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Bank Risk and the Declining Franchise Value of the Banking Systems in the United States and Japan

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Abstract

This paper associates both the increase in risk taken by wholesale banks in the United States and the decline in earnings at wholesale banks in Japan with a reduction in the franchise value of wholesale banking. In contrast with the conventional view that relates the franchise value of banking to informational advantages over other lenders, this paper argues that banks' franchise value originates in their provision of liquidity and payments services to their customers. Therefore, the decline in corporate demand for bank liquidity is identified as a major factor explaining the fall of the franchise value. The paper also analyzes recent proposals for banking reform and assesses their relevance for dealing with the problems of wholesale banks.

JEL Classification Numbers:
G18; G21

1/ This paper has benefitted from comments by Ulrich Baumgartner, Peter Garber, Morris Goldstein, Ellen Nedde, and Jan van Houten. We accept sole responsibility for any remaining errors.

Contents

Contents

Summary

The recent rise in problem loans extended by banks in the United States and the decline in profitability faced by Japanese banks are a source of concern for policymakers, who associate these events with a significant decline in the franchise value of wholesale banks in those countries.

In contrast with the conventional view that the franchise value of banks stems from their informational advantage over other financial institutions, this paper identifies the franchise value of a bank with the business of providing liquidity and payments services to bank customers. In this regard, the decline in the franchise value of wholesale banks in Japan and the United States is attributable to a reduction in corporate demand for bank liquidity. This paper also maintains that the decline in franchise value has led to increased risk taking on the part of American wholesale banks and to a decline in earnings at Japanese wholesale banks.

An important conclusion is that proposals to reform the banking industry that concentrate on broadening the powers of banks may not solve the fundamental problem of wholesale banks because they do not deal with the origin of the problem. Instead, wholesale banks are faced with two choices: First, banks could reduce the scale of their business to a level consistent with the reduced demand for liquidity of their customers. A second option may lie in the expansion of businesses that permit banks to exploit better their traditional skill of reducing the cost of liquidity. The building of swap markets is a case in point.

I. Introduction

A major development in industrialized countries over the past decade has been the growing modernization, deregulation and integration of financial markets. This in turn has produced increased competition among the suppliers of financial services. Although this increase in competition has resulted in increased efficiency in the allocation of financial resources, it has also brought concerns about a decline in the franchise value of the banking industry--i.e., the value of the business that distinguishes banks from other financial intermediaries.

This paper deals with the recent evolution of the franchise value of banks in the United States and Japan. The problems of banks in the United States are well known. Twice in the last five years, provisions for bad loans have more than wiped out the aggregate net income of American wholesale banks, and they have been forced to pay dividends out of capital. In addition, after an extended period of maintaining a high return on equity, Japanese banks have also recently been experiencing downward pressure on earnings and on capital. 1/ This paper argues that the franchise value of wholesale banking in the United States and Japan has declined, increasing the incentives for risk taking by banks. Specifically, the paper maintains that the decline in franchise value has led to increased risk taking on the part of wholesale banks in the United States and to a decline in earnings at Japanese wholesale banks.

In contrast with the conventional view that identifies the franchise value of banking as arising from informational advantages over other lenders, 2/ this paper argues that banks are unique because they are the cheapest source of "good funds"--i.e., cash or items whose delivery always constitutes settlement of a claim for cash--in the economy. This uniqueness is derived from the special nature of the banking system which can mobilize good funds more easily than competing financial institutions. As such, the franchise value of banking originates in the provision of liquid assets and payments services to banks' customers. The higher the demand for those services, the higher the value of the banking franchise. A central argument in this paper is that, following the liberalization of financial markets and the increased efficiency in the payments systems, corporations in the United States and Japan reduced their demand for bank liquidity. This in turn led to a decline in the franchise value of wholesale banks in those two countries.

1/ Reflecting the recent decline in real estate values and the related financial difficulties of property developers, Japanese banks have also encountered a rise in problem loans, although the proportion of organized non-current loans in total bank loans has remained small.

2/ The special information hypothesis is contained in Bernanke (1983) and Fama (1985).

The proper identification of the franchise value of banking has important policy implications. In recent years, concerns about the profitability of wholesale banks in the United States and Japan has led authorities in those countries to consider expanding the range of activities undertaken by banks. In the United States, for example, the Treasury's proposal for reform of the banking system aims at removing restrictions on securities activities by depository institutions and at loosening restrictions on interstate banking. Similarly, in Japan, debate is under way over a proposal to broaden the securities powers of banks. An important implication of the analysis in this paper is that bank reform envisioned in current proposals may not be able to solve the fundamental problems of wholesale banks. This is because broader powers are unlikely to offset the declining franchise value attributable to a reduction in corporate demand for bank liquidity.

The rest of this paper is organized as follows: Section II presents the conventional view regarding the nature of the franchise value of banks, discusses its shortcomings and suggests an alternative view. This section also discusses the factors that have induced banks to undertake risky activities, emphasizing the linkages between risk taking and the franchise value of a bank. Section III presents a brief overview of banking systems in Japan and the United States. Section IV analyses the franchise value for wholesale banks in the United States and Japan and explores the relationship between the decline in this value and the increase in bank risk. Section V analyzes the franchise value for American and Japanese regional banks. Section VI evaluates the potential effectiveness of proposed reforms in solving the problems faced by major banks in the United States and Japan. Finally, Section VII contains the paper's conclusions.

II. The Nature of the Franchise Value of Banks and its Effect on Bank Risk

This section reviews the recent literature on the special role of banks in financial markets and discusses its shortcomings. An alternative view on the nature of the franchise value of banks is then presented. Finally, the linkages between the franchise value and risk-taking activities of banks are explored.

1. The conventional view on the franchise value of banks

In exploring the role of banks in financial markets, the "special information hypothesis," first advanced by Bernanke (1983) has gained considerable support. This hypothesis states that banks play a unique role in financial markets because they have private information about costumers unavailable to other, nonbank lenders. This theory was reinforced by Fama (1985). Based on the observation that bank certificates of deposits, which were then subject to reserve requirement, traded at the same yield as commercial paper and bankers' acceptances, which were not subject to reserve requirements, Fama inferred that bank borrowers rather than depositors bear

the burden of reserves. Bank loans must then be a unique form of credit, or borrowers would avoid paying for reserves by switching into alternative sources of credit. Based on such observations, many economists have concluded that banks have an information advantage which prevents borrowers from easily seeking alternative sources of credit.

The theory was given some empirical content in James (1987). James performed an event study in which he showed that the announcement of a bank commitment to lend caused the stock price of the recipient company to rise immediately after the announcement by more than general market movements and its risk would seem to warrant. He also found that an announcement of a commitment to lend by an insurance company caused no such reaction in the stock market. James interpreted his findings as evidence that financial markets believe banks have special information about borrowers.

However, Lummer and McConnell (1989) showed that the stock price effect found by James occurred only when bank loan commitments are renewed on favorable terms. Thus, the market does not believe banks have special information about new borrowers. It has been argued that banks' renewal signal is more important than signals provided by original bank terms or by other borrowers because banks play a special role in monitoring borrowers' behavior. Black (1975) and Goodfriend (1988) have suggested that this special function is conferred on banks because of their role in the payments system. They argue that a bank benefits from having a demand deposit relationship with a customer, which provides it with current information about the state of the borrower's financial condition. Another nonbank lender, however, could easily erode this competitive advantage by requesting that the borrower provide real time access to his on-line bank financial statements. In short, there may be economies for a potential borrower to subject itself to a bank credit examination because the borrower must visit the bank anyway to access the payment system. After having done the examination, the bank knows more than other lenders ex post; but ex ante it has no intrinsic advantage in information gathering.

2. An alternative view on the franchise value of banks

As stated in Section I, this paper takes the view that banks' franchise value originates in their provision of liquidity and payments services to their customers. 1/ All segments of the economy require access to liquidity--in order to carry out payments--and banks are the cheapest source of "good funds." 2/ That is, banks are unique not because they possess an informational advantage over other lenders but because they can mobilize good funds more easily than competing financial institutions. Banks can

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1/ A more detailed presentation of this view is contained in Garber and Weisbrod (1990).

2/ "Good funds" can mean either cash or, in the wholesale market, deposits at the central bank or at banks, items whose delivery always constitutes settlement of a claim for cash.

make a credible statement about delivering good funds to their deposit customers and borrowers on demand because banks are part of a banking system tied together by the clearing and settlement mechanism of a clearinghouse. Members agree to lend good funds to members who experience a shortage of good funds on any particular day.

Since banks' retail customers have different liquidity requirements from large corporations and securities markets, the franchise value of regional banks differs from that of wholesale banks. Liquidity for the retail customer means having convenient access to cash, the overwhelming choice for settling small transactions. To serve this market, banks must provide extensive branch and ATM locations. In contrast, wholesale banks' franchise value is in the provision of payments and liquidity services to large corporations and securities markets.

As mentioned above, since these services enable banks' customers to carry out payments, banks issue liabilities, such as demand deposits and repurchase agreements, which promise delivery of good funds to another party on the same or the next business day. Banks also make short-term loans to their customers to cover payments when the latter do not have access to other forms of immediately available funds. These transactions are settled by delivery of reserves to a receiving bank's account at the central bank. In the United States, the Federal Reserve guarantees payments messages sent over "fedwire," the electronics payments system operated by the Federal Reserve Board (the Fed). That is, the Fed promises that all banks receiving payments will be honored instantly with the delivery of good funds, even if a bank sending a payment should fail.

It is expensive to provide liquidity. The conventional explanation is that reserves that banks must deliver to settle transactions among themselves do not pay interest. The central bank supplies these reserves, and, in both Japan and the United States, establishes reserve requirements on liquid deposits. 1/

Wholesale banks perform a valuable service because they conserve on the use of reserves while still providing liquidity to their customers. A bank must deliver reserves to the central bank only against its net "due to" position vis-à-vis all other banks in the system. In other words, if a bank receives as many payments messages as it sends, it need not deliver any

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1/ However, liquidity is costly for reasons other than the fact that the central bank does not pay interest on reserves. After all, no law prevents wholesale market participants from establishing a "bank" that holds Treasury bills and settles payments through purchases and sales of these bills. Treasury bills are just not liquid enough for payments purposes; only reserves will do. In fact, this is what a money market mutual fund does. However, money market mutual funds still hold demand deposits at banks because this is the only way they can provide their customers with the ability to make payments.

reserves at the end of the day. If a bank does not have to deliver reserves, it need not hold reserves or liquid assets easily convertible into reserves on the asset side of its balance sheet; this means that its profits will be larger. 1/ Banks can in fact choose their customers to minimize end-of-day net "due to" positions that require delivery of reserves to other banks' accounts at the Fed.

It might be argued that a bank need not hold liquid assets to guarantee coverage of net "due to" positions because it can always borrow in the interbank market or from the central bank to guarantee delivery of funds. The latter vehicle is not as useful as it may first appear because, typically, the central bank rations credit supplied through the discount window.

Borrowing in the interbank market can permit a bank to meet its net "due to" position without having to sell assets. However, an interbank loan must be repaid the next day. Thus, the bank selling the funds is likely to demand a guarantee that the buying bank can come up with good funds the next day--that is, a guarantee that the buying bank will not become illiquid during the night. The buying bank can provide this guarantee by holding some liquid assets on its balance sheet. Hence, the buying bank would have to pay the price of receiving a relatively low rate of return on a liquid asset, even if it uses the interbank market to obtain liquidity.

In private clearing arrangements, such as CHIPS (Clearing House Interbank Payment System), banks employ end of day net settlement. CHIPS members guarantee intra-day payments messages. Since the daily payments volume is large (over US$800 billion), large participants receive about as many payments as they send. Thus, actual settlement is small relative to the volume of payments. CHIPS members are able to settle net rather than gross positions because the banking system has developed the legal arrangements that allow this to happen. Specifically, CHIPS has precedence over other creditors in seizing certain liquid assets of a failed member to settle its net "due to" position.

Thus, providing liquidity through a clearing house has a cost to other less senior bank liability holders, and they must be compensated for bearing this risk. This is the source of the liquidity premium. Those who are paid first receive a lower rate of return on their asset. When the central bank absorbs this risk--that is, when it guarantees payment--it must be

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1/ It may be argued that a bank must still hold reserves because it is subject to reserve requirements. However, in a market like the United States, wholesale banks have many opportunities to reduce their reserve holdings to their desired level by issuing liabilities not subject to requirements instead of reservable deposits. For example, overnight repurchase agreements have the same characteristics as demand deposits, but they are not subject to reserve requirements.

compensated as well. Issuing non-interest bearing reserves is one way for it to receive compensation.

The liquidity premium will decline if market participants believe they do not have to hold a traditionally liquid asset to obtain liquidity. For example, if the commercial paper market becomes large and achieves a high degree of liquidity, large corporations will hold commercial paper rather than an asset that definitely promises immediate convertibility into good funds, such as a bank repurchase agreement or a demand deposit. If this happens, the wholesale bank franchise will decline in value because the demand for the service of providing immediate convertibility falls. 1/

3. Linkages between risk and the franchise value of banks

Almost universally among industrial countries, policies are in effect that either explicitly or implicitly protect bank customers--and often banks themselves--from the consequences of failure. In both Japan and the United States, an insurance system exists for small depositors. In Japan, insurance is limited to deposits of ¥ 10 million per person across all banks (about US$75,000) or less; in the United States, deposits of less than US$100,000 are insured. It is commonly believed that both countries have an implicit "too big to fail" doctrine. That is, all liability holders of large banks, whether technically insured or not, will be rescued in the event of bank failure.

