Is there a future in banking? Towards a new theory of the commercial bank.

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Abstract

According to some, the commercial bank -- an institution that conducts the twin activities of accepting deposits payable on demand and originating loans -- is anachronistic and in a state of terminal decline. The evidence, however, is somewhat mixed. This paper takes a different approach to analyzing the future of banks: I examine whether there is an economic rationale for their existing in the past and whether this rationale continues to hold. I first outline why the two core banking activities, of taking in deposits payable on demand and of originating non-marketable loans, are performed by financial institutions. Both activities essentially require an institution to come up with cash at short notice, that is, provide liquidity. Scale economies in providing liquidity then explain why both activities are provided by the same entity -- a commercial bank. Deregulation and innovation have increased competition, which has forced banks to concentrate on the essentials of liquidity provision. This is why the outward nature of their activities -- though not the underlying economic rationale -- has changed. However, in the course of performing their traditional activities, banks have acquired competencies that enable them to perform a variety of other financial and non-financial activities that deregulation and innovation have opened up to them. The paper concludes with a discussion of why banks may want to limit their entry into some new activities.
According to many observers, the commercial bank -- the institution that accepts deposits payable on demand and originates loans -- has outlived its usefulness and is in a state of terminal decline.\footnote{For example, the Chairman of the Federal Reserve Board, Alan Greenspan, is quoted by the Wall Street Journal (July 9th, 1993) as saying "Public policy should be concerned with the decline in the importance of banking. The issues are too important for the future growth of our economy and the welfare of our citizens." In the same article, William Isaac, a former chairman of the Federal Deposit Insurance Corporation and an industry consultant, is quoted as saying “The banking industry is becoming irrelevant economically, and it's almost irrelevant politically".}

Commercial bank assets as a fraction of assets in financial institutions in the United States have fallen dramatically, from over 70% around the turn of the century to just around 30% today. Bank share of corporate debt in the United States has declined from 19.6\% in 1979 to 14.5\% in 1994.\footnote{For the view that banks are in decline, see G. Gorton and R. Rosen, "Corporate Control, Portfolio Choice, and the Decline of Banking", \textit{Journal of Finance} 50 (1995), 1377-1420.} But history suggests caution in projecting trends too far. Bank loans to industrial firms fell dramatically in the 1920s in the United States as firms directly tapped the public markets. Proclamations of the demise of commercial banking were often heard at that time. Since projections based on trends have been proved wrong, I take a different approach in evaluating the future of commercial banking.

What I propose to do here is to explore why the two core banking activities, of taking in deposits payable on demand and of originating non-marketable loans, are performed by the same organization. While we have good theories as to why either activity is performed by institutions (rather than anonymously in the market place), we understand less well why both activities have historically been united in the form of the commercial bank. I present two related explanations. First, both activities essentially require an institution to come up with cash at short notice, i.e., provide liquidity. Scale economies in providing liquidity then explain why both activities are provided by the same entity. Second, since both activities essentially offer customers guarantees, the safety and soundness of the institution offering guarantees is important. I will argue that the activities, at least historically, co-insured each other, and these scope economies again made it advantageous to combine the activities in one organization.

In the second half of the paper, I argue that deregulation and innovation have increased competition in banking and financial services, which has forced banks to concentrate on the essentials of liquidity provision. Also, the co-insurance between lending and liquidity provision has become less important. In
response, the outward nature of bank activities has changed -- though much of the underlying economic rationale has not. Furthermore, in the course of performing their traditional activities, I will argue that banks have acquired competencies that enable them to perform a variety of other financial and non-financial activities that deregulation has opened up to them. As part of their evaluation of these non-traditional activities, bankers must carefully consider whether their organizational structures, controls and compensation policies are appropriate for the new environment.\(^3\)

**WHY FINANCIAL INTERMEDIARIES WIN OUT OVER MARKET TRANSACTIONS.**

Financial institutions bring to financial transactions exactly that which industrial firms bring to industrial production -- namely, an ability to accomplish some economic task or objective at lower cost than arm’s length contracts. I now elaborate on the advantages institutions bring to the two traditional financial activities that define a commercial bank.

*Why institutional intermediaries offer demand deposits.*

To focus on why institutional intermediaries are better at offering customers the ability to deposit money and withdraw it on demand, I start with the simplest such intermediary -- an open-ended money market mutual fund -- and compare it with the simplest direct alternative, that of the individual customer holding financial assets such as T-bills directly and liquidating them when the need for funds arises.

\(\text{a. Institutions have greater market power than individuals.}\)

A money market mutual fund can save investors the transactions costs of brokerage fees they would incur if they invested directly. Even if the mutual fund buys and sells as often, and in the same quantities, as all of its individual investors taken together (which I note below is not the case), intermediation by the

\(^4\) In a series of papers and in *The Global Financial System: A Functional Perspective* (Harvard Business School Press, Boston, 1995) Robert Merton and his colleagues argue for a functional approach to analyzing and regulating financial institutions. “Rather than taking existing institutions and organizational structures as givens, [this research] is anchored on the underlying functions of financial systems.” (Page vii). The idea is to take the economic function as given and then ask what institutional structure best performs the function at a given time and place. So institutional form follows function. While this approach has the commendable virtue of abstracting from institutional nomenclature to focus on the economics, it may be taken too far. Implicit in a strict application of such an approach (for example, regulating functions rather than institutions) is the assumption that functions are separable. This seems a little premature unless we understand why multiple financial functions are performed by a particular type of institution. If the performance of a financial function develops critical competencies in an institution, it may well be placed to perform other financial functions. A purely functional approach may miss the interlinkages between functions, while an approach which considers an institution as a whole, in terms of the functions it performs, will capture these.
fund would benefit individual investors simply by virtue of the fund’s market power in negotiating brokerage fees. In this sense, the mutual fund simply plays the role of a buyer's co-operative. But a mutual fund does more than just concentrate bargaining power.

b. Institutions reduce uncertainty by pooling.

An individual's demand for cash is uncertain and can fluctuate considerably. Therefore, the individual must maintain excess cash reserves as a cushion against such uncertainty or else risk being forced to sell assets at considerable cost in the market. The average demand for cash by the fund's investors as a whole is much more predictable because individual needs (those arising from a marriage, sudden trips, etc.) tend to be smoothed over all investors. Also, the fund can net sellers against buyers instead of transacting on behalf of each in the market. For these reasons, both the fund's precautionary cash reserves and its volume of transactions are smaller than the sum of individuals' reserves and trading volume absent such a fund.

c. Institutions bring scale economies.

