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Financial Fragility and Regional Economic Growth

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Pressures on bank profitability and capital positions have been blamed for the perceived constraint on credit availability in the emerging economic recovery. However, conditions in the banking industry vary significantly by region. The authors examine the potential link between local financial problems and regional economic growth, finding evidence of a regional credit channel.

Although the 1980s ushered in the second-longest economic expansion in U.S. history, regional economic performance was uneven during the decade. These regional disparities were accompanied by a deterioration in the quality of bank loans and a sharp increase in the number of bank failures. Indeed, more than half of the banks that have failed since the Federal Deposit Insurance Corporation was founded in 1933 did so during the 1980s.

Now, in the wake of a national recession, policymakers have become concerned that fragility in the financial sector may be constraining the supply of credit and hampering the economy's recovery. It is widely feared that the pressures on bank profitability and capital positions have caused lenders to restrict the flow of credit required to fuel a growing economy.

In a recent address to Congress, Federal Reserve Board Chairman Alan Greenspan voiced concern about the role that credit is playing in the current economic scenario, stating "... the restraint on credit availability at depository institutions represents a continuing clear risk to the outlook and, therefore, is a critical challenge for [monetary] policy."[1]

What is underemphasized, however, is the regional nature of current financial-sector conditions. Richard Syron, president of the Federal Reserve Bank of Boston, has dubbed problems in the banking industry a "capital crunch" that has been more severe in the Northeast than in other areas of the country.[2]

Regional disparities in credit conditions pose a problem for the Federal Reserve, because they can be difficult to troubleshoot with monetary policy tools that impact credit markets nationally. Although within the past few months the Fed has both cut interest rates and lowered reserve requirements to encourage bank lending, the impact of these policy moves is likely to be entirely different in regions where banks are healthy and willing to lend than in regions where bank capital inadequacy is constraining credit availability.

This *Economic Commentary* examines the linkage between credit conditions and economic activity from a regional perspective and discusses how the health of the financial sector can affect economic performance when credit markets are segmented along regional lines.

■ The Regional Dimension of Credit Woes

While concerns have surfaced about a *national* credit crunch, both anecdotal evidence and financial data indicate that current credit problems are localized in nature, stemming from regional disparities in banking performance during the past decade.

Figure 1 compares the ratio of nonperforming loans to total loans for selected regions to the national ratio from 1982 to 1990. Although the national share of nonperforming loans was relatively flat, there were substantial regional differences in the quality of bank loan portfolios. During this same period, the uneven performance of regional economies became an important focus in assessing the national economy. These disparities are reflected in figure 2, which illustrates the growth rate of personal income relative to U.S. personal income growth for selected regions between 1978 and 1990.

The correlation between regional banking conditions and regional economic performance is not coincidental. The regulatory structure of the U.S. banking industry reflects a long tradition of geographic barriers in the form of interstate branching restrictions. These artificial boundaries have resulted in a banking system that is more or less regionally segmented and whose performance is dependent on the health of local economies. It is not surprising, therefore, that

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FIGURE 1 RATIO OF NONPERFORMING LOANS TO TOTAL LOANS

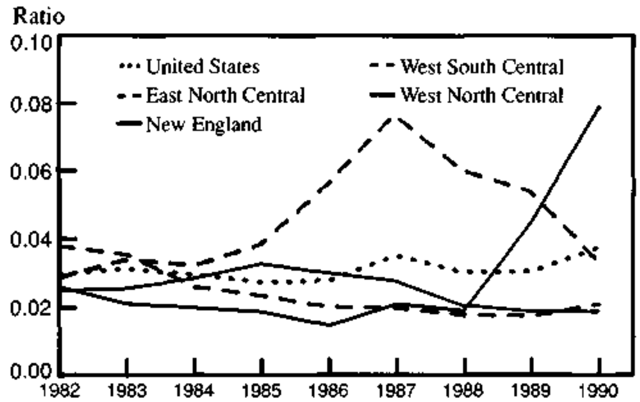
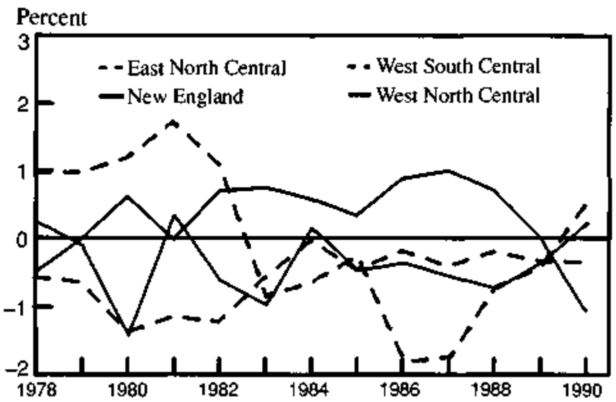


FIGURE 2 DIFFERENCE BETWEEN REGIONAL AND U.S. PERSONAL INCOME GROWTH



SOURCES: Board of Governors of the Federal Reserve System; and U.S. Department of Commerce, Bureau of Economic Analysis.

bank failures in the 1980s were concentrated in those regions experiencing economic distress. The most striking examples were found in the depressed farm belt and oil-producing regions in the mid-1980s, and more recently in the economically distressed Northeast.

