FDIC Outlook

FALL 2004

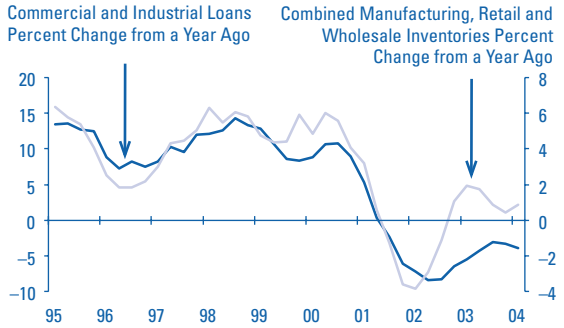
In Focus This Quarter: Commercial Lending at FDIC-Insured Institutions

Total commercial and industrial (C&I) loans held by FDIC-insured banks and savings institutions have declined for 13 consecutive quarters, beginning in the first quarter of 2001. This issue of ***FDIC Outlook*** assesses recent trends in the business sector and bank commercial lending activity and suggests where and when a turnaround in C&I loan growth is likely to occur.

Emerging Signs of a Recovery in Commercial and Industrial Lending

Commercial and industrial (C&I) loan volume among U.S. insured institutions declined for 13 consecutive quarters through March 31, 2004. However, the near-term outlook for C&I borrowing is improving. Overall, the U.S. business sector is again experiencing stronger investment, increased inventory building, and greater merger activity. As a result, signs of a recovery in C&I lending are emerging. This article looks at why this recovery was delayed two years after the end of the 2001 recession, identifies the indicators of a rebound in this lending segment, and analyzes some of the competitive challenges facing community banks as these institutions try to expand C&I portfolios. *See page 3.*

The Recent Recovery in Inventory Building Should Boost C&I Loan Demand



Note: C&I = commercial and industrial.
Source: FDIC; U.S. Census Bureau.

Where Should Banks Look for C&I Loan Demand?

A recovery in commercial and industrial (C&I) lending will help commercial banks' earnings growth. However, a broad-based recovery in C&I loan demand can occur only if the business sector's need for external funding expands. This article identifies those industries that show the greatest external funding need for and, in turn, likely will drive a rebound in C&I lending among insured institutions. *See page 9.*

The U.S. Manufacturing Sector: A Strong Past and an Uncertain Future

The manufacturing sector continues to contribute to the strength of the U.S. economy, despite reductions in employment. Technological advances are expected to provide new opportunities, but key challenges remain. *See page 14.*

Have Chicago Region Community Banks Been Adversely Affected by Auto Sector Job Losses?

Despite significant employment losses in the motor vehicle industry, community banks located in Chicago Region counties with high exposure to this industry are performing as well as banks elsewhere in the Region. *See page 19.*

The U.S. Agricultural Sector: Recent Events Highlight Ongoing Systemic Risks

Although healthy, the nation's agricultural sector faces long-term risks, including changing consumer attitudes toward food safety, evolving water allocation policies, and the ongoing agricultural trade policy debate. *See page 25.*

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Emerging Signs of a Recovery in Commercial and Industrial Lending

Commercial and industrial (C&I) loan volume among U.S. insured institutions declined for 13 consecutive quarters through March 31, 2004. The reasons for this decline have been well documented.[1] However, the near-term outlook for C&I loan demand among businesses is improving. Overall, the U.S. business sector is again experiencing stronger investment, increased inventory building, and greater merger activity. As a result of more robust loan demand and greater willingness by banks to extend C&I credits, insured institution C&I lending is beginning to recover. This article looks briefly at why this recovery was delayed for two years after the 2001 recession ended, identifies some indicators of a rebound in this lending segment, and analyzes some of the competitive challenges facing community banks as these institutions try to expand their C&I portfolios.

Several Factors Kept C&I Loan Growth in Check despite More than Two Years of Economic Expansion

From a fourth quarter 2000 peak of roughly $1.1 trillion, the overall level of C&I loans outstanding at insured institutions steadily declined 16 percent to just over $910 billion by the end of first quarter 2004. Almost two-thirds of that decline occurred after the recent recession ended in late 2001. Now, two and a half years later, the banking industry is seeing signs of a recovery in C&I lending. The delay in C&I loan growth resulted in part from normal cyclical lags but also involved unique elements that are explored in more detail below.

Borrowers and Lenders Became More Risk Averse in 2002 and Early 2003

Just as the economy was beginning to expand following the recession and recovery in 2001, two shocks occurred that raised business uncertainty. The first was the corporate accounting scandals that unfolded in mid-2002, and the second was the buildup to the war in Iraq during late 2002 and early 2003. These events raised concerns about the economy's fledgling expansion and the growing geopolitical tensions related to the situation in Iraq—concerns that in turn weighed heavily on financial markets and business risk taking. In its Monetary Policy Report to Congress in early 2003, the ***Federal Reserve Board*** noted the adverse effects of these developments on business sentiment.[2] Lenders and borrowers became more cautious during this period, especially in areas that involve risk taking and confidence in future demand, such as investment spending and inventory accumulation. This caution likely slowed growth in both the supply of and demand for corporate lending.

Robust Profits Reduced the Need for Outside Funding

With U.S. corporations taking a conservative approach to the evolving economic expansion in 2002, cost controls and a reluctance to hire and invest helped firms to build profits and cash flow. According to the ***Bureau of Economic Analysis***, U.S. corporate operating profits, after dropping $84 billion during 2000 and 2001, rose $107 billion in 2002 and $146 billion in 2003. These gains, on the order of 14 percent to 17 percent per year, represented the strongest two-year

[1] For information on the effect of the 2001 recession on C&I loan trends, see the FDIC *FYI* article "Loan Weakness Spreads; Banks' Defenses Hold," February 27, 2002, www.fdic.gov/bank/analytical/fyi/2002/fyi022702.html; and the FDIC *Regional Outlook* articles "In Focus This Quarter: The Road to Recovery for Commercial Credit Quality: Not Without a Few Hurdles Ahead," third quarter 2002, www.fdic.gov/bank/analytical/regional/ro20023q/na/Infocus.html, and "In Focus: Economic Conditions and Emerging Risks in Banking," fourth quarter 2002, www.fdic.gov/bank/analytical/regional/ro20024q/na/index.html.

[2] Monetary Policy Report submitted to Congress on February 11, 2003, by the Federal Reserve Board.

Chart 1

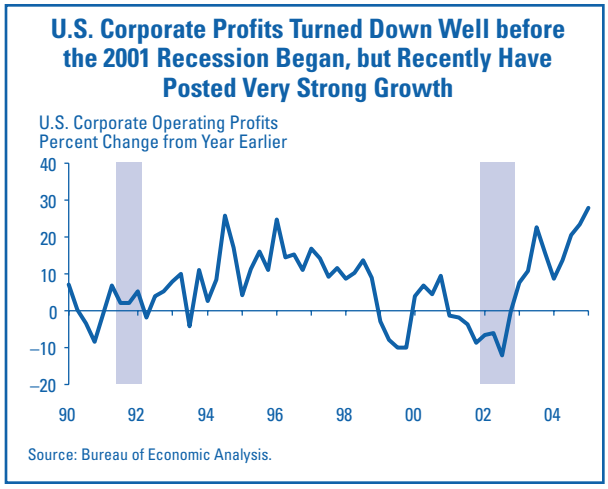
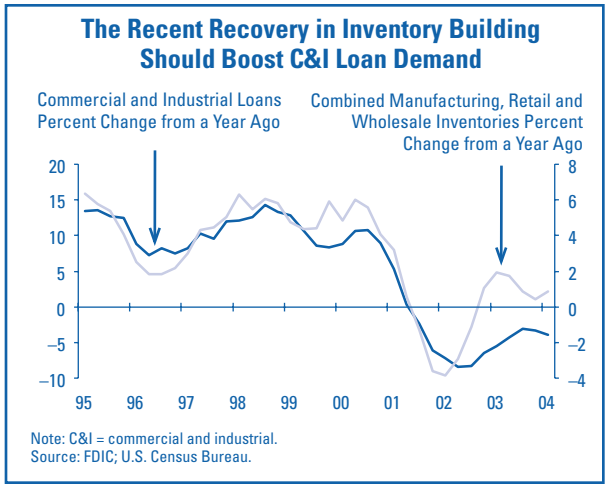


Chart 2



growth in corporate profits since the mid-1990s (see Chart 1). Strong profit gains pushed the amount of net cash flow at U.S. corporations to almost $1.2 trillion in 2003, a record high of 10.8 percent of gross domestic product. As businesses accumulated cash over the past few years, many firms self-funded their working capital needs and incremental business expansion.

Access to Cheaper Funding Sources Further Hampered C&I Demand

Large public corporations also took significant advantage of low-cost alternative funding sources during the past few years, thereby diminishing their need for C&I loans. Through 2003 and the first half of 2004, Moody's high-quality corporate bond yields, as reported by the Federal Reserve, averaged at or below 5.7 percent—the lowest yields in more than 30 years. As a result, according to ***Thomson Financial***, corporate bond and convertible securities sales rose to a record $899 billion in 2003 from $668 billion in 2002, a 35 percent increase.[3] Had this debt not been so affordable to corporate issuers, some of those funding needs may have been met through commercial lenders.

Emerging Signs of a Recovery in C&I Lending Activity

As the factors that delayed demand for C&I loans during the past two years abate, U.S. corporations should turn increasingly to bank funding. In fact, several signs are pointing toward stronger C&I loan demand, as well as a greater availability of credit moving forward. Some of these signs are discussed below.

Business Investment Growth Has Accelerated

The recent acceleration in business investment growth is a sign of renewed strength in the U.S. corporate sector. Outlays for equipment and software grew at a double-digit annualized pace in the last three quarters of 2003. Although this growth pace moderated in the first half of 2004, it remained at a solid 9 percent. Forecasts from ***Macroeconomic Advisers*** and ***Blue Chip Economic Indicators*** expect strong double-digit business investment gains through year-end 2004.

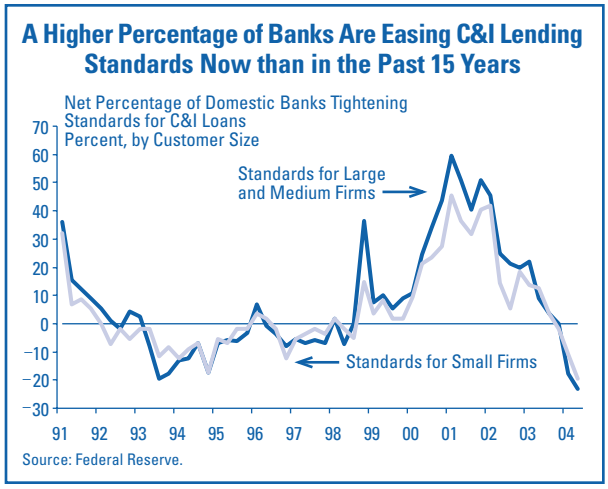
Inventory Building Has Resumed

Historically, C&I lending has tracked the U.S. inventory cycle. Business inventory growth has been on the rise for a little over one year (see Chart 2). Even so, recent growth has been weak, especially given the protracted declines in 2001 and 2002. The slow buildup in inventory to date suggests that inventories have more room to grow as the economy expands. For many industries, inventory needs will drive their demand for C&I loans.[4]

[3] Reuters, "U.S. Corporate Bond Issuance Rises in 2003–Thomson," December 31, 2003.

[4] See "Where Should Banks Look for Emerging C&I Loan Demand?" by Steven C. Gabriel in this issue.

Chart 3



M&A Activity Has Increased

A return of merger activity may also boost C&I loan demand. After a long period of dormancy, merger and acquisition (M&A) activity has recently increased. According to ***Mergerstat***, total M&A activity for 2003 was $528 billion, compared with $462 billion in 2002; moreover, the year-to-date value of mergers and acquisitions through second quarter 2004 was $354 billion, up from $168 billion in the first half of 2003.[5] Although this was a significant increase, about one-third of 2004 year-to-date activity was in banking and finance. Further, current levels of M&A activity are less than half their peak 1999 level. A robust economic expansion and historically low interest rates for the remainder of 2004 are likely to support further M&A gains over the near term.