Banks perform a role similar to mutual funds in offering depositors liquidity, i.e., cash on demand. Apart from the advantages of pooling accounts discussed above, there is a small but currently significant difference. Banks allow depositors to make transfers from their accounts to the accounts of others either within the same bank or in other banks. The transactions costs of transfers within the bank are close to zero, so these transfers can be very profitable if volume is high. Transactions costs of transfers between banks are also reduced because the bank backs the transfer with its credit rather than the credit of the payer, and because

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5 This is the Law of Large Numbers. Perhaps the most important recent paper in the field, makes the point that a bank can arise to share liquidation costs among risk-averse individual investors. See D. Diamond and P. Dybvig, “Bank Runs, Deposit Insurance, and Liquidity”, Journal of Political Economy 91 (1983), 401-419.

7 Indeed, there is some historical evidence that banks arose primarily to facilitate payments among depositors rather than to channel funds from depositors to borrowers. Raymond De Roover argues in Money, Banking, and Credit in Mediaeval Bruges (Mediaeval Academy of America Cambridge, U.S.A., 1948) that in mediaeval times when coins were clipped, adulterated and forged, transactions involving an exchange of money were too costly to consummate. Far better for merchants to deposit their money with an expert moneychanger who would make a book entry for the sums deposited. When goods were exchanged, payment was effected through a book entry debiting one account and crediting another. The costly transport and weighing of coins did not have to take place. De Roover claims that moneychangers were the precursors of the modern bank.
banks are specialists at evaluating each other’s credit. There are obvious scale economies in this business.

To summarize, institutions can pool transactions and bring scale economies to managing demand deposits. Clearly, access to official sources of liquidity such as the discount window, and the ability to process large volumes of transactions at low costs are also necessary to the activity of offering demandable deposit accounts, but these are not as fundamental as pooling and scale economies. I turn now to the other defining activity of banks; making non-marketable loans.

**Why institutional intermediaries make loans.**

*a. The effects of scale again.*

Consider the mutual fund once again. A mutual fund co-ordinates investor demands, thus increasing the scale of its purchases. In other words, while 100 individuals when left to their own devices would individually invest in 15 securities each, and collectively own a few hundred securities, the mutual fund can achieve desired diversification with a number in between what the individual and what the uncoordinated collective would hold. Clearly, there is a cost because individuals sacrifice some flexibility in allowing the fund to determine their holdings, but these are outweighed by the benefits -- in particular, the fund’s ability to reduce brokerage costs because of scale economies.

Scale also allows the mutual fund to employ analysts, which would be beyond the means of most individual investors. And, by providing the necessary scale, the mutual fund solves the “free-rider” problem associated with its analysts’ production of information. To illustrate this problem, even if an individual investor could afford an analyst, she would be reluctant to employ her knowing that she would pay the full cost while her friends and relatives pestered her for free advice.

In a similar vein, investors who purchase the stocks or bonds issued by banks or finance companies do so in the hope that the institutions will make more informed lending decisions than could the individual investors themselves. But unlike a passive mutual fund, these institutions also provide benefits to the firms they lend to. Specifically, they reduce a firm’s funding costs, and also enhance contractual possibilities

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6 This is one reason loan making entities are well suited to offer payments services. Since there are costs of continuously making transfers, efficient clearing between financial institutions requires that settlement be delayed to give payments a chance to net out. But delay requires that institutions offer each other short term credit. Clearly, the institutions who will be best at this are institutions who already make loans. See M. Goodfriend, “Money, Credit, Banking, and Payment System Policy”, *Federal Reserve Bank of Richmond Economic Review* 77 (1991), pp7-23.

The announcement of an equity issue is typically met with a negative stock price reaction, while the announcement of a public debt issue is met with an insignificant stock price reaction. By contrast, the announcement of a bank loan is met with a strong positive stock price reaction. Furthermore, the stock price reaction is concentrated around announcements of loan renewals, suggesting that banks have special information about firms which is signalled to the public when loans are announced. See C. James, "Some Evidence on the Uniqueness of Bank Loans", Journal of

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for individuals, institutions reduce the risk premium firms have to pay for borrowing.

b. Institutions enhance contractual possibilities.

The financial institution, however, offers its clients more than just current funding -- it offers them explicit or implicit promises of future funding at a reasonable price. Explicit promises such as commitments to offer loans are fairly straightforward. The financial institution may also implicitly promise to stand by a client firm when it is in financial distress. When accompanied by a reverse implicit promise from the client firm to give a large share of its future business to the institution, we have a "relationship". Relationships can be very valuable because they allow the two parties transactions that are not possible through explicit contracts in the spot market. In fact, relationships are critical to defining a bank’s lending business. Consider the following examples of how relationships with institutions enhance the possibility of transactions:

b.1. Relationships in small business lending.

Small business loans are usually not worth the trouble to a lender; given the small size of the loan, the fixed cost of investigating the borrower and servicing the loan is extremely high. Of course, the lender can demand compensation for this cost by charging a high interest rate, but this may impose an excessive debt burden on the firm and reduce its growth prospects. Alternatively, the lender can explicitly demand a "first right of refusal" agreement whereby the firm has to offer all new financial business to the original lender (thus permitting the lender to recover the initial subsidy from profits on the future business). But such a contract, if strictly enforced, may place the borrower at the mercy of the lender and force it to accept all the lender’s services regardless of quality. The general problem here is that explicit contracts cannot deal with future contingencies without becoming overly rigid.

Relationships may evolve in situations where explicit contracts are inadequate, but a long term interaction between the two parties is mutually beneficial. If the lender is sufficiently confident that the firm will honor its trust, it offers the firm a loan as a kind of loss-leader. In turn, the firm gives the lender the lion's share of future financial business. The firm may have economic reasons to honor the trust; the lender
knows more about it than others at the time additional business is contracted. Also, by deepening the relationship, the firm strengthens its implicit "insurance" claim on funding from the bank when the firm is in trouble in the future. However, the firm reserves the right to withdraw business if the bank’s services are abysmal. Similarly, the bank may never make the promise of help explicit because that will reduce the firm's incentive to stay out of trouble. But it will go to some length to honor future calls for help because it values the firm's future business and its general reputation among borrowers as a "relationship" bank.\(^9\) In summary, because institutions can form relationships, they can loosen the credit constraints on small and distressed borrowers.

b.2. Relationships and financial innovation.

A second area where relationships help is in the process of financial innovation. In a though provoking paper, Robert Merton argues financial innovations (such as commodity swaps or credit derivatives) are first developed by institutions and then, when the financial contracts are well understood, are taken up by the market.\(^{10}\) Financial institutions then move on to new products. Thus there is a continuous spiral of innovation. But this raises the question of why innovations are better produced by financial institutions rather than directly by markets.