It is frequently argued that the insurance system creates an incentive to take excessive risk. If this is so, we would expect to find all banks taking risky positions to benefit from the insurance system. Nevertheless, we see variations in bank risk, both across markets and across time. This leads to the question of why some banks and banking systems are riskier than others. This paper argues that the answer lies with the basic franchise value of the bank, which, as discussed above, is linked to providing liquidity and payments services--that is, enabling their customers to carry out payments. This is the one line of business in which others cannot compete--usually by law. However, as the previous discussion suggests, the advantage banks have in providing payments services goes beyond the legal charters under which they operate. It has an economic dimension as well.

How does franchise value affect risk in a system that insures banks against failure? Assume that a bank can engage in two basic types of activities. One is the role of a pure investor or portfolio manager--that is, the bank takes deposits, which are insured by the government, and invests the proceeds. The other activity is the provision of payments services. A bank that provides payments services also has a balance sheet

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1/ The commercial paper market ultimately depends on the banking system for liquidity because issuers back their paper with liquidity lines. However, the fact that lines are rarely drawn implies that banks do not need to supply liquidity under normal circumstances (Garber and Weisbrod (1990)).

because, to make and receive payments, banks must supply deposits and occasionally make loans. The following example illustrates the relationship between franchise value and bank risk.

Assume a banking system composed of two banks, A and B. Bank A operates fully as a portfolio manager and accepts US$2 billion in deposits for investment. In contrast, bank B operates a payments business that generates US$100 million in fees per year, and, as part of the payments business, also ends up with a US$2 billion balance sheet. Suppose that both banks can make loans for US$2 billion and that the distribution of payments is such that the future value of the loans equals US$3 billion if the loans are paid off, or zero if customers default on these loans. Both banks fund their loans with US$2 billion in insured deposits. 1/ In addition to the expected gain from making a loan, bank B owns an income stream from its payments business that equals the discounted value of the yearly cash flows. Assume that these cash flows equal US$100 million, and that, at a discount rate of 10 percent, this yields an asset worth US$1 billion.

The balance sheets of banks A and B, assuming that they invest in the risky loans, are displayed at the top of Figure 1. Bank A's only assets are the loans, which it funds with deposits; it therefore has no equity. Bank B, on the other hand, holds an asset worth US$1 billion, which represents the value of its payments business. Hence, it has US$1 billion in equity on the liability side of the balance sheet.

In Figure 1, the balance sheets of the two banks are displayed. In case 1, the assumption is that the risky loans are fully serviced. Since the loans are worth US$3 billion, the organizers of each bank have earned a revenue of US$1 billion, which is represented by an increase in their equity accounts. Case 2 depicts the situation when the loans are not paid off. Bank A now has negative equity of US$2 billion, while bank B has negative equity of US$1 billion. The negative equity is a liability of the government insurance agency.

If government insurance did not exist, depositors of bank A would not be paid in the event of loan default, while depositors of bank B would receive half their money. Thus, depositors of bank A would demand a higher ex ante interest rate on their deposits. However, with deposit insurance, depositors (as investors) cannot lose; hence, they are willing to supply funds to both banks at the same interest rate.

Due to the existence of insurance, owners of bank A gain relative to the owners of bank B when a risky loan strategy is pursued. The former risk nothing for a possible gain of US$1 billion, while the latter risk US$1 billion for the chance to make US$1 billion. If entry into the banking business is relatively free, type A banks will drive the return on the risky

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1/ It is assumed that the banks' insurance costs are unaffected by the risks they accept, as is the case in most government insurance schemes.

Figure 1. Examples of Risk Taking

(In millions of U.S. dollars)

BANK A
Balance Sheet

Assets		Liabilities	
2,000	Loans	2,000	Deposits

BANK B
Balance Sheet

Assets		Liabilities	
2,000	Loans	2,000	Deposits
1,000	Payments Business	1,000	Equity

Case 1: Loan Pays Off

BANK A
Balance Sheet

Assets		Liabilities	
3,000	Loans	2,000	Deposits
		1,000	Equity

BANK B
Balance Sheet

Assets		Liabilities	
3,000	Loans	2,000	Deposits
1,000	Payments Business	2,000	Equity

Case 2: Loan Defaults

BANK A
Balance Sheet

Assets		Liabilities	
0	Loans	2,000	Deposits
		-2,000	Equity

Bankrupt

BANK B
Balance Sheet

Assets		Liabilities	
0	Loans	2,000	Deposits
1,000	Payments Business	-1,000	Equity

Bankrupt

business is relatively free, type A banks will drive the return on the risky portfolio down to a level that makes it unattractive for type B banks to hold it.

In such an environment, type B banks must survive based on the viability of their payments business. They will hold a balance sheet because the balance sheet is necessary to support the payments business, but they will hold a safer portfolio than type A banks because there is no incentive to risk the payments franchise. Type B banks will pay a lower interest rate on deposits than type A banks. Nevertheless, type B banks will be able to attract deposits because its customers are willing to accept a relatively low rate of return in exchange for payments-related services. In general, insured banks that have a profitable business will always have a lower expected return from taking risk than insured banks with less profitable businesses. The latter banks will drive the expected returns on risky investments below the level required by banks with profitable businesses.

Although this section has identified bank risk with holding a risky loan portfolio, the rest of the paper assumes that banks can also take risk through increasing leverage--i.e., by reducing the capital-to-asset ratio. 1/

From the analysis in this section, the following conclusion can be established: banks with a profitable payments business, that is, banks benefitting from the value of their franchise, will have an incentive to increase the riskiness of their activities only if the value of their franchise, relative to the return on riskier activities, decreases. The next two sections review the recent evolution of franchise value in both the wholesale and regional banking business in the United States and Japan, and discuss the relationship between the changes in franchise value and risk-taking activities of banks.

III. An Overview of the Banking Systems in the United States and Japan

A capsule summary of the American and Japanese banking industries is presented in Table 1. In both Japan and the United States, there is a group of wholesale banks that operate primarily in financial centers. These banks--nine "money center banks" in the United States (as of year-end 1991), and 11 "city banks" in Japan--are the main providers of bank loans to large corporations. They are also major players in the market for government securities, and the major source of bank credit to securities markets. They raise approximately 40 percent of their deposits outside their home country and are active participants in world foreign exchange markets.

1/ Risk can be taken in other ways as well, for example, by taking a risky trading position in interest rate or currency markets.

Table 1. Comparative Summary of the American and Japanese Banking Industries, 1990-91

(In percent of total assets)

	United States		Japan	
	Money Center Banks	Regional Banks	City Banks	Regional Banks
	December 31, 1990		March 31, 1991	
Assets				
Cash 1/	11.4	6.6	17.5	6.3
Securities	14.2	15.2	10.7	18.9
Loans	60.5	63.6	54.1	61.8
Liabilities				
Total deposits	68.7	71.4	66.8	82.6
Domestic deposits	36.2	64.6	42.6	76.5
Equity	4.5	5.6	2.9	3.7
Average branch size (in millions of U.S. dollars) 2/	100 3/	45 3/	430 4/	125 4/

Sources: Board of Governors of Federal Reserve System, Federal Reserve Bulletin (various issues); Federal Reserve Report data base; American Bankers, Top Numbers 1990, p. 50; Bank of Japan, Economic Statistics Monthly (February 1992), and Economic Statistics Annual (March 1991), p. 160; and Federation of Bankers Association of Japan, Analysis of Financial Statements of All Banks (March 31, 1991).

1/ Cash item includes interbank deposits, deposits at the central bank, and cash items in the process of collection.
2/ Branch size measured by domestic deposits.
3/ Data are as of December 1989.
4/ Data are as of December 1990.

In both countries there is also a group of major regional banks--95 in the United States, and 64 in Japan. In the United States, regional banks are banks that have assets greater than $5 billion. In Japan, the regional category includes major banks in each of Japan's prefectures. Regional banks focus on the retail banking business, that is, they provide banking services to individual customers, to small businesses, and to medium-size corporations. Regional banks have higher capital-to-asset ratios than wholesale banks, and they obtain a far greater percentage of their deposits from the domestic market. They also have smaller branches than money center or city banks. The Regionals likewise tend to have higher loan-to-asset ratios, although the difference is more pronounced in Japan.

It is noteworthy that banks play a much larger role in the Japanese economy than they do in the United States. One indication is that for example in 1990, domestic, commercial bank assets per capita were US$12,000 in the United States versus US$40,000 in Japan.

In addition to wholesale and regional banks, a large number of "small" depository institutions exist in both countries. These small banks are more numerous in the United States than in Japan. 1/ Japan also contains a group of specialized financial institutions namely, trust banks, not found in the United States. By law in Japan, trust business can only be performed by banks with a special trust license. The Japanese banking system also has three specialized long-term credit banks. These banks were initially established to provide long-term funding to corporations in an economy without a well-developed bond market. This paper will not analyze the specialized banks in detail; suffice to say that they face the same earnings problems as the city banks.

A bank franchise in the United States and in Japan is affected both by legal restrictions and by economic factors. Banks in both countries are prevented from underwriting and from dealing in securities other than government bonds. In the United States, the Federal Reserve has recently reinterpreted this restriction to allow banking companies to own an affiliate with limited powers to underwrite corporate securities. At present, U.S. banks are not important players in the market for corporate securities.

1/ U.S. depository institutions include commercial banks, savings and loans, mutual savings banks and credit unions. Japanese depository institutions include financial institutions for small businesses, agriculture, fisheries, and postal savings.

In the United States, money center bank holding companies hold 8.5 percent of all U.S. depository institutions' domestic deposits, while other large bank holding companies hold 30.4 percent of those deposits. In Japan, city banks and regional banks hold 27.4 percent, and 20.4 percent of all depository institutions' domestic deposits, respectively.

In the United States, it is illegal for a bank to control (or be controlled by) an enterprise engaged in business not closely related to banking. In Japan, banks are allowed to own corporate equities, but they are prevented by the anti-monopoly law from holding more than 5 percent of the equity of any company. This means that it is illegal for a bank to control any other enterprise, even if its business is closely related to banking.

In the United States, banks are prohibited from branching across state lines, and they can only own a bank in another state if that state permits them to do so. 1/ In Japan, there are no geographic restrictions on bank expansion, but the Ministry of Finance has final say over whether a bank can open new branches. In both countries, the deposit-taking business of wholesale banks is limited mainly to the major financial centers.

IV. Franchise Value in Wholesale Banking and Bank Risk in the United States and Japan

1. The franchise value of wholesale banks in the United States

It is often argued that wholesale banks have lost their best corporate customers to securities markets where these customers can borrow directly from investors, such as life insurance companies and pension funds. Thus, banks have found that spreads in corporate lending are too narrow to support their costs, and they have had to accept more risk to obtain an adequate rate of return on capital.

However, this explanation falters because banks are investors just like insurance companies. If banks cannot afford to hold corporate debt, why can pension funds afford it? In fact, it is corporate demand for bank liquidity, rather than banks' role as investors, that has declined. The well-known evidence for this fact is the decline in the ratio of bank demand deposits to financial assets of U.S. nonfinancial corporations, which fell from 9.2 percent in 1974 to 6 percent by 1990.

It is customary to attribute the decline in demand deposits to regulation. Banks were protected from market forces by the prohibition against paying interest on demand deposits. When corporations found ways to achieve liquidity without holding demand deposits, the franchise value of wholesale banking is said to have declined. This story is unsatisfactory because it makes bank viability dependent upon regulation. That is, it assumes banks had a regulation-imposed monopoly in providing liquid assets. As the market made this regulation nonbinding, the value of the banking system declined. In contrast, it is argued here that, as payments systems became more efficient and as markets became more liquid, corporate demand

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1/ Bank holding companies that cross state lines are, however, permitted to operate in some 40 states.

for traditionally liquid assets declined, causing liquidity premiums to fall.

The decline in demand deposits on the asset side of corporate balance sheets did not occur independently of other changes in financial markets. In the mid-1970s large corporations began raising short-term funds through the commercial paper market, reducing their reliance on commercial bank loans to meet their immediate needs for liquidity. This, in turn, reduced the demand for settlement in good funds and, ultimately, for demand deposits. As indicated in Figure 2, corporations' reliance on commercial paper continued to increase during the 1980s.

How does a relative increase in commercial paper imply a decline in demand for settlement in good funds? Assume a corporation makes a payment to a supplier and issues commercial paper to cover the payment. If the supplier wants payment in a demand deposit, someone who previously held a demand deposit must be willing to hold the newly issued commercial paper. That is, ceteris paribus, if economic agents are willing to hold commercial paper, they must undertake a change in the composition of their portfolio, reducing their holdings of demand deposits. If this happens, the payment is made without any increase in the demand for good funds. That is, the payment nets out with a receipt from the party that previously held the demand deposit. Transactions are settled with no increase in demand for reserves.

The change in how large corporations raise funds and deliver payment to their suppliers had a profound effect on how banks price large, short-term commercial loans. Traditionally, the interest rate on these loans was based on the prime rate, which was set periodically by large banks in New York. The prime rate followed market interest rates with a lag so that when market rates rose, the spread between the prime rate and market interest rates narrowed and when market rates fell, the spread widened.

