

The Functions and Future of Retail Banking

address by
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**Consumer Bankers Association
76th Executive Retail Conference**

Tuesday, October 1, 1996
The Drake Hotel
Chicago, Illinois

I. Introduction

At the turn of the century, one of the largest employers in America was the U.S. Ice Trust, which cut, stored, and delivered ice for people's "iceboxes." That industry doesn't employ many people now, although it's not because people have forsaken the need to cool fresh food. Rather, a product born of new technology, the refrigerator, entered American homes and all but eliminated the need for ice cutters. Another prominent firm in the early part of the century, the Fisher Company, produced carriages and buggies. This firm is still in business, making the automotive bodies for Chevrolet.

What will happen to the retail commercial banking industry in the coming decades? That depends on how successfully banks can provide value to their customers. The challenge for both managers and banking supervisors is to understand what customers want --to distinguish between cutting ice and keeping food cold. I believe the best way to do this is think clearly about the *services* or *functions* that people demand, and then ask whether banks (as we know them today) have a comparative advantage in supplying them.

By looking at the value-adding activities of banks, I hope to give you a framework for thinking about profitable opportunities and a way to assess the competition coming from other banks, money market funds, or even the phone company or a computer software company. I will also comment on how changes in the delivery of financial services may affect the role of the Federal Reserve in regard to money, the payments system, and banking supervision.

II. Origins of Banks

Economies have always developed methods for providing what we call financial services. As economic systems change, the nature of the enterprises providing these services adapts to the technology and preferences of the customers. Most professors of money and banking fondly discuss the medieval goldsmiths, who took in gold for safekeeping, and whose receipts eventually became money. Goldsmiths added value by reducing information and transaction costs for their clients. They assayed samples and certified their quality (via a hallmark stamp). In other words, they produced information and made that information easily verifiable. They issued receipts, which were easier to carry than gold bullion, thus reducing transaction costs. From here it was a short step to making loans.

The goldsmith experience has several lessons for today. First, many of these functions still survive, although modern banks' methods of providing a convenient means of payment and a loan are certainly different. Second, the institutional form has changed drastically, from guild to corporation. Banking is not combined with goldsmithing today--and you really can't blame this split on the Bank Holding Company Act of 1956. Note that goldsmiths, as part of a guild system, were not corporations, either.

Finally, we should consider the heavy role of government even at the dawn of banking history. Though other merchants offered credit in medieval times, goldsmiths became particularly important because of Henry VIII's suppression of monasteries and religious charities (1545), which released their accumulated gold and silver back into circulation. Deposits with goldsmiths increased dramatically after 1640, when Charles I seized the specie and bullion at the mint in the Tower of London.

Even earlier than the goldsmiths, the organizers of the Champaign Fairs in the 12th and 13th centuries performed similar functions. They issued tokens to the

participating merchants, with each token representing deposits of coin, plate, and bullion that had been tested. The merchants used these tokens to net out their accounts before clearing and settling in the deposited gold. At the same time, many functions we consider banking were undertaken by scriveners--clerks who were needed to write letters and contracts in an illiterate age. They became general advisors, because they were needed to reduce transaction costs.

Institutions more recognizable as banks, such as the Casa de San Giorgio in 1407 and the Bank of Amsterdam in 1609 (made famous by Adam Smith's descriptions in the *Wealth of Nations*) also arose. These banks provided the functions of safekeeping and security, assessed and certified quality, and enabled transfer payments. Even though at first both parties had to meet at the bank to transfer funds, transaction costs were lower than by lugging gold through the streets of Genoa or the canals of Venice. Often these banks kept deposit and lending functions separate, so that deposits were not used to fund loans. The Bank of England formally separated its deposit and lending functions in 1844 with Peel's Act, but the Riksbank of Sweden, which was founded in 1656, was separated into a "narrow" bank and a lending bank from the start.

III. The Functional Approach to Financial Services

The history of banking, particularly in the United States since the 1930s, contains many examples of government attempts to separate an economic activity we think of as “financial services” into distinct industries. These industries can, and do, separately exist in a market-oriented economy, as long as they are performing functions that people value. Taking a functional perspective enables us to look more deeply into the well of issues surrounding the future of banking. As firms adapt to competitive forces, we should expect them to alter their product mixes, delivery vehicles, and corporate structures to serve their functional role.