Innovative financial contracts are typically incomplete in many ways when they are first introduced. Payments or responsibilities have not been fully spelt out for many possible situations, partly because the situations themselves have not been anticipated. A trial period is necessary where the contract has to be tried out in real world situations, and the appropriate contractual features to deal with initially unforeseen contingencies has to be developed. The firms with which an institution has relationships form the ideal

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testing ground. Since there is so much uncertainty about contractual outcomes, mutual trust is needed so that differences will be amicably worked out without one party taking undue advantage of another. This is what the relationship provides.\textsuperscript{11} Also, the wider the circle of relationships the institution has, the easier it is for the institution to recoup the rents from the innovation before competition from other imitators drives down prices. Hence, relationships can explain why financial institutions rather than market institutions such as exchanges are more likely to originate financial innovations.

To summarize, relationships work by allowing reputational capital to fill in the holes that explicit contracts cannot fill.\textsuperscript{12} This enhances the scope of transactions that can take place beyond those that are strictly legally enforceable.\textsuperscript{13}

c. \textit{Institutions pool the liquidity demands of borrowers.}

Institutions who form relationships can make commitments that are not contractually feasible. Moreover, they have prior information from the relationship about the potential borrower. Putting these together, they have a competitive advantage in making loans to the borrower at short notice. While the borrower's request for additional funds may not be a contractual right as with demand deposits (though it is if it is in the form of a line of credit or loan commitment), the institution's value as a relationship financier will depend on how reliable it is in meeting additional funding needs. Thus, as with demand deposits on the liability side, some institutions may specialize on the asset side in providing cash at short notice.

Institutions who provide such funding can pool the liquidity demands of borrowers. As with demand

\textsuperscript{11} An incident reported by Euromoney (April 1995, p35) is suggestive. In 1987, Texaco sought bankruptcy protection after being ordered to pay $10.5 billion in damages to Pennzoil. Even Texaco was far from insolvent, the filing put it in technical default on a swap contract with Bankers Trust. The details of the swap contract allowed either party to walk away even if they owed money when one party defaulted (this limited-two-way-payment clause is deservedly obsolete). Bankers Trust owed $10 million on the swap. The expectation was that it would waive the default given that it was merely technical. Euromoney reports that “top Bankers Trust management looked at the situation, weighed the bank’s relationship with Texaco - not itself known for showing much mercy to its bankers - and took the windfall gain. Texaco has refused to deal with Bankers Trust ever since.”

\textsuperscript{12} See A.Boot, S.Greenbaum, and A.Thakor, “Reputation and Discretion in Financial Contracting”, \textit{American Economic Review}, 83 (1993), 1165-1183.

\textsuperscript{13} A measure of the value of relationships is that in 1984, client firms of Continental Illinois Bank incurred average abnormal stock returns of -4.2% during the bank’s impending insolvency and +2% in response to announcements of the government rescue. See M. Slovin, M. Sushka, and J. Polonchek, “The value of bank durability: borrowers as bank stakeholders”, \textit{Journal of Finance} 48 (1993), 247-266.
deposits, the aggregate liquidity needs of borrowers may be more predictable than individual needs. Furthermore, the institution's greater information (than individuals) enables it to discriminate between situations where liquidity support is warranted and where it is not. Thus it can provide the insurance at lower cost than a publicly enforceable explicit contract could. Its concern for its reputation for being supportive (for which it can charge a premium) make it a more reliable provider even absent explicit contracts.

**Why banks?**

We have seen that institutions bring market power, scale, pool liquidity needs, and enhance contractual possibilities when they undertake the traditional activities of offering demand deposits and originating illiquid loans at short notice. But what additional benefit does an institution have when it undertakes both activities? In other words, what accounts for the popularity of the bank as an institutional form? One can think of at least two reasons why the organizational form that intermediated between savers and borrowers has typically been the commercial bank. First, the bank form may have been favored by governments. Second, the bank form may have been the optimal institutional arrangement to deal with private contracting problems. Since Machiavelli predates Coase, I examine the theory of government as creator first.

*a. The Government as Creator.*

Why would governments want the bank form to emerge? One possible answer is that this may be the easiest way for the government to start the flow of credit in the economy; Let me explain. In the imperfect real world, for an individual with a clever idea to borrow to start an enterprise, she should be able to put up enough assets or franchise value as collateral so that she can commit not to misuse lenders’ money. Alternatively, she should find a large potential lender who can lend enough that he has an incentive to screen the borrower’s creditworthiness and monitor her actions carefully. Either solution implies substantial wealth, either in the hands of the entrepreneur (so that she can post collateral) or in the hands of the lender (so that he has the incentive to monitor and the power to recover the loan). Absent some minimal concentration of wealth in the right places, the argument goes, credit will not flow.

In an impoverished economy, a welfare maximizing government may have to redistribute wealth in order to get enterprises started. Ideally, one should redistribute wealth to those with clever ideas so that
they can implement them. But how does one identify them? After all, people with clever ideas do not carry placards identifying them as such. A second possibility may be to make some individuals rich by taxing others. But what ensures that the rich individuals will identify and finance the clever rather than wasting their wealth in consumption? A third best possibility may be to create wealth opportunities in the process of intermediation.

Thus the government may step in by creating franchise value in some part of the banking process. For instance, if individuals are willing to pay (by accepting low interest rates) for the safety and payment services offered by demand deposits, the government may allow the privilege of taking in demand deposits to only a few, thus creating supernormal profits there, and, in effect, capitalizing the few. These incumbents then have enough equity or franchise value to be trusted with their money by depositors, and have the scale to lend to borrowers who have little collateral. Credit starts flowing.\(^\text{14}\)

This line of thought would suggest that lending and deposit taking are together simply because, historically, governments have found the latter the least distortionary activity in which to create rents and initiate the former. One could ask why the government does not directly create rents, or offer subsidies, in lending. A possible answer is that rents in lending hurt the borrower, and often the major borrower is the government itself. Subsidies to lending could result in indiscriminate loans, something a credit-starved economy can ill afford. Furthermore, creating rents in the deposit business has the political advantage of taking a little from the many (and may even be disguised as being in the interest of the many because it keeps their money safe).

