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## IMPLICATIONS OF DEREGULATION FOR PRODUCT LINES AND GEOGRAPHICAL MARKETS OF FINANCIAL INSTITUTIONS

George Kaufman, Larry Mote, and Harvey Rosenblum

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#### Implications of Deregulation for Product Lines and Geographical Markets of Financial Institutions

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In his popular 1970 book, <u>Future Shock</u>, Alvin Toffler argued that, while change had occurred to some degree throughout human history, the mid-20th century was experiencing an acceleration of change such that adaptation was proving increasingly difficult, not only for individuals, but also for governments and other social institutions. There are few areas of life where this phenomenon of accelerating change has been more evident than in the markets for financial services. While the changes in banking in the 1920s—the rapid expansion of branch banking; the development of the federal funds market; the gradual shift of banks into consumer credit, term business lending, and mortgage lending; and the dramatically enlarged scope of bank securities underwriting activities—appeared drastic at the time, they pale into insignificance in comparison with the changes in the past two decades. A brief chronological listing of the more important changes includes at least the following items:

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Large negotiable CDs--1961

Bank credit cards--1965

Nationwide bank loan production offices--late 1960s

Entry by bank-originated one-bank holding companies into nonbanking financial activities and the establishment of offices across state lines--late 1960s

Expansion by foreign banks in the United States--1969

NOW accounts offered by Massachusetts mutual savings banks--1972

Failures of large banks--1973-74

Money market mutual funds--1973

Credit union share draft accounts--1974

National banks' operation of CBCTs--1974

Telephone transfers to checking accounts--1975

Interest rate futures trading--1975

Merrill Lynch Cash Management Account--1977

Money market certificates at depository institutions--1978

Adoption by Fed of new reserve-oriented operating procedure--1979

Depository Institutions Deregulation and Monetary Control Act, authorizing nationwide NOW accounts, uniform reserve requirements, phase-out of Reg Q, new thrift institution powers--1980

Variable-rate mortgages authorized for national banks--1981

American Express acquisition of Shearson--1981

Sears, Roebuck acquisition of Dean Witter--1981

Interstate mergers of savings and loan associations--1981

Widespread failures and government-assisted mergers of thrift institutions--1982

The list is only illustrative; a complete list would have dozens of entries. But it does at least suggest how sweeping the recent changes in financial markets have been. The House Banking Committee was so impressed by the scope and magnitude of these changes that it dubbed its recent hearings on financial reform, Financial Institutions in a Revolutionary Era (FIRE).

Whether these changes really warrant the designation "revolution" is, of course, open to some skepticism. Revolutions in the financial sector have been proclaimed almost weekly for more than a decade. The most obvious example is the "whole new ballgame" based on EFT that was first predicted more than a decade ago. Despite bold forecasts of an imminent cashless and checkless society, relatively few payments are made electronically even today; check volume and currency growth have almost kept pace with the growth in economic activity. Nevertheless, the revolution may finally be arriving. One reason is that the Federal Reserve is no longer subsidizing the check-based payments system. Thus, the cost advantages of an electronic system are likely to become progressively more pronounced with the passage of time. Another reason is that cable television and the growing popularity of home computers are preparing the way for consumer acceptance of in-home electronic banking using existing television sets and the telephone system. Once the economics of these systems catches up with their technology, they could produce a massive transformation of the financial services industry in a very short period of time.

If we really are witnessing a revolution, it is still in its early stages. The lesson we learn from the history of American business enterprise is that, in any industry that has undergone a revolution, few of the original firms remain when it is over. 1 Those that survive are typically larger than they were before the revolution and the number of industry competitors is

reduced. This has been true in manufacturing and transportation as well as in retail trade. In some cases, the consolidation has gone well beyond what was dictated by scale economies, and competition has been unnecessarily impaired. The fact that the players in the financial system ballgame have not changed appreciably suggests that it is still not too late to intervene by setting appropriate ground rules for the future. It is the purpose of this paper to analyze the causes of the recent and prospective changes in financial markets, to speculate on their effects on the product lines and geographic markets of financial firms over the next decade or so, and to explore their implications for public policy.

#### Sources of Change

There have been two primary driving forces behind the recent innovations:

- 1. unexpected and abrupt increases in the level and volatility of interest rates and
- 2. major technological improvements in the transmission, processing, and storage of information.

The impact of these two forces was much more dramatic and severe than it otherwise might have been because of a third factor—the existence of a pervasive system of regulations that has limited and distorted the responses of existing financial institutions and contributed to the emergence of new ones. Before analyzing in detail the interaction of these three factors, it may be useful to describe their major features.

Interest rates. From the end of World War II to the early 1970s, interest rates in the United States trended upward but were relatively stable over short periods. For example, the 4-6 month prime commercial paper rate, which stood at .75 percent in 1945, rose to 1.5 percent in 1950, 3.8 percent in 1960, and 7.7 percent in 1970. The stability during the years prior to the

early 1950s reflected the Fed's wartime policy of pegging the prices of Treasury securities. After the 1951 Accord, movements in rates were moderated during the remainder of the 1950s by the Fed's pursuit of a free reserves strategy and during the 1960s by the Fed's emphasis on money market conditions. With the exception of some relatively rapid, but temporary jumps during the Korean War and again during the credit crunches of 1966 and 1969, the increase was gradual. However, fueled by the inflation resulting from several years of accelerating monetary growth and from the supply side shocks produced by the OPEC embargo of late 1973 and the subsequent oil price increases, interest rates rose to new heights in 1973 and 1974. They also embarked on a period of instability not previously experienced in this century. The commercial paper rate, which had fallen to 4.7 percent in 1972, rose to 9.9 percent in 1974, fell back to 5.4 percent in 1976, then climbed to 16.5 percent by the end of 1980 and over 17 percent in 1981. Although the recent behavior of interest rates more closely resembles historical experience prior to the 1930s than did the period of remarkably stable prices and interest rates between 1930 and 1970, 2 the abruptness of the change after 1972 clearly had some wrenching effects on financial markets and institutions grown unaccustomed to such volatility. More recently, the Fed's adoption of a reserves-oriented operating procedure has made the short-run volatility of interest rates even greater.

Technology. Recent technological improvements in transmitting, processing, and storing information originated outside the financial industry and reflect primarily the rapid improvements in the electronic computer. It is these developments, more than anything else in the current picture, that deserve the adjective revolutionary. The magnitude of the advances in this area is dramatically illustrated by what has happened to the costs of

information processing and transmission. It is estimated that hardware with the same capabilities as computers costing a million dollars in the 1950s cost less than \$20 in 1980. Between the mid 1960s and 1980, the monthly rental cost of computer memory space declined by a factor of over 50 and the cost of processing by a factor of over 10. Over this entire period, computing costs have declined at an average annual rate of 25 percent, communications costs at a rate of 11 percent, and memory costs at a rate of 40 percent.

These advances make it possible to transfer funds quickly and cheaply between accounts and institutions and to maintain appropriate up-to-the minute, on-line records. Transfer instructions can be given on-line, preauthorized, or keyed by a "plastic card." This greatly increases the liquidity of all accounts -- and, ultimately, all assets. Because fund transfers among accounts may be keyed by any computer in the network, there is no longer a need for the transfer agent to be a financial institution. It is feasible for a nonfinancial firm operating within a computer network to issue plastic cards to customers who authorize the firm to withdraw funds from designated accounts at financial institutions or sell designated assets -- e.g., money market shares, bonds, stocks, and even real estate -- and transfer the proceeds to other accounts specified upon the completion of a transaction. The customer could indicate at the time of the transaction the date of the transfer and whether it is to be financed by drawing on an automatic predetermined linof credit, by transfering funds from a fixed par value account, or by selling a variable value asset. For variable value assets, the customer may need to receive a periodic statement from the firm, say, monthly or weekly, on the market value of the asset account and the maximum transfer amount for the period. Some of this scenario is already a reality through the use of charge and debit cards tied to the sale of money market funds. An even more recent

development is Merrill Lynch's plan to offer credit cards with borrowing limits tied to customers' equity in their homes. The rest may reasonably be assumed to be not too far off. The technology is in place; all that remains necessary is the operational formalities.

The forces of interest rate volatility and information-processing technology undoubtedly would have produced marked changes in the behavior and structure of financial institutions even in the absence of antiquated regulation. Be that as it may, it has been the continuing tension between these largely exogenous financial market forces and a set of banking laws and regulations adopted for reasons possessing varying degrees of validity in the past, but increasingly inappropriate and ineffectual today, that has produced the phenomenal pace of financial change over the past several decades. These regulations include restrictions on the assets banks may acquire, capital requirements, restrictions on interest rates banks may pay on deposits, restrictions on bank securities activities, restrictions on the activities bank holding companies may engage in, and the restrictions on the geographic scope of banks' operations contained in the 1927 McFadden Act, as amended, and the Douglas Amendment to the Bank Holding Company Act of 1956.

#### Regulation of Financial Institutions

In assessing the past role and current relevance of regulation, careful distinctions must be made between existing regulations based on their origins, purpose, effectiveness, and desirability, and the effects of eliminating each major category of regulations must be evaluated within a coherent analytical framework. Among the many specific statutes, regulations, and rules that constitute the regulatory framework within which banks and other financial institutions operate today, some were adopted for better reasons, or have more

rational purposes, or are more effective in achieving those purposes than others.

Generally speaking, regulation is justified only when there is some demonstrable failure of the free market to achieve results broadly desired by the population. There are two primary cases in which such failures are fairly obvious. One is the case of natural monopoly. When one firm of minimum efficient size can supply the entire market, there is reason to be concerned about monopolistic price and output policies, albeit the threat of entry may constrain the incumbent firm's ability to exploit its position. Thus, the fact that gas pipelines, electric transmission lines, and railroad rights of way are natural monopolies has been used as justification for their regulation by public bodies--regulation that often extends beyond the natural monopoly itself to other activities such as gas production, the operation of railroad rolling stock, etc., that are not inherently monopolistic. Another case of market failure occurs when the production of a good or service generates costs that are borne by parties other than the producers or consumers of that good or service. Examples of such external costs are air and water pollution, noise, nuclear radiation, etc.

