IMPACT OF TECHNOLOGY AND Deregulation
ON PERSONAL FINANCIAL MANAGEMENT

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ABSTRACT

This paper reviews changes in the financial services industry including unprecedented technological developments, deregulation, and related cost pressures. Second, consumer response to the changes and implications for consumer welfare are assessed. Finally, areas for adult education and research are proposed. Technology is melting market boundaries and forcing removal of regulatory restrictions. Rising operating costs, deregulation of interest rates, and the demise of cross-subsidies among accounts have changed the pricing of financial products and services. Consumer response to a highly automated financial service industry has not been all positive. Financial management education should address the issues of product diversification, complexity of decision making, and information processing. Research is needed to provide a basis for educational programs, information systems, and policy recommendations.

INTRODUCTION

A revolution is underway in the financial services industry. The revolution encompasses new products, delivery systems, providers, and a changing regulatory framework (Fernstrom, 1984). The implications of this revolution for consumers, educators, and researchers are beginning to unfold. This paper reviews changes in the financial services industry including unprecedented technological developments, deregulation, increased competition from old and new service providers, and related cost pressures. Second, consumer response to these changes and implications for consumer welfare are assessed. Third, appropriate adjustments in educational materials and delivery systems are identified. Finally, areas for research are proposed.

THE CHANGING INDUSTRY

Technology

Technology is melting market boundaries and forcing removal of regulatory restrictions far more rapidly and completely than otherwise would be possible under all but the most extreme economic conditions. The revolution in electronics, particularly in computers and telecommunications, has opened vast potential for improved investment, credit, and payment products and services through data base management, automation, and networking arrangements. Specific applications have been well known for some time: the automation of payment systems, back offices, and accounting, and now the phenomenon of microcomputing.
Technological changes not only meet existing demands more efficiently, but also create new demands. Rogowski and Simion (1984) state that "to view electronics as just a more efficient substitute for manual processes is to miss what is, perhaps, the major point. Technology is not simply a new way to do old things" (p. 23). Growth is predicted in telephone usage for communications among computers as well as individuals; the use of computers for central processing, billing, and indexing of insurance; automatic teller machine (ATM) networks; and home banking (Fernstrom, 1984). There are probably myriad products and services for organizing, investing, and reporting on households' financial assets that will develop as extensions of electronic payments systems and innovative employees interacting with microcomputers.

Home banking is one of the newest additions in the growing family of electronic financial services. The service allows customers with personal computers to check the balances in their accounts, move funds from one account to another, pay bills, and do anything except make a deposit or a cash withdrawal. The costs of operating these systems are high. However, banks are willing to make the necessary investments because home banking attracts new depositors. Those attracted by the electronic services are the kind of depositors banks like best. Chemical Bank in New York estimates that the typical user of their Pronto home-banking service has an average of 3.9 accounts with the bank, versus an average of only 1.5 for other customers (Millstein, 1984). It is predicted that home-banking networks will increasingly substitute for less efficient paper-based payment services. However, many retailers so far have refused to accept electronic payments because they would have to modify their accounts receivable operation to do so. Therefore, banks must translate the customer computerized order into an expensive "low tech" cashier's check (McComas, 1984).

Home banking is expected to grow as more and more families purchase personal computers and as banks branch out to offer discount stock brokerage, insurance, and other financial services that can be delivered electronically. Demand for ATMs will expand as consumers with home banking require more frequent opportunities to withdraw cash. There are also fascinating possibilities for home computers and video text or video display systems, which allow users to exchange information with a central computer in a remote location.

Technology is reaching into the community with ATMs. Cash register terminals communicate transaction information and cable other communication systems for home banking. The smart card, a credit card equipped with microprocessors, allows retention of information such as the amount of credits available and a record of loans made, with information updated each time the card is used. A smart card also is capable of operating as a debit card that withdraws or borrows funds as soon as the transaction occurs.

By the 1990s there is likely to be a well-developed capability for transcribing information from voice commands. Several banks currently use completely automatic telephone bill-paying systems that recognize spoken numbers and allow a two-way conversation with the computer for verifying numerical information (Hudson Strategy Group, 1984). Communications technologies also enable expansion of correspondent services among banks and savings institutions. They facilitate faster clearing of payments and placing of investments. They allow pooling of resources among institutions to share risks and enable teller machine networks to realize economies by sharing equipment. "Expert systems" using artificial intelligence can follow a prescribed set of instructions to make decisions, and even devise new rules, according to which decisions will be made (Hudson Strategy Group, 1984). Experts will be able to offer computerized instructions for money management, provide advice to professional advisors in financial institutions via terminals, or advise consumers directly in their home.