The traditional pricing structure for large, short-term commercial loans can be observed in Figure 3. In this figure we plot the change in the interbank lending rate (the fed funds rate) and the spread between the rate charged on large, short-term commercial loans and the fed funds rate. Until about 1977, the change in the fed funds rate and the interest rate spread moved in opposite directions, indicating that most large corporate loans were priced on prime.

In a rising rate environment, the cost of short-term corporate liquidity did not rise as rapidly as open market interest rates. Thus banks provided their large corporate customers with some degree of protection against swings in short-term interest rates. When corporations shifted from bank loans to commercial paper, they abandoned this protection, indicating that their cash flow was adequate to absorb fluctuations in short-term borrowing costs. In short, large corporations had become more liquid.

The most liquid corporations began using the commercial loan market as a backup to their commercial paper facilities. That is, they borrow overnight funds from banks when market conditions are unfavorable to an immediate issue of commercial paper. These loans are priced on market interest rates at extremely narrow spreads over the fed funds rate. As documented by Wolfson and McLaughlin (1989), in 1986 this spread reached a low of 46 basis points. The prime rate itself has been under pressure from open market alternatives as well. In 1984 it stood at 199 basis points over the fed funds rate; by 1987 it had fallen to 158 basis points. Over most of this period market interest rates were declining.

The decline in the demand for settlement in good funds tends to narrow liquidity premiums--that is, investors are less willing to sacrifice yield to hold a liquid asset. Short-term corporate borrowers abandoned the bank loan market--where spreads over market rates were, on average over the last twenty years, 114 basis points--for the commercial paper market. Corporate treasures shifted financial assets from demand deposits to the direct short-term liabilities of other corporations.

This decline in the liquidity premium resulting from the reduced demand for settlement in good funds was accompanied by an increase in bank risk. In the early 1970s, money center banks began their heavy investment in Latin American loans. By 1980, the American money center banks had invested more than twice their capital in loans to developing countries. As Figure 4 indicates, capital ratios at money center banks began to decline in the late 1970s, reaching their low point in 1980. 1/ By 1987, over 10 percent of foreign loans were on non-accrual or past due status (Table 2). This figure understates the problem since loans to many developing countries only accrued interest because banks were willing to book unpaid interest as additional loans.

In the 1980s, money center banks began rebuilding their capital base, reflecting, at least partly, instructions from regulators. Simultaneously, however, they began to increase their real estate lending as a percent of total assets. As Figure 5 indicates, the ratio of real estate loans to total assets of money center banks rose from 8.62 percent in 1981 to over 18 percent of assets by 1990. Problem real estate loans in money center banks rose from about 3 percent of total problem loans in 1987 to almost 9 percent of such loans by September 1991 (Table 2).

Mounting loan problems caused money center banks to take large losses in 1987 and again in 1989 as they were forced to increase their provision for loan loss (Figure 6). Up until they realized these losses, their return on equity was generally higher than at the major regional banks, a fact that

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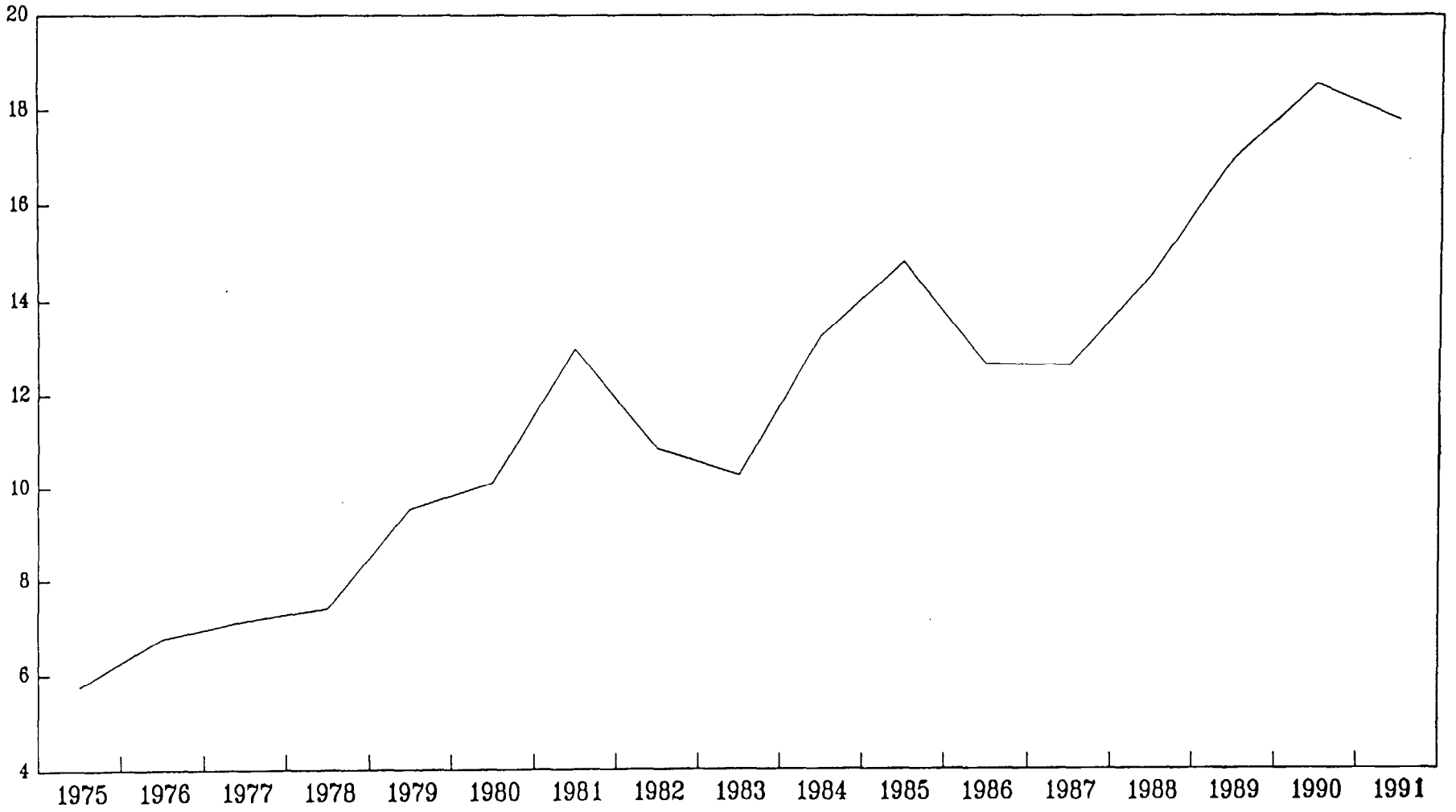
1/ Most charts in this paper provide data for regional banks as well. This serves both as a point of comparison, and as a basis for our later discussion of regional banks.

Figure 2. United States: Share of Commercial Paper to Commercial Paper plus Commercial and Industrial Loans, 1975-91[1]

(In percent)

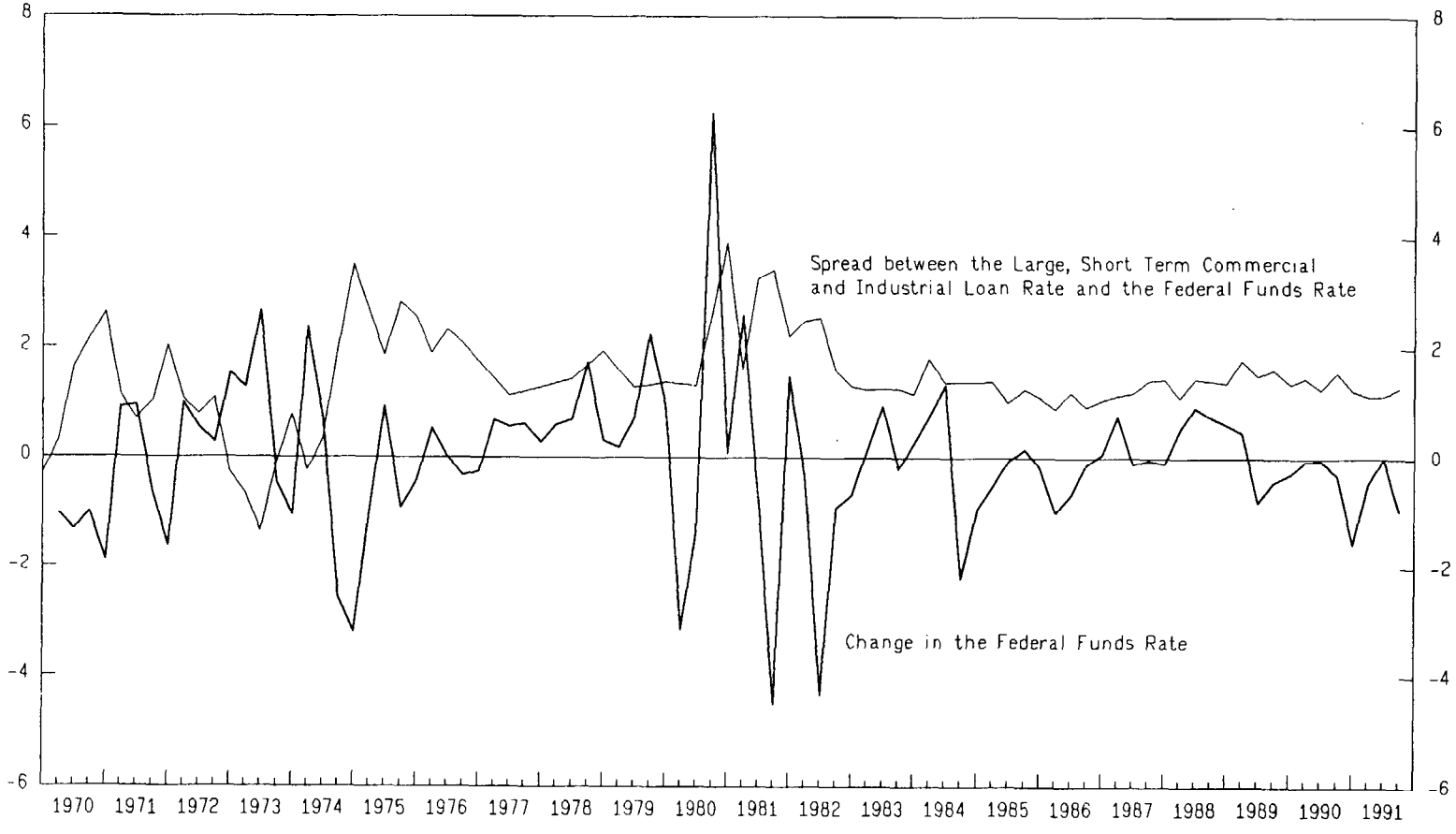


Source: Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin*.

[1] Data refer to commercial paper issued by nonfinancial corporations.

Figure 3. United States: Interest Rate Spread and Change in Federal Funds Rate, 1970-91[1/]

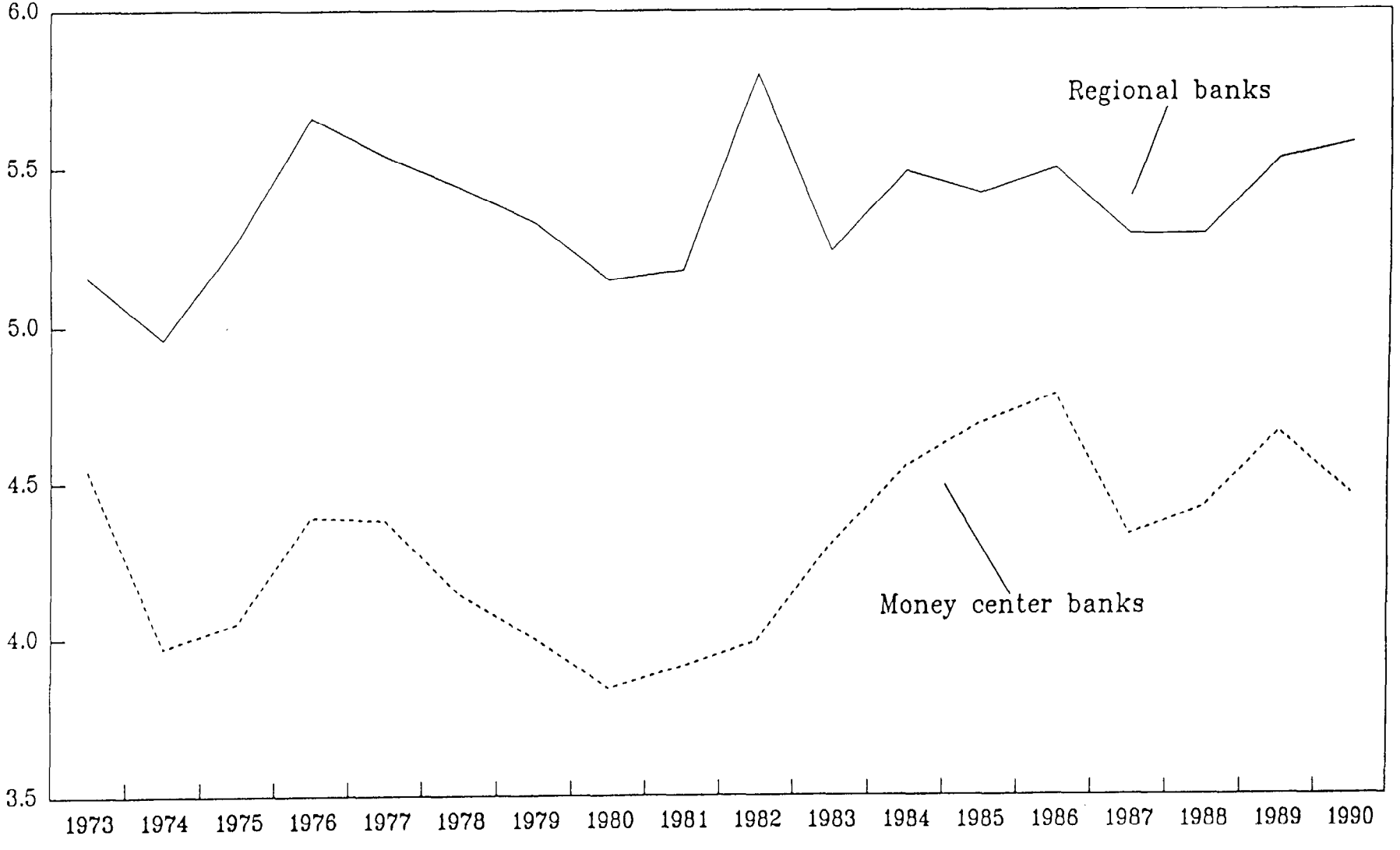
(in percent)



Sources: Board of Governors of the Federal Reserve System, various issues.