Natural monopoly does not appear to be a problem in banking. Economies of scale are not such as to limit the number of efficient competitors in the national market to a very small number. On the other hand, there is reason for concern about the state of competition in some highly concentrated local market areas. In part, to be sure, the problem exists because of regulations limiting entry. Nonetheless, given the insulation from outside competition conferred on these markets by their distance from other towns and the discontinuities in entry resulting from the small size of such markets relative to the minimum efficient size of bank, there might be a case for

public intervention to maintain competition even in an otherwise fully deregulated environment. Such intervention might possibly be limited to enforcement of existing antitrust laws.

The most important external cost associated with banking is probably the incentive depositors had, prior to the introduction of deposit insurance, to try to withdraw their deposits from a troubled bank before it failed. In the aggregate this was self-defeating because it accelerated the closing of some banks and was actually responsible for the closing of other banks that might otherwise have survived. Still, it was rational behavior for the individual depositor, because his decision to abstain from withdrawing his funds could not provide any assurance that the bank would remain open. This negative externality—without which bank runs would not be a serious problem—was largely eliminated by the adoption of federal deposit insurance in 1933. Unfortunately, under the current structure of insurance premiums, deposit insurance gives rise to a need for supervision to prevent banks from taking advantage of the incentives it offers for risk-taking.

A recent paper prepared by Carter Golembe for the Treasury Department includes the prevention or cure of these two types of market failure among the primary objectives of public policy toward the financial system. Thus, Golembe lists "a sound, stable system" and "avoidance of concentration of financial power" as two of the four basic objectives. The other two, "fair treatment of customers" and "proper allocation of credit," are less well defined and offer less of a theoretical economic justification for the existence of regulation. Even to the extent that there is agreement that they are worthy ends, it is not clear that they are better served by regulation than by unrestrained competition. Nevertheless, both are firmly embedded in the series of consumer protection laws adopted since 1968, beginning with the

Truth In Lending Act, and in the regulatory and tax provisions that encourage savings and loan associations to specialize in residential mortgage lending.

To have a legitimate claim to continued existence, a regulation must have a well-defined purpose measured in terms of its contribution to the achievement of the free market result or to some other result that enjoys widespread popular support. Second, it should be effective—not just in the narrow legal sense that institutions do not violate its proscriptions, but in the economic sense that it achieves its intended results. Third, its benefits should clearly outweigh its total costs in terms of the costs of compliance by financial institutions, the costs of administration and enforcement by the regulator, and any unintended side effects. If a regulation fails to measure up to all three of these standards—or if its benefits are so ill-defined that they cannot even in principle be quantified—there is a strong presumption that society would be better off without it.

Few existing bank regulations appear to meet these criteria. However, the differences between the major categories of regulation in this respect are large. To illustrate this, we will briefly consider each of the major categories of regulations.

Entry restrictions. In the early days of U.S. history, chartering restrictions were quite severe, as an act of the state legislature was necessary to grant a bank charter. Policy toward entry into banking was reversed in the late 1830s when most states enacted free banking laws extending the states' general incorporation laws to banking.

Following the banking collapse of the 1930s, the Banking Act of 1933 introduced explicit standards for national bank charters and implicitly restricted state bank entry by the standards it established for granting federal deposit insurance. This legislation reflected the widely accepted,

but unconfirmed diagnosis that the cause of the collapse was excessive competition, which was alleged to have led bank managements to behave in an imprudent fashion. The prescription adopted was to limit competition by restricting entry into banking.

Interest rate restrictions. The same diagnosis led to the prohibition of certain types of competitive behavior deemed unsound. For example, the Banking Act of 1933 prohibited the payment of interest on demand deposits, authorized the Federal Reserve to regulate the maximum interest rates payable on time and savings deposits, restricted the types of investment securities that banks might hold, and prohibited banks from underwriting and trading most types of securities. The underlying assumptions of the diagnosis and remedy were that individual banks, left to their own devices and subject to unrestricted competition, would behave in such a way as to bring disaster on themselves, their depositors, and the economy as a whole, and that they must therefore be sheltered both from competition and from their own poor judgment.

There are at least three basic flaws in this regulatory response of the 1930s. The first is that it was based on a misdiagnosis. The evidence simply does not support the belief that imprudence on the part of individual banks was the primary, or even a major, cause of the banking collapse. Rather, in hindsight, it appears to have been the result of faulty central bank policy—in particular, the passiveness of the Federal Reserve in the face of several major bank failures, massive withdrawals of currency, and the resulting forced liquidation of the banking system. Once the process of deterioration got underway, it was exacerbated by the important negative externality associated with fractional reserve banking discussed above, namely, the incentive even depositors of well—managed banks have to withdraw their deposits in the form of currency when prior bank failures have made the

public nervous about the safety of banks in general. Regulation per se did nothing to remedy this externality.

The second flaw is that regulation went beyond what was necessary to preserve bank soundness and imposed severe costs on the public by prohibiting basically desirable types of behavior. For example, many customers have been poorly served because entry restrictions kept out more efficient competitors that could have improved services and lowered prices. At least in the short run, legitimate credit demands may have gone unmet because existing banks were not willing to accept the risks involved in making some types of loans and alternative sources of credit were few. Regulation of the interest rates payable on deposits has had even more obvious pernicious effects. Particularly in recent decades when inflation has led to sharp increases in market rates, interest rate ceilings have prevented low income savers with limited alternatives from enjoying reasonable rates of return on their savings.

The third and fatal flaw is that many regulations simply have not achieved what they were intended to do. They have been circumvented in a variety of ways and have ended up having the net effect simply of raising the private and social costs of doing the same business.

It is easy, and probably unfair, to criticize harshly actions taken in desperation and whose mistaken premises are clear only in hindsight.

Nevertheless, it is widely acknowledged today that many of the New Deal efforts to deal with the Depression and to prevent its reoccurrence were misguided, and should not be repeated. Unfortunately, while the codes restricting competition adopted by nonfinancial industries under the auspices of the National Recovery Administration were quickly thrown out by the Supreme Court on constitutional grounds, the restrictions imposed on banking remain, nearly a half century after they were first introduced.

Portfolio regulation. The tightened capital and portfolio restrictions adopted in the 1930s, though reflecting the same diagnosis that led to entry and interest rate restrictions, had a slightly different rationale. Their effects in restricting competition are only incidental; their basic thrust was to prevent banks from taking excessive risks and to cushion depositors against whatever losses the bank might suffer. It is often argued that they are redundant, on the grounds that much of the danger to depositors' funds that they were designed to reduce was eliminated by the introduction of federal deposit insurance. (To be sure, some students of banking have insisted that the role of broadened regulation in preventing bank failures has been understated, and that of deposit insurance correspondingly exaggerated.) 4 In any case, and somewhat ironically, one of the most persuasive justifications for their continued existence today is that the failure to price deposit insurance to reflect differences in risk provides a powerful incentive to risk-taking by individual banks. Thus, regulation is needed to prevent banks from taking advantage of that incentive.

Curiously, some opponents of deregulation argue that portfolio regulation is needed because the difficulty of measuring risk accurately dooms any attempt to devise risk-related deposit insurance premiums. A little reflection will convince one that this difficulty poses as much of a problem for ongoing regulation as it does for deposit insurance premium setting. If we did not know enough about the relationship between portfolio characteristics and risk to base insurance premiums on risk, we also would not know enough to regulate bank portfolios—even though it has been done for years.

Not only do bank examiners carry out detailed analyses of samples of a bank's loans and classify them according to their likelihood of repayment,  $^6$ 

they also look at the quality of its investment securities, excessive concentrations in any class of loans or securities, the adequacy of capital, and even the quality of management. All of this information is folded into a composite rating for the bank. Moreover, there are several statutory provisions—the prohibition of bank ownership of equities, the restriction on loans to one borrower, the tying of the volume of real estate loans to the amount of a bank's capital or time and savings deposits, etc.—that presuppose that one portfolio configuration involves more risk than another. The agencies' recent attempts to establish early warning systems to identify problem banks are an even more formal effort to weigh various portfolio characteristics in arriving at an overall measure of risk. 7

While neither these measures nor the examiners' ratings can discriminate perfectly between sound and risky banks, both have some predictive power.

More important, both are used in making supervisory decisions to impose additional reporting burdens on particular banks and in some cases to require them to modify their behavior in ways that adversely affect current earnings. The agencies' willingness to use the ratings in this way contrasts strangely with their aversion to charging for deposit insurance based on the same type of judgmental criteria.

Securities activities. The Glass-Steagall Act's restrictions on bank securities underwriting and trading activities had a still different origin and rationale. Here the intent was not to protect the banks from entry into an activity that was considered their sole province, but rather to keep them out of an activity to avoid what was perceived as a serious conflict of interest situation affecting the safety of depositors' funds. The immediate impetus was the revelation that a small minority of banks—albeit a considerably larger percentage of those banks involved in securities

activities—had engaged in a number of egregious practices during the late 1920s and 1930s. In spite of repeated assertions by the large—bank lobby that the statutory separation of commercial and investment banking is anticompetitive, it is not a barrier to entry in the same sense that chartering restrictions are. The reason is that, for all potential entrants other than banks, entry into investment banking per se was left unrestricted. Of course, companies engaged in investment banking were also prevented from accepting deposits. The only social costs imposed by such a restriction would be the loss of any informational and transactions economies that might have been achieved by integrating securities underwriting with banks' deposit and lending business.