I believe there is some truth to the argument I just laid out. Banks in some countries may have become so dependent on government imposed rents that they have lost touch with their core competencies. However, the bank form historically predates the intervention of governments. Furthermore, few banks in the United States today have given up their charter even after deregulation. This suggests the bank form may indeed be the optimal institutional arrangement to deal with private contracting problems. I now point to two sources of economies from combining deposit taking and

offering bank loans. The first is that both activities require the bank to offer liquidity on demand. Scale economies in providing liquidity may ensure the bank is the best entity to offer such services. Second, the nature of the business requires a constant transformation between liquid reserve assets and illiquid loans. Interestingly, these assets may co-insure each other and reduce the bank’s overall cost of funding. I elaborate.

a. Synergies: Liquidity insurance.

Unlike more specialized institutions like money market funds or finance companies, the bank offers liquidity on demand on both sides of the balance sheet. There are a number of consequent advantages for a bank; First, the bank services more liquidity demand for the same scale than do other financial institutions. Since there are scale economies in liquidity provision -- stemming from diversification across liquidity demands, fixed costs in the institutional arrangements to ensure the bank's access to liquidity, and the costs of precautionary holdings of liquid assets -- the bank form may be more cost effective. Second, those who deposit may have liquidity demands that are naturally negatively correlated through the medium of real transactions with those who borrow. In other words, and somewhat simplistically, those firms who sell goods deposit cash while those who buy typically draw it down till they sell. To the extent that a bank services both sets of firms, there is a natural smoothing out of liquidity demand. By contrast, a financial institution which either only makes deposits or offers loans does not have this natural diversification.

The above argument may explain why the traditional bank still has value even though money market mutual funds can provide depositors unlimited liquidity on demand, and even though finance companies can provide longer term finance to firms. While the money market mutual fund has lower costs than a bank because it commits (through regulatory oversight, legal constraints, and custodial arrangements) to investing all its cash in extremely safe and liquid securities, not all its investors require their money at the same time. So the liquidity of its assets remains largely unused. Similarly, while a finance company may be able to provide longer term loans (because its liabilities are also typically longer

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15 The average maturity of finance company loans has been estimated to be 50% higher than the maturity of bank loans. See M. Carey, M. Post and S. Sharpe, "Does Corporate Lending by Banks and Finance Companies Differ? Evidence on Specialization in Private Debt Contracting", mimeo, Board of Governors of the Federal Reserve, 1996.

b. Synergies: Co-insurance.17

The provision of liquidity requires the financial institution to maintain a free-floating inventory of liquid cash and securities. These assets are continuously transformed in the course of business – the liquid securities holdings are sold and the proceeds lent out to safe borrowers whose repayments are reinvested in securities and so on... At any point in time, therefore, investors do not know the composition of the institution’s balance sheet. Since a large fraction of a bank’s assets are, by necessity, extremely liquid, and the bank’s operations are intrinsically opaque, theft and fraud have historically plagued banks. Moreover, the range of personally beneficial activities available to bank managers need not be confined to the illegal. Liquid securities can be quickly transformed into risky loans (or risky proprietary trades) rather than safe loans. This is perfectly legal and may benefit the bank’s management while hurting depositors.18 Therefore, the very liquidity of the bank’s reserves creates a problem. Investors demand a “moral hazard” risk premium even if the bank’s activities are safe because the liquid assets can be quickly transformed to unsafe assets. In a sense, the bank’s cost of borrowing is too high given the risk of its holdings.

If transformation activities are key to the value the institution adds (as in lending, dynamic

16 Each facet has been separately recognized. That banks create liquidity for depositors has been stressed by D. Diamond and P. Dybvig while the role of banks in fueling liquidity to firms has been emphasized by B. Holmstrom and J. Tirole in “Private and Public Supply of Liquidity”, mimeo, M.I.T., 1995.


18 The standard academic rationale is that management is rewarded for adopting risky strategies by equityholders who like risk because they benefit from the upside. Equivalently, a trader (and management) gets a high bonus for making large profits, but cannot be penalized by more than the loss of a job for poor performance. This asymmetric compensation function could lead the trader to take excessive risks.
hedging, or trading) then the institution has to find some way of preserving the value creating aspects of asset transformation (making safe loans) while committing to not indulge in the value destroying aspects (making excessively risky ones). One possibility is for the institution to develop a reputation for probity. Since a good reputation can be a source of income (since more firms want a reputable bank as relationship banker) and acting against investor interests can destroy it, a reputable institution can commit to the value enhancing aspects of asset transformation. But it takes a long time to achieve a good reputation.\\footnote{See D. Diamond, “Reputation Acquisition in Debt Markets”, \textit{Journal of Political Economy} 97 (1989).}

Another way of saying this is that profitable sub-groups within the bank have an incentive to stop rogue operations which take excessive risks, because the latter jeopardize the former’s bonuses. Of course, if all operations are unprofitable, then everyone in the bank passively waits for the risky trades or loans to bail them out. Finally, I have talked about liquid assets as increasing transformation risk. The ability to take on large positions using derivatives is another source of transformation risk. This compounds the opacity of the bank balance sheet and makes it even more important that the bank have illiquid assets or franchises in place to assure lenders.\\footnote{Another way of saying this is that profitable sub-groups within the bank have an incentive to stop rogue operations which take excessive risks, because the latter jeopardize the former’s bonuses. Of course, if all operations are unprofitable, then everyone in the bank passively waits for the risky trades or loans to bail them out. Finally, I have talked about liquid assets as increasing transformation risk. The ability to take on large positions using derivatives is another source of transformation risk. This compounds the opacity of the bank balance sheet and makes it even more important that the bank have illiquid assets or franchises in place to assure lenders.}

To summarize, banks may reap scale economies from offering liquidity services to both
depositors and firms who have problems accessing short term credit markets. An added virtue of making illiquid loans and having some franchise value in providing “liquidity insurance” is that these assets serve to assure depositors against an overnight change in the bank’s risk. With this view of why banks exist, I now propose an explanation of how changes in technology and the regulatory environment have affected banking activities.  

**WHAT HAS CHANGED?**

Deregulation and technological change are the two single biggest changes in the banking environment. Both appear to be mixed blessings for banks. It may be best to illustrate their effects through examples.

Bank loans as I have been arguing have, historically, been illiquid assets. The originating bank that has the relationship knows more than the potential buyer about the borrower’s true credit risk. So a potential buyer of bank loans faces the risk of getting only “lemons”, which may be one reason the market has been illiquid. Another reason has been that bank loans typically involve more complicated covenants than public debt, and are usually smaller in size. The legal and administrative costs of keeping track of title, payments, and covenant violations may not have justified the sale.

All this has changed. Banks have started selling their loans. The loan sales market has grown tremendously; from approximately $26.7 billion in the second quarter of 1983 to $290.9 billion in the third quarter of 1993.  