Banks Are More Willing to Lend

In addition to rising demand for commercial loans, some data suggest that C&I lending standards have begun to ease as the economy recovers. For example, in July 2004, the ***Loan Pricing Corporation*** reported that the ratio of debt-to-cash flow on syndicated loans increased to 4.3 compared with 4.0 in 2003.[6] In addition, the Federal Reserve's April 2004 ***Senior Loan Officer Survey*** indicates that, after three years of significant tightening in C&I loan underwriting standards, a higher percentage of respondents, on net, reported easing C&I underwriting standards than at any other time in the past 15 years (see Chart 3).[7]

Survey Suggests More Interest in C&I Loans

The Federal Reserve's Loan Officer Survey also shows that a net 29 percent of banks saw increasing demand for C&I loans from large- and middle-market borrowers in early 2004, while a net 38 percent of banks reported that small business C&I demand was increasing. These levels were the highest readings in six to ten years. Furthermore, about 50 percent of domestic respondents indicated that they had received an increasing number of inquiries from potential business borrowers. Among those banks reporting more C&I inquiries, most attributed this activity to increased customer financing needs for inventories and accounts receivable, as well as for investment in plant and equipment. Finally, the Federal Reserve Board indicated in its July 2004 ***Beige Book*** that, in 9 of 12 districts, commercial loan demand was rising in recent weeks.[8]

The Competitive Landscape for C&I Lending Is Changing

C&I lending is recovering across the industry; however, competition between large and small institutions may intensify. Large banks, despite renewed strength in the syndicated loan market, may diversify their commercial lending by targeting mid-sized and small businesses. This strategy will intensify competition for commercial loans at community banks that have traditionally dominated this market.

[5] Mergerstat, "FactSet Mergerstat's M&A Roundup in 2003," news release, January 7, 2004, www.mergerstat.com/new/press/release23.htm, and "FactSet Mergerstat's M&A Roundup: Second Quarter, 2004," news release, June 30, 2004, www.mergerstat.com/new/press/release25.htm.

[6] Sadaf Khan, "No Holds Barred in 2Q04! Leverage Caps Loosen across the Market," Loan Pricing Corporation, www.loanconnector.com, July 19, 2004.

[7] Federal Reserve Board, *Senior Loan Officer Opinion Survey on Bank Lending Practices,* April 2004.

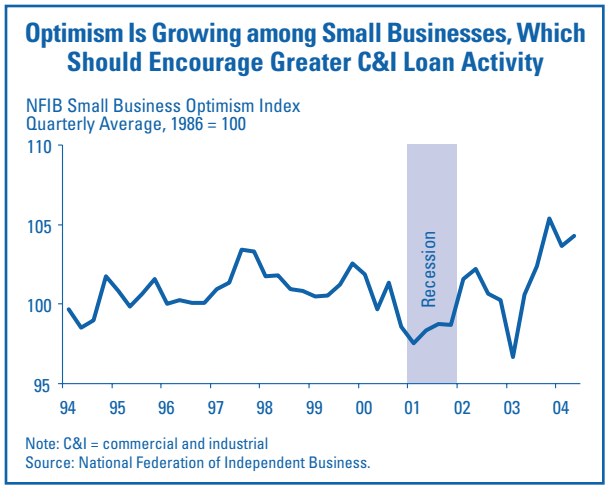
[8] Federal Reserve Board, *The Beige Book,* July 28, 2004, www.federalreserve.gov/FOMC/BeigeBook/2004/20040728/default.htm.

Community Banks Will Face Increased Competition for Their Core Business Customer

As mentioned earlier, demand for C&I lending by mid-sized and small firms appears to be recovering. A sustained increase in demand for C&I loans among community banks has traditionally depended, at least in part, on small business owners' views of business conditions and their plans for future expansion.[9] According to the ***National Federation of Independent Business (NFIB)*** Optimism Index, small business owners have become increasingly optimistic in recent quarters about future operating conditions (see Chart 4).[10] Factors that have contributed to greater optimism for economic and business conditions include an increase in the number of small businesses reporting higher earnings, a greater need for labor, and expectations for higher sales during the next quarter. In addition, according to the NFIB, a larger share of small business owners reported that they intend to increase inventory levels in the next three to six months.[11] As small businesses tend to rely on community banks for external financing, optimism about business conditions and plans to build inventories should contribute to stronger demand for C&I loans at community banks.

Evidence suggests that some of the nation's small banks have already experienced a pickup in C&I loan demand. In fact, the NFIB survey results are supported by the Federal Reserve Loan Officer Survey: almost one-third of the small banks surveyed reported increased loan demand from the small business sector during the previous three months—a sharp contrast from the previous year, when no respondents reported evidence of greater demand for small business loans.[12]

Chart 4



One of the advantages that community banks have in competing for small business banking services is that they are near, and familiar with, local firms. Nonetheless, competition for small business banking is intense. According to one survey, when banks were asked why they might consider easing credit standards or loan terms, aggressive competition from other banks and nonbank lenders was the most frequently cited factor.[13] So, although C&I loan demand for community banks is showing early signs of improvement, these smaller institutions may face more intense competition going forward.

Larger Banks Increase Efforts to Target Smaller Business Borrowers

The largest institutions have seen increasing interest from C&I borrowers, and stronger growth may be on the horizon. Syndicated lending has traditionally been a principal lending market for large banks. According to the Loan Pricing Corporation, syndicated loan originations surged in the first half of 2004 to

[9] According to the Small Business Administration (SBA), small businesses in the United States make up over 99 percent of all business enterprises, employ 50 percent of all private-sector workers and create more than half of private gross domestic product. Small businesses are defined by the SBA as firms employing fewer than 500 individuals.

[10] The NFIB Optimism Index is an index based on survey responses by small business owners to questions about plans to increase employment and expenditures as well as expectations of future economic conditions and earnings performance.

[11] NFIB, *NFIB Small Business Economic Trends: Based on a Survey of Small and Independent Business Owners,* July 2004.

[12] Federal Reserve Board, *Senior Loan Officer Opinion Survey on Bank Lending Practices,* April 2003 and April 2004, Table 1, Question 4B. Response data under the heading "Other Banks" are cited as a proxy for small bank responses. "Other Banks" are defined in the surveys as banks with total domestic assets of less than $20 billion as of December 31, 2002, and December 31, 2003, respectively.

[13] Federal Reserve Board *Senior Loan Officer Opinion Survey on Bank Lending Practices,* January 2003–April 2004, Table 1, Question 3B.

$643 billion, up 38 percent from the same period a year earlier.[14]

Even though the syndicated loan market is beginning to recover, large banks also may seek to increase their C&I marketing efforts in the mid-sized and small business arenas. According to a 2003 survey by the ***American Bankers Association***, almost three-fourths of large banks surveyed have increased or are planning to increase marketing expenditures to small businesses in 2004.[15] The larger banks that may be more successful at taking market share from smaller banks are those with more distribution channels, extensive technological capabilities, and greater marketing resources. Many large banks, in an effort to gain a greater share of the small business banking market, are marketing a suite of small business services, such as credit cards, Web bill payment, cash management, and payroll administration. The number of credit cards used by small businesses in the United States increased from 4 million in 2000 to more than 10 million last year and is estimated to reach 12.1 million at the end of 2004.[16] Furthermore, many large institutions are promoting strong customer service as part of their marketing strategy. Historically, local customer service has been the calling card of community banks.

Conclusion

Increasing evidence suggests that C&I loan demand is finally picking up after three and a half years of weakness. Conditions typically associated with expansion in C&I lending have turned positive in recent quarters, including renewed inventory building, rebounding capital expenditures, an improved view of business conditions on the part of business owners, and increased M&A activity.

Insured institutions also are becoming more receptive to C&I borrowers. Data suggest that following several years of significant tightening, lenders, on net, have begun to ease C&I underwriting standards to some degree and have taken other steps to increase the supply of C&I loans. Nonetheless, the competitive landscape for business lending may be changing. Competition, particularly in the small business market, will likely intensify, especially as larger banks court the same customer base that has been the stronghold of smaller financial institutions.

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[14] Loan Pricing Corporation, *GoldStats,* July 14, 2004.
[15] American Bankers Association, Bank Marketing Planning Survey Report, September 2003. The report defines large banks as those with total assets of at least $1 billion.
[16] "More Firms Make Credit Cards Their Financing Tool of Choice," *Wall Street Journal,* July 6, 2004.

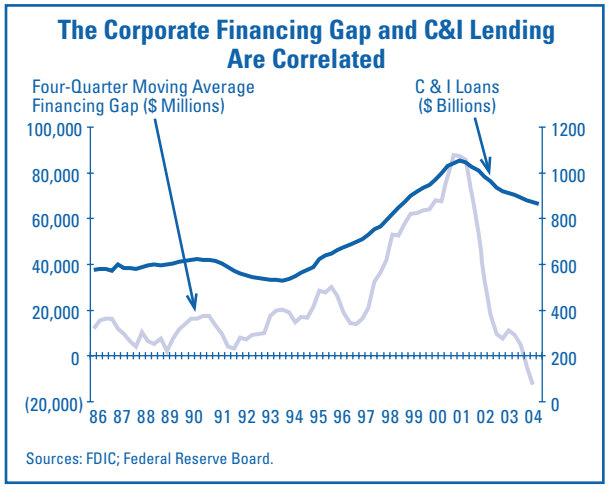
Where Should Banks Look for C&I Loan Demand?

Recent underwriting surveys indicate that bankers are eager to grow commercial and industrial (C&I) credit. With the expectation of slowing consumer lending growth, particularly residential real estate lending, C&I loan growth will factor prominently in sustaining earnings growth for commercial banks. Demand for credit, however, will not improve substantially until corporations are no longer able to meet their financing needs from internal cash flows. The need for many companies to tap external funding sources may remain lackluster for several more quarters. Indeed, when viewed across all industries, corporate cash flows appear more than sufficient to meet near-term funding needs.

The need for external funding is often measured by the corporate financing gap (capital expenditures plus the change in inventories less internal cash flow). When summed across all nonfinancial U.S. corporations, the four-quarter moving average of this metric has been declining since second quarter 2000. The corporate financing gap is watched carefully by forecasters of C&I loan demand because it correlates historically with C&I loans outstanding (see Chart 1).[1]

Strong corporate profits, scaled-back capital expenditures, and declining inventories across many industries have driven the total corporate financing gap into negative territory, where it has remained since second quarter 2003. Nevertheless, this national trend does not reflect the current need by many companies for external funding. This article identifies the industries that evidence the greatest need for external funding and, therefore, are more likely to drive a turnaround in C&I loan demand. The article further stratifies industries by corporate credit quality to identify industry sectors that need funding but that may find an unfavorable reception in the public debt markets.

Chart 1



Identifying Sources of C&I Loan Demand

Historical trends and industry research confirm that the financing gap is a key indicator of potential C&I loan demand. William Bassett and Egon Zakrajsek of the ***Federal Reserve Board*** offered the sharply rising financing gap in the 1997 to 2000 period as an explanation for the increase in C&I loan growth at that time.[2] This sharp rise in the financing gap was most pronounced in the telecommunications sector. Shortly after, telecommunications dominated the shared national credits in the banking system. More recently, Richard Berner of ***Morgan Stanley*** has pointed to a projected increase in the corporate financing gap as evidence of an impending rise in business funding needs in late 2004.[3]

Although the analysis presented here relies on the strong historical relationship between a firm's or an industry's financing gap and its demand for C&I loans, this relationship should not be overstated. Companies have access to sources of funds other than cash flow, including sale of investments and issuance of long-term debt and equity. Also, capital expenditures and purchases of inventory are not the only potential uses of funds. Companies use available funds to increase investments, make acquisitions, reduce long-term debt, and pay cash dividends (see Box 1 for details).[4]

Because of these factors, a company's or an industry's financing gap should be viewed as a necessary, if not

[1] Applebaum, Lori, et al., *The Next Leg of Growth: Middle-Market Banking*, Goldman Sachs Global Investment Research, May 13, 2004.