There is continuing uncertainty regarding the seriousness of the conflict-of-interest problem and whether other means short of legal separation are adequate to deal with it. For example, it is often argued that the abuses of the 1920s could be prevented simply by applying today's securities laws to banks. In any case, the desirability of the Glass-Steagall restrictions remains a strongly debated issue and liberalization is likely to be near the top of the banking industry's list of priorities over the next several years.

Branching restrictions. Though having profound effects on the nation's banking structure, the restrictions on branching by national banks had their origin in what was virtually an oversight. Although the National Bank Act did not even mention branch banking, a provision in it aimed at wildcat banking was interpreted for the next 60 years as prohibiting national banks from branching. To be sure, even where branching was permitted it did not really take off until the 1940s. Nevertheless, the experience of the Bank of America in California, as well as the development of multi-state bank holding

companies in the West and the Upper Midwest, suggests that some banks would have taken advantage of broader branching privileges. The unequal treatment of national banks vis-a-vis state banks with respect to branching was largely eliminated by the McFadden Act of 1927 and totally eliminated by the Banking Act of 1933. However, the growth of the power and political influence of the independent bankers movement after 1900 had prompted many states to adopt severely restrictive branching laws by 1930.

It is extremely difficult to find any convincing justification for branching restrictions in their present form. Among the reasonable-sounding arguments that have been advanced for limiting branching are a fear of the political and economic power of very large banks and concern over concentration in banking markets. Yet, existing restrictions appear poorly designed to remedy either problem. They restrict the overall size of banking organizations, if at all, only by confining them geographically to a single state. In some lines of business, particularly lending to large corporate customers, they have little effect. This explains why, for example, Continental Bank and First National Bank of Chicago have been able to maintain their top-ten rankings among U.S. banks despite Illinois' prohibition of branching. The restrictions actually are conducive to local market concentration insofar as they require a bank's expansion to occur within a limited area and prevent outside banks from establishing a physical presence in that area. To the extent that they limit the geographic scope of a bank's lending operations, they force the bank to forego the benefits of reduced risk through geographic diversification. By and large, existing branch restrictions are protectionist, designed to shelter inefficient banks from the rigors of competition.

Prior approval of mergers and acquisitions. A few regulations are actually designed to preserve competition in banking. Included here are the statutes that require prior approval by one or another federal agency before banks may merge or bank holding companies may acquire additional banks or nonbanking firms. Although elements of protectionism—particularly, the preservation of small banks—have occasionally crept into decisions, the major effect of these acts has been to put a heavy burden of proof on the applicant to demonstrate that any economies of scale or integration or other benefits that may result from the proposed transaction clearly outweigh any likely anticompetitive effects resulting from the elimination of existing or potential competitors.

To the extent that these acts actually succeed in preserving or fostering competition between financial institutions, they are in conflict with the thrust of most other regulations. 10 The conflict is simply illustrated by a fairly typical, albeit hypothetical, merger case. A bank in a small, isolated rural town applies to a regulatory agency for prior approval of its merger with the only other bank in town. Because the Bank Merger Act prohibits any bank merger that would result in a substantial lessening of competition, absent a showing that the anticompetitive effects are outweighed by the convenience and needs of the community, the merger is denied. Presumably the purpose of the denial is to maintain competition in the local market in services and prices, including the interest rates paid on passbook savings deposits and NOW accounts. However, under existing ceilings established by the Depository Institutions Deregulation Committee, the maximum rate payable on either type of account is severely limited--5½ percent at the time this was written.

Regulation begins to bind. Most of the restrictions adopted in the wake of the banking collapse were of little consequence during the remainder of the 1930s, the 1940s, and up to the mid 1950s, given the great caution exercised by those bankers wise enough, or lucky enough, to have survived the depression. Even without the prohibition of interest on demand deposits, banks would not have paid rates in excess of a fraction of a percent in the late 1930s, while market rates on savings and time deposits remained well below Regulation Q ceilings until the 1950s. Similarly, chartering restrictions had little effect at a time when no one was interested in entering the banking business and the restrictions on bank securities activities were not a serious constraint in an era when the securities markets were uniformly depressed.

Not until the revival of credit demands in the postwar period did most of the restrictions become severely binding on most institutions. The degree of constraint increased moderately year by year as banks gradually became more aggressive and market interest rates rose. Up until the early 1960s, the Federal Reserve generally pursued a policy of raising the ceilings on time deposits whenever they constrained a significant number of banks. However, the accelerating inflation and increases in interest rates after 1965 caused most of the regulatory shackles to bind, causing bankers considerable annoyance, if little real pain.

#### Response to Regulation: The 1960s

The decade of the 1960s began as a period of growing frustration for commercial bankers; it ended in frustration for financial regulators. Caught between rising loan demands and restrictions on their ability to pay market rates for deposits and hemmed in by branching restrictions and limitations on their activities, banks sought out every loophole they could find in the

existing web of regulation. The decade became a contest of wits and wills between regulator and regulatee. Not surprisingly, given their greater potential rewards and the stimulus of competition, the banks tended to stay at least six months ahead of the regulators. The decade began with Citibank's 1961 announcement that it would sell negotiable certificates of deposit and that a major security dealer would make a secondary market in them. The rapid growth of these instruments raised great hopes for, and increased reliance on, the techniques of liability management. No longer did bankers simply sit and wait for deposits. They began to seek them out, paying market interest rates and competing for them in other ways. Many bankers came to believe that they would always be able to buy whatever liquidity they needed. This notion was dispelled abruptly in 1966, when, in response to concern over what was perceived as an inflationary capital spending boom financed by bank loans and a savings and loan industry suffering from the first in a series of "credit crunches," the Fed refused to raise the ceiling on large CDs as market rates rose.

The remainder of the 1960s saw attempt after attempt by the banks to develop substitute sources of funds not subject to interest rate ceilings or reserve requirements. This response is an example of what Professor Edward Kane has called the "regulatory dialectic". Thus, the banks introduced loan participation certificates, working capital acceptances, small denomination capital notes, Eurodollar borrowing from overseas branches, and holding company commercial paper. Each of these moves was then followed by the Fed, six months or a year later, redefining the new instrument as a deposit and subjecting it to interest rate ceilings, reserve requirements, or both.

Blocked from competing on rates, banks tried to compensate by offering greater convenience, primarily by opening additional branch offices. Although

the existence of such an effect has long been recognized, its magnitude was not fully appreciated until the publication of a recent study which concluded that fully two-thirds of the branch offices of California savings and loan associations in 1978 could be attributed to Regulation Q. <sup>13</sup> Though specifically addressed to savings and loan association branching, the study is highly suggestive of what one might expect to find for banking, albeit to a somewhat lesser degree in view of banks' lesser dependence on retail deposits. This is a prime example of the cost-raising effects of efforts to avoid regulation.

The Saxon era. Banks also attempted to expand their permissible activities during the 1960s. Blocked from underwriting and other securities activities by the Glass-Steagall Act of 1933 and from many other activities by the National Banking Act's limitation of bank activities to "such incidental powers as shall be necessary to carry on the business of banking," banks began to look for ways around these prohibitions. One way around was through the reinterpretation of existing law. The Comptroller of the Currency in the early 1960s, James Saxon, sympathized with the bankers' desire to enter new fields and to compete with greater freedom. A lawyer with more respect for economic realities than for the niceties of the law, Saxon challenged existing restrictions on national banks by liberalizing chartering, branching, and merger restrictions and by unilaterally authorizing national banks to engage in activities the law had long been interpreted to proscribe. Among these activities were data processing, offering commingled agency accounts (essentially operating a mutual fund), operating travel agencies, and underwriting municipal revenue bonds. However, few of Saxon's challenges to prior interpretations of existing law held up in court.

The one-bank holding company. Banks also sought to escape their perceived chains through the device of the one-bank holding company. Because companies owning or controlling only one bank were exempt from the restrictions on activities of bank holding companies established by the Bank Holding Company Act of 1956, many large banks took the initiative in the late 1960s of organizing their own one-bank holding companies. Although the bank itself was still subject to restrictions on its activities, other subsidiaries of the holding company were free to enter almost any activity, financial or otherwise, that they wished. By 1970 over a thousand banks, accounting for about a third of commercial bank deposits, were owned by one-bank holding companies. Many had announced far-reaching plans to enter diverse financial and nonfinancial businesses. However, the one-bank exemption was quickly eliminated. The Bank Holding Company Act Amendments of 1970 extended the Bank Holding Company Act to cover one-bank holding companies and redefined permissible activities of bank holding companies to include only those "closely related to banking" and whose performance by a bank holding company subsidiary was in the public interest.

Innovation in the 1960s. A great deal has been made of the innovative activity of banks in the 1960s, as if it had produced wondrous advancements in the financial system. What it actually did was simply to bring us, de facto, part of the way back to the situation that existed prior to 1933, at least with respect to interest paid on deposits. Although it was certainly rewarding from the standpoint of the banks, socially it was wasted effort, a cost that could have been avoided had regulation not been so at odds with extant market forces.

#### Regulatory Accommodation: The 1970s

By the early 1970s the consequences of regulations designed to shelter banks from competition and from their own mistakes were becoming increasingly evident. The Hunt Commission focused attention on many of the ills attributable to the regulatory balkanization of financial markets and called for an end to restrictions on price competition, enforced specialization, and geographic barriers. But decisive legislative action in these directions was not to come for another decade.