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21 One potential synergy that has been discussed in the literature is that it may be optimal to fund a bank’s well diversified but unobservable portfolio with demandable debt. Unfortunately, commercial paper has many of the characteristics of demandable deposits, so this line of thought does not help us distinguish between a finance company and a bank. See D. Diamond, “Financial intermediation and delegated monitoring”, *Review of Economic Studies* 51 (1984), 393-414 and C. Calomiris and C. Kahn, “The role of demandable debt in structuring optimal banking arrangements”, *American Economic Review* 81 (1991), 497-513. Another potential synergy is that borrowers also maintain deposit accounts with the bank which makes the bank more informed at low cost (see L. Nakamura). The evidence in favor of this is weak. See M. Carey, M. Post and S. Sharpe, “Does Corporate Lending by Banks and Finance Companies Differ? Evidence on Specialization in Private Debt Contracting”, mimeo, Board of Governors of the Federal Reserve, 1996.

22 Former Chairman of the FDIC, Irvine Sprague describes the methods of Penn Square, the bank that failed in 1982 and nearly brought down Continental Illinois as follows: “Its mode of operation was to make large, high-priced but chancy loans to drillers and then to sell the loans, in whole or in part, to other banks while pocketing a fee for the service...The large participating banks were exposed, embarrassed, and threatened... Their transactions with Penn Square violated all tenets of sound banking...They were content to rely on someone else’s faulty and fragmentary loan documentation... See G. Gorton and G. Pennachi, “Banks and Loan Sales: Marketing Nonmarketable Assets”, *Journal of Monetary Economics* 35 (1995), 389-411.
quarter of 1989 (loan sales declined somewhat in the early 1990s as loans financing mergers and acquisitions declined). What is also notable is that the majority of loans sold changed over this period from investment grade to being non-investment grade.\textsuperscript{23}

On the high end of the market, rated borrowers have increasingly used the commercial paper market for short term funding needs. The ratio of non-bank commercial paper issuances to Commercial and Industrial (C&I) loans made by banks rose from 10\% in 1958 to 75\% in 1990. Similarly, finance companies have increased their share of business lending, with finance company business credit increasing from 29\% of C&I loans in 1985 to 43\% in 1994.\textsuperscript{24}

On the liability side of bank balance sheets, the changes have been equally, if not more dramatic. Consider a depositor not so long ago. She went physically to her bank branch to withdraw money. She wrote checks even for routine payments. The bank typically was also her main source of loans as few other institutions had information on her. She dealt separately with her brokerage firm, her bank, her mutual fund and her mortgage lender, and never really knew how much of her wealth was where.

Now she can withdraw money in Italian Lira from an Automatic Teller Machine in Europe and have her account in Peoria, Illinois debited in dollars. She can initiate a payment using her Citibank credit card in a German restaurant and have the transaction travel seamlessly through Citibank’s internal system to South Dakota and back so that the restaurant’s account is credited. She can apply for credit to any mortgage lender, all of whom have access almost instantaneously to her credit history from the same credit rating agency. In fact, she can now get a loan from an Automatic Loan Machine. Finally, if she wants, she can track her wealth easily by allowing one financial institution to serve all her needs, and have it consolidate all her statements. This institution may be a bank, an investment bank, or even a mutual fund. Clearly, the tremendous advances in communications and processing technology, as well as de-regulation of entry have been at work to make all this possible. Does all this change suggest the bank form become obsolete? To answer this, let us first consider changes on the asset side.

\textbf{The Changes: Disintermediation, Commercial Paper, Loan Sales, and Finance Companies.}

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\item See M. Carey, M. Post and S. Sharpe, op. cit.
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One view of the changes is that computer and communications technology have dramatically reduced transactions costs, as well as increased the availability of public information about borrowers. Some argue that firms can now cut out the intermediary and borrow directly from the markets. They argue that banks as corporate lenders are, therefore, dead. I think these arguments miss the point of the changes. Banks have not been driven out of corporate lending, even to high credit quality customers, they have simply refocused on their core competence. I elaborate.

A bank’s core competence, as I have argued in the previous section, is to provide funding on demand, not provide funding per se. In fact, there may be compelling reasons why a bank is at a competitive disadvantage in funding especially high quality clients. Since the bank continuously transforms its assets, its balance sheet is opaque to the investor, and is becoming more so as transformation activities such as proprietary trading, loan purchases and sales, and derivative trading increase. So investors charge a hefty asymmetric information and moral hazard premium. Furthermore, the rate of interest demanded by investors does not respond to the marginal loan made by the bank because investors do not see the loan, and have no idea how long it will be on the balance sheet.

To make this point clear, consider a bank that is A rated and borrows at 12%. In a perfect world, it can make a new loan to a AAA customer at 10% and still make a profit. The rationale is that the bank’s lenders, seeing the new safe loan, will adjust downwards their estimate of the bank’s credit risk, and demand a lower rate. In a perfect world, the downward adjustment on the bank’s average cost of funds will be just enough to make the loan worthwhile. But if bank balance sheets are opaque, their cost of capital does not adjust downwards to the marginal high-quality loan because investors do not know whether, and for how long, it is there. A bank that wants to improve the credit quality of its lending has to either bolster its capital so that its own credit quality improves, or implement a strategy of moving up market, making new loans only to good credits below its own funding cost, until the bank’s financiers believe the strategy and reflect it in the bank’s cost of borrowing. The transition may be long and very costly.

In other words, when bank credit ratings were high because of rents from the deposit business, funding high quality firms was not a problem. When bank credit ratings fell, perhaps as deregulation reduces rents, it makes sense for the bank to unbundle the products; to allow investors to finance the firm directly
through commercial paper while providing back up lines of credit or letters of credit to assure the commercial paper investors that they would get their money back. The virtue of investors directly financing the firm is that they charge a rate appropriate to the risk of the firm rather than a rate commensurate with the average risk of the lower credit quality bank. The bank still monitors the firm (because it has offered guarantees to the commercial paper) and provides liquidity insurance, but does not fund it any more. It turns out that bank profits are typically no lower with this strategy than if it funded the loan. In fact, when non-interest bank income is capitalized and added to bank assets, the augmented bank assets have retained a relatively constant share of financial sector assets over the last twenty years. More generally, this suggests that while banks have not altered their basic function of arranging short notice funding, the product through which they offer this service has changed considerably.