■ A Regional Credit View

Evidence that regional economic problems can lead to a deterioration in the loan portfolio quality of local banks has important implications for the government as it regulates, supervises, and insures these institutions. But from a policymaker's perspective, another question is equally important: To what degree do problems in the local banking sector affect future regional economic activity?

The notion that credit market activity may influence real activity has come to be known as the *credit view*.[3] According to this view, credit markets are important in determining the allocation of resources in an economy for two reasons. First, individuals with profitable investment opportunities may not have the financial resources to fund ventures themselves. Second, investors who fund projects often do not have complete information about these ventures and hence face the potentially large costs associated with evaluating and monitoring them. Investors do, however, recognize that borrowers who fund highly leveraged projects may be more likely to default on their debts. Thus, investors will impose stricter credit conditions on these less-creditworthy borrowers to compensate for the higher costs associated with monitoring their projects.

Banks play a vital role in credit markets by identifying, funding, and evaluating investment projects. However, banks' ability to supply credit depends on their capacity to raise funds. Because much of the information produced by banks is confidential, these institutions must be monitored as well. And, just as the costs of monitoring an individual borrower are tied to his creditworthiness, the costs of monitoring a bank are related to the risk that it will fail.

Bank equity capital is the buffer between the performance of bank investments and bank insolvency. Thus, the greater a bank's stock of equity capital relative to potential losses on its loan portfolio, the more creditworthy the institution. The credit view suggests that the creditworthiness of banks affects their ability to finance risky ventures. When a bank is in poor financial condition, regulators (as well as uninsured depositors and equity holders) should impose more stringent credit stipulations on the institution. Regulators do so by limiting the risks that banks may assume and by enforcing capital requirements. Uninsured investors do so by requiring a higher risk-adjusted return.

Diversification helps banks to minimize the cost of raising funds, as it reduces their exposure to the risk of any one loan, or type of loan, and hence their exposure to failure.[4] However, to the extent that banks cannot or do not diversify risks that are costly to monitor, the credit view suggests that the health of banks' balance sheets affects their ability to intermediate credit and to fuel economic growth.

Information costs may be one factor that limits the ability of banks to diversify their lending geographically and thus causes banking markets to be regional. If it is relatively costly to monitor the performance of ventures in other regions, banks will be inclined to concentrate their lending activities locally. This implies, however, that their profitability is more directly related to the economic fortunes of the local market than if their loan portfolios were more geographically diversified. Regulatory restrictions limiting geographic branching further reduce banks' ability to diversify across regions.

Thus, the credit view implies that the information costs that cause the health of local banks to be tied to the health of the local economy may also cause the performance of the local economy to be tied to the health of local banks. It suggests that economically depressed regions may find it difficult to fund a recovery *because* of the associated deterioration in the region's financial health, even though other regions may be flush with funds. For example, capital-impaired Boston banks may be

TABLE 1 VARIABLES RELATED TO RELATIVE STATE OUTPUT GROWTH
Sample period: 1980 to 1986

Lagged variable	High-growth states	Low-growth states
Relative GSP growth	Positive	Positive
Loan growth	Generally none	Generally none
Loan loss reserve growth	Generally none	Generally negative
Return on bank equity	Generally positive	Generally negative
Liabilities of failed businesses[a]	Generally none	Generally negative

a. This measure was scaled by GSP.

NOTE: A complete summary of these results appears in Katherine A. Samolyk, "A Regional Perspective on the Credit View," Federal Reserve Bank of Cleveland, *Economic Review*, vol. 27, no. 2 (1991 Quarter 2), pp. 29-38.

SOURCE: Authors' calculations.

unable to lend to a risky-but-profitable biotechnology firm in New England, while healthier Cleveland banks may find monitoring the firm too costly. In the extreme case, profitable ventures may not be undertaken because of local credit problems, while less productive ventures may blossom in more economically healthy areas. In short, disparate regional credit health can cause the return from investment activity in the overall economy to decline.[5]

To the extent that this credit view accurately characterizes the credit channel operating in regional credit markets today, banks in financially unhealthy regions need to raise capital and strengthen their balance sheets. It should be noted, however, that the regional aspect of credit markets is in some measure an unavoidable result of the very information and monitoring costs that give rise to financial intermediaries in the first place.[6] Thus, it is doubtful that the relevance of the regional credit view will disappear with the easing of interstate branching restrictions, as some banks will not find it profitable to operate under an interstate branching structure and with the associated geographic diversification of their portfolios.

■ Testing for a Regional Credit Link

Most empirical studies of the credit view have looked for a link between credit and economic activity at the national level.[7] However, a regional credit channel may be obscured by data that are so broadly aggregated.

To examine how a region's financial health is related to regional economic growth, we examined state-level data between 1980 and 1986 and tested whether the credit health of borrowers helps to explain the future growth of real gross state product (GSP) relative to the growth rate of the national economy (GNP).[8] The credit view implies that financial problems should be negatively related to a local economy's ability to fund investment activity and, hence, negatively related to future economic growth. Moreover, the relationship between financial-sector conditions and economic activity should be different when a local economy is experiencing difficulties than when it is booming. Quite simply, when a state economy is performing poorly, it is more likely that financial-sector conditions may constrain its growth. To look for this effect, we split the data between low-growth and high-growth state economies.