The advent of NOWs and MMFs. In the meantime, the existing restrictions on banks created opportunities for other types of institutions. Stimulated by rising interest rates associated with accelerating inflation in the face of unrealistic deposit rate ceilings, other types of depository institutions began to invade turf previously viewed by banks as their own. The introduction of the NOW account by Consumer Savings Bank of Worcester, Economically, the NOW Massachusetts, in June 1972 was a momentous event. account was an interest-bearing checking account, and Massachusetts mutual savings banks were prohibited from offering demand deposits. However, the courts held that the NOW account was simply a savings account offering a somewhat unusual means of withdrawal. Savings banks in New Hampshire soon followed Massachusetts' example. Money market mutual funds, offering the small investor a way of participating in high market yields at only a small cost in terms of safety and liquidity, made their debut in 1973. By yearend 1981 their assets had risen to the remarkable total of \$185 billion. Though initially resisting these innovations, regulators and legislators soon began to accommodate them, partly out of recognition of the ultimate futility of trying to suppress them and partly because of a belated acknowledgment that interest rate ceilings are a source of economic mischief.

#### The Fight for Financial Turf: The 1980s

In the face of these inroads, and given the high and rising rates of interest on competing financial assets, an end to the prohibition of interest on consumer demand deposits in the rest of the country was only a matter of time. It is ironic that the immediate impetus was supplied by a court ruling in mid-1979 that held NOW accounts, the similar share draft accounts offered by credit unions, and remote service units operated by savings and loan associations to be in violation of existing law. Though attacked at the time as representing a step backward, the decision simply affirmed that the law, wise or not, meant what it said. To avoid disruption of financial institutions, the court gave the Congress until yearend (later extended three additional months by the Congress) to consider new legislation before the court's order was to go into effect. The urgency of the need to act was heightened by the difficulties created for financial institutions by soaring interest rates in the first quarter of 1980.

DIDMCA. The eventual result was the Depository Institutions Deregulation and Monetary Control Act of 1980 (DIDMCA), signed into law on March 31. When and if all of its provisions are fully implemented, the act will provide great benefits in the form of a modest improvement in the technical means for monetary control, more equitable treatment of competing financial institutions, and a greater ability of depository institutions generally to meet the competition of unregulated competitors and to withstand interest rate fluctuations. But, because the act left a number of important issues unresolved, the long war of attrition between banks and other suppliers of financial services over the division of geographic and product market turf continues unabated.

Geographic restrictions. De jure geographic restrictions on banks and other financial institutions remain, although they are slowly giving ground. The spirit and economic substance, if not the letter, of these restrictions have been trampled on by bank holding company acquisitions of nonbank firms--e.g., consumer finance companies and mortgage companies--having offices in many states, by the opening of Edge Act offices and loan production offices in major cities throughout the country, by savings and loan branching in states restricting branching by banks, by the rapid growth of nationwide bank credit card franchising networks, by the establishment of electronic banking facilities in locations closed to brick-and-mortar branches, by the use of computerized cash management services capable of managing a number of widely dispersed accounts as if they were one account, by national advertising, and by the growing use of 800 phone numbers to entice customers to deal with distant financial institutions. Perhaps the most striking example is provided by Citicorp, which, through its nonbank subsidiaries and other devices, now operates 444 out-of-state offices in 39 states (see Table 1). Manufacturers Hanover Corporation has even more offices, 471, but is represented in only 30 states. Even the Continental Bank, in the unit-banking state of Illinois, is represented in ten states. The geographic restrictions of the McFadden Act and the Douglas Amendment to the Bank Holding Company Act remain, but they have been largely transformed into minor competitive disadvantages for banks rather than effective impediments to competition in financial services.

Nonbank financial institutions. The distinctions between traditional forms of depository and nondepository financial institutions continue to erode as each tries to expand the scope of its activities. Commercial banks long ago became important in consumer and residential mortgage lending, two areas

previously the province of small loan companies and savings and loan associations. More recently, as we have seen, the inroads have been in the other direction, as thrift institutions have been granted third-party payment and consumer and limited commercial lending powers. But the most dramatic expansions by financial institutions have been the recent incursions by nondepository type financial institutions into areas of business where they were not previously represented. Prudential Insurance Company's acquisition of Bache combined into a single entity one of the country's largest institutional investors and one of its largest brokers and underwriters. view of the fact that such a combination involves the same type of conflict of interest between investor and underwriter that was proscribed by the Glass-Steagall Act where banks are involved, it will be interesting to see whether any legislative response is forthcoming. Still another example of the breakdown of traditional functional boundaries is the offering of third party payment services by money market mutual funds and by Merrill Lynch through its Cash Management Account (CMA).

<u>Nonfinancial competitors</u>. The inroads of basically nonfinancial businesses into the financial area continue. The examples given at the beginning of this paper are only some of the more dramatic cases. As early as 1974 Citibank distributed a study detailing the extensive financial service activities of such industrial and retailing giants as General Motors, Ford Motor Company, IT&T, Control Data, Gulf and Western, Westinghouse, Marcor, and J.C. Penney. However, as startling as the revelation of these activities was to some bankers, it is easy to exaggerate their significance. The simple fact

Table 1
Out-of State Offices of 10 Large
Bank Holding Companies

	Non-Bank Subsidiary Offices	Banking Offices	Total Offices	Total States	
Manufacturers Hanover	471	7	478	30	
Security Pacific	427	7	434	35 & DC	
Citicorp	419	25	444	39 & DC	
BankAmerica	360	15	375	40 & DC	
Chemical	135	6	141	23	
First Chicago	13	14	27	10	
Chase	13	4	17	15 & DC	
Continental Illinois	9	12	21	10	
Bankers Trust	1	8	9	4	
J. P. Morgan	1	5	6	4	

Source: Manufacturers Hanover Corporation, The New Reality, May 14, 1981.

is that commercial banking has held its own in most of its major markets over the past two decades (see Table 2).

Of course, this is subject to change. While telecommunications, transportation, and information processing advances have made geographic expansion possible in ways that would not have been dreamed of 50 or even ten years ago because of the inefficiencies of coordinating business endeavors over great distances, these same technological advances pose a threat to the hegemony of depository institutions in the financial services business. survive and prosper, such institutions not only have to utilize state-of-the-art credit information processing technology but they also need to maintain a source of funding that is cheaper than that obtainable by such nonfinancial information-processing firms as, say, TRW or Dun and Bradstreet. But the deposit rate deregulation promised by DIDMCA will likely decrease the cost of funds advantage that depository institutions have enjoyed. 14 these narrower spreads were to prevail, any nonbank firm that enjoyed a comparative advantage in credit information processing could enter the credit business as a commercial or consumer finance company competing for the loan customers of present-day depository institutions.

Captive finance companies and other suppliers of trade credit constitute another source of potential entry. The larger of these companies can raise funds in the commercial paper or longer-term capital markets at interest rates very similar to those paid by banks and bank holding companies. They currently have credit information on their customers in their computers and the marginal cost of adding additional information on these same customers would seem to be small. Many of these companies deal with as many clients as do some of the larger banks in the country; thus, they suffer few economies of

#### TOTAL PRIVATE FINANCIAL ASSETS, 1945-1980

(Billion dollars)