The functional approach to economic analysis has a long history in economics. Frank Knight described the basic economic functions as answers to a set of questions that any society must answer--what to produce, how to produce it, and how to distribute the output. As part of the financial system, banks enable their customers to transfer resources across time and space. More specifically, the financial system performs six broad functions:

- 1) Conducting exchange: clearing and settling claims
- 2) Funding large-scale enterprises: resource pooling
- 3) Transferring purchasing power across time and distance
- 4) Providing risk management: hedging, diversification, and insurance
- 5) Monitoring performance of borrowers: mitigating adverse incentives
- 6) Providing information about the relative supply and demand for credit

Commercial banks perform all of these functions, but other organizations clearly do so as well. In a well-functioning economy, people make payments, save for the future, and insure themselves. There is no presumption that existing corporate forms will survive. (Remember the goldsmiths.) For economic reasons, combinations of products may exist at a certain time within one industry, such as “commercial banking,”

or "insurance underwriting." However, there is no guarantee that one type of heavily taxed, heavily regulated industry granted a particular "charter" will survive--quite the opposite.

Consider a simple example: the savings account. This financial product transfers purchasing power from the present to the future. But this savings function can be accomplished in other ways; for example, by investing in common stock. There are risk differences between the instruments: the savings account comes with a guarantee of principal, and in that regard is safer than stock. Buying a put option, however, can remove that element of risk from the stock. The functions provided by the savings account remain the same (transferring purchasing power into the future, reducing risk), but they need not be provided by a depository institution.

Something like this has happened with mortgages. At first, people purchased a house using the family's retained earnings (no financial intermediary); later the funds would come from a mortgage loan financed by the savings of other families in the same community (depository financial institution); now the purchase is financed by a non-bank loan ultimately funded by investors in the mortgage-backed securities market.

Using this functional perspective, a bank (or the business of "banking") is a particular combination of functions. Functionally, a commercial bank is a business that funds itself with liquid liabilities and makes illiquid loans. Legally, a commercial bank is a corporation that receives a banking charter and is subject to the rules and regulations thereof.

This statutory definition prompts two important observations. First, the functional definition of "banking" is not synonymous with the legal definition. Thus, a financial holding company owning a finance company, a venture capital firm and a money market mutual fund has a fair claim to be called a "bank." Likewise, a chartered bank that specializes in global custody arrangements or serves as a clearinghouse for credit

cards is functionally not a bank. Second, "commercial banks" need not exist, and may disappear. Someone will perform the functions now provided by banks: on the liability side, payments, pooling, and risk management; and on the asset side, resource transfers and risk management. But this particular combination need not necessarily survive, just as the particular combination of making metal jewelry and taking deposits no longer exists.

In the future, firms may serve customers by bundling certain financial services that are not currently combined, or they may merge banking-like services with non-banking-like services, such as tickets to concerts and sporting events, and vacation planning. These firms may have electronic delivery vehicles and be accessed through the Internet. In the end, prosperous firms will be those that find ways to deliver services the public wants. Some activities that today we regard as inappropriate, difficult, or illegal for banks will most likely change, and sooner than we expect.

Already, in New Zealand, the government is moving to end the distinction between corporations chartered as commercial banks and those incorporated for other business purposes. Customers of public utilities, such as the telephone company, may be able to carry interest-bearing balances and instruct the utility to credit the account of other merchants. Indeed, the government may even move to allow some non-banks to have settlement accounts at the Reserve Bank of New Zealand. What, then, is a bank?

IV. Money

Evolution of the financial services industry carries implications for money and monetary policy. Just as we are challenged to rethink what a bank is, we will be challenged to rethink what money is. Money will, of course, still be the same from an economist's viewpoint--a medium commonly accepted in trade for goods and services. But in practical terms, if the set of firms engaged in banking broadens, then might we

not find that the liabilities of these new entrants may also circulate among the public as one side of transactions? If people want to pay for goods and services with electronic vehicles that today's banks are slow to develop and offer, is it unreasonable to think that other commercial firms will step into the marketing void?

New payments technologies should be regarded as innovations that enhance productivity and welfare just as surely as any other new product. The challenge we face at the Federal Reserve is to ensure that we can adapt our own operating practices and monetary policies to maintain financial stability and control the price level. Today, banks hold our liabilities because they must meet reserve requirements, because they find having Reserve Bank balances instrumental in settling transactions with other banks, and because the public uses Federal Reserve notes in transactions.

Required reserves are already declining; in the future, the demand for central bank money will depend on the Fed's usefulness in net settlement and on the public's interest in using Fed liabilities for transactions instead of those of some other issuer. Does the public want to use an electronic traveler's check issued by American Express, or an electronic Federal Reserve note?

V. Implications

The functional approach challenges bankers to determine how they can most efficiently perform the various financial functions their customers want. What is the comparative advantage of banks? Another way of addressing this question is to think about what functions can be profitably outsourced. Money market mutual funds, for example, outsource some risk management. Unlike banks, they don't handle a loan portfolio. By engaging in loan sales and securitization, a banking firm can outsource the transfer and pooling functions, but keep the credit evaluation and monitoring (for example, risk management and incentive) functions.