[2] Bassett, William, and Egon Zakrajsek, "Recent Developments in Business Lending by Commercial Banks," *Federal Reserve Bulletin,* December 2003.

[3] Berner, Richard, "Business Borrowing—On the Way," *Global Economic Forum,* Morgan Stanley, April 30, 2004.

[4] Mergers and acquisitions are also considered sources of C&I loan demand. Mergerstat ranked the top industries as of June 20, 2004, in terms of base equity price offered. The top six industries were banking and finance, leisure and entertainment, communications, computer software, supplies and services, and retail.

Box 1

Analytical Approach

Corporate financial data from the Standard & Poor's Compustat database were used to calculate the 2003 financing gap and first quarter 2004 financing gap of more than 4,000 public companies. (Firms not reporting inventories, cash flow, or capital expenditures separately were excluded from the analysis.) Industries were initially categorized according to the 24 Global Industry Classification Standard (GICS) codes, which were developed by Standard & Poor's and Morgan Stanley Capital International. Firms were further categorized by standard industrial classification (SIC) for a more detailed industry breakdown.

The analysis identifies industries that likely had the strongest C&I loan demand in 2003 by calculating the total 2003 financing gap for those firms with a positive financing gap. The results are presented by credit quality category (see Box 2). Similar analysis using first quarter 2004 data indicates emerging C&I loan demand in 2004. We also look at the composition of each industry's C&I loan demand in 2003 and first quarter 2004 by considering the relative importance of capital expenditures and changes in inventories.

sufficient, predicate to bank borrowing. Analyzing financing gaps provides insights into which industries have the greatest demand for financing purchases of inventories and capital equipment. Other conditions being equal, these industries will be more likely to need bank-provided financing.[5]

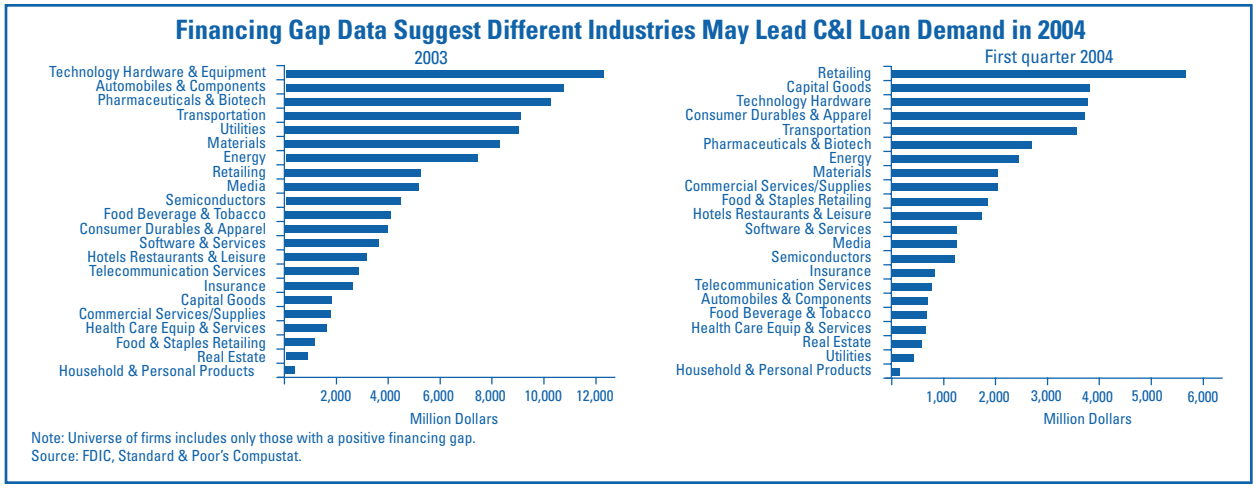
The 2003 Financing Gap Suggests Which Industries Had the Strongest C&I Loan Demand Last Year

Table 1 presents industries with the largest financing gaps at year-end 2003. Industry financing gaps are further divided on the basis of credit quality. Credit quality is proxied with the Expected Default Frequency™ (EDF™) bands calculated by ***Moody's KMV Company*** (see Box 2 for details). Unfavorable pricing in the public debt markets might further increase the likelihood that a company needing funds would turn to bank financing. Firm credit quality affects the relative cost of accessing the capital markets for funding when compared with the cost of bank financing. Therefore, the highest-credit-quality firms may be most successful finding accommodative pricing in the public debt markets, allowing them to defer bank borrowing longer.

First Quarter Data Suggest Different Industries May Lead C&I Loan Demand in 2004

Retailing, capital goods, and consumer durables and apparel exhibited far more demand for external financing relative to other industries in first quarter 2004 compared with 2003 (see Table 2 and Chart 2).

Chart 2



Note: Universe of firms includes only those with a positive financing gap.
Source: FDIC, Standard & Poor's Compustat.

[5] Not all C&I loan demand will be met by commercial banks and savings institutions. Nonbank financial institutions compete with banks for C&I loan business.

Table 1

Industries with the Highest 2003 Financing Gap*

Expected Default Frequency™ (EDF™) Category**		
Investment-Grade .02 – .56	**Non-Investment-Grade .56 – 20**	**All Firms .02 – 20**
Autos & Components	Technology Hardware	Technology Hardware
Energy	Computers	Computers
Crude petroleum/natural gas	Printed circuit boards	Printed circuit boards
Petroleum refining	Telecom equipment	Telecom equipment
Utilities	Materials	Autos and Components
Electric Utilities	Steelworks/blast furnaces	Pharmaceuticals and Biotech
Pharmaceuticals & Biotech	Chemicals	Transportation
Transportation	Plastics	Airlines
Auto rentals	Pharmaceuticals and Biotech	Auto rentals
	Transportation	Utilities
	Airlines	Electric utilities
	Food, Beverage, and Tobacco	
	Cigarettes	

* Industries are listed in descending order of magnitude. The indented industries are the industries contributing the most to the broader sector's financing gap.

** Based on firms' March 2003 Expected Default Frequency™. The lowest EDF™ assigned is .02 and the highest is 20.

Note: The universe of companies includes only those with a positive financing gap in 2003.

Sources: FDIC; Standard & Poor's Compustat; Moody's KMV Company.

Table 2

Industries with the Highest First Quarter 2004 Financing Gap*

Expected Default Frequency™ (EDF™) Category**		
Investment-Grade .02 – .56	**Non-Investment-Grade .56 – 20**	**All Firms .02 – 20**
Retailing	Technology Hardware	Retailing
Building supply retailers	Computers	Building supply retailers
Department stores	Systems integrators	Auto dealers
Variety stores	Printed circuit boards	Department stores
Auto dealers	Telecom equipment	Capital goods
Capital Goods	Retailing	Industrial systems/instruments
Industrial systems/instruments	Auto dealers	Farm/construction machinery
Construction machinery	Department stores	Technology Hardware
Consumer Durables/Apparel	Variety stores	Computers
Home builders	Transportation	Printed circuit boards
Energy	Airlines	Telecom equipment
Petroleum refining	Pharmaceuticals & Biotech	Systems integrators
Crude petroleum/natural gas	Materials	Consumer Durables/Apparel
Transportation	Chemicals	Home builders
Auto rentals		Transportation
		Airlines
		Auto rentals

* Industries are listed in descending order of magnitude. The indented industries are the industries contributing the most to the broader sector's financing gap.

** Based on firms' March 2004 Expected Default Frequency™. The lowest EDF™ assigned is .02 and the highest is 20. May 2004 EDF was used for 88 firms with no assigned March 2004 EDF.

Note: The universe of companies includes only those with a positive financing gap in 2003.

Sources: FDIC; Standard & Poor's Compustat; Moody's KMV Company.

Although seasonal factors may influence the quarterly financing gap of some industries, historical data suggest that retail companies tend to experience peak external financing needs in the third quarter. Capital goods firms generally face peak financing requirements in the fourth quarter.

The Importance of Inventory Financing Will Likely Grow in 2004

Capital spending finance was the primary source of external funding needs overall in 2003, accounting for more than 82 percent of the total.[6] In some industries, however, inventory finance was a far more important need. For example, the change in inventories in consumer durables and apparel accounted for 88 percent of the total. Change in inventories accounted for a large part of financing needs in the household and personal products and food, beverage, and tobacco sectors as well.

These industries aside, businesses generally have allowed inventories to decline to very low levels since the economic slump that began in the middle of 2001. However, both business and consumer confidence have largely recovered and economic activity has become brisk, requiring businesses to begin investing in inventories to meet product demand.

First quarter 2004 data bear this out. Inventories' share of external funding needs rose from 18 percent in 2003 to 43 percent in first quarter 2004. Higher inventories were significantly more important relative to capital spending in the consumer durables and apparel, capital goods, household and personal products, and retail sectors (see Chart 3). For some industries, the change in the source of external funding needs was stark. For example, the change in inventories at retail firms increased from 31 percent of funding needs in 2003 to 66 percent in the first quarter of 2004. For the capital goods sector the change in inventories increased from 41 percent to 77 percent from 2003 to first quarter 2004.

[6] Total C&I loan demand is assumed to be the sum of capital expenditures and the change in inventories during the period for firms with a positive financing gap.

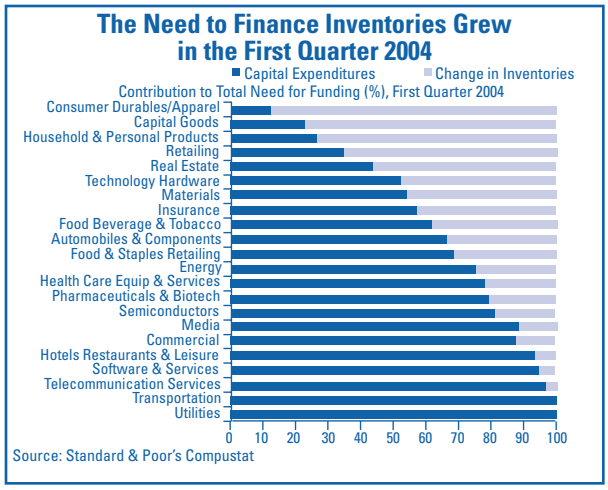
Box 2

Expected Default Frequency™ Provides Insights into Firms' Credit Quality

Moody's KMV Company calculates its Expected Default Frequency™ (EDF™) for thousands of public companies on a monthly basis using information from each firm's financial statements and market value of assets. A firm's EDF™ is the probability of default within one year.[7] Although Moody's KMV does not specify investment-grade EDFs™ as the rating agencies' rating systems do, it is possible to make some inferences based on the distribution of firms' EDFs™ by rating category.

There is considerable overlap of EDF™ scores across Standard & Poor's rating categories. However, for the purposes of this analysis, we used the EDF™ at the 90th percentile of all BBB rated firms to define the highest EDF™ for what we refer to as investment-grade firms. Hence, we refer to firms with EDFs™ greater than .56 as non-investment-grade, understanding that some non-investment-grade firms have EDFs™ lower than .56. On the basis of this criterion, industries with the greatest potential commercial and industrial loan demand among investment-grade and non-investment-grade firms are identified.

Chart 3



[7] The Moody's KMV Credit Monitor® EDF™ estimates the probability of default within one year. Moody's KMV Company's calculation for EDF™ is based on (1) the current market value of the firm, (2) the structure of the firm's current obligations, and (3) the vulnerability of the firm to large changes in market value measured in terms of asset volatility.

Conclusion

When C&I loan growth resumes, the industries with the strongest demand will be those with the greatest need for financing purchases of capital equipment and inventories. This demand will likely come from the retailing, consumer durables, transportation, technology hardware, and capital goods sectors.

The composition of C&I loan demand is likely to shift in 2004. First quarter 2004 data suggest that inventory financing will grow in importance this year as the economy continues to strengthen and the business sector invests in inventory to meet emerging demand. However, there should also be significant demand for capital equipment financing.

Stephen C. Gabriel, Senior Financial Economist

The U.S. Manufacturing Sector: A Strong Past and an Uncertain Future

Manufacturing has played a major role in the U.S. economy since before the Civil War. This article reviews the sector's more recent contribution to employment and output, explores key technological improvements, and concludes with a discussion of future prospects for the manufacturing industry.