	1945	<u>1950</u>	<u>1955</u>	1960	<u>1965</u>	<u>1970</u>	1975	1976	1977	<u>1978</u>	<u>1979</u>	1980
Commercial Banking	143.8	147.8	185.1	228.3	340.7	504.9	834.3	905.5	1002.9	1146.8	1274.5	1386.7
(U.S. Banks)	143.0	147.0	103.1	224.2	335.0	448.9	786.0	845.4	936.3	1056.0	1161.4	1244.7
(Domestic Affiliates)				224.2	333.0	3.0	12.8	18.8	18.9	20.6	25.2	29.5
•	8.7	16.9	37.7	71.5	129.6	176.2	338.2	391.9	459.2	523.6	579.3	629.8
Savings and Loan Associations Mutual Savings Banks	17.0	22.4	31.3	41.0	59.1	79.3	121.1	134.8	147.3	158.2	163.3	171.5
3	.4	.9	2.4	6.3	11.0	18.0	31.1	43.3	51.6	58.4	61.9	69.2
Credit Unions	43.9	62.6	87.9	115.8	154.2	200.9	279.7	311.1	339.8	378.3	420.4	469.8
Life Insurance Companies	2.8	6.7	18.3	38.1	73.6	110.4	146.8	171.9	178.3	198.3	222.0	286.8
Private Pension Funds	2.0	5.0	10.7	19.7	34.1	60.3	104.8	120.4	132.5	153.9	169.7	198.1
State and Local Government	2.1	3.0	10.7	19.7	34.1	00.3	104.0	120.4	132.3	1950	107.,	170.1
Employee Retirement Funds		12.6	21.0	26.2	36.5	49.9	77.3	93.9	113.2	133.9	154.9	180.1
Other Insurance Companies	6.9	9.3	17.1	27.6	44.7	64.0	99.1	111.2	133.8	157.5	184.5	198.6
Finance Companies	4.3	9.3	1/.1	27.0	44.7	3.9	14.0	9.8	7.2	6.8	6.7	5.8
Real Estate Investment Trusts		2.2	7 0	17.0	35.2	46.8	43.0	46.5	45.5	46.1	51.8	63.7
Open-End Investment Companies (Mutual Funds)	1.3	3.3	7.8	17.0	33.2	40.0						
Money Market Mutual Funds							3.7	3.7	3.9	10.8	45.2	74.4
Security Brokers and Dealers	4.9	4.0	5.9	6.7	10.3	16.2	<u> 18.5</u>	26.8	27.7	28.0	<u> 28.2</u>	33.5
TOTAL	236.7	291.5	425.2	598.2	929.0	1330.8	2111.6	2370.8	2642.9	3000.6	3362.4	3768.0
					(	Percent	of total	.)				
Commercial Banking	60.8%	50.7%	43.5%	38.2%	36.7%	37.9%	39.5%	38.2%	37.9%	38.2%	37.9%	36.8%
	60.8%	50.7%	43.5%	38.2% 37.5	36.7% 36.1	37.9% 36.7	39.5% 37.2	38.2% 35.7	37.9% 35.4	38.2% 35.2	37.9% 34.5	33.0)
Commercial Banking (U.S. Banks) (Domestic Affiliates)	60.8%	50.7%	43.5%			•		-				33.0 )
(U.S. Banks) (Domestic Affiliates)	60.8%	50.7% 5.8	43.5% 8.9			36.7	37.2	35.7	35.4	35.2	34.5	33.0)
(U.S. Banks) (Domestic Affiliates) Savings and Loan Associations	(			37.5	36.1	36.7	37.2 .6	35.7 .8	35.4 .7	35.2 .7	34.5 .7	33.0 ) .8 ) 16.7 4.6
(U.S. Banks) (Domestic Affiliates) Savings and Loan Associations Mutual Savings Banks	( ( 3.7	5.8	8.9	37.5 12.0	36.1 14.0	36.7 .2 13.2	37.2 .6 16.0	35.7 .8 16.5	35.4 .7 17.4	35.2 .7 17.4	34.5 .7 17.2	33.0 ) .8 ) 16.7
(U.S. Banks) (Domestic Affiliates) Savings and Loan Associations Mutual Savings Banks Credit Unions	( ( 3.7 7.2	5.8 7.7	8.9 7.4	37.5 12.0 6.9	36.1 14.0 6.4	36.7 .2 13.2 6.0	37.2 .6 16.0 5.7	35.7 .8 16.5 5.7	35.4 .7 17.4 5.6	35.2 .7 17.4 5.3	34.5 .7 17.2 4.9	33.0 ) .8 ) 16.7 4.6
(U.S. Banks) (Domestic Affiliates) Savings and Loan Associations Mutual Savings Banks Credit Unions Life Insurance Companies	3.7 7.2 .2	5.8 7.7 .3	8.9 7.4 .6	37.5 12.0 6.9 1.1	36.1 14.0 6.4 1.2	36.7 .2 13.2 6.0 1.4	37.2 .6 16.0 5.7 1.5	35.7 .8 16.5 5.7 1.8	35.4 .7 17.4 5.6 2.0	35.2 .7 17.4 5.3 1.9	34.5 .7 17.2 4.9 1.8	33.0 ) .8 ) 16.7 4.6 1.8
(U.S. Banks) (Domestic Affiliates) Savings and Loan Associations Mutual Savings Banks Credit Unions Life Insurance Companies Private Pension Funds	3.7 7.2 .2 18.5	5.8 7.7 .3 21.5	8.9 7.4 .6 20.7 4.3	37.5 12.0 6.9 1.1 19.4 6.4	36.1 14.0 6.4 1.2 16.6	36.7 .2 13.2 6.0 1.4 15.1	37.2 .6 16.0 5.7 1.5 13.2	35.7 .8 16.5 5.7 1.8 13.1	35.4 .7 17.4 5.6 2.0 12.9	35.2 .7 17.4 5.3 1.9 12.6	34.5 .7 17.2 4.9 1.8 12.5	33.0 ) .8 ) 16.7 4.6 1.8 12.5
(U.S. Banks) (Domestic Affiliates) Savings and Loan Associations Mutual Savings Banks Credit Unions Life Insurance Companies Private Pension Funds State and Local Government	3.7 7.2 .2 18.5	5.8 7.7 .3 21.5 2.3	8.9 7.4 .6 20.7	37.5 12.0 6.9 1.1 19.4	36.1 14.0 6.4 1.2 16.6 7.9	36.7 .2 13.2 6.0 1.4 15.1 8.3	37.2 .6 16.0 5.7 1.5 13.2 7.0	35.7 .8 16.5 5.7 1.8 13.1 7.3	35.4 .7 17.4 5.6 2.0 12.9 6.7	35.2 .7 17.4 5.3 1.9 12.6 6.6	34.5 .7 17.2 4.9 1.8 12.5 6.6	33.0) .8) 16.7 4.6 1.8 12.5 7.6
(U.S. Banks) (Domestic Affiliates) Savings and Loan Associations Mutual Savings Banks Credit Unions Life Insurance Companies Private Pension Funds State and Local Government Employee Retirement Funds	3.7 7.2 .2 18.5	5.8 7.7 .3 21.5 2.3	8.9 7.4 .6 20.7 4.3	37.5 12.0 6.9 1.1 19.4 6.4	36.1 14.0 6.4 1.2 16.6 7.9	36.7 .2 13.2 6.0 1.4 15.1 8.3	37.2 .6 16.0 5.7 1.5 13.2 7.0	35.7 .8 16.5 5.7 1.8 13.1 7.3	35.4 .7 17.4 5.6 2.0 12.9 6.7	35.2 .7 17.4 5.3 1.9 12.6 6.6	34.5 .7 17.2 4.9 1.8 12.5 6.6	33.0) .8) 16.7 4.6 1.8 12.5 7.6
(U.S. Banks) (Domestic Affiliates) Savings and Loan Associations Mutual Savings Banks Credit Unions Life Insurance Companies Private Pension Funds State and Local Government Employee Retirement Funds Other Insurance Companies	3.7 7.2 .2 18.5 1.2	5.8 7.7 .3 21.5 2.3 1.7	8.9 7.4 .6 20.7 4.3 2.5	37.5 12.0 6.9 1.1 19.4 6.4 3.3	36.1 14.0 6.4 1.2 16.6 7.9 3.7	36.7 .2 13.2 6.0 1.4 15.1 8.3 4.5	37.2 .6 16.0 5.7 1.5 13.2 7.0 5.0	35.7 .8 16.5 5.7 1.8 13.1 7.3 5.1	35.4 .7 17.4 5.6 2.0 12.9 6.7 5.0	35.2 .7 17.4 5.3 1.9 12.6 6.6 5.1	34.5 .7 17.2 4.9 1.8 12.5 6.6 5.0	33.0) .8) 16.7 4.6 1.8 12.5 7.6 5.3
(U.S. Banks) (Domestic Affiliates) Savings and Loan Associations Mutual Savings Banks Credit Unions Life Insurance Companies Private Pension Funds State and Local Government Employee Retirement Funds Other Insurance Companies Finance Companies	3.7 7.2 .2 18.5 1.2 1.1	5.8 7.7 .3 21.5 2.3 1.7	8.9 7.4 .6 20.7 4.3 2.5	37.5 12.0 6.9 1.1 19.4 6.4 3.3	36.1 14.0 6.4 1.2 16.6 7.9 3.7	36.7 .2 13.2 6.0 1.4 15.1 8.3 4.5	37.2 .6 16.0 5.7 1.5 13.2 7.0 5.0	35.7 .8 16.5 5.7 1.8 13.1 7.3 5.1	35.4 .7 17.4 5.6 2.0 12.9 6.7 5.0	35.2 .7 17.4 5.3 1.9 12.6 6.6 5.1	34.5 .7 17.2 4.9 1.8 12.5 6.6 5.0	33.0) .8) 16.7 4.6 1.8 12.5 7.6 5.3
(U.S. Banks) (Domestic Affiliates) Savings and Loan Associations Mutual Savings Banks Credit Unions Life Insurance Companies Private Pension Funds State and Local Government Employee Retirement Funds Other Insurance Companies Finance Companies Real Estate Investment Trusts	3.7 7.2 .2 18.5 1.2 1.1	5.8 7.7 .3 21.5 2.3 1.7 4.3 3.2	8.9 7.4 .6 20.7 4.3 2.5	37.5 12.0 6.9 1.1 19.4 6.4 3.3 4.4	36.1 14.0 6.4 1.2 16.6 7.9 3.7	36.7 .2 13.2 6.0 1.4 15.1 8.3 4.5	37.2 .6 16.0 5.7 1.5 13.2 7.0 5.0	35.7 .8 16.5 5.7 1.8 13.1 7.3 5.1	35.4 .7 17.4 5.6 2.0 12.9 6.7 5.0	35.2 .7 17.4 5.3 1.9 12.6 6.6 5.1	34.5 .7 17.2 4.9 1.8 12.5 6.6 5.0	33.0) .8) 16.7 4.6 1.8 12.5 7.6 5.3
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(U.S. Banks) (Domestic Affiliates) Savings and Loan Associations Mutual Savings Banks Credit Unions Life Insurance Companies Private Pension Funds State and Local Government Employee Retirement Funds Other Insurance Companies Finance Companies Real Estate Investment Trusts Open-End Investment Companies (Mutual Funds) Money Market Mutual Funds	3.7 7.2 .2 18.5 1.2 1.1 2.9 1.8	5.8 7.7 .3 21.5 2.3 1.7 4.3 3.2 1.1	8.9 7.4 .6 20.7 4.3 2.5 4.9 4.0	37.5 12.0 6.9 1.1 19.4 6.4 3.3 4.4 4.6 2.8	36.1 14.0 6.4 1.2 16.6 7.9 3.7 3.9 4.8 3.8	36.7 .2 13.2 6.0 1.4 15.1 8.3 4.5 3.7 4.8 .3 3.5	37.2 .6 16.0 5.7 1.5 13.2 7.0 5.0 3.7 4.7 .7 2.0	35.7 .8 16.5 5.7 1.8 13.1 7.3 5.1 4.0 4.7 .4 2.0	35.4 .7 17.4 5.6 2.0 12.9 6.7 5.0 4.3 5.1 .3 1.7	35.2 .7 17.4 5.3 1.9 12.6 6.6 5.1 4.5 5.2 .2 1.5	34.5 .7 17.2 4.9 1.8 12.5 6.6 5.0 4.6 5.5 .2 1.5	33.0) .8) 16.7 4.6 1.8 12.5 7.6 5.3 4.8 5.3 .2 1.7 2.0 .9
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Source: Board of Governors of the Federal Reserve System, Flow of Funds

scale disadvantages vis a vis their bank competitors. General Electric Credit Corporation is one very successful example of a captive finance company that has expanded its business to include financing not related to its parent's products. 15

The volatility of interest rates may be another important factor impacting depository institutions' share of the credit-granting pie.