1/ The large, short-term commercial and industrial (C&I) rate is collected from the Federal Reserve Bulletin, but the table numbers and methods of collection changed several times between 1970 to 1991. From 1970 to 1976, the large, short-term C&I rate equaled the average interest rate paid on short-term business loans greater than $1 million in 35 business centers. From 1977 to 1985, the large, short-term C&I rate was collected from Table 1.34 (Line 6)--Terms of Lending at Commercial Banks. After August 1985, the large, short-term C&I rate is the weighted average of the effective fixed (Line 18) and floating rate (Line 25) for short-term business loans greater than $1 million. This table may be referenced under Terms of Lending at Commercial Banks in the Guide to Tabular Presentation, Statistical Releases, and Special Tables. Beginning in 1991, this rate is for C&I Loans greater than $10 million.

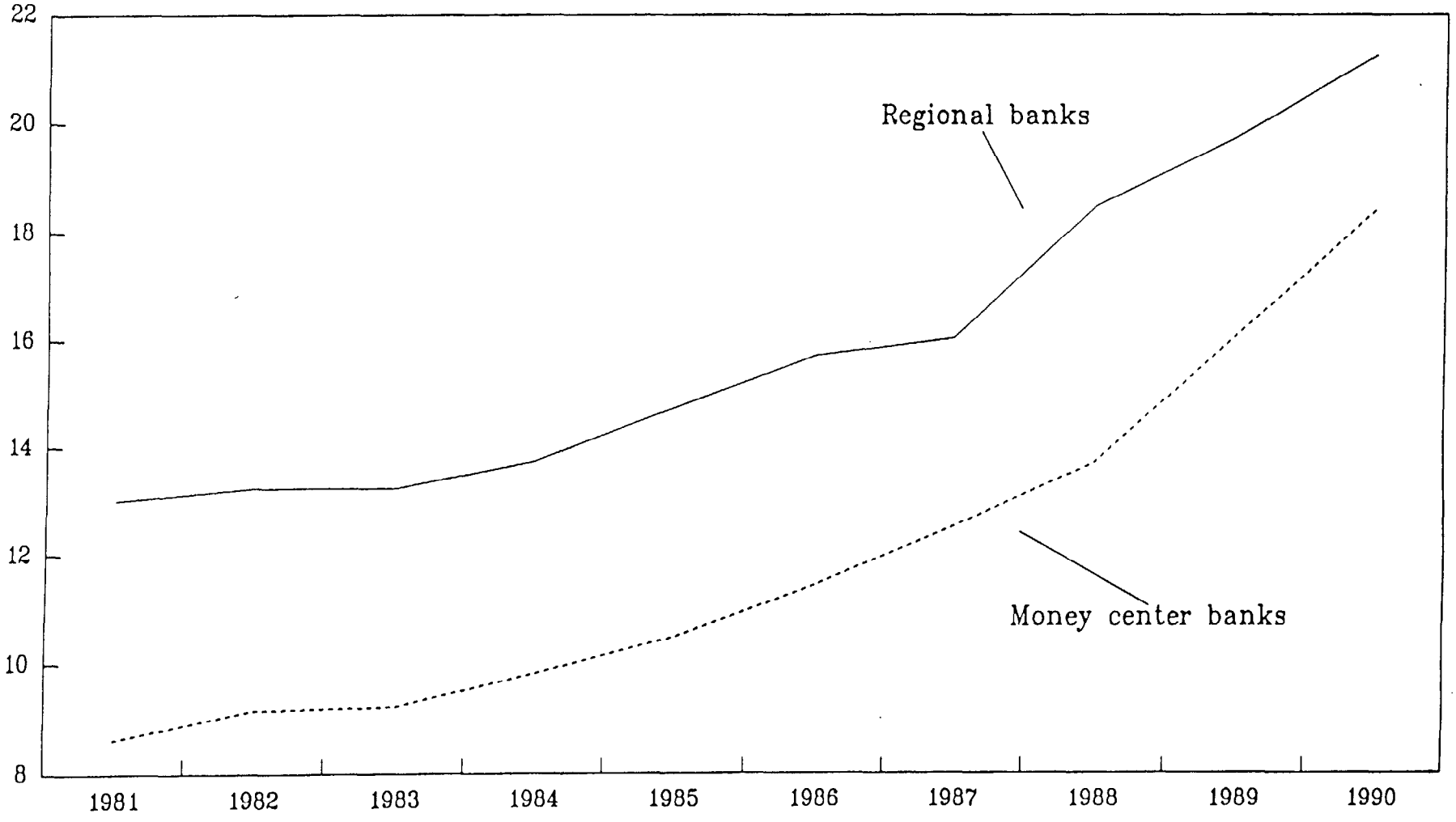
Figure 4. United States: Capital Ratios of Large Banks, 1973-90[1]
(In percent)



Source: Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin.*

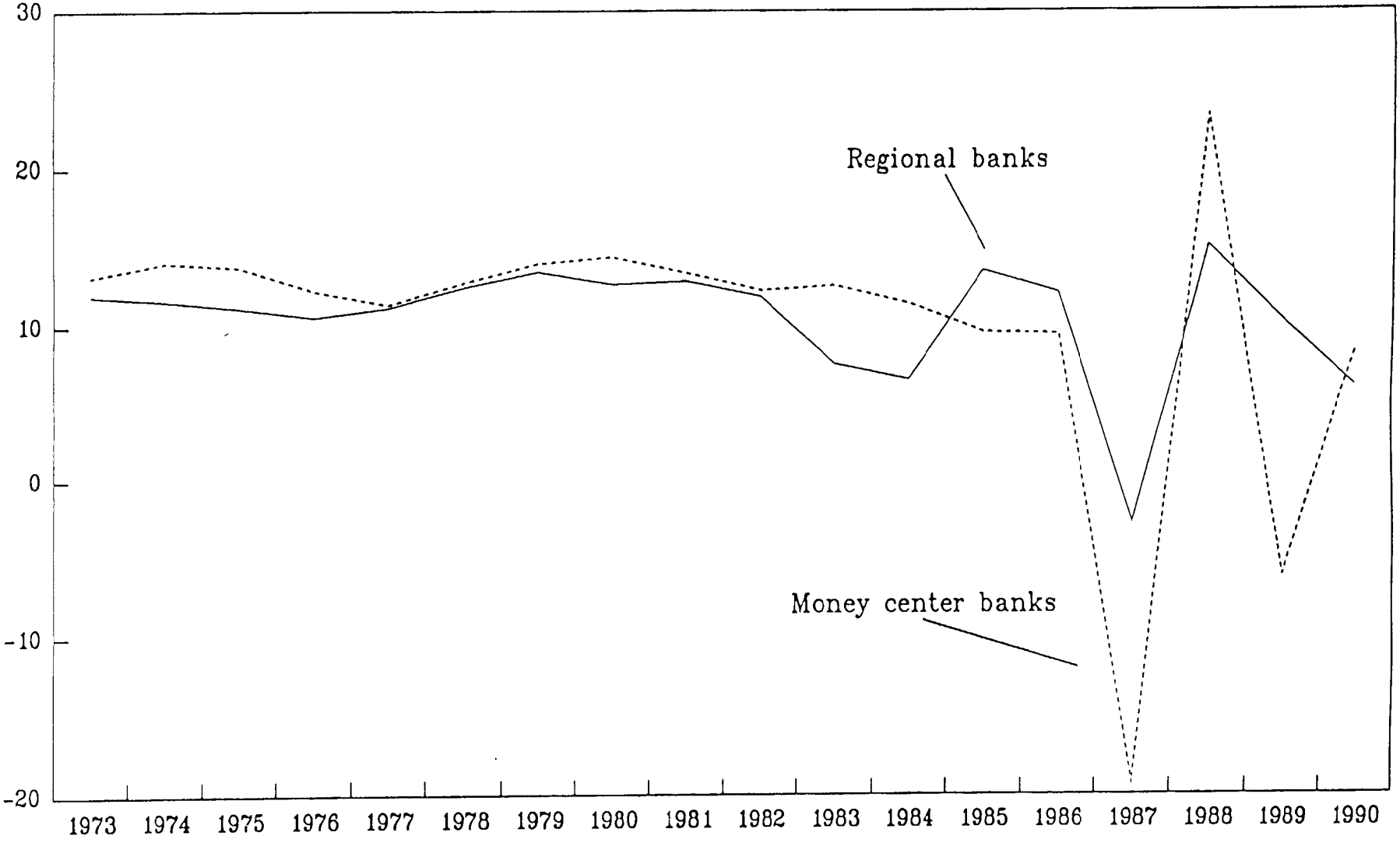
[1] Defined as equity to total assets.

Figure 5. United States: Proportion of Real Estate Loans to Total Assets at Large Banks, 1981-90
(In percent)



Source: Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin.*

Figure 6. United States: Return on Equity at Large Banks, 1973-90
(In percent)



Source: Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin.*

Table 2. United States: Noncurrent Loans at Top Bank Holding Companies
1987 to September 1991 1/

(In percent)

	1987	1988	1989	1990	1991
Money centers 2/					
Noncurrent loans to total loans	5.75	5.99	5.78	6.24	6.36
Percent of each portfolio on noncurrent status					
Real estate loan portfolio	3.36	3.14	3.74	6.72	8.89
Commercial and industrial loan portfolio	5.88	5.82	5.30	5.73	5.75
Consumer loan portfolio	2.10	2.11	2.19	2.46	2.58
Foreign loan portfolio 3/	10.33	11.98	10.54	7.90	5.30
Regionals					
Noncurrent loans to total loans	2.57	1.96	2.05	3.12	3.51
Percent of each portfolio on noncurrent status					
Real estate loan portfolio	2.11	2.14	2.49	4.20	4.46
Commercial and industrial loan portfolio	3.55	2.29	2.36	3.54	4.30
Consumer loan portfolio	0.77	0.77	0.83	0.97	1.07
Foreign loan portfolio 3/	14.20	8.21	6.75	5.13	4.10

Source: Board of Governors of the Federal Reserve System, Consolidated Financial Statements for Bank Holding Companies data base.

1/ Noncurrent loans include loans past due 90 days and loans on non-accrual status.
2/ Money centers include BankAmerica, Bankers Trust, Chase Manhattan, Chemical, Citicorp, Continental, First Chicago, J.P. Morgan, and Manufacturers Hanover. Regionals include top 95 largest bank holding companies ranked by 1990 assets (excludes money centers).
3/ Also distributed among other categories.

suggests money center banks take greater risk than regional banks. In 1990, money center banks out-performed regional banks, but they did so only because their provisions for loan loss were less than loan chargeoffs.

As the discussion above suggests, the decline in the value of the banking franchise was a key factor in generating an increase in bank risk. A frequently heard argument, however, suggests that bank risk taking is encouraged by government policy. The argument advanced in this paper is that it takes two factors to generate an increase in bank risk--a government insurance policy with prices that do not reflect risk, and a decline in the value of the banking franchise.

Many commentators argue that the authorities encouraged risk taking in the 1980s by demonstrating that they followed a "too big to fail" doctrine. This doctrine was made explicit in 1984 when the Federal Reserve provided loans to Continental Illinois through the discount window when it was having trouble raising funds in the open market. Uninsured lenders to the bank took the opportunity to withdraw their funds while the Fed propped up the value of the bank. Thus, uninsured liability holders were effectively insured, and the "too big to fail" doctrine was put into practice.