In functional thinking, the initial tendency is to assume that everything can get outsourced, broken up, and reduced to a commodity. Experience, however, shows that this is not the case. Think about diversifying your stock portfolio--managing risk. Not that long ago, you did it yourself, by buying a lot of different stocks. Then the intermediary called a mutual fund did it for you, but you still had the search and transaction costs of finding a good fund. Very sophisticated investors left the intermediary behind and invested directly in stock index futures. Others moved to a new class of intermediary, the fund family, such as Schwab or Fidelity, which makes it easy to choose, evaluate, and transfer between different mutual funds. (An Internet search engine that does this is probably not far behind). Some people have returned to their commercial bank, trusting it to aid them in searching and evaluating funds.

The collection of functions currently known as banking survives--so far--for several reasons. Banks can use the combination of functions to provide services more efficiently, effectively, and cheaply than if the functions were accomplished separately. Banks can use the information from deposits to better price and monitor loans. Because it is the intense information uniqueness that prevents illiquid loans, such as small business loans, from being customized and securitized, this added informational advantage is decisive. Banks also survive because their organization solves incentive problems. Funding themselves with a debt instrument that guarantees a specific payout and that is also liquid, and thus moveable, gives banks a strong incentive to monitor and maintain the illiquid loans on their asset side. Why do we trust banks as "delegated monitors"? Because their structure has evolved to solve the incentive problem.

For the future, the question becomes: "What is the cheapest way to integrate and deliver functions?" Generally, the future will rely more on people and technology, and less on physical location. People will phone or e-mail an expert rather than talk

face-to-face with a local teller, especially in areas where expertise is vital: life insurance, financial planning, and mutual funds. Sears is the proof by counterexample: The retail chain attempted to use a physical location, their stores, as an integration tool for financial services. The idea failed.

What lies behind this trend? Knowledge is lumpy because of specialization, something Adam Smith pointed out long ago. Milton Friedman provided a more modern interpretation: no single person knows how to make a pencil. Producing even such a simple writing utensil needs the coordinated activities of many experts--producing the wood, the lead, the rubber, the paint, and so on.

People can act as efficient integration tools because they can acquire expertise. Banks can use technology to deliver experts from afar, and this allows further specialization. A bank would never hire an expert in options for a local branch, but such an expert would be useful for the 0.1 percent of clients nationwide who trade options.

Technology can also be used to integrate functions by, for example, integrating different types of financial accounts--since people care about their total portfolio position and how it changes. They would like to be able to integrate across multiple vendors, checking mortgage and car loans, mutual funds, stocks, and bonds.

Technology can also be used to reduce search costs. On the customer end, products such as BargainFinder search for the best-priced CD, as in compact disk, but it's a small step to searching for the best-priced CD, as in certificate of deposit.

SearchSpace is a commercial artificial intelligence computer program developed by the English that Italian banks use to predict loan defaults. This is a far cry from the 14th century scrivener dispensing advice, but serves the same function--reducing transaction and information costs.

To avoid bedazzlement (or cynicism) with the glories of information technology, it is worth returning once again to the functional approach, asking what functions

technology performs. Technology aids in navigation, or search, and reduces transaction and information costs by giving people easier access to a wider array of data. At one level, it merely means using your home computer terminal to find information, rather than going to a library. At another level it means using a program, search engine, or editor that can act as an intelligent agent on your behalf.

Technology also aids in delivery: services can be delivered electronically, or much of the delivery process can be automated. This means less paper clearing, fewer paper records, and reduced need for brick-and-mortar branches. Some functional problems will remain the same, though the delivery systems differ dramatically. For example, customer complaints about a long line or surly teller will become customer complaints about programs that crash.

Technology aids in making payments--a fascinating and important area. Though many key issues arise for monetary policy, there is a key issue for banking as well. Will the deposits of the future take a different form, and if so, will the combination of assets and liabilities that defines banking still be profitable?

Technology can readily be used to provide substitutes for banks. As people make payments electronically, and as software searches the Web for the best loan rates, banks may be reduced to commodity providers. Think about retailing: it's easy to find examples of businesses that were once strictly wholesalers, but that now deal directly with the public. We also can think of large "category killers" that aim to be customers' retail destination for all transactions of a particular type. Technology is an integral part of this retailing transformation. In time, the interface--Java, Netscape, or their successors-- will become the bank in people's minds, and in reality. Goldsmith receipts did not start out as money--they were *receipts* for money--but in time the interface became the reality.

Technology can also allow banks to become the interface, however. Already,

banks are becoming mutual funds for some people. Apollo Bank in Pennsylvania has become an Internet service provider. One scenario is that on-line, banks become just like one store in the mall. Another scenario is that banks can become your financial planner, listing your various bank accounts, credit card limits, and home equity balance on-screen, providing the navigation and delivery software that lets you buy with confidence.