This issue of ***FDIC Outlook*** also features an article that looks at how community bank performance was affected in counties of the **Chicago Region** that are characterized by relatively high employment exposures to a subsector of manufacturing, the motor vehicle and parts industry (see "Have Chicago Region Community Banks Been Adversely Affected by Auto Sector Job Losses?").

Good-bye to the Industrial Revolution

Manufacturing output grew rapidly through the 20th century. Even during the past ten years, manufacturing production expanded at an average rate of 3.6 percent per year.[1]

National income and product account data confirm the continuing importance of manufacturing. In 1939, just before World War II, manufacturing represented almost 30 percent of gross domestic product when measured in inflation-adjusted dollars. The comparable amount in 2003 was even higher—almost 35 percent (see Chart 1).[2]

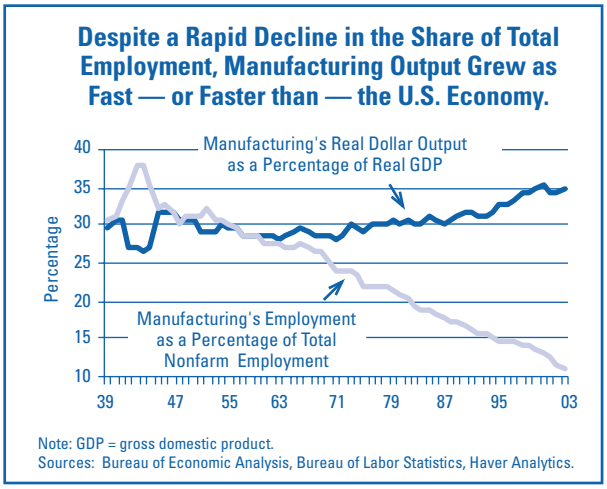
Such growth, of course, suggests increasing manufacturing employment. In broad terms, as the U.S. economy advanced during the 19th and much of the 20th century, workers relocated from farms to factories. That migration, however, became less and less effective at generating manufacturing employment, as capital was substituted for labor and technology progressed. Indeed, maximum employment of manufacturing workers occurred 25 years ago in 1979, when employment slightly exceeded the previous peak reached during World War II. As of World War II, 1 in 3 production workers not in agriculture was employed in manufacturing; 60 years later, fewer than 1 in 12 were employed in manufacturing.[3]

Technology, Not Hiring, Drives the Productivity Miracle

Maintaining significant growth in output with small, or no, gains in labor input implies substantial increases in productivity. Manufacturing overall has enjoyed higher productivity over time. Increases in productivity often have resulted in profound changes in products as well as in production techniques—changes that have been driven in large part by technological advances.

The measure of productivity most commonly cited defines productivity as output per hours worked. This definition implicitly attributes any increases in productivity to workers. However, other factors, such as changes in technologies, physical capital, nonlabor inputs, and organizational characteristics, also affect output. When measured as output per hour worked, increases in manufacturing productivity appear quite

Chart 1



[1] G.17, *Industrial Production and Capacity Utilization*, Federal Reserve Board. Current estimates for manufacturing production, 1993–2003.
[2] Department of Commerce, Bureau of Economic Analysis, *National Income and Product Accounts*, Real Gross Product by Major Type of Product, Chained 2000 Dollars, Table 1.2.6.
[3] Bureau of Labor Statistics of the Department of Labor, *The Employment Situation*, Employees on Nonfarm Payrolls by Industry Sector, Table B-1, distributed by Haver Analytics.

Chart 2

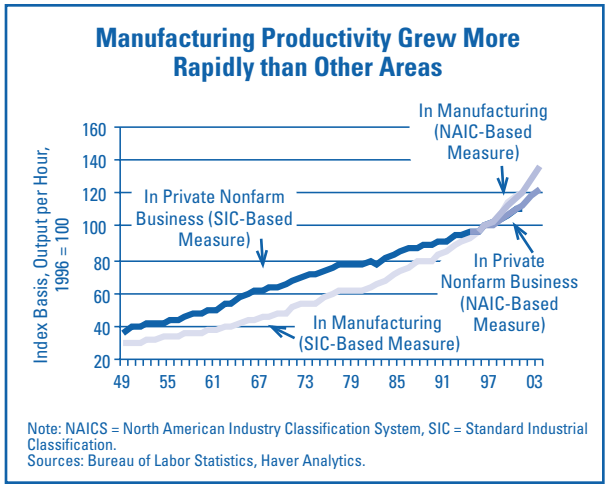
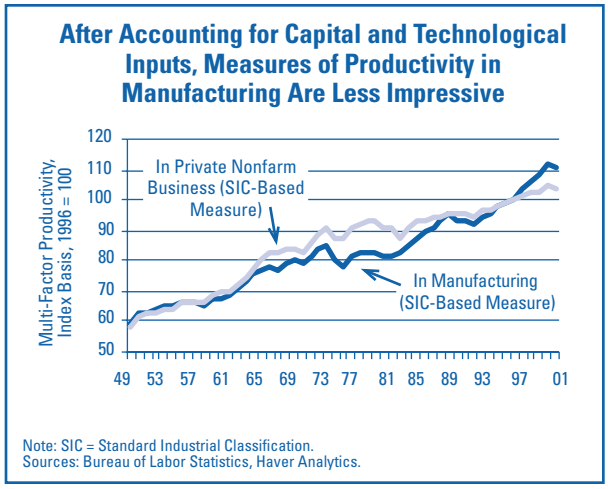


Chart 3



sizable. From 1949 through 2001 (the years for which data are available), annual productivity increases averaged 2.7 percent in the manufacturing sector compared with 2.1 percent in the larger private nonfarm business sector, which includes service industries (see Chart 2). However, if variations in capital inputs (including embedded new technologies) also are considered, the direct output gains attributed to labor diminish considerably.

When this more advanced *multifactor* approach is used, increases in manufacturing productivity slip to only 1.2 percent per year, very close to the 1.1 percent gain for the private nonfarm business sector (see Chart 3). Thus, factors other than labor accounted for slightly more than half the total productivity gains during this period. In addition, changes in capital (including technology)—not labor directly—appear responsible for the high rate of increase in productivity that characterizes the manufacturing sector.[4]

On an annual basis, changes in productivity have been highly variable, sometimes affected by cyclical developments and other times by secular events. Such events range from advances in technology to changing demographics, and also encompass economic shocks. From the end of World War II to 1973, the date of the first oil shock, productivity in manufacturing trended upward. However, higher oil prices, changing demographics, policy responses to high inflation, and other global factors led to a loss of competitiveness in key industries. As a result, productivity increases during the ensuing years slowed considerably. Later, during the 1980s and particularly during the 1990s, new technologies associated with the development of personal computers, the Internet, and wireless communications drove productivity increases to levels that matched or even exceeded previous performances.[5]

U.S. Manufacturing Competitiveness Has Been Challenged Worldwide

Manufacturing output has varied with changes in productivity. Beginning in 1973, hours worked in manufacturing showed cyclical variations but little sustained change on a secular basis.

In large part, this lack of growth in manufacturing employment reflected changing global economic conditions. The rise of Asian economies, in particular, introduced new economic powers on the world stage. In some cases, these rapidly developing economies competed directly with U.S. manufacturers. In other cases, U.S. manufacturers moved production facilities offshore, either through direct investment or by contracting out to reduce labor costs. International competition also was enhanced by the relaxation and removal of trade barriers under agreements forged through the World Trade Organization and by the

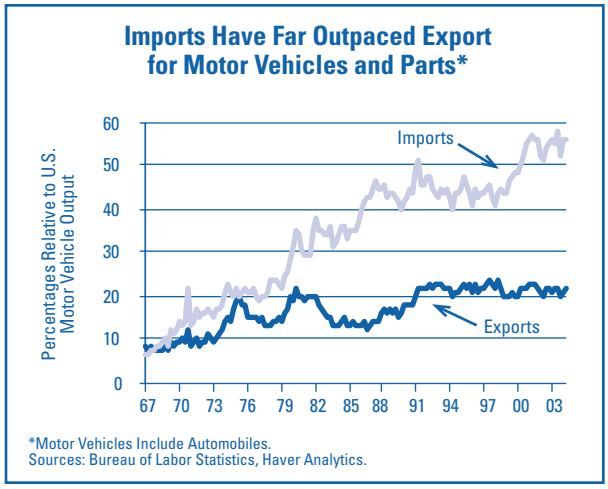
[4] Bureau of Labor Statistics, *Monthly Labor Review*, November/December 2003, pp. 80–82. See also Bureau of Labor Statistics press release, "Multifactor Productivity Trends in Manufacturing, 2001," February 10, 2004, for data on output per hour of all persons and multifactor productivity from 1949 to 2001.

[5] Bureau of Labor Statistics, *Monthly Labor Review*, "Labor Productivity in Manufacturing," June 2002, pp. 51–65.

development of free-trade areas, such as that created by the North American Free Trade Agreement. The combination of these diverse developments presented both new opportunities and challenges for U.S. manufacturers.

The U.S. automotive industry is a case in point, as global competition and consolidation have enabled foreign manufacturers to make significant inroads. The U.S. market has been transformed by growing imports of product and parts, along with manufacturing facilities and production techniques introduced into the United States by foreign producers. In the mid-1960s, exports and imports of motor vehicles and parts in this country were about equal, each representing less than 10 percent of domestic output. Since that time, the export share has more than doubled, while imports have grown more than fivefold (see Chart 4).[6]

Chart 4



Textile Manufacturing Suffers while Pharmaceuticals Expand

The outlook for traditional manufacturing is not expected to change greatly. In its employment outlook for 2002 through 2012, the ***Bureau of Labor Statistics*** projects that the manufacturing sector will realize continuing significant output gains without increases in labor usage. These projections anticipate that real growth in the manufacturing sector will match that of the overall economy. As a result, manufacturing's output share will change little during this ten-year period. By contrast, the employment share will continue its steady decline.[7]

Specifically, over this ten-year period, manufacturing is projected to lose about 200,000 production workers. Retirements of existing workers, however, will soften this impact, implying a minor, but positive, level of new hiring.[8] The textile and apparel industries and related occupations are expected to experience the greatest percentage declines, in large part because of global competition and easing of import quotas.

Although the outlook for manufacturing is mixed, with good-sized output gains coinciding with an essentially unchanged number of workers, conditions across industries are expected to differ widely (see Table 1). For example, employment in the chemicals industry is expected to decline by 38,000, or 4 percent, during the ten years ending in 2012.[9] By contrast, the plastics manufacturing industry is expected to expand 20 percent—a considerable acceleration in the rate of growth for this sector.

Perhaps most significantly, pharmaceutical production is also expected to expand by at least 20 percent. A large share of this increase will be based in medical areas characterized by an extended development period. The approval of new drugs is expected to contribute to some significant increases in employment.

Avant Immunotherapeutics, a **Massachusetts**-based pharmaceutical company, provides an example. At a point of transition from start-up to a mature operating company, Avant has achieved sufficient size and progress to support research facilities in **Needham,** Massachusetts, and **St. Louis, Missouri.** It also has occupied a new production facility in **Fall River,** Massachusetts.[10]

[6] Bureau of Economic Analysis, Tables 4.2.5 and 7.2.5B. Globalization also works to the advantage—as well as disadvantage—of U.S. producers. See "GM to Invest $3 Billion to Grow China Output," *The Washington Post*, June 7, 2004. Cost comparisons associated with motor vehicle parts manufacturing can be found in "Big Three's Outsourcing Plan: Make Parts Suppliers Do It," *The Wall Street Journal*, June 10, 2004.

[7] *Monthly Labor Review*, "Employment Outlook, 2002–2012," February 2004, pp. 3–105.

[8] Employment projection materials provided to Business Research Advisory Council, Bureau of Labor Statistics, April 2004.

[9] Bureau of Labor Statistics, *Monthly Labor Review*, "Industry Output and Employment Projections to 2012," February 2004, p. 63.