But the "too big to fail" doctrine was not conceived in the 1980s. It would probably have been applied earlier if the situation had arisen. That is, there is no reason to believe that economic agents' perceptions about the probability that the Government would "bail out" an important financial institution was different before and after the actual implementation of policies in 1984. The circumstance arose in the early 1980s because the wholesale franchise had deteriorated to such an extent that weaker banks were threatened with insolvency. 1/ Therefore, our argument is that it was the decline in the franchise value of banks, rather than a change in the regulators attitude toward large banks with problems, that led to the observed increase in bank risk in the 1980s.

In 1987, the spread between the overnight commercial loan rate and the fed funds rate increased from 46 basis points to 67 basis points. The spread between the prime rate and the fed funds rate began to rise in 1988. Government regulation had an important role in this recovery. The regulators placed pressure on the money center banks to increase their capital ratios, which had declined after banks made large loan loss provisions in 1987 to cover possible loan losses (See Figure 4). The banks have attempted to meet these requirements by reducing their balance sheets. Low risk loans, including liquidity loans to large corporations, have been the first to go. That is, notwithstanding the decline in the demand for settlement in good funds experienced in recent years, liquidity premiums

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1/ The regulators and Congress have attempted to come to grips with the problem by increasing supervision and attempting to place limits on the Fed's powers of lender of last resort.

recovered somewhat during the period 1987-90 because of the role of regulators in reducing the supply of bank liquidity.

Because of both a decline in the demand for settlement in good funds experienced since the mid-1980s and the regulatory pressures that reduced the supply of bank liquidity, the ratio of commercial and industrial loans to total assets at money center banks declined. In addition, the ratio of overnight loans to total commercial and industrial loans has fallen (Figure 7). This decline was accompanied by a renewed upward thrust in the ratio of corporate financing through commercial paper since 1988 (Figure 3).

2. The franchise value of Japanese wholesale banks

Banks in Japan play a larger role in the economy than they do in the United States. For example, in 1990, the ratio of bank deposits to total corporate financial assets (excluding trade credits) stood at 46.5 percent in Japan versus 18.8 percent in the United States. The ratio of bank loans to total corporate financial liabilities (excluding equity and trade debt), stood at 58.8 percent in Japan in 1990, compared to only 25.4 percent in the United States. This has led to the common view that Japanese wholesale banks have a much more powerful voice in corporate policy than wholesale banks have in the United States.

Yet dominance in supplying liquidity and credit to corporations has not given Japanese wholesale banks immunity from the same problems faced by American wholesale banks. For example, corporate willingness to hold demand deposits is declining. In 1974, the ratio of demand deposits to financial assets (excluding trade credit) was 38.6 percent; by 1990, their ratio had declined to 10.5 percent--about the same level as in the United States. 1/ Total bank deposits (including time and saving deposits) as a percent of total assets in Japan fell from 66.2 percent in 1980 to 46.5 percent in 1990. 2/ Bank loans as a percent of corporate liabilities fell less drastically, however. Between 1980 and 1990, they fell about 9 percentage points from 67 percent to 58 percent. 3/ The decline since 1980 in the demand by corporations for bank deposits was instigated by two factors: the deregulation of the government bond market in 1979, and the decline in corporate demand for bank liquidity.

1/ The decline in corporate willingness to hold demand deposits becomes evident by noticing that the value of these deposits actually declined from ¥ 39.2 trillion in 1985 to ¥ 37.9 trillion in 1990.

2/ It is sometimes argued that much of this decline was due to capital gains on cross-corporate equity holdings. However, if we consider close domestic substitutes for bank deposits, it is clear that the relative demand for bank deposits has declined. In 1980 trust accounts equaled 6.5 percent of bank deposits. By 1990 the ratio of trust accounts plus commercial paper (a short-term asset not available in 1980) to bank deposits rose to 24.4 percent.

3/ These figures exclude equity from liabilities.

Bank deposits held by corporations declined rather sharply in 1980 as a result of a change in government policy toward its debt outstanding. The Japanese Government had run large deficits in the mid to late 1970s, and the banks were obliged to buy virtually all of the government bonds not held by government related institutions. Through this measure, the Government might have hoped to preserve a policy of interest rate regulation on both deposits and loans by preventing government bonds from getting into the hands of nonbank investors, who would have preferred them over regulated deposits. Thus, banks were encouraged to buy government bonds at a fixed interest rate and were strongly discouraged from selling them. However, in 1979, Japanese interest rates rose sharply, and city banks responded by writing down the value of their government bonds. This led to a large drop in return on equity, as indicated in Figure 8. Eventually, the banks sold these bonds to the public, setting the stage for the inevitable decline in deposits as a percent of corporate assets and the deregulation of deposit interest rates. 1/ Corporations correspondingly increased their holdings of securities and trust accounts.

Indicative of the declining corporate demand for bank liquidity, there has been a sharp decline in the ratio of short-term loans (bills discounted, loans on bills, and overdrafts) to total loans at city banks. This ratio fell from 61 percent in 1985 to 42 percent in 1990 (Figure 9); by way of comparison, in 1974 it stood at 78 percent. Short-term loans are the traditional means by which large corporations obtain liquidity from banks; a decline in the ratio of these loans to total loans therefore signals reduced corporate demand for liquidity. 2/ City banks replaced the short-term loans with loans secured by deeds, many of which were made to real estate investment companies. 3/

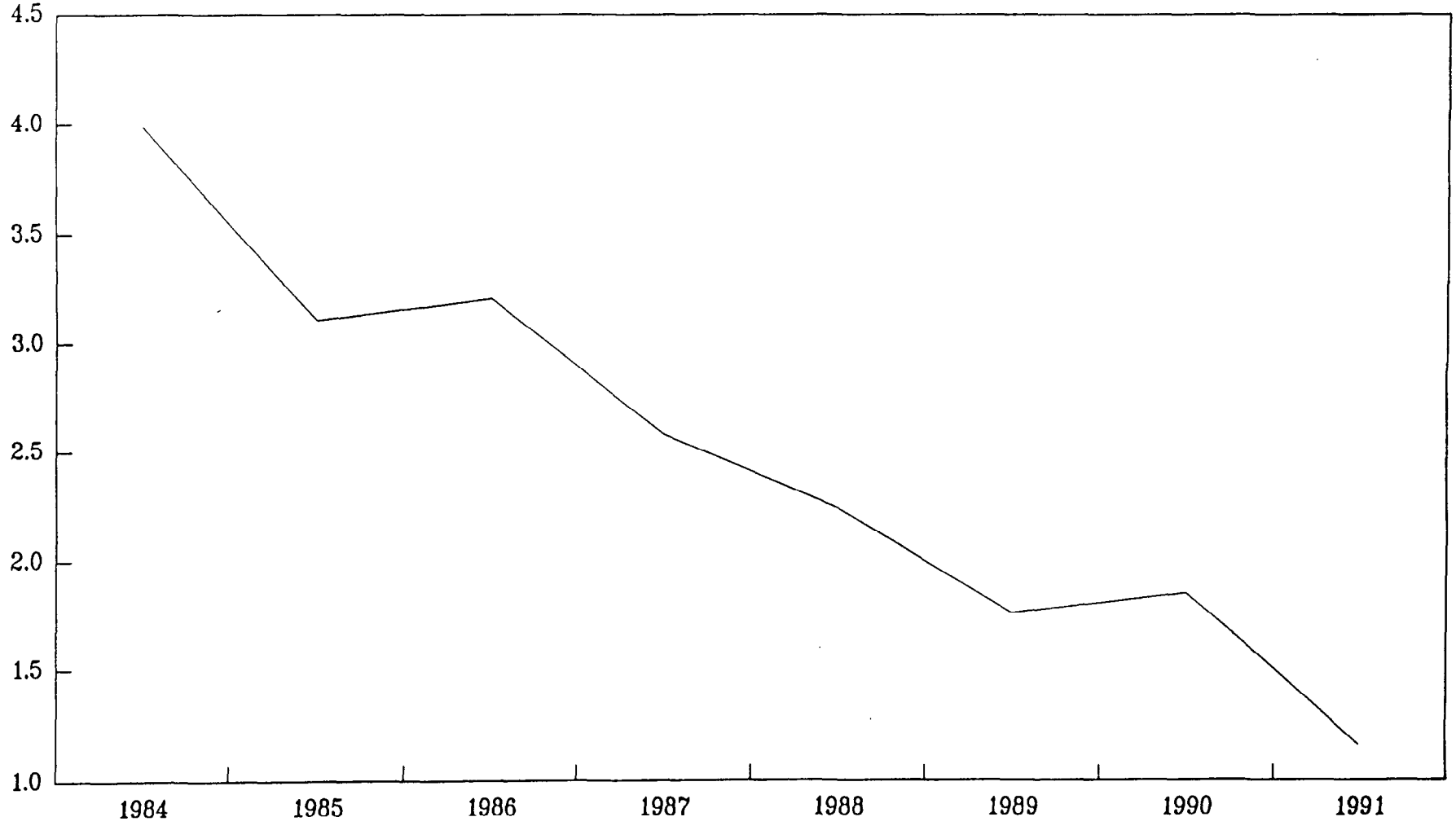
1/ Many of the government bonds were sold to the trust accounts of banks and investment trusts and therefore held indirectly by the public through trust funds. For example, by 1985 trust accounts and investment trusts held ¥ 16.9 trillion in government bonds compared to ¥ 17.5 trillion on the balance sheets of all banks.

2/ While the ratio between short-term and long-term bank loans is the relevant measure of corporate demand for bank liquidity, the outstanding value of both kind of loans largely increased during the 1980s.

3/ It is noteworthy to point out that not all segments of the Japanese market in the mid 1970s were as liquid as the corporate market. The call money market, which operates as an interbank market and as a market for loans to securities dealers, was regulated until the Fall of 1978. When it was deregulated, the spread between the rate at which city banks sold and bought funds increased from zero to about 300 basis points. At the same time, call loans at city banks expanded by about 75 percent as banks tried to profit from the lack of liquidity in this market. However, the market was too small to have much of an impact on city banks profitability, and by the end of the 1980s, the spread had disappeared (Table 3).

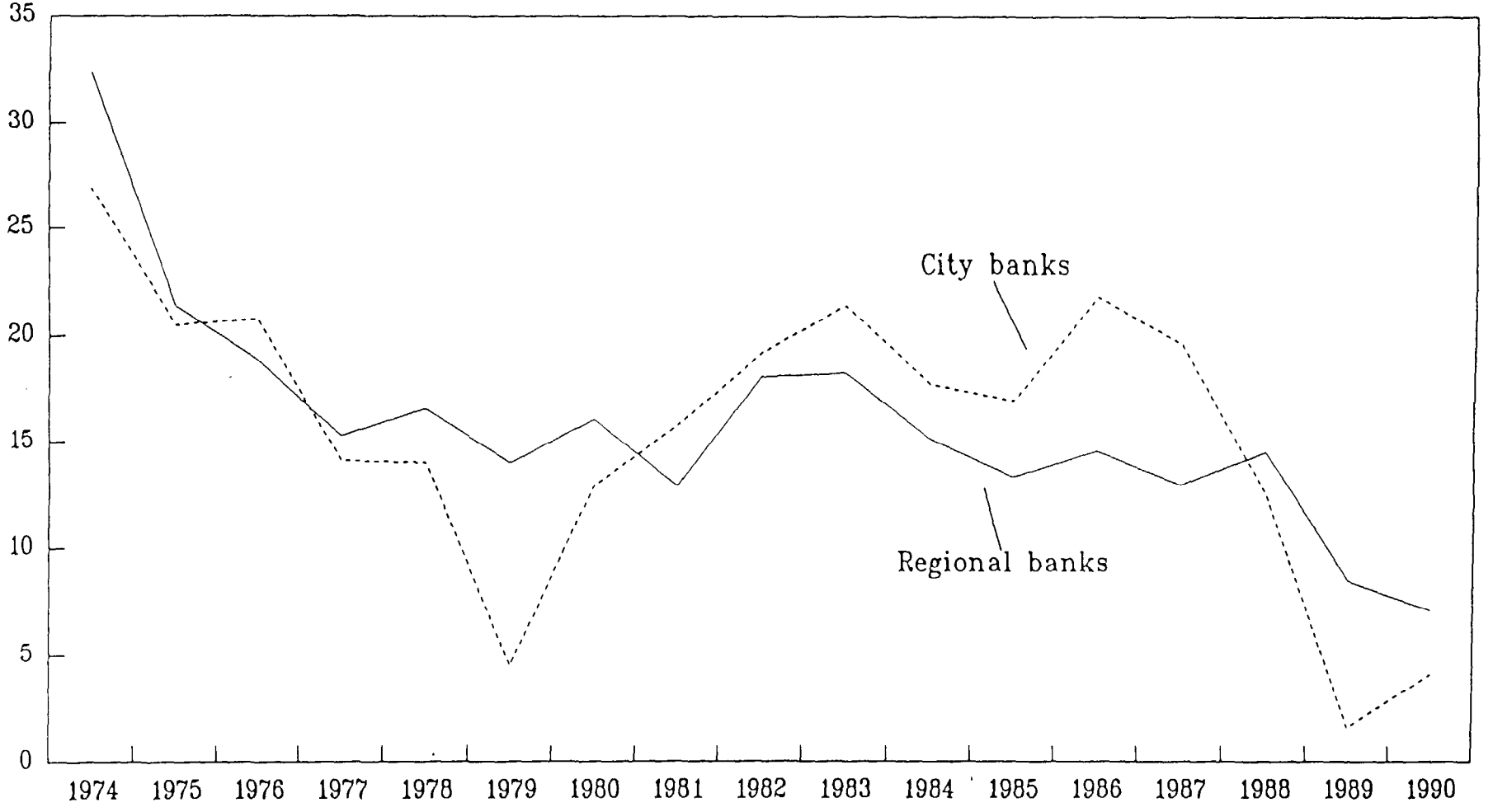
Figure 7. United States: Overnight Loans as a Proportion of Commercial and Industrial Loans, 1984-91