New products

Operationally, the possibilities that technology brings go beyond merely reducing the cost and improving the quality of current products. It may prove possible, and even profitable, to combine functions in new ways. One example is the evolution of the stock market. As transaction costs dropped, it became easier to add more stocks to your personal portfolio. The real news, however, was that those lower costs allowed the development of mutual funds and, later, index options. So the real news may not be about loans made over the Internet. Let me sketch some possibilities, while pointing out that entrepreneurship is not often considered a comparative advantage of central bankers.

One demand for many people is college savings accounts. They would like to purchase some sort of futures contract, delivering four years of college tuition starting in 18 years. This combines investment and savings with insurance. People would like a guaranteed real payout (in college cost terms), with insurance against future problems (unemployment, divorce, etc.) and some means to avoid putting down the entire amount up front. This sort of contract reduces uncertainty and adds value.

Credit derivatives present another growth area. Standard loans have several types of risk, and investors may not want all those types together. A way to transfer credit risk to other parties who either want to bear risk or know how to hedge it would reduce overall uncertainty. Some banks may specialize in finding and servicing small

business loans while others specialize in hedging credit risk, and still others in managing interest-rate risk.

VI. Regulation

As the financial marketplace evolves, so too must financial regulation, and financial regulators. Just as those functions known as “banking” need not be provided by banks, those functions known as “regulation” need not be provided by regulators. Regulators should be clear about what function they are providing and about how they provide it. An insightful set of reform proposals comes from the Bank Administration Institute (BAI) in its report, *Building Better Banks: The Case for Performance-Based Regulation*. From a functional viewpoint, the report perhaps concentrates too much on the health of the banking industry, but it provides a wealth of resourceful ideas on how regulation can stop hindering banks from providing these functions. From my broader perspective, regulatory reform must rest on three principles.

1. A level playing field

Like the Champaign Fairs of old, in which merchants could participate if they agreed to obey certain rules such as having their gold assayed, regulation must not discriminate between different financial service providers. Banks generally applaud this rule when they talk about finance companies, mutual funds, and insurance companies not facing CRA exams, but are less enthusiastic about allowing Goldman Sachs or Microsoft Corporation access to FedWire.

The BAI report hoped to achieve a similar goal when it called for the elimination of outmoded compliance burdens, such as dual antitrust reviews. The report provides specific proposals to achieve a level playing field: One set of recommendations aims to “liberate full customer service capabilities” by eliminating anti-tying restrictions (section 106 of BHCA), and eliminating applications for new, unregulated products.

Another set aims to free up the organization of banks, to “empower full corporate governance.” These proposals would seek to permit well-managed banks to hold equity investments and undertake merchant banking activity. Notification would replace application for both bank and non-bank acquisitions (including branches and ATMs), and would likewise replace the requirements for approval of headquarters expansion and dividend payouts.

2. Functional regulation

Regulation should focus less on institutions and more on functions. The SEC is well equipped to handle securities-related problems. Let them handle the problems, and make the regulations, whether the securities are underwritten by Merrill Lynch or the local bank. Conversely, the extension, which again the BAI report and banks in general may not like to contemplate, is that Merrill Lynch must submit to Federal Reserve examinations when they make loans or use FedWire.

The BAI report called for “risk-based supervision” and insightfully looked for ways that regulation could be accomplished more efficiently without regulators. Thus, a greater use of external and internal audits, coupled with increased disclosure and reliance on market indicators, would go far in this direction. New Zealand, for example, has mandated that banks publicly display their credit rating.

3. Value-added supervision

Supervision and regulation must take account of the dynamic combination and re-combination of functions occurring today. It should be less concerned with playing “financial cop” and more with helping firms to work safely and efficiently. Ideally, banks will one day treat Federal Reserve exams more like a report from McKinsey, Arthur Anderson, or Moody’s, than an ordeal to be survived. The removal of unfair taxes and subsidies posited under the “level playing field” principle should make regulations less burdensome, and banks less eager to find ways around them.

The BAI report explicitly recognized the Federal Reserve Bank of Cleveland's "value-added supervision" approach of structuring more efficient exams, improving communication between banks and their supervisors, and rapidly identifying hazardous risk. The report stressed that supervision should concentrate on a bank's risk management capabilities, assessing internal controls and audit procedures. The Nick Leesons of the world remind us that these procedures and controls truly matter to the bottom line.

In the end, functional regulation may not be completely adequate, because some functional combinations pose incentive and informational problems. After all, it was the combination of long-term assets and short-term liabilities that got savings and loans in trouble. Still, with these principles, the new financial landscape may have the regulation it deserves. In the end, the greatest disaster would not be a world without banks or bank regulators, uncomfortable as that transition might be. Rather, it would be a drastic failure of innovation. Most people today would miss their refrigerators if they were taken away, even though the ice-cutters' union may disagree.