Some recent research adds peripheral support to the claim that banks are essentially in the business of providing short notice monitored finance. When Drexel Burnham Lambert filed for bankruptcy in 1990, the share prices of major money center banks went up by an astonishing 7%. By contrast, the share prices of competing investment banks went up only by 1.6%. Clearly, Drexel was more of a competitor to commercial banks than to investment banks. But what exactly did it do? Essentially, Michael Milken set up a network of junk bond buyers which accepted pretty much any deal he sponsored. In return, he exercised control over the borrower to make sure they did not lose out. Furthermore, if a particular issue underperformed, he made it up to the buyer in future transactions. With placement power assured, he could guarantee borrowers short notice finance -- exactly what I argue a bank does. In fact, Drexel’s letter assuring a company board under hostile attack that Drexel was “highly confident” of raising finance for the takeover became virtually a loan commitment, albeit for a very large sum of money. No wonder bank stockholders rejoiced at Drexel’s demise! One could ask why finance companies have grown their assets while banks have shrunk from directly funding clients. This is easily explained. Finance companies offer longer term

25 J. Boyd and M. Gertler, “Are Banks Dead? Or Are the Reports Greatly Exaggerated?”, Quarterly Review of the Federal Reserve Bank of Minneapolis (Summer 1994), 2-23. They argue that when loans made by foreign banks and off-balance-sheet activities are accounted for, average bank share of intermediated assets is stable at about 40% between 1955 and 1993.

credit than banks and are also very focussed in their activities -- typically, they provide secured term financing for a narrow range of industrial products. This makes finance companies more transparent to their own investors. As a result, finance companies have a better match between the interest income they receive on an additional loan and the cost of funding it. Of course, finance companies would lose their ability to fund if they ventured to lend outside their area of focus. This is why finance companies do not typically lend to high quality credits or make as many general purpose loans as banks.  

Finally, the growth of the bank loan sales market is yet more evidence that banks are focussing on their competence. While a bank’s desire to sell loans may be motivated by regulatory concerns or concerns about the cost of funding discussed above, what has enabled buyers to overcome their historical reluctance to purchase from more informed sellers. Is it that the originating bank no longer has an informational advantage and banks no longer have a role to play even in liquidity provision? Gorton and Pennachi (1995) do not find this to be the case. Instead, banks have devised a variety of mechanisms to convince buyers of their good intentions. For instance, they retain a share which increases in the riskiness of the loan, as a signal of their good faith. Gorton and Pennachi also conjecture that banks offer implicit commitments to buy back loans that turn sour (these commitments cannot be explicit for regulatory reasons) but their tests for this have low statistical power. Finally, the loan sales market is one where repeat sales are important so sellers have an additional reputational incentive to stay on the straight and narrow. The researchers conclude (p410) that their findings imply “banks still offer services for certain classes of borrowers that cannot be obtained in the capital market via the underwriting of public securities.”  

I am not suggesting that improvements in technology and communications have had no effect.

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27 For evidence that finance companies lend to riskier borrowers, see M. Carey, M. Post and S. Sharpe, op. cit. That even finance companies who are not subject to regulation do not lend to high credit quality borrowers suggests that disintermediation has not been caused by excessive regulations imposed on the banks.

28 See Gorton and Pennachi (1995) op.cit. What appears to be more of a violation of the Lemon’s principle is the recent emergence of a market for credit derivatives. Here, the originating bank purchases insurance (a credit derivative) against a borrower’s default. My guess is that the bank will still retain enough of the risk to convince insurers of its good faith. The pricing of the derivative will also probably reflect the exposure the bank retains to the firm, though knotty issues are raised about how the bank can commit to holding on to the exposure. Finally, it appears that banks want to reduce exposure to a client by purchasing insurance rather than selling the loan because they fear that selling the loan will offend the client. In fact, one of the advantages of credit derivatives is that insurance can be purchased without alerting the client that the bank is reducing exposure (see Euromoney, 1996).
Public markets are now far better informed, and innovations have made it much easier to slice and dice financial services, and to value and place each part separately. But banks have also benefited from these improvements. For instance, even though high quality customers can now transact more directly with the market, banks can lend greater amounts to lower grade customers, confident that their risk exposure can be reduced in the secondary loan sales market. Furthermore, the greater integration of markets as a result of innovation has made liquidity insurance even more important. A hint of distress -- even if rumor rather than fact -- can become self-fulfilling as all markets simultaneously close off to a firm. The presence of a supportive institution which has the information to sift rumor from fact, and a relationship to protect, can be very welcome in these circumstances.

I end this section, on a somewhat paradoxical note. Even though I have argued that relationships are critical to many of the services banks provide firms, and even though the greater informational integration of financial markets makes institutional support through relationships more valuable, relationships have become harder to initiate and sustain. The reason is that a relationship involves substantial cross-subsidy across time and transactions. The increase in competitive alternatives outside the relationship -- such as other forms of financing -- can place substantial strains on it. Partners in a relationship can no longer be confident that their partner will be faithful. This is perhaps why bankers in the U.S. bemoan the deterioration of relationships since the 1960s, why bank-firm relationships in Japan may have become weaker as equity and bond markets have deepened, and why, somewhat paradoxically, small U.S. firms find it easier to obtain credit in areas where there are few banks than in areas where there are many competing banks. Since banks can no longer be confident of coming out ahead in the long run, they are now forced to become better at pricing each transaction. They have to make a conscious choice of which customers to cross-subsidize. The growing popularity of tools like RAROC are testimony to this trend.

To summarize, both theoretical arguments and the evidence suggest the fundamental services banks

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provide corporations are alive and well, albeit much changed.

**The Changes: Competition and the Deposit Business.**

What about the retail side of the business? Historically, banks have made profits in regulated and protected markets where, for the reasons discussed above, individuals have considered their local bank convenient, informed, and trustworthy relative to the more distant competition. As a result, they have been relatively price insensitive. Of these attributes, the first two are no longer the preserve of the local bank. Deregulation has brought down geographic barriers to competition between banks so a competing bank -- which enjoys all the economies of the institutional form -- may be equally convenient. Moreover, technology has put much of the competition just a phone call away. Even more problematic, a competitor has access to the same centralized credit rating agencies that the local bank gets its information about the customer from. The local bank then has trust as its only remaining source of advantage.

The new holy grail is for banks is to rediscover captive customers who are price-insensitive. Barring this, banks have to innovate continuously, or find scale economies and become the low cost producer. It helps, of course, if there is a substantial first mover advantage in a product so that the profits from innovation or scale can be reaped over a period.

"Captive" customers.