Beginning in the 1930s banks became more active in fixed-rate term lending. 16

This practice continued until the early 1970s when interest rate volatility increased markedly and banks began passing forward to their commercial and industrial customers the risks associated with the more volatile cost of funds.

Banks of all sizes have been very successful, on the whole, in avoiding the perils of interest rate risk. <sup>17</sup> Rather than bear this risk, many banks have shifted this risk forward, particularly to their business customers, many of whom may not have been in as good a position as the bank to absorb this risk. Eventually, this could result in banks losing some business credit market share to suppliers of trade credit, which is typically offered at what appear to the borrower to be fixed rates. The use of bank credit relative to trade credit for short-term financing purposes has not changed appreciably as interest rate volatility has risen; however, for small businesses, trade credit is the most widely used source of credit, both in terms of the percentage of firms utilizing it as a credit source <sup>18</sup> and in dollar volume. <sup>19</sup> These facts take on increasing significance when one realizes that it is small firms that have experienced the greatest employment growth over the last decade and that this trend is expected to continue. <sup>20</sup> To the extent that these firms desire fixed-rate loans, banks must offer them the credit terms

that they desire or other credit suppliers (finance companies, leasing companies, trade credit, etc.) may find an opportunity to fill this void.

None of this is to say that banks need fear for their survival. Customer turnover in any industry is a fact of life and banks have dealt successfully with this problem for many years. As William F. Ford, President of the Federal Reserve Bank of Atlanta, concluded in a recent speech to a banking audience:

When you stop to think about it, the reason all these other kinds of businesses want to get into banking markets is quite simple. Your business looks good to them. You have been doing better than they have in earning profits, and you have been doing it for a long time.

Banking has been a profitable industry over the last 15 years. Earnings growth averaged (at an annual rate) 18 percent during 1966-70, 10 percent during 1971-75, and 19 percent during the 1976-80 period. Return on capital as measured by the ratio of net income to total capital was significantly higher in the 1970s than in either the 1950s or 1960s, and higher in the last three years of the 1970s than in any other three-year period (see Table 3). The ratio of net income to total bank assets was also higher in the 1970s than in the previous two decades, but somewhat lower in the second half of the decade than in the first. This strength could be interpreted as showing that banking was profitable because of its highly regulated environment, but this would probably be the wrong conclusion as the regulatory walls have been crumbling at a very rapid pace.

The playing field. The public has little or no vested interest in the outcome of the battles over the division of the financial market turf. It is concerned primarily, and probably exclusively, with receiving the best service possible and, for any given quality of service, the lowest price. Questions as to whether there is a "level playing field" or whether competition is

Table 3

Profitability of Insured
Commercial Banks: 1952-1980

Net Income as Percent of Total Assets Year Total Capital Equity Capital 1952 0.55 8.07 1953 0.55 7.93 1954 0.68 9.50 1955 0.57 7.90 1956 0.58 7.82 1957 8.30 0.64 1958 0.75 9.60 1959 0.63 7.94 1960 0.81 10.02 1961 0.79 9.37 1962 0.73 8.83 1963 0.72 8.86 1964 0.70 8.65 1965 0.70 8.73 1966 0.69 8.70 1967 0.74 9.56 10.14 1968 0.72 9.70 10.31 1969 0.84 11.48 11.98 1970 0.89 11.89 12.37 1971 0.87 11.85 12.39 1972 12.25 0.83 11.60 1973 0.85 12.14 12.86 1974 11.89 0.81 12.53 1975 0.78 11.19 11.75 1976 0.70 10.66 11.41 1977 0.71 10.93 11.72 1978 11.96 0.77 12.80 1979 0.81 13.01 13.89

12.85

13.66

Source: FDIC Annual Report, various issues.

0.80

1980

"fair" are likely to leave the public cold; harm to a competitor is not the same thing as harm to competition. Moreover, efforts to establish "fairness" by legislation or regulation often result in ossification and inefficiency. This has certainly been the case with the Interstate Commerce Commission's efforts to maintain fair competition between rail, barge, and truck transportation.

Ideally, the many proposals for legislative and regulatory changes currently under consideration should be evaluated on their merits, with little regard for whether they enhance or detract from some particular narrowly defined industry's competitive position vis a vis its competitors. Of course, legislators cannot ignore the political reality of well-organized industry lobbies. But to the extent that they condition further deregulation on their ability to achieve a multi-industry consensus, they may simply be encouraging the vultures to agree on a division of the public carcass.

#### Product and Geographical Lines of the Financial Industry of the Future

In attempting to peer into the future of the financial services industry, it is probably wise not to assume that it will consist of the same, familiar types of institutions that we know today. As Almarin Phillips pointed out recently in testimony before the House Banking Committee,

It is not ordained that all or most commercial banks, savings and loan associations, mutual savings banks, credit unions, insurance companies, investment bankers and others of the old forms of financial institutions will persist. It is more clearly ordained that they will not.

Predicting the future configuration of the financial services industry requires two preliminary steps. First, one must make some assumptions about the future pace and direction of technological development, both of which are largely independent of developments in the financial sector, and also about the extent and form of deregulation and the level and volatility of interest rates, which are not. In the nature of things, these can be no more than

educated guesses. Second, one needs an analytical framework, filled in as much as possible with estimates of the magnitudes of relevant parameters, in order to be able to calculate the consequences of the assumptions.

Assumptions. It would appear reasonable to assume that technological advances in information processing and transmission will continue in the future. More importantly, the rate of adoption of existing technology is likely to accelerate as the bugs in existing equipment are remedied and as the public gradually comes to accept—and is given market incentives to accept—new ways of doing things.

Deregulation appears to have a certain amount of momentum at this time and is likely to go somewhat further before the pendulum begins to swing in the other direction. To be sure, a large number of thrift institution failures might dampen the prospects for major additional steps toward deregulation over the next year or so. Ironically, just as the decades-long campaign for financial deregulation is bearing fruit, we are experiencing a recurrence, hopefully on a milder scale, of the conditions responsible for the imposition of regulations in the 1930s. If the difficulties currently being experienced by financial institutions can be kept to manageable proportions, and if market interest rates do not rise again sharply between now and 1986, there still appears to be a fairly good chance that the following steps toward deregulation will be taken:

\*The phase-out of Regulation Q ceilings on time deposits will continue under the current six-year timetable.

\*The asset powers of thrifts will be further enlarged.

\*The Glass-Steagall Act will be relaxed at least enough to allow the underwriting by banks of all municipal revenue bonds and the management by bank trust departments of commingled agency accounts.

\*The few remaining functional distinctions between different types of depository institutions will be destroyed by mergers of commercial banks and thrift institutions.

\*Interstate commercial deposit banking may soon be allowed de jure as well as de facto.

\*The attitude of regulators toward entry will be further relaxed.

\*Regulation of bank lending and investment policies will become progressively less detailed and restrictive, particularly if risk-related deposit insurance premiums are adopted.

\*Prior approval for mergers and acquisitions will be more perfunctory and liberal.

In all probability, the relaxation of geographic restrictions will take the form of an easing of the Douglas Amendment to allow interstate acquisitions of banks by bank holding companies, perhaps followed by regional full service interstate branching on a reciprocal basis. NCNB's announcement of its planned acquisition of Gulfstream Banks in Florida is just one more step in this process. The branching issue may be forced by the problems currently being experienced by the savings and loan industry. The recent acquisition of Farmers and Mechanics Savings Bank of Minneapolis by Marquette National Bank and of Fidelity Mutual Savings by First Interstate Bank of Washington are probably just the first in a series of commercial bank-thrift institution mergers. In those cases where thrift institutions now enjoy broader branching privileges than banks, such mergers effectively constitute an instant liberalization of branching restrictions. If such mergers are permitted on an interstate basis, as may occur if there are insufficient in-state bidders to rescue all the failing thrift institutions, they will do even more to break down geographical barriers. That many in the banking industry foresee a lowering of the barriers to interstate banking is strongly suggested by the recent rush by bank holding companies to acquire less-than-controlling interests in out-of-state banks.

The analytical framework. Projecting the consequences of these assumed developments in technology and regulation requires one to take into account a

number of important facts and relationships. For example, it must include what is known about how output varies with the amounts of various inputs and how cost varies with the output of a given financial service. A key question is the degree to which there are complementarities or interaction effects between the production of one financial service and another—e.g., is it cheaper or otherwise more efficient to produce underwriting services and investment services jointly rather than separately? Unfortunately, our knowledge of such effects is extremely fragmentary.

Equally important are empirical estimates of the relationships between the demands for various services and customers' incomes, the prices of the services in question, and the prices of substitutes. It is essential to take account of the geographical distribution of demand and any complementarities on the demand side between different services—e.g., how much value do consumers place on full—service banking or, more generally, on being able to obtain more than one service at the same place?

Our task in the remainder of this paper is to use our assumptions about future regulatory developments, together with what is known about demand, cost, and other behavioral relationships, as the basis for projecting the future configuration of the financial system, particularly with respect to the geographic markets and product lines of financial firms. This necessarily involves us in making educated guesses about the number and size distribution of financial firms, the number and locations of their branch offices, and their degree of specialization or diversification. We then offer a few comments on the public policy issues raised by the transition to a deregulated environment.

Branching. In predicting the branching patterns of the future it is useful to keep in mind that, when an institution is constrained by more than

one regulation, these regulations may interact to produce results differing from what might otherwise be expected. For example, it is certain that, if left wholly free to compete as they wished, some banks would choose to branch into geographical areas beyond where they are permitted to go today. But total deregulation might not produce a net increase in the number of branches operated by some banks, for at least two reasons. In the first place, some branches opened by expanding banks would simply displace existing branches of other banks, either through acquisition or through their elimination by competition. Second, as we have already seen, many banks have opened more branches, within the area in which they are allowed to branch, than they would operate in the absence of interest rate restrictions.