(In percent)



Source: Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin.*

Figure 8. Japan: Return on Equity at Regional and City Banks, 1974-90 [1]
(In percent)

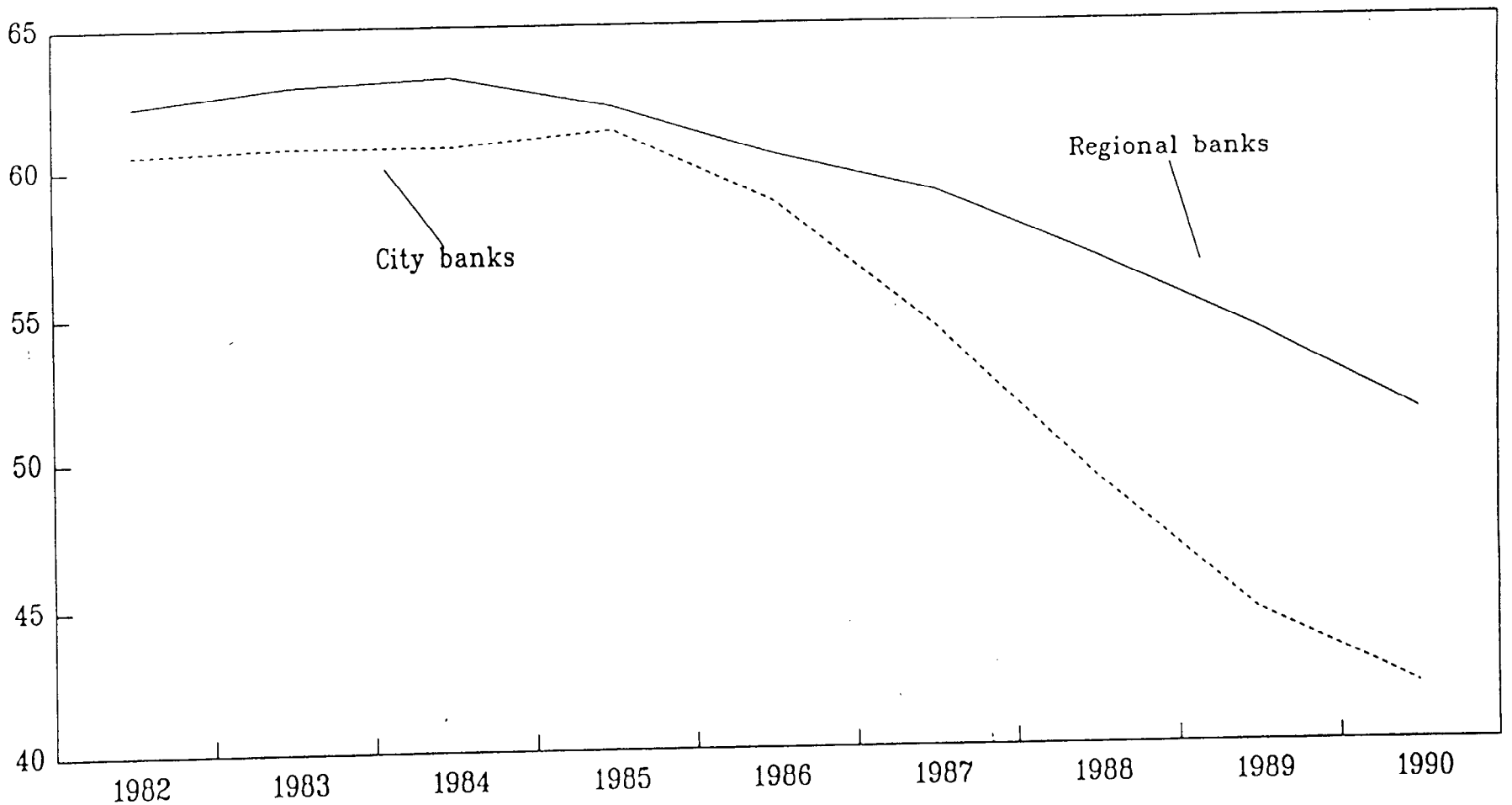


Source: Federation of Bankers Association of Japan, *Analysis of Financial Statements of All Banks.*

[1] Data represent return on equity before sales of securities and taxes. Numbers refer to fiscal year which runs from April to March. The large decline in return on equity in 1979 resulted from a write down in the accounting value of government securities.

Figure 9. Japan: Proportion of Short-Term Loans to Total Assets at Regional and City Banks, 1982-90[1 2]

(In percent)



Source: Federation of Bankers Association of Japan, *Analysis of Financial Statements of All Banks.*

[1] Short-term loans include bills discounted, loans on bills, and overdrafts .

[2] Numbers refer to fiscal year which runs from April to March.

Table 3. Japan: City Banks--Selected Sell, Buy, and Spreads in the Call Money Market, 1978-90

(In percent)

Year 1/	Sell	Buy	Difference
1978.2	8.32	5.27	3.05
1979.2	14.30	9.37	4.93
1980.2	14.41	11.25	3.16
1981.2	16.78	11.55	5.23
1982	12.98	9.83	3.15
1983	9.39	7.99	1.40
1984	10.92	8.32	2.60
1985	7.48	7.11	0.37
1988.1	5.12	5.05	0.07
1989	5.92	5.76	-0.16
1990	7.64	7.75	-0.11

Source: Bankers Association of Japan, Analysis of Financial Statements of All Banks, various issues.

1/ Number after the decimal indicates half year averages.

As in the United States, the decline in the large corporate demand for liquidity has resulted in a decrease in the franchise value of Japanese banks; in this connection note should be taken of the decline in net interest margin at city banks, which fell from 1.62 percent of average assets in 1978, to 0.24 percent of average assets in 1990 (Figure 10). 1/

In contrast to the United States, however, city banks were generally able to increase or maintain their return on equity until 1988, despite declining net interest margins. They did this through a combination of lower capital ratios (i.e., increasing leverage) until 1984 (Figure 11), an increase in non-interest income, and a decline in non-interest expenses. Of particular interest was the response of Japanese banks and their customers to the government's abolition in 1980 of controls on holding assets denominated in foreign currencies. Following this policy, corporate customers began to shift deposits to the overseas branches of city banks, as suggested by Figure 12. Most of these deposits were in U.S. dollars, which induced banks to increase their dollar denominated assets. Instead of extending loans, however, the city banks invested in deposits at foreign banks. By 1984, interbank deposits and "due from" foreign banks, as a percentage of total assets, rose to over 20 percent 2/ (Figure 13). Deposits and "due froms" equalled 47 percent of foreign assets by 1989, a ratio more than twice as high as at American banks. Thus, city banks held liquid, presumably dollar denominated, assets in their foreign branches.

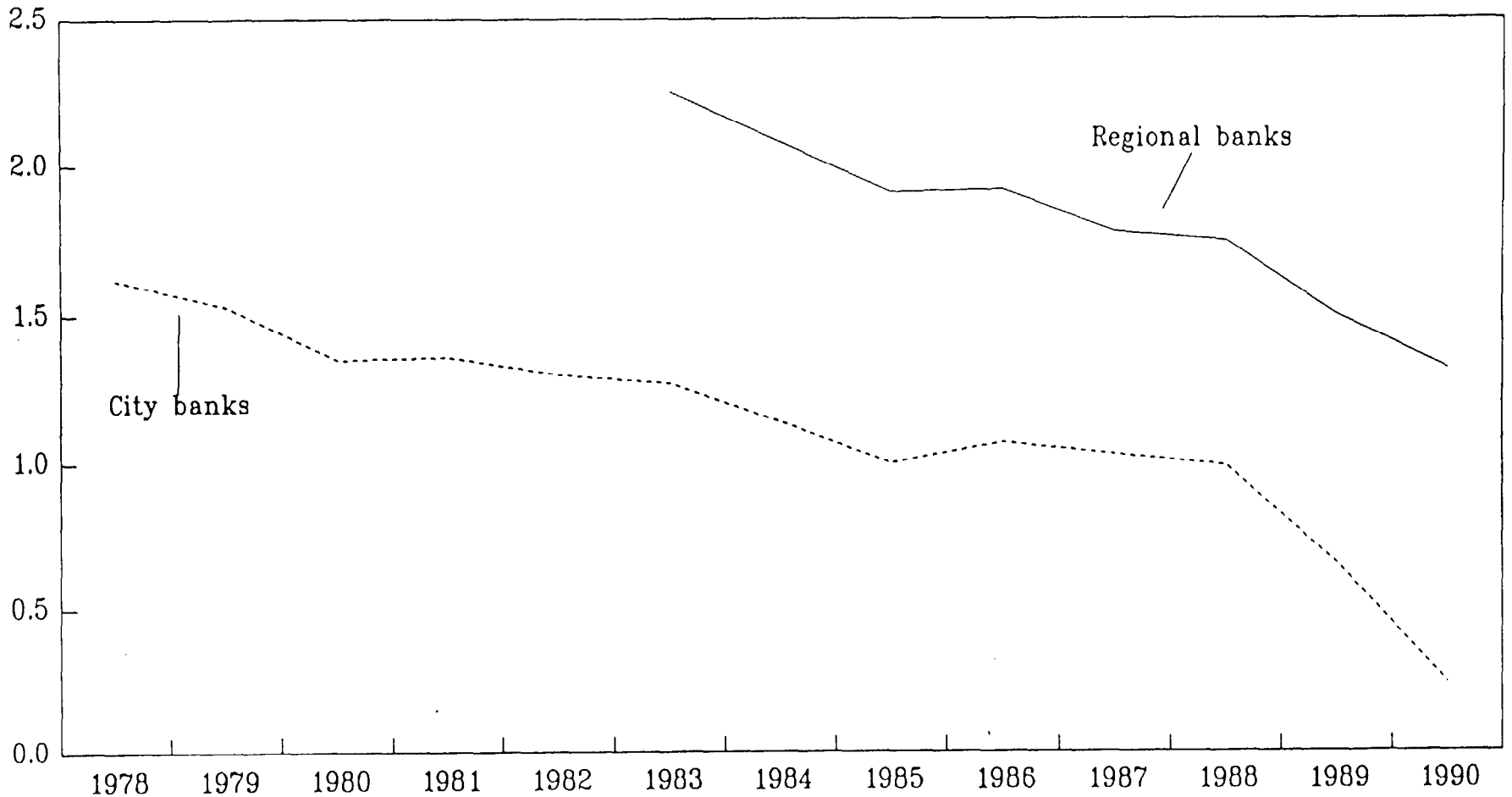
Why did the city banks invest in very liquid assets? After all, it was claimed earlier that banks make their money by investing in illiquid assets while providing liquidity to their liability holders. Their liabilities were the liquid dollar assets of Japanese corporations. It is possible that they held liquid assets because they did not believe that they could supply dollar liquidity in any other way. This implies they had a higher cost of producing dollar liquidity than American banks.

1/ Net interest margins are affected by interest rate cycles as well as the secular trend. It is sometimes argued that the secular trend has been driven by deposit interest rate deregulation. We suggest that deposit interest rate deregulation is, in fact, endogenous to the decline in demand for liquidity. Banks have attempted to maintain their share of financial assets by reducing their spread. To do this, they had to support deposit deregulation.

2/ The expansion of city banks' foreign assets occurred at the same time that American banks were making dollar loans to developing countries, so the time would have been right for the Japanese banks to follow the same path if they had so desired. Figure 12 illustrates that they did not do this. The ratio of domestic loans to total loans did not fall by as much as the ratio of domestic deposits to total deposits. (Japanese banks did make some loans to developing countries, but the amount of their exposure is less than their total capital account.)