In their search for captives, banks have one big advantage in deciding who to target, how to bring them in, and then how to increase their switching costs; many customers have been slow to take advantage of their ability to use the phone to reach other providers.\(^{30}\) They still prefer to use the bank branch for such activities as depositing checks (for fear they will not have a physical record otherwise).\(^{31}\) The local bank branch also provides some human interaction and is less technologically intimidating. Moreover, bankers (at least in the U.S.) have been seen as more trustworthy than other financial service providers such as stock

\(^{30}\) While the number of ATMs in the U.S. has gone up from 13800 in 1979 to 109080 in 1994, the number of bank branches has also gone up over the same period, from 50,136 to 65,610. See A. Berger, A. Kashyap, and J. Scalise, “The Transformation of the U.S. Banking Industry: What a Long Strange Trip It’s Been”, *Brookings Papers on Economic Activity*, 2 (1995), 55-217. Of course, the size of a branch is now changing, with one-person branches being placed in supermarkets at a fraction of the cost of a regular branch.

\(^{31}\) It is now possible for an ATM to automatically produce an image of a check that is deposited so that the customer has a record. Banks will obviously be torn between the trade-off of driving away more customers from the branch versus attracting new customers with these machines.
Some banks correctly view their branch network and current depositor base as an opportunity. Their idea is to use the branch as the gateway through which the depositor can access the entire financial system. They would like to convert the physical access and trust they currently enjoy with depositors into high switching costs so that when the depositor becomes more technically sophisticated, or access costs diminish further, she is not tempted to switch. There are a number of ways of increasing switching costs. The costliest approach may be to provide personal advisory services, but it builds human bonds that are hard to break. Other approaches include offering a variety of services and integrating the customer’s interaction with them so that they seem seamless. For instance, a bank that offers the customer mortgage, credit card, and insurance services can link all these accounts to the deposit account, as well as to overdraft facilities and home equity loans. Within limits, authorized payments can be made automatically, if necessary by borrowing on behalf of the customer at her least cost rate. The bank can also provide a consolidated statement to the customer at the end of every month. The advantage of being the access point is that the cost of switching to a different access point increases with the number of services provided (and if the customer uses software, with the degree of specialization of the software needed to gain access).

An interesting question is whether the bank should offer access to more than its own in-house services. My conjecture is that it should, not simply because it will become more attractive as an access point if it offers the best services, but it is also a commitment to the customer that she will not be gouged later if she locks herself into the bank (economists call this technique “second sourcing”). Moreover, the bank that controls access can extract rents from the other service providers (it controls the unique asset, i.e., the captive customer).32

Innovation.

Innovation is clearly a way for a financial institution to differentiate oneself from the pack. But most product innovations on the retail side are easily imitated if they catch on (except, of course, the ones based

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32 This approach has been followed extremely successfully by Charles Schwab, a discount brokerage house, and by Intuit Home Banking. For example, with its Mutual Fund OneSource product, Schwab allows customers access to over 1100 mutual funds from over one hundred fund families. Schwab consolidates all fund statements into one consolidated statement for the customer. Schwab’s market power through its control of access is evident in Fidelity’s recent decision to withdraw most of its popular funds from this scheme.
on proprietary technology). One way to build a sustained advantage is to use innovation to build a captive customer base. This is, in a sense, what Charles Schwab has done. It was one of the first brokerages to allow customers to trade electronically. In the process, it cross-sold a variety of products including information services and mutual fund services which locked the electronic customer in. At the same time, these customers give Schwab the scale to pursue further innovation.

Another kind of innovation is to identify areas of high transactions costs and to reduce these costs by internalizing the transactions. To the extent that there are first mover advantages in this, the bank can build a long term franchise. For example, Citibank has recognized that there are still very high costs in making cross-border payments. By setting up a global network of branches, and developing tremendous expertise in foreign exchange transactions, it has internalized cross-border payments. The savings in transactions costs coupled with the very high volume of transactions make this a very profitable franchise. Moreover, other banks are unlikely to challenge this franchise because there are costs of setting up a competing network and the prospective profits are meagre given that there is already an incumbent.

Economies of Scale.

Of course, nothing beats being the low cost producer. Automation is often the way to reduce costs. For example, the real cost of an electronic deposit has come down from being four and half times the cost of processing a paper check in 1979 to being half the cost in 1994. Since automation requires substantial investments, large banks have a competitive advantage. This may also explain the consolidation of the industry in recent years; the percentage of assets in the banking industry in megabanks (banks with assets over $ 100 billion in 1994 dollars) has doubled between 1979 and 1994 while the percentage of assets in small banks has halved. 33

WHAT ELSE WILL BANKS DO?

Banks have developed a number of competencies in the course of their traditional activities. They have access points to retail customers (the branch system, the phone and computer network), processing and

33 These figures are from A. Berger, A. Kashyap, and J. Scalise (1995) op. cit. Interestingly, academics have been unable to find evidence of substantial scale or scope economies. My sense is that this has more to do with the weak power of the tests used rather than actual absence of these economies. For an excellent review of this literature, see A. Berger, W. Hunter, and S. Timme, “The Efficiency of Financial Institutions: A Review and Preview of Research Past, Present, and Future”, Journal of Banking and Finance, 17 (1993), 221-249.
communications systems (the back office operations), financial engineering expertise, substantial capital, and trust. Financial services essentially consist of assuring performance (as when an investment bank puts its reputation behind a client it underwrites), making contingent or non-contractable payments, reducing transactions and settlement costs, and providing information and expertise. If we compare the list of competencies with the services, it is obvious that large banks have the capability of offering most financial services. What will, of course, change is that rather than focusing on the product, they will attempt to fulfill, and broaden the function they perform -- often way beyond the specific financial service. This will involve both product innovation as well as functional innovation as banks attempt to bring more transactions within their purview.

Many of the products they offer will be modernized versions of their traditional products. The attempt will be to reduce transactions costs while making transactions seamless for the customer. For instance, instead of carrying myriad payment instruments in her handbag -- money, checks, credit cards, debit cards -- the customer will eventually be able to use her fingerprints or voiceprint to initiate payment. The payment will then be debited from a common transactions account, and the balance reinvested according to the customer's desired portfolio choice or borrowed from a preferred lender. With consolidated accounts, stored value cards, and automatic loan machines, the industry is converging towards this ideal.

Banks will also get into non-traditional financial business. Consider underwriting a corporate security. A bank already has an advantage because its lending relationship gives it frequent contacts with firms, and gives it a first mover advantage in making an underwriting pitch. The bank can also make a loan to bridge the gap between the emergence of a project opportunity and the time finance can be raised from the markets. While it may not have a network of institutional buyers who provide the information to price the issue, it can certainly develop these. Large banks have the credit experience to investigate the firm, and the reputation to certify issuers to the market. Congress willing, the branch system, and eventually Internet, will provide a low cost retail outlet for securities for U.S. banks. So banks can easily perform the functions of pricing, certification, and distribution that go into underwriting. Furthermore, they may have some advantage in capturing the business. While the underwriting business will not be a cakewalk, and should not be entered by every bank (see the caveats below), the vigorous lobbying by investment banks against the removal of
Glass Steagall barriers suggests that the investment banks have something to fear.