In a deregulated environment they might find it more efficient to compete for deposits by paying a higher rate, avoiding some operating costs by closing down some existing branches. Indeed, money market funds have demonstrated clearly that it is possible to collect funds from throughout the country with only one office and an 800 telephone number if market rates are paid. The demand for brick-and mortar branches is likely to be affected even more dramatically as point-of-sale payment systems and, ultimately, in-home banking become realities. For all of these reasons, we project a substantial absolute decline in the number of conventional branches over the next decade. To the extent that they are permitted, the larger banks will establish full-service branches in the major financial centers and many of the regional centers. But massive expansion of retail-oriented branches is highly unlikely.

Consolidation and number of firms. What we know of economies of scale in banking, the experience of other countries permitting nationwide branching, and the changes that have occurred in individual states that have liberalized branching all point toward a considerable amount of consolidation if existing

barriers to interstate banking are dropped. As we know, the banking structures of all other major industrial nations are much more concentrated than that of the United States; most have only a handful of banks, each with an extensive system of branches. To be sure, it appears likely that consolidation in those countries has gone well beyond what is required for efficiency, as is strongly indicated by the success of American banks in competing against the established giant British banks in London. Nevertheless, there are important size economies still unrealized by many small and medium-sized banks in the United States.

When states have liberalized their branching laws, the results almost invariably have been increases in the rate of consolidation and increased statewide concentration. Thus, New York and Virginia, both of which liberalized their branching and holding company laws in the early 1960s, both experienced declines in the number of banking organizations over the ensuing decade of 20-40 percent and both experienced increases in statewide concentration. (Both also experienced net declines in concentration at the crucial local market level and essentially no change in the number of potential entrants into local markets.) If carefully monitored and controlled, consolidation need not have anticompetitive consequences.

But even under the assumption that branching restrictions are totally eliminated, there would continue to exist a large number, perhaps several thousand, smaller, retail-oriented banking or thrift institutions. There are basically two reasons for expecting this. First, there is a genuine demand for the type of personal service that only a small, locally oriented institution can give. This explains why many mom-and-pop businesses continue to do well in the era of the supermarket; it may also explain why new unit banks are still being established and are thriving in statewide branching states such as

California and Oregon. Second, the economies of scale in many retail banking activities, in particular consumer and mortgage lending, are simply not that great. Once an institution reaches an asset size of \$50-\$100 million, there appears to be little additional cost advantage to be gained by another doubling in the scale of these functions. Such institutions will not, of course, be able to compete seriously in the national and international corporate lending markets.

Diversification. The advantages of being able to buy your stocks where you buy your socks (or hold your checking account) are probably greatly overrated. It is doubtful whether many stock market investors have complained of the inconvenience of not being able to buy and sell stocks through their banks. The main attraction of the Cash Management Account, which at first glance might seem to depend on economies of joint consumption, is really related to economies of joint production. It enables a product to be offered—ready access to a larger line of credit than is currently available with a bank credit card—that is possible only because of the investment account maintained by the customer at Merrill Lynch. However, the convenience of one—stop banking has been shown to be of major importance in determining where consumers hold their savings accounts, 25 and the advantage to the customer of being able to obtain all, or most, financial services from a single source may become more important in the future.

Very little is really known about the existence or magnitude of economies of joint production of various financial services. That there are some in the case of the CMA account is clear. There also would appear to be fairly important complementarities in the granting of various kinds of credit; e.g., a bank's experience gained by extending consumer credit to a customer is clearly useful in deciding whether to make him a mortgage loan. In at least

one area where there might be important informational economies to be gained by combining activities—commercial lending and management of trust investments—the potentials for abuse are so great that public policy actively discourages the realization of such economies.

However, the recent advances in information-processing technology are rapidly eroding much of the cost advantage enjoyed by established lenders, thereby destroying the associated advantages to borrowers and, hence, their interest in maintaining such relationships. Assuming only that in-home banking terminals do not take the form of proprietary installations by a single financial firm--thereby excluding other competitors until the customer decides to terminate his entire relationship with the installing firm--there is likely to be a great deal more "shopping around" by customers on the computer terminal for the best terms available on individual financial services. Thus, specialized firms offering only a limited number of services will still be able to compete on the basis of price and quality with the large financial conglomerates.

Although the Citicorps, Manny Hannies, and Merrill Lynches may try to offer every financial service under one roof—we might end up with, say, 25 or so fully integrated, national financial conglomerates—the managements of many other institutions will choose to specialize. This may be either from weak—ness—for example, it is not clear that many savings and loan associations are prepared to move from the rather simple business of accepting passbook savings and making mortgage loans to operating department stores of finance—or from strength, in the sense that some managements may be convinced that they can perform a narrow range of functions better than anyone else.

However, it is doubtful that thrift institutions, in particular, will be quite as narrowly specialized as they have been in the past. The new NOW

account, consumer lending, and limited trust account powers granted them by DIDMCA have already moved them in the direction of becoming family banking institutions. Further liberalization on the asset side is likely to move them further in that direction. But it should be recognized that adoption of either of the two major reform bills currently under consideration—the Garn bill and the regulators' bill—will do nothing to end the tax preferences that have been a major force pushing thrift institutions to specialize in residential lending.

It might be observed that these much-heralded asset powers are likely to prove less useful to the thrifts in surviving in a volatile interest rate environment than the variable-rate mortgage powers that they are still learning to use. Transition problems aside, they permit the same shortening of asset durations without either start-up costs or the need to compete with other established suppliers of the new services. The shifting of interest rate risk to the borrower that such mortgages entail may not be as serious a problem as it has been painted to be. Although the typical homebuyer is probably less able to predict interest rate movements than the professional managers of lending institutions, this is generally counterbalanced by the fact that the market value of the mortgaged property rises with increases in the mortgage rate. (However, this hedge will not work when the increase in interest rates is not attributable to expectations of increased inflation, i.e., when the real rate of interest increases.) In the past, it was extremely difficult to translate the increase in the homeowner's equity into improved cash flow. However, the recent expansion in lenders' willingness to make second mortgages, as well as such developments as Merrill Lynch's new plan to extend lines of credit based on the borrower's equity in his home,

promises to increase the availability of this hedging possibility in the future as variable rate mortgages grow in importance.

As for the banking industry's role in the financial system of the future, we believe that the question is somewhat out of place. In the past, the unique attributes and capabilities that distinguished banking as a well—defined industry were largely the product of regulation. With the demise of these artificial barriers, the notion of banking as a separate and distinct industry will slowly but inexorably disappear. Although its full implications have only begun to seep into the consciousness of those who labor in the financial marketplace, the Depository Institutions Deregulation and Monetary Control Act was a fateful step into a largely unknown, but certainly very different, competitive environment.

## Public Policy

The public policy questions raised by these hypothetical developments are many, varied, and important. Although one of our key theses is that much of the change we have been seeing is inevitable and that regulation must, and in fact does, adapt itself to that change, this point can be pushed too far. The argument of "inevitability" is easily abused, as when it is argued that a particular change, though highly undesirable in and of itself, should be adopted because of its "inevitability." In other words, if the ship is going to sink anyway, let's blow a hole in the side to get it over with. The arguments of some financial industry lobbyists that such and such law should be changed now because it must inevitably be changed someday are examples of this particular brand of sophistry.

We reject such a simplistic notion of inevitability. Although we acknowledge that, to be effective, regulations must be predicated on a realistic idea of how market forces work and must be designed so as to minimize evasion, we would not argue that they have no effect whatever on the economic outcome or that they can never play a constructive role in shaping firms' responses to market forces.

One very real concern that attends the prospective dismantling of geographical barriers is whether the ensuing consolidation movement will result in excessive concentration, both in specific markets and in the aggregate, and whether existing antitrust laws are adequate to prevent such a development. The Sherman and Clayton Acts were designed to deal with horizontal restraints on competition and there does not appear to be any good reason why they cannot serve to prevent mergers that would result in excessive concentration in specific markets in the financial sector. Several important cases in the 1960s settled the question of whether they apply to commercial banking. Thus, one may question whether prior approval under such special legislation as the Bank Merger Act will be necessary in the future.

The effectiveness of the antitrust laws, however, depends to a large degree on how they are applied; antitrust has always been one of the more arcane and fuzzy areas of the law, particularly when applied to financial institutions, and its administrators have considerable discretion in choosing which cases to prosecute. Deregulation undoubtedly will lead to both a broadening of the actual geographic and product markets within which financial institutions compete and a broadening of the approximations of those markets used by the agencies and the Antitrust Division in evaluating the competitive effects of acquisitions. Conceivably, however, the broadening of the definitions could be carried beyond what the facts would warrant, and acquisitions could be allowed that are seriously anticompetitive. This is made more likely by the fact that, with markets in flux and new competitive realities emerging, great uncertainty will attend the market delineation process in the years

immediately ahead. The limited resources of the Antitrust Division and the typically long lag between the filing of an antitrust case and its resolution in the courts raise additional questions regarding the adequacy of relying completely on the antitrust laws to prevent anticompetitive mergers in financial markets, particularly during the transition to full interstate banking.

Much also depends on economic conditions in the years ahead. If interest rates remain high and volatile, and many financial institutions find themselves in serious trouble, the anticompetitive effects of acquisitions may be relegated to a position of secondary importance. This is already evident in the virtual neglect of the competitive implications of recent mergers of large thrift institutions in New York and Chicago.