[10] Presentation by Dr. Una Ryan, CEO of Avant Immunotherapeutics, to "South Coast Economic Outlook Briefing—Spring 2004," by Mass Insight and Mass Development, May 12, 2004.

Table 1

Projection of Annual Change in Manufacturing Employment by Sectors, 2002–2012*

Gainers		Losers	
Sector	**Annual Projected Change**	**Sector**	**Annual Projected Change**
Plastics and Rubber	+1.5%	Apparel	–11.0%
Wood Products	+1.3%	Textile Mills	–6.1%
Nonmetallic Minerals	+1.1%	Leather	–4.0%
Furniture	+1.0%	Petroleum and Coal	–1.6%
Machinery	+0.9%	Paper	–1.4%
Fabricated Metal	+0.6%	Beverages and Tobacco	–1.4%
Food	+0.5%	Computers and Electronics	–1.3%
Printing	+0.3%	Nonapparel Textile Products	–0.8%
Miscellaneous	+0.3%	Chemicals	–0.4%
		Primary Metals	–0.3%
		Electrical Equipment	–0.3%
		Transportation	–0.2%
Projected Annual Rate of Change in all Manufacturing Employment: –0.1%.			

Sources: Bureau of Labor Statistics, "Industry Output and Employment Projections to 2012," Monthly Labor Review, February 2004, Table 3, pp. 62–65. See related articles in this publication for additional detailed projections by industries and occupations.

Large bio-tech firms, such as Biogen-Idec, Inc., and Amgen, Inc., are expected to build on their earlier successes. However, the value of these and other enterprises lies more with research and development than with manufacturing. As a result, high-tech and bio-tech manufacturing activity in the United States will continue to produce high-volume, high-dollar-value products with only a limited impact on overall employment levels.

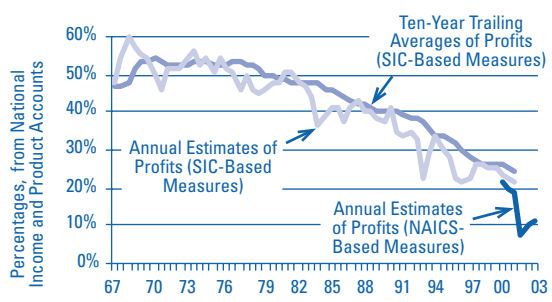
U.S. Manufacturing Faces an Uncertain Future

Even where the outlook for manufacturing appears relatively bright, challenges loom. Investment in new technologies and new facilities is increasingly expensive, and the sector's ability to generate funds for investment is being called into question. Before the Great Depression and through the 1960s, U.S. manufacturers represented about one-half of total U.S. corporate profits. This share has declined to only one-fifth during the past decade (see Chart 5).[11]

As a result, the outlook for the U.S. manufacturing sector is mixed. In recent years, U.S. manufacturers have regained some competitive advantages among developed economies. However, the rapid rise of new international competitors has continued to erode the position of U.S. manufacturers. As the sector's ability to generate profits for future investment has deteriorated, the manufacturing sector today appears as much a potential source of economic weakness as a source of strength.

Frederick S. Breimyer
Regional Economist

Chart 5



* Profits Include Inventory Valuation Adjustment.
Note: NAICS = North American Industry Classification System, SIC = Standard Industrial Classification.
Sources: Bureau of Labor Statistics; Haver Analytics.

[11] Department of Commerce, Bureau of Economic Analysis, *National Income and Product Accounts*, Corporate Profits by Industry, Tables 6.16A, B, C, and D.

Box 3

Pension Burden Dampens Outlook for Older, Capital-Intensive Industries

U.S. manufacturers face substantial logistical challenges as they plan future operations. Although many may succeed in their efforts to source, produce, and distribute in increasingly global markets, others will find it difficult to do so given the weight of prior obligations. Such obligations in some cases are quite sizable, and may include large amounts of fixed-term debt or previously contracted, but underfunded, pension liabilities. In addition to substantial ongoing costs to provide pension benefits, these companies often provide retiree medical coverage.

This legacy of prior financial obligations impinges on some manufacturers' ability to compete with overseas firms. For example, in the automotive industry, the results of a ***Prudential Financial*** study show that pension and retiree benefits represent $631 of the cost of every Chrysler vehicle, $734 of the cost of every Ford vehicle, and $1,360 of the cost of every General Motors vehicle.[12] In contrast, an article in the ***Detroit Free Press*** reported that pension and retiree benefit costs per vehicle at the U.S. plants of Honda and Toyota are estimated to be $107 and $108, respectively.[13]

On June 17, 2004, the ***Pension Benefit Guaranty Corporation*** (PBGC), the federal agency that guarantees qualifying private-sector defined benefit pension plans, reported that companies with underfunded pension plans had a total pension shortfall of $278.6 billion, down slightly from 2003, but still substantially higher than the $18.4 billion deficit reported in 1999. The PBGC disclosed that a significant amount of pension underfunding persists in the airline and steel industries. More recently, United Airlines announced that it would no longer contribute to its employee pension plans while in bankruptcy.[14] This implies that the PBGC could face another huge obligation to cover these pensions in the future. Even now the PBGC faces serious challenges in the years ahead, as it reported a $9.7 billion deficit in its single-employer insurance plan as of March 31, 2004. This is down from the $11.2 billion deficit as of September 30, 2003, but in sharp contrast to the $9.7 billion surplus posted in 2000.

For additional discussion on pension plans, see Rae-Ann Miller and Jeffrey Ayres, *FYI: An Update on Emerging Issues in Banking*, "Could a Bull Market Be a Panacea for Defined Benefit Pension Plans?" January 13, 2004, at www.fdic.gov/bank/analytical/fyi/2004/011304fyi.html.

[12] "Analyzing the Big Three's Pension and OPEB Costs," *Prudential Financial Research*, July 15, 2003.

[13] Butters, Jamie. "UAW to Target Chrysler for Talks, Analyst Says Improved Benefits May Come at the Cost of Jobs." *Detroit Free Press*, March 19, 2003.

[14] Walsh, Mary Williams, and Micheline Maynard. "United Airlines to Quit Paying into Pension Plans." *The New York Times*, July 24, 2004.

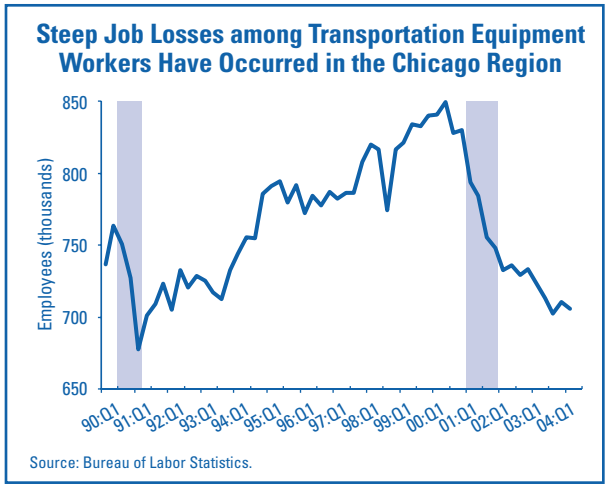
Have Chicago Region Community Banks Been Adversely Affected by Auto Sector Job Losses?

Manufacturing, particularly the production of motor vehicles and parts—typically referred to as "auto-manufacturing" in this article—has played an important role in the **Chicago** Region's economy for decades. During 2003, about 40 percent of the nation's employment in transportation equipment manufacturing was located in the Region's six states: **Illinois, Indiana, Kentucky, Michigan, Ohio,** and **Wisconsin.**[1]

Many domestic auto manufacturing firms have faced financial challenges and thin profit margins for some time. Small supplier firms, in particular, have been disappearing because of mergers, acquisitions, or closures. Technology has facilitated expansion of auto-related output without parallel growth in employment.[2] Such factors contributed to the recent sharp drop in employment by transportation equipment firms in the Region (see Chart 1).

Employment cutbacks by auto manufacturers in this sector may affect the financial health of community banks and thrifts headquartered in areas with high exposure to the this sector in a variety of ways.[3] For example, loan growth and credit quality, deposit growth, and fee income opportunities could reflect the condition of auto manufacturers, households that derive their income from these firms, and small local businesses that rely on both.

Chart 1



To evaluate potential effects on community lenders, we identified a group of insured institutions operating in counties with relatively high employment exposure to auto manufacturing. We compared several key performance measures between the institutions based in these counties and institutions operating in markets with less exposure. The results of the analysis suggest that any county-level relationship between high auto manufacturing employment exposure and community bank performance is tenuous.

Employment by Auto Manufacturers Is Concentrated in the Chicago Region

The Chicago Region economy represented 18 percent of national employment in 2003, about 24 percent of the nation's manufacturing output, and 61 percent of the nation's auto manufacturing output.[4]

Production of motor vehicles and equipment generates more than 4 percent of the Region's real gross product, nearly four times the national share. Only Illinois, with 0.7 percent of its real gross state product (GSP) generated by this sector, has a smaller share than does the nation. At the other extreme, auto manufacturing generates about 9 percent of GSP in Kentucky and Michigan.

Michigan's dependence on auto manufacturing is about half what it was 15 years ago, reflecting growing economic diversification in the state and faster growth of industries other than vehicles and parts. In contrast,

[1] The transportation equipment industry includes motor vehicles and parts as well as airplanes, ships, and railroad equipment.
[2] See "The U.S. Manufacturing Sector: A Strong Past and an Uncertain Future" in this issue of ***FDIC Outlook***.

[3] The performance of large banks likely is subject to economic conditions beyond those in headquarters locations. As a result, our study focused on insured community banks and thrifts (institutions that hold assets less than $1 billion, excluding de novo and specialty institutions).
[4] Data reflect 2001 output shares, the most recent available.

the sector's role in the Kentucky economy more than doubled during the past decade, reflecting the development of a major transplant assembly plant, expansion of United States-owned plants, and the growth of supplier firms.[5]

Many more workers are employed by firms that make parts and equipment than by vehicle producers.[6] Employment data with this level of detail are available from the ***Bureau of Labor Statistics*** for three states in the Chicago Region. Michigan is the site of many assembly plants and the "Big Three" corporate headquarters (GM, Ford, and DaimlerChrysler), along with design, research, and engineering staff. Even so, employment in the state's parts and equipment sector was more than double that of vehicle producers in recent years. In Ohio, the ratio of workers making parts to those hired by producers was about three to one, while in Indiana it was almost six to one.

Production of motor vehicles and parts occurs in about 60 percent of the Region's 557 counties, according to estimates for 2003 from ***Global Insight, Incorporated,*** an economic analysis firm. The industry's share of employment in 182 counties was as high as 6 percent, but the actual number of workers was fairly low, at 550 or fewer. These figures illustrate that some counties with a relatively high share of auto manufacturing employment have rather low employment levels overall, but one or two plants hire a significant share of local workers.

Wayne County, Michigan, home to **Detroit,** has the highest (72,200) of auto manufacturing workers in the Region. Eleven counties in the Region have at least 9,500 auto sector workers: six of these counties are in Michigan, two in Ohio, two in Indiana, and one in Kentucky. Many of these counties are in large, urban areas with diversified economies; as a result, only Scott County, Kentucky, and Howard County, Indiana, also rank in the top dozen when sorted by auto manufacturing share of employment.

[5] "Transplant" is a term used to describe a foreign-owned plant located in North America. Transplant facilities produced 25 percent of light-vehicle output in North America in 2002. Japanese producers other than Toyota, Honda, and Nissan are controlled by, or allied with, GM, Ford, or DaimlerChrysler. (Source: John McElroy, "Fight Fire with Fire," *Ward's AutoWorld,* March 1, 2004.)

[6] Along with assembly line workers, employment by producers includes headquarters, research and development, design, and other professional staff.

In an effort to gauge the employment exposure of counties to auto manufacturing, we developed an index with equal weights for the number of workers in that industry and their share of county employment. The 100 Chicago Region counties with the highest employment exposure to auto manufacturing (and that are home to at least one community bank or thrift) are listed in the appendix.