The list of prospective non-financial activities also seems large, and perhaps more interesting. Banks have become very competent at reducing transactions costs through automation. The next frontier is for them to find routine non-financial transactions that can be automated and seamlessly merged with the financial transactions the bank already does. For example, libraries typically invest substantial costs in ordering magazine subscriptions from various publishers. Banks are only involved when the final payment has to be made. There is no reason why a bank cannot take over the entire process, reducing the number of interfaces across which transactions take place, and bringing scale economies to bear. This is, in fact what Banc One offers with its “Subscribe96” product. Library subscription orders are initiated in co-operation with RoweCom (a library service provider), routed to Banc One’s web site and then sent on to the appropriate publisher. Banc One then debits library accounts and credits the publishers’ banks through automated clearing house transactions.

Large banks also get an enormous amount of information routinely. While the confidentiality of some of this has to be respected (and the bank makes money of some information through proprietary trades), yet other pieces can be aggregated and sold to the public. For instance, mortgage lenders obtain information about house prices in the course of lending. It should be relatively easy for them to develop regression models of how prices depend on house characteristics, location, etc., and provide the pricing service at a fee to buyers. Of course, there may be legal issues such as whether the lender will be held responsible for poor estimates. But I see no fundamental reason why banks cannot bring their huge information gathering networks and processing technology together in brokering information to customers.

I could go on. But the pattern seems fairly clear. In the course of providing liquidity, banks have also developed other capabilities such as information gathering and transaction processing. Banks also have a history of being trustworthy with financial matters, an asset that new, specialized, providers do not have (would you bank on the Internet with a software company or a chartered bank?). The opportunities these open up may seem more attractive for some banks than the traditional business. But for the majority of banks, at least in the near future, business will consist of modernizing, broadening, and leveraging off, the traditional business of liquidity provision. I now conclude with what I think will limit bank activities even though
banks may have the intrinsic competence to get into them.

THE LIMITS TO GROWTH

Personnel.

Bank personnel require retraining, new incentive systems and new control systems to deal with a changed world. The biases ingrained from past ways of working are sometimes hard to see, let alone erase. For example, prior to deregulation in many countries, banks rationed scarce credit even to high quality customers. The credit decision was often centralized, and the loan officer essentially pleaded his client’s case to the bank’s credit committee. Credit evaluation by the loan officer was of secondary importance. This worked because the lack of competition and frequent government intervention meant that few companies were allowed to fail. But in a deregulated environment, the bank no longer has the luxury of dealing only with high quality clients. The loan officer has to sell his bank’s services to clients of lower quality while making sure that they are sound credit risks. Often, banks do not recognize that the changed environment has to be met with changes in managerial practices. Loan officers then continue to advocate (but not evaluate) clients to a credit committee that is out of touch with ground realities -- a certain recipe for disaster as banks in Japan, Norway and Sweden have realized.

The entry into new activities can also lead to internal conflict about pay equity. Many European banks have bought merchant banks in London in order to enter the securities business. Merchant bankers are typically more market driven than commercial bankers and are more highly paid. This sets up a clash of cultures and internal jealousies which can decimate a bank. Even if these tensions are smoothed over without the bank unduly pushing up personnel costs, there is still the problem that the investment banking business is much more cyclical than the banking business. There are constant changes in the power of different investment banking groups which, typically, are better managed by a more flexible, flatter, managerial structure. The historically more hierarchical, rigid, commercial bank has to adapt its organizational structure to absorb these shifts in power. Banks that do not take cultural and organizational issues into consideration while entering new activities are likely to have a lot of conflict management on their hands.

Spillover effects.
New activities have other indirect or spillover effects on the rest of the organization. They can affect the organization’s reputation, incentives, cost of capital, and regulation. A bank has to be extremely confident of its control over new activities because a rogue operation can jeopardize the entire bank. Salomon Brothers experienced this soon after its involvement in manipulating the Treasury auction became public in 1991. It experienced a dramatic drop-off in even unrelated business, loss of key personnel, fines, liquidation of approximately one third of its assets and a loss in market capitalization of $1.5 billion as firms worried about the adverse publicity from doing business with, and the reliability of, a “tainted” investment bank.

Some activities can also reduce the confidence the public places in other activities because of the perception of conflicts of interest they generate. A number of studies show that an investment bank’s analysts are overoptimistic when they report on the performance of firms their bank has relationships with. This causes investors to suspect all the advice they get. Evidence from the 1920s shows that commercial banks who integrated their lending and underwriting operations tightly did not get as good a price for the securities they underwrote as did banks who voluntarily set up firewalls and separate boards for the operations. The rationale seems to be that the public was wary that the lending arm would attempt to bail itself out of past mistakes by selling securities on behalf of distressed firms through the underwriting arm without disclosing the state of the firm. Thus the “lemons” problem was more severe if the operations were too tightly integrated.\(^{34}\) Banks have to be aware of the changes in incentives when new activities are entered, and adjust organizational, compensation, and control structures accordingly.

New businesses can also affect the transformation risk on a bank’s balance sheet and alter its cost of borrowing. The classic example of this is proprietary trading where the bank takes positions on its own behalf. Proprietary trading pushes up the transformation risk in a bank. Even if income volatility from trading is not high, the possibility (however remote) that traders may “bet the bank” can push up the cost of borrowing. Banks have also followed the opposite course and bought into steadier fee based franchises such as mutual funds to stabilize their income and co-insure activities with greater

transformation risk. The effects of new businesses on the bank’s average cost of borrowing should be a consideration when entering new businesses.

Finally, banks have historically been considered too important to be left alone by politicians and regulators. Every bank action prompts a regulatory reaction, and this will, no doubt, continue. For instance, recent bank forays into risky activities have prompted calls for "narrow banking". These are essentially calls to break up the bank into separate money market mutual funds and finance companies. While I see no reason why banks should be subsidized through deposit insurance, narrow banking would have the undesirable effect of eliminating the synergies banks bring to their traditional activities.

CONCLUSION

The fundamental banking business of liquidity provision is alive and well. Substantial new opportunities have opened up for the commercial banks. Their task is not so much how to get out of a declining business, but how to select judiciously between these opportunities. Therein lies the future.