Several measures of financial health were used in this study, including the liabilities of failed businesses, commercial banks' loan loss reserves (reserves set aside for expected loan losses), return on commercial bank equity (the ratio of net income to equity capital), and the volume of bank loans. The volume of liabilities associated with business failures is related to changes in the overall creditworthiness of business borrowers, as the flow of debt in default decreases their creditworthiness and increases their cost of funding future ventures. Similarly, loan loss reserves are related to the expected default losses on existing loan portfolios and therefore should be negatively related to the creditworthiness of banks.

To the extent that the return on bank equity capital (ROE) reflects the risk-adjusted return to bank lending, a higher ROE may reflect tighter lending standards imposed by banks making riskier loans. Thus, ROE should be negatively related to the credit quality of bank loan portfolios and hence to banks' ability to finance future local economic growth.

The relationship between bank loans and economic activity is somewhat more difficult to interpret in terms of the credit view. Loans are made based on lenders' expectations about the future profitability of projects, as well as on their current capacity to fund these ventures. Thus, new lending could reflect lenders' expectations that coincidentally are good predictors of future output, or credit availability that actually does affect future output. Because of this ambiguity, we include past bank lending growth as a proxy for the expected profitability of local investment opportunities. We interpret bank balance-sheet measures that reflect the financial health inherited from the past (such as loans in default) as more likely to reflect a causal channel from credit conditions to economic activity.

The results of this study support the credit view and point to a channel running from regional credit markets to regional economic performance. In every test we ran, we found a statistically significant relationship between creditworthiness and output growth in state economies that are growing more slowly than the national average (see table 1). That is, the results indicate that a state's poor credit health was a constraint on credit availability in states experiencing relatively low growth. Moreover, this credit channel was less important in states experiencing high growth—a result suggested by the credit view. Regional credit conditions appear to be more important in economies that are performing poorly and thus may inhibit their ability to recover.

Conclusion

Current concerns about credit availability have raised the issue of whether monetary policy should be used to confront problems with credit quality in the banking industry. The regional credit view examined here suggests that the tools of monetary policy may be ill-suited to this task. Current financial problems appear to be the result of regional capital inadequacy, such as the "capital crunch" plaguing the Northeast, rather than a "credit crunch" resulting from the general unavailability of funds.

In addressing the policy implications of a regional credit channel, it is important to distinguish between policies affecting financial market structure and those aimed at promoting noninflationary growth. While lowering interest rates, for example, may temporarily increase the profit margins of capital-impaired banks, such a policy may not be sufficient to jump-start regional lending. And monetary policy tools, which can temporarily influence bank credit availability at the national level, are likely to be an inefficient solution to this essentially regional problem. Moreover, such an approach could have undesirable inflationary effects.

Alternatively, the regional credit view does suggest that a longer-run solution to the current credit constraint may require focusing on those factors that prompt regional credit market barriers. To the extent that some state and federal regulations limit the ability of banks to diversify across regions, these restrictions magnify the link between regional credit health and regional economic activity. While this study has not identified the extent to which branching restrictions induce regional credit markets, it recommends that the benefits of such current regulatory policies should be carefully weighed against the costs of reduced geographic diversification in the banking industry.

Footnotes

1. Statement before the Joint Economic Committee, United States Congress, March 13, 1991.

2. See "Statements to the Congress," *Federal Reserve Bulletin*, vol. 77, no. 7 (July 1991), p. 540.

3. For a survey of literature examining this view, see Mark Gertler, "Financial Structure and Aggregate Economic Activity: An Overview," *Journal of Money, Credit, and Banking*, vol. 20, no. 3 (August 1988), pp. 559–88.

4. For a model in which banks exist to minimize monitoring costs, see Douglas W. Diamond, "Financial Intermediation and Delegated Monitoring," *Review of Economic Studies*, vol. 51, no. 3 (July 1984), pp. 393–414.

5. An earlier paper presents a theoretical model in which regional disparities in financial conditions affect aggregate output. See Katherine A. Samolyk, "The Role of Banks in Influencing Regional Flows of Funds," Federal Reserve Bank of Cleveland, Working Paper 8914, November 1989.

6. A discussion of the comparative advantage of banks as lenders can be found in Eugene F. Fama, "What's Different About Banks?" *Journal of Monetary Economics*, vol. 15 (1985), pp. 29–39.

7. For a related study using national-level data, see Ben S. Bernanke, "Nonmonetary Effects of the Financial Crisis in the Propagation of the Great Depression," *American Economic Review*, vol. 73, no. 3 (June 1983), pp. 257–76.

8. Details of this study can be found in Katherine A. Samolyk, "A Regional Perspective on the Credit View," Federal Reserve Bank of Cleveland, *Economic Review*, vol. 27, no. 2 (1991 Quarter 2), pp. 27–38.

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