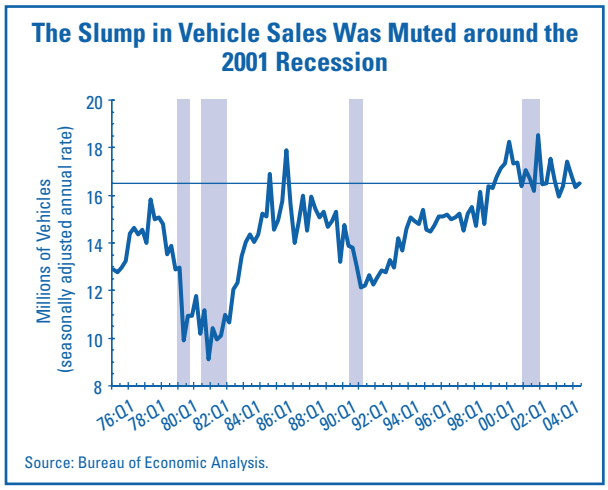
Structural and Cyclical Developments Affect the Motor Vehicle Sector

For some time, a mix of cyclical and longer term structural elements has buffeted domestic auto manufacturers. Structural factors such as productivity growth, producers' growing reliance on supplier firms for parts (outsourcing), and increased use of robotics tend to be relatively impervious to cyclical contractions and expansions.

Other structural changes affect individual states and Regions more than the nation as a whole. For example, a growing share of auto manufacturing facilities is now located in the southern half of the auto corridor as a result of site selection decisions by transplant producers and the associated growth of supplier plants.[7]

Auto manufacturing also is highly cyclical in nature. When the 2001 cyclical downturn is measured by vehicle sales, its severity was quite muted (see Chart 2).

Chart 2



[7] The auto corridor is bordered approximately by interstate highways 65 and 75, extending south from Michigan.

However, vehicle manufacturers offered generous rebates, low-interest financing, and other inducements to sustain demand. Even though the annual sales pace for domestic cars and light trucks held at around 16.5 million units during and after the 2001 recession, employment among transportation equipment manufacturers fell sharply during the same period.

To the extent that auto manufacturing output and job contractions are cyclical, they are likely to be followed by cyclical rebounds. In turn, small businesses and households that depend heavily on this industry need financial cushions that will carry them through the slowdowns.

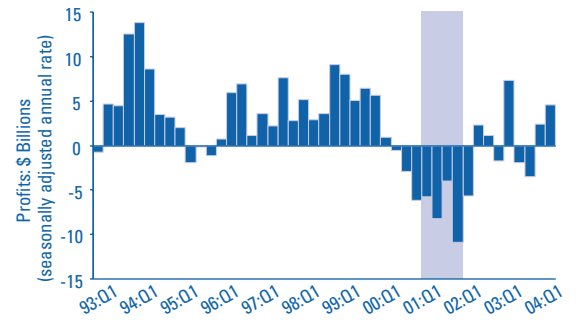
In contrast, to the extent that the industry's job contractions are structural and thus permanent, the economic challenges for workers and firms can be steep and long lasting. Many communities in the Chicago Region that are dependent on auto manufacturing are affected by these structural and cyclical conditions, albeit to varying degrees.

The historical experience of many community banks and thrifts in Michigan, Ohio, and the upper Midwest guides how they plan for and manage the local impacts from cyclical swings in auto manufacturing. These banks and thrifts also are familiar with structural trends, such as the demise of small, independent supplier firms and the fact that rising productivity and other factors trim the potential for robust auto sector job growth.

Structural Challenges Are Significant

As a group, U.S. producers of motor vehicle and parts frequently reported losses from current production in recent years (see Chart 3) despite the strong sales pace and the fact that the industry's capacity utilization rate remained relatively high. The use of record-level rebates and incentives contributed to some producers' poor profitability record. Sales incentives offered by the Big Three more than doubled between 1999 and late 2003, to $4,000 per vehicle, yet these companies lost market share.[8]

Chart 3



Note: Data are not entirely comparable before and after first quarter of 2001 due to change in methodology at source agency. Data reflect before-tax profits with inventory valuation adjustments.
Source: Bureau of Economic Analysis.

In this environment of low profitability per vehicle produced, several Big Three corporations recently generated more income from their financial arms than from their production operations.[9] Without the financing side of each corporation to counter the marginal profitability from producing vehicles, the effects on the Chicago Region economy from downsizing of the light-vehicle industry might have been more severe.

Motor vehicle producers assemble and deliver finished cars and lightweight trucks.[10] These firms operate in an environment of substantial excess production capacity in North America and worldwide. Consequently, they face keen competition for potential customers and limited ability to raise profits through higher prices.

Pensions and other liabilities to retirees are substantial for the Big Three firms and do not fluctuate with production volumes.[11] Firms thus have a high proportion of fixed costs relative to variable costs, and reducing production runs does not reduce total operating costs dramatically.

[8] Thomas Klier, "Challenges to the U.S. auto industry," *Chicago Fed Letter,* March 2004, referring to comments by Iain Carson, industry editor of *The Economist,* at a conference sponsored by the Federal Reserve Bank of Chicago. The exact dollar amount of incentive differs by sources, but few question that it has risen.

[9] See, for example, Lee Hawkins, Jr., "Outside Audit: Guess Why GM Is More Bank Than Car Maker? Finance Arm GMAC Gives Firm Most of Its Earnings; 0% Car Loans Pay Off, Too," *The Wall Street Journal,* May 5, 2004.

[10] Lightweight vehicles are automobiles plus Class I and Class II trucks, which have a gross vehicle weight of 10,000 pounds or less. Some producers also own "captive supplier" subsidiaries.

[11] The collective benefit expense of Detroit-based producers is estimated to rise 80 percent from 2002 to 2007, and the pressure on cash flow is likely to peak in 2008–2012. (Source: Kenneth N. Gilpin, "Cool on Cars, but Warm on Car Parts," *The New York Times,* June 22, 2003, quoting Goldman Sachs & Company's auto analyst Gary R. Lapidus.)

Because vehicle producers often lack an economic motive to curtail production, the number of trucks and cars available for sale often exceeds demand. This imbalance, in turn, leads to price and incentive "wars." One result of this strategy is that producers can face difficulties in generating profits from their manufacturing operations.

Transplant facilities have a cost advantage compared with the Big Three. In general, transplants operate relatively new and efficient plants, are located in states with lower wage rates, lack the pension and medical "legacy costs" for a large pool of retirees, and have greater flexibility in scheduling employee work hours and duties. Therefore, the economic impact of an assembly plant on a locality can vary considerably, depending on whether or not the plant is unionized and run by one of the Big Three.[12]

The 2003 United Auto Workers contract with the Big Three allows the firms greater flexibility in closing plants than the previous contract. Indeed, Detroit-based automakers have announced plans to reduce capacity in the next three years. This strategy likely will trim production and employment in the Chicago Region, but it is unlikely to resolve the vehicle glut or production profitability problems.

Foreign producers, meanwhile, have announced plans to increase their U.S. production capacity by 1.8 million vehicles, about twice the capacity being trimmed by the Big Three.[13] Thus, excess supply in the North American market, which was two million vehicles in 2003, may not shrink substantially in the next five years.[14] In the coming years, therefore, economic conditions in communities with high exposure to the sector may remain in flux, as some firms and locations experience auto manufacturing payroll growth while others face shrinkage.

Manufacturing of equipment and parts is less concentrated among a few firms than is vehicle production. Some analysts feel that domestic supplier firms' profitability and viability are under severe pressure because the Big Three, in particular, impose cost-reduction requirements on their suppliers, while production from abroad limits domestic suppliers' pricing power.

Although cost containment is one factor in producer-supplier relationships, the mutual nature of the relationship plays out in a number of ways. Vehicle manufacturers, for example, are entering longer-term contracts with suppliers (often for the life of a vehicle model) to foster engineering and design improvements while lowering per-unit parts prices (via larger production runs). Consequently, suppliers can invest in new products or production techniques without losing a major customer when an annual contract is renewed.

Some supplier firms diversify risks by developing relationships with the Big Three and transplant firms. Others spread risks by serving not only new vehicle producers but also the replacement part market, and some produce for nonvehicle markets. For example, a firm might make molded plastic parts for computers as well as for vehicles.

Producers prefer to purchase systems or modules rather than individual pieces and parts, a trend that favors certain suppliers. This trend has pressured the viability of small firms that produced a limited variety of individual parts. Some of these firms responded by expanding sufficiently to produce the new systems; some merged or formed alliances with firms that made similar or complementary parts; and others closed.

All of these conditions and changes might be expected to stress the economic vigor of communities with historically high auto employment exposure. In turn, lenders and providers of financial services could suffer. The extent to which declining auto manufacturing employment in a market hurts community banks and thrifts, however, would reflect these institutions' skill in managing risks and observing prudent underwriting as well as other factors.

How Are Community Banks and Thrifts Faring in Auto Manufacturing Counties?

As challenges facing the auto manufacturers remain and job losses continue in the Chicago Region, concerns have arisen about the possible adverse effects on banks and thrifts headquartered in communities with high employment exposure to producers of vehicles and parts.

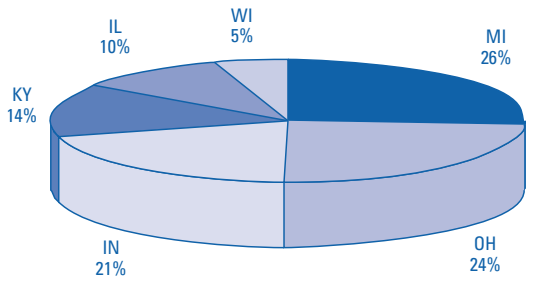
[12] The degree of income volatility among households and small businesses in a bank's market area may vary considerably, depending on whether local auto manufacturing workers are employed in union or nonunion plants.
[13] Diane C. Swonk, "The Fairy Tale Economy—What's Real, What's Not," in *One View of the Economy,* Bank One, February 2004.
[14] Kenneth N. Gilpin, "Cool on Cars, but Warm on Car Parts."

To evaluate the economic implications for the Region's community banks, we compared the overall risk profile and financial performance of two groups: insured community institutions headquartered in counties with the greatest employment exposures to auto manufacturing and all other community institutions in the Region.

The Chicago Region is home to 1,779 community institutions. Of these, 326 are located in counties with relatively high employment exposure to auto manufacturing. These institutions are primarily based in Michigan, Ohio, and Indiana (see Chart 4). The median asset size of these 326 institutions is $126 million, versus $105 million for other institutions, suggesting that both groups operate traditional types of local banking.

Chart 4

Institutions in Counties with High Exposure to Auto Manufacturing Are Concentrated in Three States



Source: FDIC, Data as of December 31, 2003.

Despite stresses among auto manufacturers, overall credit quality among community institutions with relatively high auto manufacturing exposure relative to other community institutions has not changed significantly since the 2001 recession. Both groups reported improving asset quality, with similar delinquency ratios in recent years. This stability exists, in part, because these institutions rarely lend directly to large vehicle producers or supplier firms. Although institutions in counties with high auto manufacturing employment reported a slightly higher 30- to 90-day past-due ratio, their noncurrent ratio was lower than among other institutions. Though both groups have a similar loan portfolio mix, delinquency ratios for 1- to 4-family mortgages and consumer loans were slightly higher among institutions in counties more reliant on auto manufacturing. However, this relationship could reflect conditions other than falling employment among producers of motor vehicles and parts.

Historically, profitability has declined during economic downturns with increasing credit costs. However, despite the recent recession, insured community institutions based in the Chicago Region have maintained solid earnings and, notably, the earnings performance of institutions in auto manufacturing counties has been comparable to that of other community institutions. Yet, about 6 percent of institutions in these counties were unprofitable in 2003, slightly higher than for other institutions in the Region.