Figure 10. Japan: Ratio of Net Interest Margin to Average Assets at Regional and City Banks, 1978-90[1]

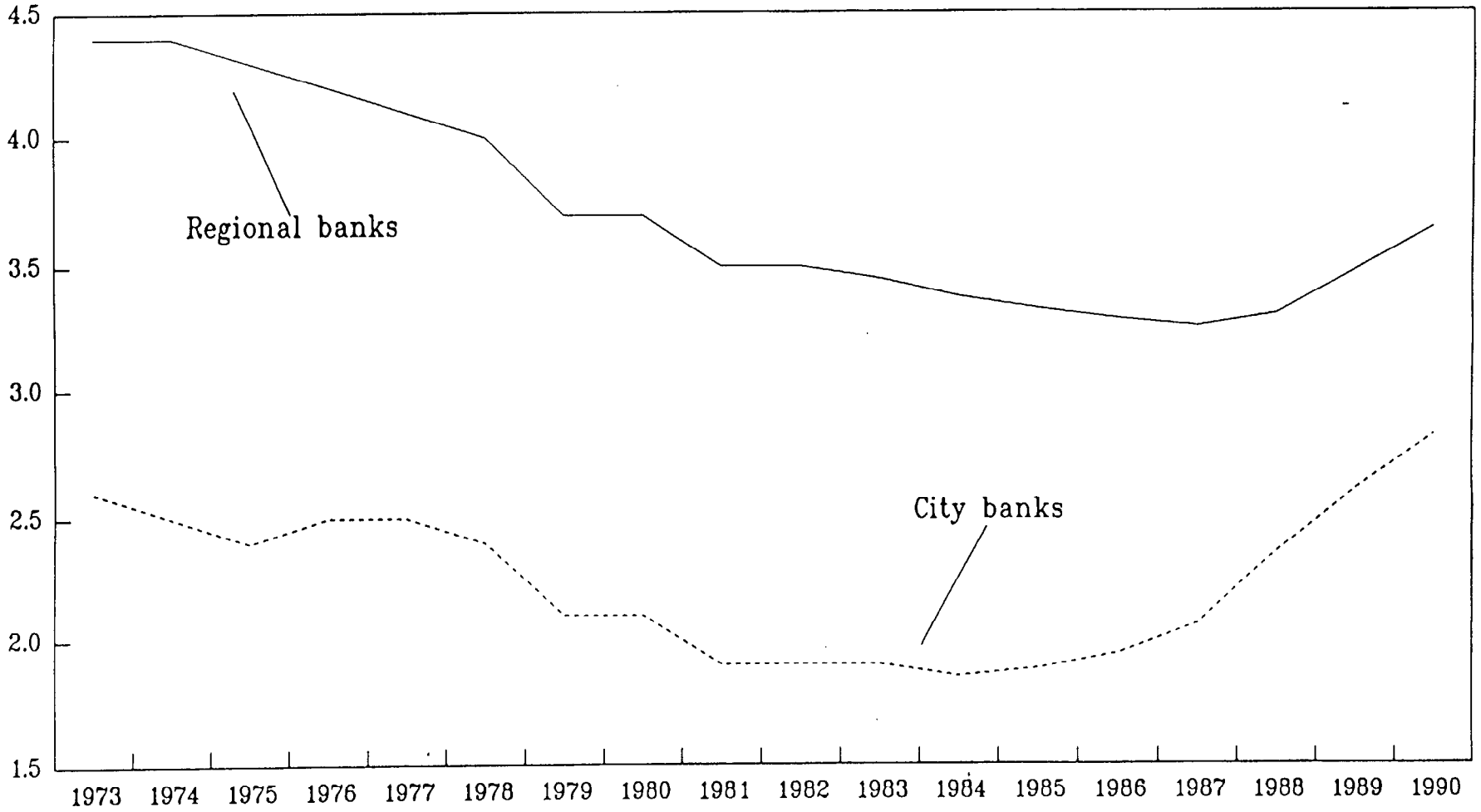
(In percent)



Source: Federation of Bankers Association of Japan, *Analysis of Financial Statements of All Banks.*

[1] Numbers refer to fiscal year which runs from April to March.

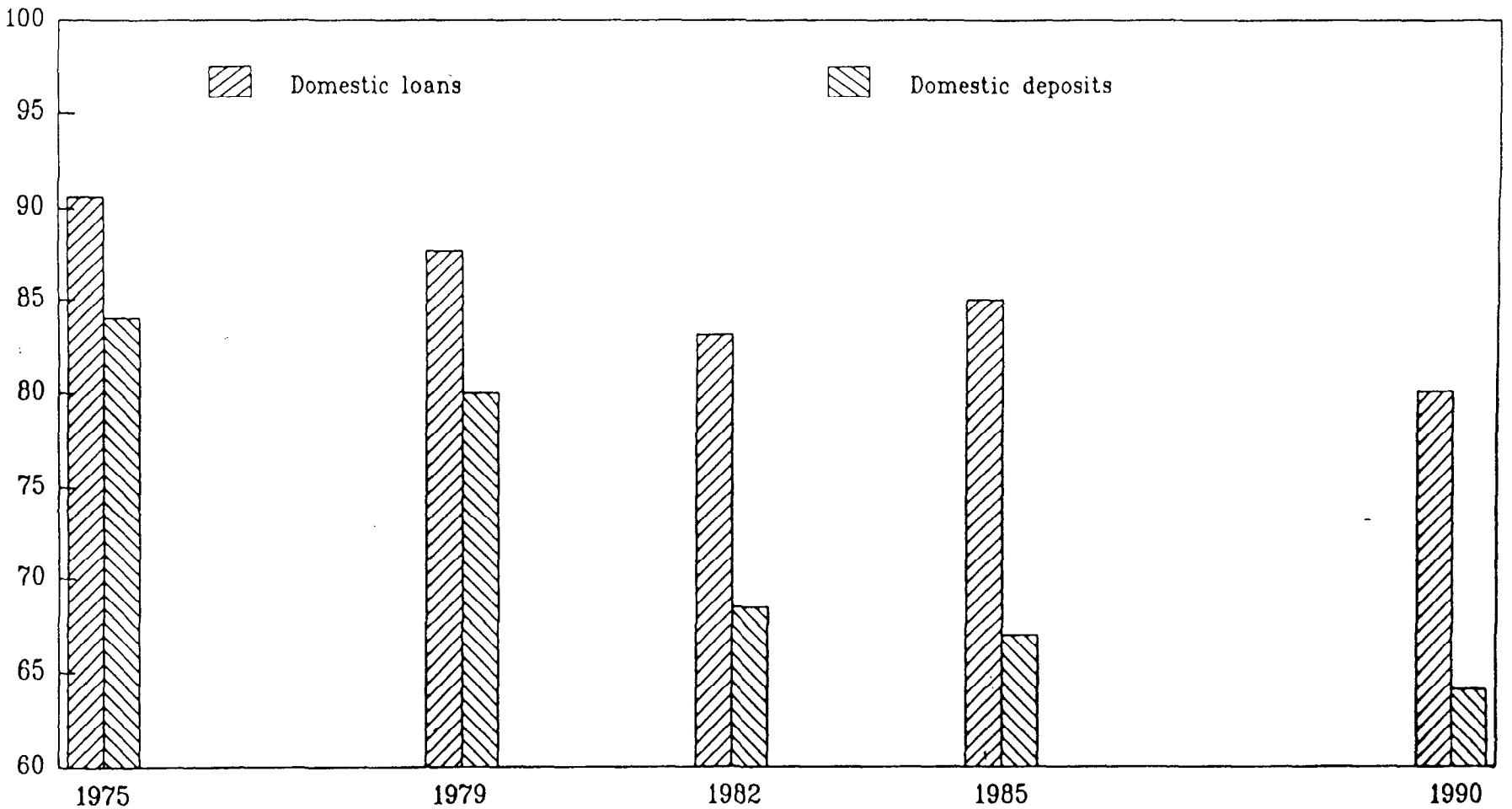
Figure 11. Japan: Capital Ratios of Regional and City Banks, 1973-90[1]
(In percent)



Source: Federal Bankers Association of Japan, *Analysis of Financial Statements of All Banks.*
[1] Data represent equity to total assets. Numbers refer to fiscal year which runs from April to March.

Figure 12. Japan: City Banks - Domestic Balance Sheet Items as a Percent of Consolidated Balance Sheet Items, 1975, 1979, 1982, 1985, and 1990[1]

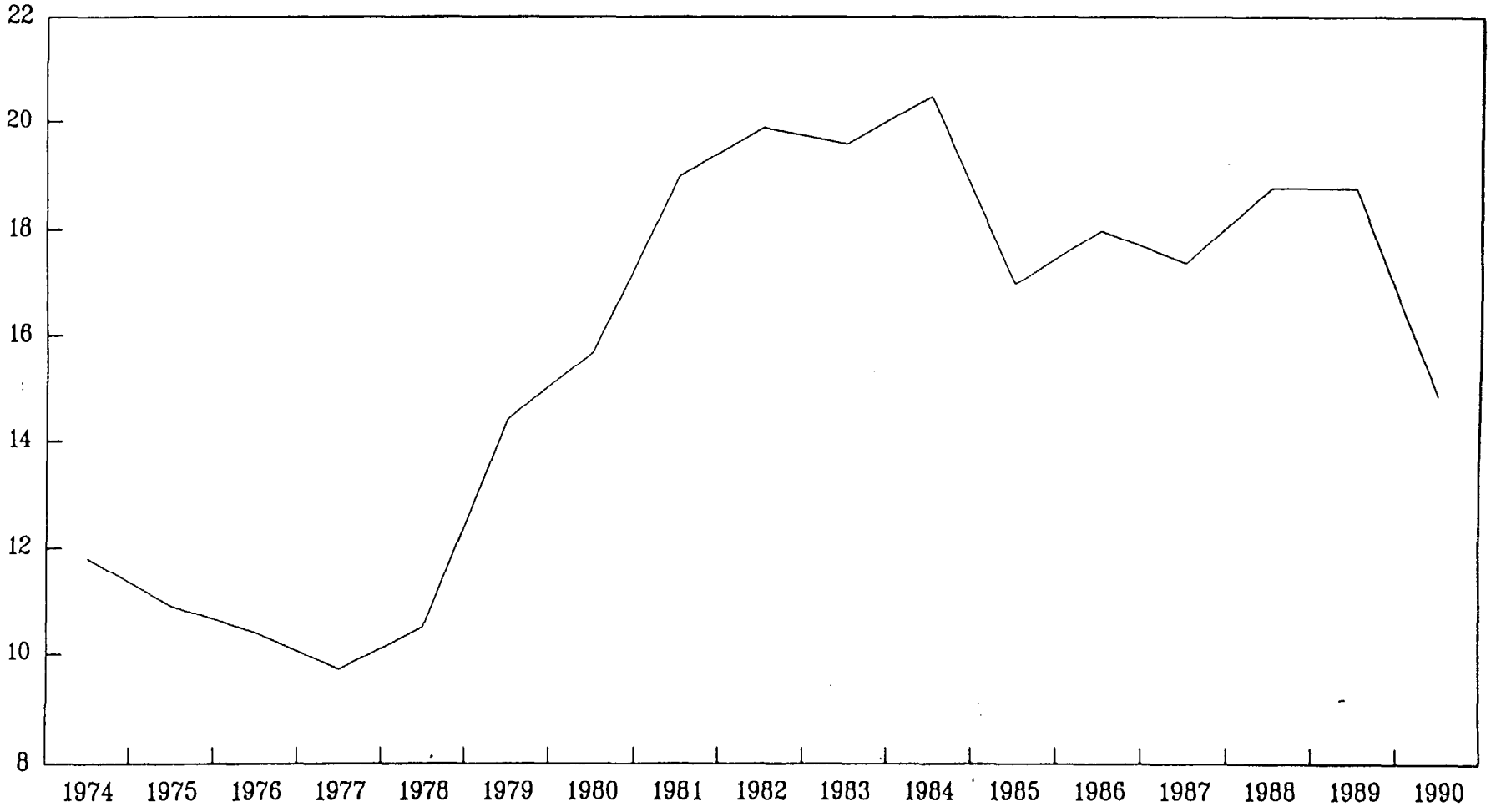
(In percent)



Sources: Bank of Japan, *Economic statistics Annual;* and the Federation of Bankers Association of Japan, *Analysis of Financial Statements of All Banks.*

[1] Numbers refer to fiscal year which runs from April to March.

Figure 13. Japan: Liquidity of City Banks, 1974-90[1 2]
(In percent)



Source: Federal Bankers Association of Japan, *Analysis of Financial Statements of All Banks.*

[1] Data represent interbank deposits and "due from" foreign banks as a percent of total assets.

[2] Numbers refer to fiscal year which runs from April to March.

Due to the large increase in dollar deposits held at banks in the early 1980s, net interest margin at Japanese city banks did not decline significantly between 1981 and 1983 (Figure 10). Because the return on interbank deposits is relatively low, this indicates that Japanese corporations were willing to hold dollar deposits in city banks at low interest rates. Thus, city banks were able to survive because their corporate clients remained with them, at least for some time. Their relatively low funding cost led to complaints of unfair competition from American banks. However, as Japanese corporations learned how to manage dollar liquidity, the spread that city banks could earn by offering dollar deposits and holding deposits at foreign banks declined. This put pressure on their net interest margin after 1983.

Although, as mentioned above, city banks were able to maintain their return on equity for several years through a combination of factors, after 1988 those factors were no longer sufficient to offset a drastic decline in net interest margin. The decline in profitability is going to require some response on the part of Japanese banks. They may not be able to increase leverage since they have been under severe pressure to increase their capital-to-asset ratios to meet the BIS requirements (risk-weighted capital). As a result, they have been increasing their equity-to-asset ratios, as Figure 11 indicates.

In spite of the depressed state of their earnings, Japanese banks were able to raise large amounts of equity during the period 1987-90 because of the realization of securities gains--that is, by realizing gains on corporate equities that they bought twenty years ago. However, the sharp decline in Japanese equity prices during the first four months of 1992 have severely reduced those capital gains and have raised concerns about the ability of Japanese banks to satisfy capital requirements. 1/

Japanese city banks now face the question of whether they should follow the example of U.S. banks and attempt to increase profitability by making higher-risk loans. The alternative is to reduce the scale of their business to a level consistent with the liquidity demands of their customers. It is too early to know how this issue will be resolved. The recent decline in the value of real estate, and the associated financial problems of property developers have added additional downward pressure on the profitability of the Japanese banking industry. Although the banks have recently curtailed their real estate lending, their profitability may depend on their ability to find safer assets with sufficient yields to compete with open market investments.