Perhaps of even more concern, the issue of aggregate concentration may become a serious problem for the first time. However crudely, the restrictions on interstate banking made it difficult for a very few firms to dominate the entire financial system, and thereby to wield undue political influence. When these restrictions are gone, that danger will become more real. Insofar as the antitrust laws reach primarily horizontal mergers, and not the market extension mergers between different types of institutions or between similar institutions in different geographical markets that are certain to be the prevalent type in the future, they are not equipped to deal with the problem. 27 Conceivably, such mergers could be attacked under the antitrust laws using the potential competition doctrine, but the burden of proof on the prosecution in such cases is extremely heavy. 28 An alternative approach to the case-by-case analysis of competitive effects would be to impose a global limit on the number of offices a financial firm might have nationally or a prohibition on further acquisitions once its share of a given market exceeded The reality and seriousness of the problem of aggregate a given level.

concentration in the financial sector and, therefore, the necessity and appropriateness of such solutions are, of course, open to some doubt. But a failure to give the problem full consideration now could be the cause for serious regret later.

A similar point can be made regarding the potential conflict of interest problem associated with allowing lenders to underwrite securities. The argument that banks should be allowed to underwrite municipal revenue bonds because securities firms are beginning to offer bank-like services is at best somewhat specious. It fails to address the evils the Glass-Steagall Act was designed to prevent and could equally well be used as an argument for drastically limiting the transactions characteristics of money market fund shares. Moreover, the effects of combining underwriting and banking on the overall risk incurred by the bank are still largely unknown. As previously indicated, the entry barrier imposed by Glass-Steagall is very different from those posed by chartering or branching restrictions, and the resulting restraint on competition considerably less. Unless there are very few firms other than banks capable of entering the investment banking industry, the exclusion of banks should have little effect on the competitiveness or the efficiency of underwriting municipal revenue bonds. In the absence of any compelling evidence demonstrating the efficiency of combining the two activities, it would appear unwise to eliminate this protection.

In closing, we would like to add our voices to those urging that much more attention be given to the adoption of risk-related federal deposit insurance premiums. The importance of this reform, which would constitute a major step toward greater reliance on price incentives to guide financial institutions' decision-making, has not been adequately appreciated. The compatibility of such a scheme with a freer and more competitive financial

environment more than outweighs the alleged difficulties of its implementation. 29 The very technological developments in information-processing that are propelling the changes in financial markets would contribute greatly to its feasibility. Indeed, without this change, it is unlikely that deregulation in the financial services industry will ever achieve its enormous potential.

## FOOTNOTES

- Alfred D. Chandler, Jr., The Visible Hand: The Managerial Revolution in American Business (Cambridge: Harvard University Press, 1977).
- <sup>2</sup>See John H. Wood, "Interest Rates and Inflation," <u>Economic Perspectives</u>, Federal Reserve Bank of Chicago (May/June 1981), pp. 3-12.
- <sup>3</sup>"Policy Recommendations for the Comprehensive Deregulation of Major Financial Institutions and Markets," September 11, 1981.
- <sup>4</sup>For example, see Raymond P. Kent, "Dual Banking Between the Two World Wars," in <u>Banking and Monetary Studies</u> (Homewood, Illinois: Richard D. Irwin, 1963), pp. 61-63.
- <sup>5</sup>See, e.g., John H. Kareken, "Deregulating Commercial Banks: The Watchword Should be Caution," <u>Quarterly Review</u>, Federal Reserve Bank of Minneapolis (Spring/Summer 1981), pp. 1-5.
- <sup>6</sup>These classifications have been shown to possess some ability to predict defaults. See, e.g., Hsui-Kwang Wu, "New Evidence on The Accuracy of Bank Examiner Loan Criticisms: An Intertemporal Cross-Section Analysis,"

  <u>Proceedings of a Conference on Bank Structure and Competition</u>, Federal Reserve Bank of Chicago, 1979, pp. 121-45.
- <sup>7</sup>See, for example, Leon Korobow, David P. Stuhr, and Daniel Martin, "A Nationwide Test of Early Warning Research in Banking," <u>Quarterly Review</u>, Federal Reserve Bank of New York (Autumn 1977).
- <sup>8</sup>See, e.g., "Alternative Views on Regulating Conflicts of Interest in The Financial Firm," in <u>Issues in Financial Regulation</u>, edited by Franklin R. Edwards (New York: McGraw-Hill, 1979), pp. 123-75.
- Strictly speaking, there is no specific mention of economies of scale in the Bank Merger Act or in Section 3 of the Bank Holding Company Act which deals with acquisitions of banks. Nor is economies of scale a legal defense under the Sherman Act or Clayton Act, although it may be a legitimate economic defense. (See O.E. Williamson, "Economies as An Antitrust Defense: The Welfare Tradeoffs, American Economic Review, vol. 58 (March 1968), pp. 18-36. Only under Section 4(c)(8) of the Bank Holding Company Act, which applies to acquisitions of nonbank companies, is economies of scale a legitimate offset to anticompetitive effects. Section 4(c)(8) states that "the Board shall consider whether its performance [of a nonbanking activity] by an affiliate of a holding company can reasonably be expected to produce benefits to the public, such as greater convenience, increased competition, or gains in efficiency, that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices." Under Section 3, convenience and needs of the community, financial and managerial resources, and future prospects of the banks involved are the only offsets to anticompetitive effects.

- 10 The Bank Holding Company Act is one of the few banking regulations to have been subjected to a cost-benefit analysis. It is doubtful that many others could stand up as well under such close scrutiny. See Harvey Rosenblum, "A Cost-Benefit Analysis of the Bank Holding Company Act of 1956", in Proceedings of a Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, 1978, pp. 61-98.
- Against Selective Credit Controls," <u>Journal of Money, Credit, and Banking</u>, vol. 9 (February 1977), pp. 55-69 and "Accelerating Inflation, Technological Innovation, and the Decreasing Effectiveness of Banking Regulation," <u>Journal of Finance</u>, vol. 36 (May 1981), pp. 355-67.
- 12 Peter R. Lloyd-Davies, "The Effect of Deposit Rate Ceilings upon the Density of Bank Locations", in <u>Proceedings of a Conference on Bank Structure</u> and Competition, Federal Reserve Bank of Chicago, 1977, pp. 1-18.
- 13 Kristine Chase, "Interest Rate Deregulation, Branching, and Competition in the Savings and Loan Industry, <u>Federal Home Loan Bank Board Journal</u>, vol. 14 (November 1981), pp. 2-6.
- 14With the complete phaseout of Regulation Q, banks will have to offer rates competitive with money market mutual funds. Banks should have a cost advantage resulting from federal deposit insurance. Based on casual observation of the minimum spreads between top quality private sector and U.S. Government debt with similar maturity and liquidity—for example money market funds of the same sponsor that invest in private vs. Treasury money market instruments, it is estimated that this cost advantage will typically be less than one percentage point.
- 15 General Electric Credit Corporation's commercial receivables grew at an 18.7 percent annual rate between 1975 and third-quarter 1980. Its net income grew at an 18.2 percent annual rate over this same period. During this time, "the type and brand of products financed and the credit granted have been significantly diversified, and products of companies other than General Electric now constitute the major portion of the products financed." Moody's Bond Survey, February 16, 1981, p. 2747, emphasis added.
- 16 Randall C. Merris, "Business Loans at Large Commercial Banks: Policies and Practices," Economic Perspectives, Federal Reserve Bank of Chicago (November/December 1979), pp. 15-23; see especially pp. 17-19.
- 17 Mark Flannery, "How Do Changes in Market Interest Rates Affect Bank Profits?" Business Review, Federal Reserve Bank of Philadelphia, (September/October, 1980).
- 18 Paul R. Watro, "Financial Services and Small Businesses," <u>Economic</u> Commentary, Federal Reserve Bank of Cleveland, January 11, 1982.
- Peter C. Eisemann, "Empirical Evidence on Sources of Business Finance," in The Future of the Financial Services Industry, Conference Proceedings, Federal Reserve Bank of Atlanta, June 1981, pp. 77-84.

- Frederick C. Klein, "Some Firms Fight Ills of Bigness by Keeping Employee Units Small," Wall Street Journal, February 5, 1982, p. 1.
- William F. Ford, "Banking's New Competition: Myths and Realities," Economic Review, Federal Reserve Bank of Atlanta (January 1982), p. 11.
  - <sup>22</sup>Ibid, Chart 1 and Chart 2, p. 5.
- $^{23}$ Statement on "Financial Institutions in a Revolutionary Era" to The Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives, December 10, 1981, p. 2.
- <sup>24</sup>See Bernard Shull, "Multiple-Office Banking and the Structure of Banking Markets: The New York and Virginia Experience," in <u>Proceedings of a Conference on Bank Structure and Competition</u>, Federal Reserve Bank of Chicago, 1972, pp. 30-40.
- 25Lorman L. Lundsten and Lewis Mandell, "Consumer Selection of Banking Office--Effects of Distance, Services and Interest Rate Differentials," in Proceedings of a Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, 1977, pp. 260-86.
- $^{26}$ Such shopping around may involve little cost. Just as billboard CRT displays of U.S. Government securities prices have revolutionized the government bond market by reducing transaction and information costs, it can be expected that similar technology will be extended to less homogeneous borrowers in the future.
- <sup>27</sup>Stephen A. Rhoades, "Limitations of Antitrust Law for the Analysis of Market Extension Mergers," unpublished paper, 1981.
- $^{28}\mbox{Mercantile Texas Corporation v.}$  Board of Governors of the Federal Reserve System.
- 29 See Chayim Herzig-Marx, "Comparing Market and Regulatory Assessments of Bank Condition," in Proceedings of a Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, 1977, pp. 89-112. This paper suggests that the market evaluates the same information as do bank supervisors; and further, the market prices the cost of bank funds in relation to risk. See also George G. Kaufman, The U.S. Financial System: Money Markets, and Institutions (Englewood Cliffs, N.J.: Prentice Hall, 1980), Ch. 16.