Conclusion

As noted in the ***FDIC Manual of Examination Policies,*** economic downturns or local exposures to declining industries can affect borrower repayment potential adversely and reduce collateral protection. Reliance on previously existing conditions and overly optimistic expectations for economic improvement could contribute to loan and deposit portfolio deterioration.[15]

The Chicago Region has been characterized by relatively high dependence on auto manufacturing for many years. As a result, households, businesses, and lenders likely have learned to manage and adjust to the inherent risks. Moreover, many who worked for dominant motor vehicle firms received relatively generous pay and benefits that carried over into retirement, regardless of the timing of that retirement. Union benefits also may have cushioned the financial shock of job loss for some workers. Thus, while the risk profile of banks and thrifts based in auto manufacturing communities may be expected to be higher than those based elsewhere, recent historical experience does not confirm this hypothesis. Rather, banks and thrifts in these areas appear to be managing the risks appropriately.

The results of this study may not apply to other Regions, as conditions and industry stresses differ among geographic areas. As economic conditions change, bankers should monitor lending policies and portfolio credit quality carefully.

Chicago Region Staff

[15] *FDIC Manual of Examination Policies,* Section 3.1 (Loans) and IV (Lack of Attention to Underlying Economic Conditions), February 2002, www.fdic.gov/regulations/safety/manual/Section3-1.html.

Appendix

Chicago Region Counties That Are Characterized by Relatively High Employment Exposure to the Motor Vehicle and Parts Industry

Weighted Ranking	County	State	MV&P Employment 2003 Level	MV&P Employment % of Total Employment	Weighted Ranking	County	State	MV&P Employment 2003 Level	MV&P Employment % of Total Employment
1	HOWARD	IN	16,885	32.0	51	EATON	MI	1,825	5.2
2	SCOTT	KY	9,582	35.6	52	KENOSHA	WI	2,264	4.8
3	TRUMBULL	OH	12,602	13.1	53	MONTGOMERY	IN	1,188	6.3
4	SAGINAW	MI	12,760	12.3	54	ST CLAIR	MI	2,330	4.5
5	UNION	OH	4,752	17.9	55	CHAMPAIGN	OH	1,014	7.5
6	LOGAN	OH	4,201	18.1	56	CASS	MI	892	8.4
7	MACOMB	MI	33,051	9.3	57	CLARK	IL	650	11.0
8	WAYNE	MI	72,203	8.4	58	LINCOLN	KY	598	13.5
9	MERCER	KY	2,883	29.5	59	ALLEN	OH	2,388	4.1
10	CALHOUN	MI	6,931	11.2	60	ROSS	OH	1,512	5.0
11	HILLSDALE	MI	3,373	16.2	61	TUSCOLA	MI	953	7.0
12	ELKHART	IN	11,701	9.4	62	ALLEN	IN	5,454	2.8
13	GENESEE	MI	14,913	8.8	63	DARKE	OH	1,147	5.1
14	TIPPECANOE	IN	6,795	10.4	64	BARREN	KY	1,034	5.3
15	NOBLE	IN	3,171	14.0	65	JACKSON	MI	2,488	3.5
16	INGHAM	MI	17,728	8.3	66	JEFFERSON	IN	910	6.1
17	BOONE	IL	2,876	17.8	67	WAYNE	IL	566	10.4
18	CASS	IN	3,032	13.8	68	WINNEBAGO	WI	2,832	3.0
19	ST JOSEPH	MI	3,279	13.2	69	BRANCH	MI	1,012	5.1
20	EDWARDS	IL	1,813	52.9	70	KOSCIUSKO	IN	1,631	3.9
21	LAWRENCE	IN	2,403	13.5	71	JOHNSON	IN	1,718	3.8
22	IONIA	MI	2,544	12.2	72	WYANDOT	OH	741	6.9
23	HANCOCK	IL	1,758	23.9	73	MARSHALL	IN	1,089	4.7
24	SHELBY	OH	2,704	10.8	74	JEFFERSON	KY	8,746	1.9
25	ROCK	WI	5,546	7.7	75	PULASKI	IN	532	9.4
26	CLARK	OH	4,428	7.8	76	WAYNE	OH	1,825	3.3
27	LORAIN	OH	7,049	6.1	77	LAPEER	MI	1,012	4.5
28	HARDIN	KY	3,484	7.4	78	FRANKLIN	KY	1,412	3.6
29	LIVINGSTON	MI	3,682	7.2	79	POLK	WI	750	5.3
30	STEUBEN	IN	2,348	9.4	80	WAYNE	IN	1,310	3.6
31	HUNTINGTON	IN	2,011	10.3	81	WASHINGTON	IL	592	7.1
32	OTTAWA	MI	6,212	5.3	82	HARDIN	OH	620	6.0
33	MONTGOMERY	OH	15,180	4.9	83	MADISON	KY	982	4.3
34	NELSON	KY	1,532	9.1	84	GRANT	IN	1,202	3.5
35	FOUNTAIN	IN	944	13.6	85	JO DAVIESS	IL	631	5.2
36	ADAMS	IN	1,373	8.4	86	NOBLE	OH	325	13.6
37	BERRIEN	MI	2,938	5.1	87	ALLEN	KY	459	7.9
38	CLAY	IN	983	13.0	88	HIGHLAND	OH	636	4.2
39	BARTHOLOMEW	IN	2,400	5.4	89	HENDERSON	KY	887	3.5
40	HENRY	IN	1,322	7.9	90	KENT	MI	4,212	1.2
41	WOOD	OH	2,534	5.0	91	MONTCALM	MI	622	4.1
42	WASHTENAW	MI	8,646	3.6	92	DE KALB	IN	789	3.4
43	BUTLER	KY	709	15.0	93	HENRY	OH	537	4.6
44	OAKLAND	MI	23,515	3.0	94	WARREN	KY	1,142	2.1
45	GRATIOT	MI	1,117	8.4	95	MARION	IN	5,511	0.9
46	DUBOIS	IN	1,721	5.7	96	MADISON	OH	614	2.6
47	DELAWARE	IN	2,348	5.0	97	CHRISTIAN	KY	944	2.6
48	MC LEAN	IL	3,400	4.0	98	CLERMONT	OH	1,166	2.0
49	VAN WERT	OH	1,024	8.1	99	FAYETTE	IN	523	4.4
50	CLINTON	OH	1,509	6.0	100	WILLIAMS	OH	636	3.1

Source: Employment estimates for 2003 on a U.S. Standard Industrial Classification (SIC) basis are from Global Insight, Inc. Only counties with at least one community institution headquartered there are listed.

The U.S. Agricultural Sector: Recent Events Highlight Ongoing Systemic Risks

Compared with the troubled 1980s, the U.S. agricultural sector has been profitable and stable in recent years. Crop and livestock production has been positive, prices have improved overall, and federal government payments have bolstered farmers' incomes. Agricultural lenders, in general, are reporting stable financial conditions. In addition, change affecting the agricultural sector, in the form of technological progress and steady consolidation of the industry, has been gradual and largely predictable. However, several recent developments, such as the filing of international trade disputes, the incidence of "mad cow" disease at the end of last year, and continuing water shortages across the West, highlight long-term, systemic risks that may profoundly affect the agricultural industry.

Farm Income Levels Continue to Be Positive and Bank Conditions Are Stable

During 2003 the U.S. agricultural sector earned $54.9 billion in net farm income, the best performance since 1996. A record corn crop, high cattle prices for much of the year, and significant government payments contributed to this strong performance.

Prices of most major commodities are forecast to be even higher in 2004 than in 2003 because of low worldwide crop inventories and declining supplies in the livestock sector (see Table 1). With normal weather, the revenues earned from crop production will likely increase in 2004. Revenue from livestock production is forecast to decline slightly but is still expected to be the third-highest level on record.

In the first half of 2004, the ***U.S. Department of Agriculture (USDA)*** forecasted net farm income at $47.6 billion for the current year, a level in line with the ten-year average but down somewhat from 2003. Much of the difference in net farm income between 2003 and 2004 can be attributed to the fact that government payments are expected to decline about $7 billion in 2004. During 2003, emergency assistance provided to farmers in response to the drought experienced in previous years resulted in large government payments. Higher prices throughout 2004 would likely result in lower levels of federal assistance.

According to the USDA, the net worth of the farming sector is forecast to increase more than 3 percent in 2004, supported by continued strength in the value of farmland, which accounts for more than 80 percent of total industry assets.[1]

Table 1

Prices of Most Commodities Are Projected to Be Strong through 2005

	2001	2002	2003	Estimated 2004	Projected 2005
Corn	1.85	1.97	2.32	2.50	2.75
Soybeans	4.54	4.25	5.53	7.65	6.20
Wheat	2.62	2.78	3.56	3.40	3.55
Cattle	72.71	67.50	84.69	86.00	86.00
Hogs	45.81	34.92	39.45	48.00	47.00
Milk	14.97	12.10	12.52	16.40	13.55

Notes: Grain prices are for marketing year of each crop. Crop quantities are per bushel; livestock and milk are per hundredweight. Commodities are listed in order of total cash receipts by product groupings: crops, meat, and milk.

Sources: U.S. Department of Agriculture/World Agricultural Supply and Demand Estimates, June 10, 2004.

[1] USDA/Economic Research Service, Farm Income and Costs Briefing Room, www.ers.usda.gov/Briefing/FarmIncome.

Banking Industry Conditions Reflect Solid Performance of the Agricultural Sector

Overall, the financial condition of the nation's 1,730 farm banks remains satisfactory.[2] In aggregate, reported asset quality indicators, such as past-due loan levels and net charge-offs, remain low, and profitability and capital levels remain high. In first-quarter 2004, farm banks reported a median delinquency ratio of 2.27 percent and a net charge-off ratio of 0.12 percent, the lowest first-quarter figures during the past five years. However, farm banks located in drought-stricken areas of the West and Great Plains are reporting far higher delinquency ratios. The drought-induced stress also is evident in Safety and Soundness examination trends. The number of farm banks based in drought-affected areas that have been rated 3, 4, or 5 for asset quality is increasing but remains manageable.[3]

Despite the stability currently experienced in the farm sector and by its lenders, several recent events suggest that significant systemic risks remain—specifically consumer attitudes about the safety of food, ongoing water shortages, and events regarding farm policy.

Systemic Risks to the Agricultural Sector Are Emerging

Consumer Attitudes: What Does the "Mad Cow" Incident Suggest about Consumer Attitudes Toward Food Safety?

U.S. cattle prices in both the cash and futures markets declined sharply in the weeks following the announcement of the discovery of the first occurrence of mad cow disease in the United States in December 2003 because of expectations of an adverse reaction by consumers.[4] However, the discovery actually had no discernible effect on domestic beef consumption, and prices rebounded quickly. According to one prominent industry analyst, domestic retail demand for beef increased 6.2 percent on a year-over-year basis in first-quarter 2004, and cash cattle prices recovered by early May.[5] This result was consistent with academic research that shows that demand for meat products by U.S. consumers is not significantly affected by adverse information about product safety. Researchers at ***North Carolina State University*** and ***Kansas State University*** found that price, seasonal factors, and precommitted levels of consumption override the effects of such adverse events. The effects that were observed were transitory and not cumulative over long periods.[6] Though U.S. consumers do not appear to have been significantly or permanently affected by the single case of mad cow disease, the incident may have wider ramifications for the long-term health of the country's agricultural sector.

This incident highlights fundamental differences between the attitudes of U.S. consumers and those of European and Japanese consumers about the role of scientific evidence in formulating regulatory policy. Some observers suggest that the relatively frequent food scares in Europe, such as the original bovine spongiform encephalopathy (BSE) crisis in England, *E coli* incidents, and dioxin-tainted animal feed, have made European consumers more wary of threats to the safety of their food. Political analysts also suggest that the decentralized nature of Europe's regulatory system makes it more susceptible to political pressure than is the U.S. Food and Drug Administration. Also, European consumers are not as accustomed as Americans to a steady stream of novel food products.[7] European regulatory agencies often feel that they have to heed the concerns of the general public, regardless of whether regulatory action is justified in the eyes of the scientific community.[8]

[2] An FDIC-insured bank is considered a "farm bank" if total agricultural production loans and loans secured by farmland are at least 25 percent of total loans.