1/ After a boom in stock prices that peaked in December 1989, the Nikkei stock index fell by 38 percent during 1990 and by 6 percent during 1991. The fall in the index accelerated further during the first four months of 1992 when it fell by over 20 percent.

V. Franchise Value in Regional Banking

1. U.S. regional banks

U.S. regional banks have traditionally maintained higher capital-to-asset ratios than money center banks (see Figure 4). Also, between year-end 1987 and September 30, 1991, the incidence of noncurrent loans has been lower at regional banks than at wholesale banks (see Table 2). This indicates that regional banks hold safer portfolios than the money center banks. Regional banks are also more heavily invested in real estate loans than money center banks (see Figure 5), causing some analysts to argue that problem loans at regional banks are understated. They cite the failure of the Bank of New England in January 1991 as evidence that real estate loans can easily bankrupt an institution with even a relatively high capital-to-asset ratio. Even if, however, regional banks' noncurrent real estate loans were to increase to the level at money center banks, the ratio of noncurrent loans to total loans at regional banks would still be lower than the same ratio at money center banks. This is because the regional banks are less heavily invested in foreign loans and in commercial loans for highly leveraged transactions than are the money center banks.

U.S. regional banks have not experienced the decline in franchise value of their wholesale counterparts because their customers--consumers and small businesses--have not been through the liquidity revolution that affected wholesale markets. As discussed in Section II, liquidity for the retail customer means having convenient access to cash. Therefore, to serve this market, banks must provide extensive branch and ATM locations.

Although there are some economies of scale in branch banking, 1/ banks often do not fully exploit them because customers demand a large number of locations for convenient access to their money. For example, banks that operate in low-density markets must maintain relatively small branches to provide customers with the convenience they demand. The importance of convenient locations to regional bank customers is indicated by the fact that the branch size of regional banks, measured by domestic deposits, is less than half that of the money center banks (Table 1).

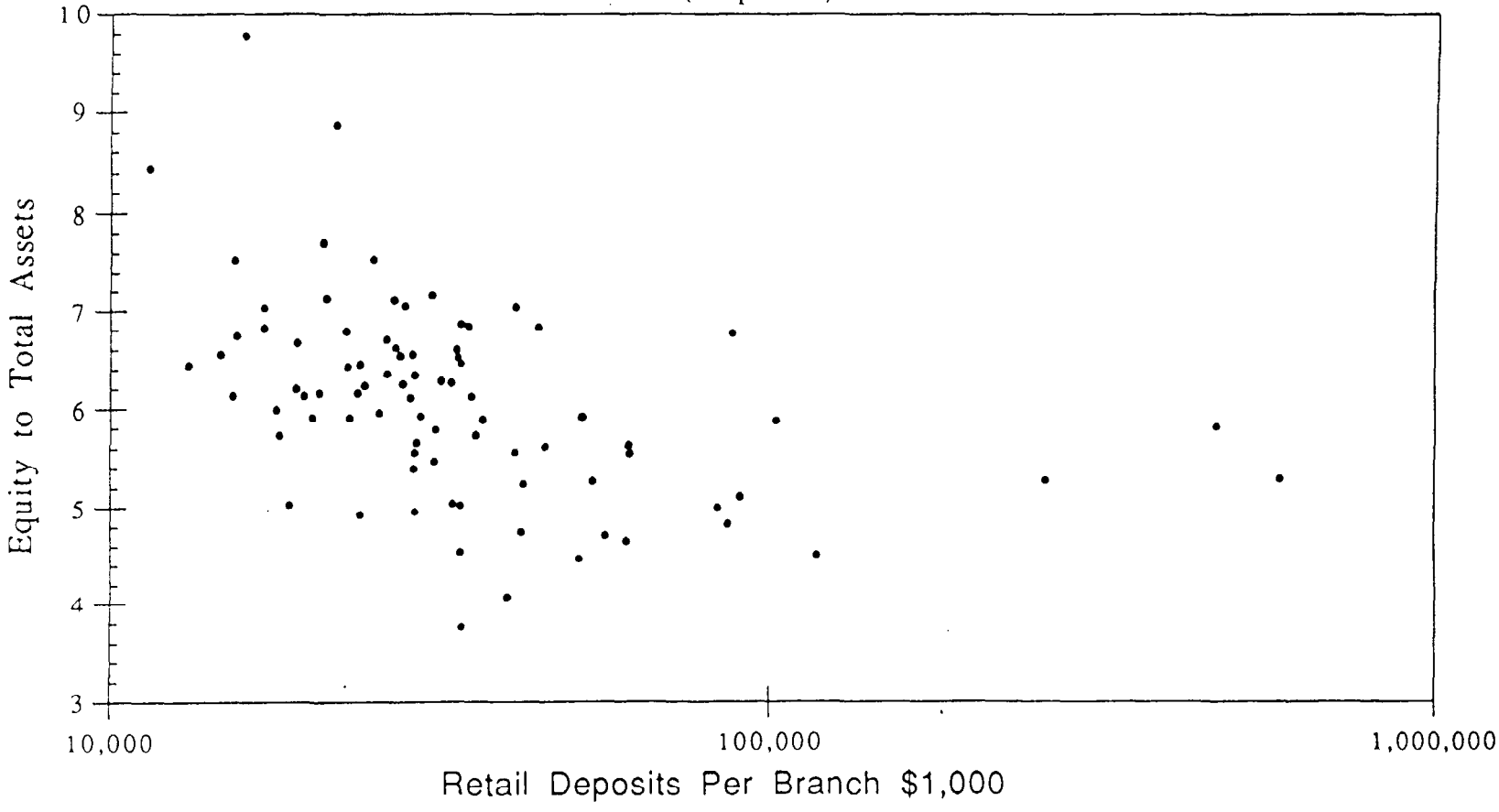
It is safe to assume that the capital value of a branch system is proportional to the expenses involved in maintaining the branch system. Banks with smaller branches will have proportionately more capital invested in this business than banks with large branches. Thus, banks with small branches will be in a similar position to bank B in Figure 1. They derive a larger portion of their income from services than from investments and will, therefore, have less to gain from taking risk. This is confirmed in Figure 14 where we observe that banks with small branches have higher capital-to-asset ratios than banks with large branches.

1/ That is, as a branch becomes larger, operating costs per dollar of deposit decline.

Figure 14

Risk vs Retail Franchise
Average for Top 96 Bank Holding Companies

(in percent)



Retail Deposits = Demand deposits, negotiable orders of withdrawal, money market deposit accounts, savings and small time deposits

Source: Board of Governors of the Federal Reserve, *Y-9 Reports of Condition and Income for Bank Holding Companies, 1985, 1986, 1987, 1988, 1989, and September 1990*, American Banker, *1990 Top Numbers*, p. 50.

Many analysts have argued that regional banks will eventually suffer the same fate as savings and loans, which also serve retail customers. However, the savings and loan industry assumed much more risk than regional banks precisely because most savings and loans had no special economic value to restrain their appetite for relying on the government insurance agency. These institutions were, until recently, prohibited from offering checkable deposits. Hence, they focused on providing time deposits to consumers. Since time deposits cannot be converted to cash on demand, consumers do not demand convenient branch access to these accounts. Consequently, savings and loans branches are about twice the size of bank branches in the same neighborhood. Because the time account is not a convenience-oriented product, it is closer to open-market investments than checkable deposits. This has meant that many savings and loans have had difficulty creating franchise value, which has induced them to hold high risk portfolios.

2. Japanese regional banks

Data for the Japanese banking system also suggest that regional banks are safer than city banks. They have higher capital ratios and lower loan losses than city banks. For example, in 1989, provision for loan loss represented 0.8 percent of total expenses at city banks versus 0.5 percent of total expenses at regional banks.

The average branch size of regional banks is about one third the size of a typical city bank, measured in terms of domestic deposits (Table 1). This indicates that branching services are more important to the customers of regional banks than to the customers of city banks. All this implies that the franchise of regional banks is more valuable than that of city banks. This has led to safer portfolios at the regional banks.

Unlike U.S. regional banks, the capital-to-asset ratios of Japanese regional banks fell relative to those of city banks over the last twenty years, as illustrated in Figure 11. This is probably attributable in part to the fact that regional banks' asset portfolios remained less risky than those of the city banks. For example, domestic loans represented virtually the entire loan portfolio of regional banks as of the end of the 1990 fiscal year. Also, the corporate loan market remained healthier for regional banks. The ratio of short-term loans to total loans did not decline as rapidly at regional banks as it did at city banks (Figure 9).

Nevertheless, recent evidence indicates that liquidity premiums are falling for Japanese regional banks, albeit at a slower rate than for the city banks. This probably reflects the trend toward banks' playing a smaller role in the household savings market. In 1974, deposits made up about 65 percent of household financial assets; by 1990, this ratio had

fallen to 53 percent. 1/ The secular decline in the profitability of regional banks over the last twenty years (Figure 8) should be seen against this trend.

VI. Regulation and the Franchise Value of Banks

Given that the demand for liquidity has declined, is it feasible to improve the profitability of wholesale banks by permitting them to expand their business to include securities underwriting? In general, it is difficult to bail out a declining business by investing in a good one. This is because investors will demand the competitive rate of return on the marginal investment. Thus, current bank shareholders may not be able to improve their position through broader powers, and the new powers may not therefore attract new capital into the large banks.

Under what conditions could deregulation attract new capital to banks? One such condition is when there are complementarities between the securities business and the wholesale payment business. Bankers often argue that there are economies of scope in the information generated to provide bank credit and to underwrite and deal in corporate securities. They believe that society would save real resources on information gathering if it permitted banks to underwrite securities. However, in exercising the limited powers they now have to operate in the corporate securities markets, banks in the United States have found that their corporate clients are very sensitive to the use of nonpublic bank information in the trading of securities.

The traditional argument for the separation of commercial and investment banking is based on conflict of interest. A banker who knows more than the public securities market might be tempted to use this information to make a profit. The question of whether some investors should know more than others is beyond the scope of this paper. However, the evidence to date indicates that corporate clients are concerned about this issue, implying that the simple act of deregulation will not automatically permit the exploitation of information economies. Also, it is possible that even if the Glass-Steagall Act is repealed in the United States, legal separation between the banking business and the securities business within a single organization will remain in force.

Removal of geographic restrictions on bank expansion represents another route for helping wholesale banks. This would allow money center banks to buy regional banks that have a retail business that is healthier than the wholesale business. However, just as in the case of expanding the powers of

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1/ The decline in total deposits relative to household assets did not occur due to the increase in the value of equities directly held by households. In 1980 trust and insurance equalled 29.8 percent of household assets; by 1990 this ratio had risen to 51.9 percent.

banks to undertake securities business, the reform of geographic regulation may only aid the wholesale business if there are complementarities between the two businesses. The issue is debatable. While some market participants in the United States argue that having access to stable retail deposits improves banks' ability to take risks in other areas, other observers have challenged this view by pointing out that the best performing money center bank, J.P. Morgan, has eschewed the retail business all together.

What else, then, might be done to improve the position of wholesale banks? As suggested, banks could reduce the scale of their business to a level consistent with the reduced demand for liquidity of their customers. On a more positive note, wholesale banks could perhaps improve their future profitability by concentrating more on businesses that permit them to exercise their traditional skills of reducing the cost of liquidity. For example, banks have proved adept at building swap markets. An efficient swap business requires a large customer base with a diversified interest rate or currency exposure. These swaps have an advantage over publicly traded hedging contracts in that the former can be custom-tailored to the participants' specific requirements. A well-positioned bank can make a market in these custom-tailored hedging contracts with minimal exposure to itself. This is a business that shares many of the same characteristics as operating an efficient payments business (since both require netting exposures across customers). In the end, banks--no less than other economic agents--need to identify and invest in their comparative advantage if they are to fare well against a host of competitors.

VII. Conclusion

This paper has identified the franchise value of a bank with the business of providing liquidity and payments services to bank customers. In this regard, the decline in the value of a wholesale bank franchise experienced in both the United States and Japan is attributed to a reduction in corporate demand for bank liquidity--rather than to a shortcoming of banks as investors. This decline in franchise value-cum the existence of government deposit insurance--has led to increased risk taking on the part of American wholesale banks and to a decline in earnings at Japanese wholesale banks.

In contrast to the wholesale banking business, the regional banking business has remained relatively healthy because the demand for access to cash by households has not declined appreciably. The threat to the regional bank franchise is linked to the means of payment: specifically, the value of bank branches would decline if cash were replaced as a means of executing small transactions.

An important implication of this paper is that proposals for reform of the banking industry that concentrate on broadening the powers of banks may not be able to solve the fundamental problems of wholesale banks. This is because broader powers are unlikely to offset the declining franchise value

attributable to the reduction in corporate demand for bank liquidity. A more promising strategy for wholesale banking may lie in the expansion of businesses that permit banks to exploit better their traditional skill of reducing the cost of liquidity--this time by using their large customer base to identify mutually beneficial hedging opportunities. Barring further expansion of these activities closely linked to banks' comparative advantage, wholesale banks may have little choice but to reduce the scale of their business to a level consistent with the reduced demand for liquidity of their main customers.

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