[3] Using data from U.S. Drought Monitor maps (http://drought.unl.edu/dm) published the first week of June 2000 through June 2004, we grouped the individual counties of all continental states west of the Missouri River according to whether they have been largely affected by persistent drought or not. We then examined the proportions of farm banks headquartered in each group that have a current Safety and Soundness Regulatory Examination asset quality rating of 3, 4, or 5. Such a rating indicates that the institution's asset quality and/or credit administration is less than satisfactory. For farm banks in areas of persistent drought, the proportion with less than satisfactory asset quality has risen from 7.2 percent in March 1998 to 14.8 percent in March 2004. Comparatively, for farm banks in areas less affected by drought, the proportion has risen from 8.0 percent to 11.7 percent in the same period.

[4] Mad cow disease is technically referred to as bovine spongiform encephalopathy, a degenerative disease of the nervous system.

[5] Smith, Rod. May 10, 2004. "Cattle return to December levels; demand exceeds all experience." *Feedstuffs* 76(19).

[6] Piggott, Nicholas E., and Thomas L. Marsh. "Does Food Safety Information Impact US Meat Demand?" North Carolina State University Working Paper, pp. 32–33. www.ag-econ.ncsu.edu/faculty/piggott/food_safety.pdf.

[7] "Biotechnology's Transatlantic Divide," Council for Biotechnology Information, www.whybiotech.com/index.asp?id=3638.

[8] Zavon, Juliet. February 27, 2004. "Food safety and the consumer: What matters and whose requirements count?" *Feedstuffs* 76(9).

This relatively conservative attitude toward food safety was evident among countries that import beef from the United States, including Japan, South Korea, and Mexico. These countries reacted immediately to the news of the discovery of BSE by suspending all imports of U.S. beef. As of mid-July, these major destination countries have continued this policy. Japan, the most important destination for U.S. beef, has insisted that all cattle slaughtered for export be tested for BSE, while the United States continues to maintain that such extensive testing is neither necessary nor prudent.[9]

Similarly, this divergence in attitude between U.S. and foreign consumers and regulators is evident in the ongoing controversy about genetically modified (GM) crops. In the United States, soybean seed that was genetically modified to be tolerant of herbicides was first introduced in 1996 and, in 2003, constituted 81 percent of all soybeans planted in the nation. Similarly, 59 percent of all U.S. cotton planted in 2003 was genetically modified, as was 29 percent of the corn crop.[10] In the United States, labeling of biotech products is not mandatory, and consumer attitudes toward the products are not well-formulated, as some argue that the speed at which the technology has been adopted has outstripped the public's ability to understand it.[11]

The European Union (EU), on the other hand, instituted a ban on new GM products six years ago, and the EU and Japan require that GM foods be labeled. The United States has protested this policy before the World Trade Organization (WTO), arguing that no one has ever presented scientific evidence showing that GM crops pose a risk to humans, animals, or the environment, and that U.S. farmers have been denied $1.8 billion in export opportunities.[12] On a global scale, the future of GM crops remains uncertain. In early May, the Monsanto Corporation, the largest producer of GM seeds, announced it was delaying the introduction of an herbicide-resistant wheat variety because of uncertainties in the international market.[13]

The international reaction to the "mad cow" incident and the ongoing resistance to GM crops suggest that the U.S. agricultural sector is facing a new set of challenges in the world marketplace, where the attitudes of consumers are profoundly different from those in the domestic market. As U.S. producers become more closely integrated into global markets, they may have to be more sensitive to the needs and wishes of foreign customers. In addition, they must be prepared for U.S. consumers to be influenced by foreign perceptions about food safety.

Water Shortages: Are They a Precursor to Conflict in the West and Great Plains?

The **Kansas City** *Regional Perspectives* article in the Spring 2004 ***FDIC Outlook*** described the effects of long-term or "hydrological" drought on the Kansas City Region.[14] Long-term drought issues are causing water shortages that are prompting conflicts between farm users (those who irrigate with wells) and urban users and developers. Changes in water policies stemming from ongoing shortages could significantly affect farmers.

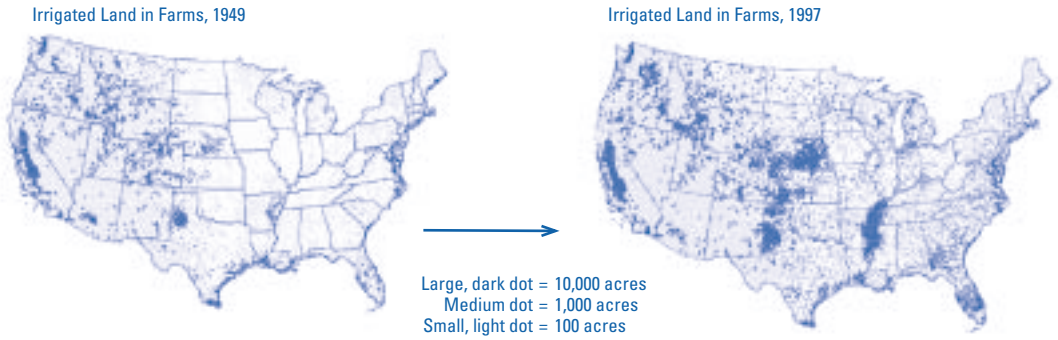
The agricultural sector's dependence on irrigation has grown considerably since 1949 (see Map 1, next page). The Great Plains and the Mississippi Delta have significantly increased the use of irrigation.

The extended drought that has persisted for six years in some parts of the West and the Great Plains has prompted concerns about the long-term sustainability of irrigated agriculture. In the Southwest and West, particularly, sustained growth of cities has increased demands for drinking water, as well as water for industrial uses and recreation. Historically, increased demands were met by expanding available supplies, but future opportunities for expansion of water supplies are

[9] Schuff, Sally. April 5, 2004. "Japan appears to reject U.S. BSE testing proposal." *Feedstuffs* 76(12). Howie, Michael. March 22, 2004. "Hueston: Testing all cattle for BSE not warranted." *Feedstuffs* 76(12).
[10] Agricultural Biotechnology: Adoption of Biotechnology and Its Production Impacts. USDA/Economic Research Service Briefing Room, http://www.ers.usda.gov/Briefing/Biotechnology/chapter1.htm.
[11] "Consumers and the Future of Bio-Tech Foods in the United States." USDA/Economic Research Service. November 2003. *Amber Waves* 1(5): 35.
[12] Elliot, Ian. April 30, 2004. "EU moves closer to ending GM ban." *Feedstuffs* 76(18).
[13] Schuff, Sally. May 14, 2004. "Monsanto shelves GM wheat after industry resistance." *Feedstuffs* 76(20).
[14] "Hydrological Drought Conditions Are Expected to Affect Farmers and Their Lenders," *FDIC Outlook,* Spring 2004, p. 25.

Map 1

Irrigated Cropland Has Increased Dramatically in the Past Half-Century



Sources: U.S. Department of Agriculture (USDA). Economic Research Service based on Census of Agriculture; U.S. Department of Commerce, Bureau of the Census, 1949; and USDA, National Agricultural Statistics Service, 1997.

more limited because of the shortage of suitable sites and environmental concerns. Instead, future water demands will likely be met by reallocating existing supplies; because agriculture is the largest user, reallocation will surely result in reduced supplies for that sector.[15]

In fact, recent press coverage shows that this reallocation is already occurring in some markets. For example, in 2003 farmers in the Imperial Valley of Southern California sold some of their irrigation water to the San Diego urban water district. Though economists see such transactions as an efficient means of allocating the water to its most valuable use, agricultural sector advocates argue that they threaten the long-term viability of the growers.[16] In another example, a number of cities in Northern Texas have been purchasing water rights from farmers and ranchers since the 1980s, and their demand for water continues to grow.[17]

These examples in Southern California and the Great Plains suggest that soon farmers may not be able to consider water a free resource. If they are forced to pay the economic value of their water, many farmers will not be able to afford the massive irrigation that is currently practiced. Significant declines in agricultural revenue, net income, and, ultimately, the value of farmland could result.

Potentially more troubling is new evidence that casts doubt on the ability of western states to sustain their present level of economic growth. Research by a hydrologist at the U.S. Geological Survey on the drought cycles of the American West suggests that the relatively wet weather enjoyed in the 20th century may have been an historical aberration, and not the norm on which land development decisions should be based. Studies of tree rings suggest that long periods of drought, such as the current one, are more likely the normal state of affairs over the long term.[18] If this evidence is correct, the days of water-intensive agriculture in the western states may be numbered.

World Trade Organization Ruling on Cotton Subsidies Is Worth Watching

The U.S. farm program provides significant financial support to the agricultural sector. From 1990 through 2003, government payments represented more than 26 percent of total net farm income. Government payments are disproportionately important in those states that concentrate in commodities that are

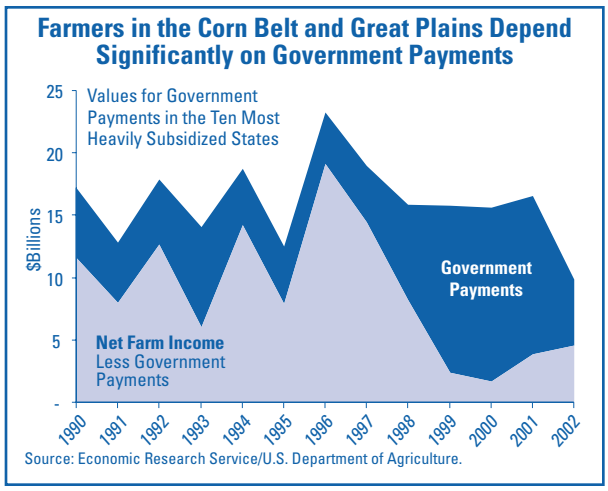
[15] Gollehon, Noel, et al. February 2003. "Water Use and Pricing in Agriculture." *Agricultural Resources and Environmental Indicators, 2003,* USDA/Economic Research Service. www.ers.usda.gov/publications/arei/ah722/arei2_2/arei2_2irrigationwatermgmt.pdf.

[16] Johnson, Kirk, and Dean Murphy. "Drought Settles In, Lake Shrinks, and West's Worries Grow." May 2, 2004. *The New York Times.*

[17] David W. Yoskowitz. 2002. "Water for the Future: The Development of Markets in the Texas Plains." *Water on the Great Plains–Issue and Policies.* Ed. Peter J. Longo and David W. Yoskowitz. Lubbock, TX: Texas Tech University Press, p. 135.

[18] Johnson and Murphy.

Chart 1



included in the farm program (see Chart 1). From 1990 to 2002, the ten states that received the highest level of subsidies represented 34 percent of national net farm income, but 59 percent of total direct government aid.[19] In these states, government aid accounted for more than 45 percent of total net farm income.

The first advance in global trade discussions since 2001 was made during WTO talks held at the end of July 2004 in Geneva. The 147-member group agreed on a new trade framework that will "include outlines for formulas for reducing import barriers, export subsidies and domestic support programs." This framework will guide discussions that will culminate in a WTO meeting in December 2005 in Hong Kong. Of particular interest to U.S. cotton producers, the July 2004 talks resulted in the creation of a new panel that is charged with recommending reforms for U.S. cotton subsidies.

In addition, U.S. government subsidies to cotton producers were the focus of a June 2004 WTO dispute panel ruling that remains confidential. Some press reports have indicated that the result, at least in part, was not favorable to the U.S. position. Details of the ruling are not expected to be made public until late summer or early fall 2004, and the WTO appeals and related processes could continue for more than a year. Nevertheless, given the importance of subsidies to farm income, the outcome could affect U.S. cotton subsidies and is an area to watch for spillover into other subsidies.

Conclusion

Though the U.S. agricultural sector and the banks that support it are currently healthy and profitable, each of the large-scale risks discussed in this article has the potential to affect the industry. And though the issues are likely considered longer term, decisions about what to produce, where to produce, the number of farmers needed to supply our food, and the ultimate impact on farm banks hinge on the resolution of these issues.

John Anderlik, Regional Manager
Richard Cofer, Jr., Senior Financial Analyst
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[19] In order of total aid received: Texas, Iowa, Illinois, Kansas, Nebraska, Minnesota, North Dakota, Arkansas, Missouri, and Indiana.

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