Deregulation

Regulation of the financial services industry, broadly defined to include banks, savings and loan associations, credit unions, stock brokerage houses, and insurance agencies, has been varied and extensive. It appears that deregulation, or the removal of controls on price or quantity of financial products and services, is creating conditions under which any financial institution can offer any product or service at any price anywhere (Walden, 1984).

Beginning in 1977, Federal regulators began authorizing a series of new savings instruments which call returns tied to market interest rates. Minimum deposit requirements have been lowered to widen the market for the new accounts. Interest payments on checking account balances have been authorized, but at the same time, more explicit charges have been placed on financial services. Correspondingly, portfolio restrictions on banks and savings and loans have been relaxed. A new market-driven industry with intense competition between financial service institutions has begun to emerge. Formerly specialized institutions have begun to look more alike as they offer services that were previously not part of their domain (Benston, 1983).

In an era of deregulation, bankers are trading stocks and brokers are making loans. Attempts are being made to provide one-stop financial shopping to very carefully segmented consumer markets. The key competitors in the nation's biggest financial supermarkets are Merrill Lynch, the Sears Financial Network, American Express Company's Shearson Lehman Brothers and IDS subsidiaries, and Prudential Insurance Company of America's Prudential Bache subsidiary. Each has a dual task: first, to make consumers comfortable with once unheard of combinations of products and services the supermarkets now offer, and second, to distinguish itself from its competitors. Achieving the first goal will certainly take time. The financial giants are taking first steps toward differentiating themselves by targeting the people they want to serve. For example, Merrill Lynch serves the affluent household with income of $50,000 and up. It is also courting young professionals, who may not have large incomes now, but seem likely to have them in the future. American Express is trying to intercept investors at three levels of wealth. IDS concentrates on families with incomes of $25,000 to $25,000, while Shearson targets the middle and upper income market segments (Colvin, 1984).
Competition or Cooperation

Paul Volcker (1983), in a statement before the Senate Committee on Banking, Housing, and Urban Affairs, stated that one of the core objectives of banking reform is to develop a system that encourages competition in the provision of banking and financial services. Competition has become unrelenting, and the future holds little hope for a repeat of the past. Although some predict a wave of mergers, since only larger firms would have the capital and technical expertise to support large electronic networks, Rogowski and Simonson (1984) depict a different scenario. They foresee banks joining or forming networks and competition heading downward. ATM networks exemplify recent cooperation. As the costs of microcomputers and software drop and their variety and access to unsophisticated users increase, the smaller bank may duplicate the system of its larger competitors. Technology may ultimately reward the decentralized or smaller bank as much as—or more than—its centralization or larger counterpart.

While regulations shielded financial institutions from unfettered competition in the past, they will face stiff competition in the future. Electronic banking has decreased the value of the geographic franchise. Customer migration to electronic banking reduces the value of the bricks-and-mortar location. Technology is equally available to banks and nonbanks. All competitors will have to be especially wise in the selection of appropriate technologies. The successful institutions will allocate capital to technologies that enhance long-run profit in carefully selected markets.

Cost Pressures

Technology and deregulation will increase the opportunity to customize product price and design. The usual approach to pricing, however, is viewed by Rogowski and Simonson (1984) as too restrictive. Conceptually, a price is set on a product demand curve at the point where the price-quantity combination produces the greatest net revenue. Because electronics will make cost and pricing measurement easier, banks will be able to price along a large portion of the demand curve by enhancing the product for consumers who are willing to pay more or by stripping away product features for those who wish to pay less than the standard price.

The phenomenon of "make your own" certificates of deposit is a good example of custom pricing and design. By varying rates of return according to maturity and balance, financial institutions can access a large part of the money market deposit demand curve. Historically, consumers were denied such choices along maturity or balance continua.

Although such innovative pricing opportunities exist, hundreds of banks across the country simply raised charges for everything from looking up bank balances to reconciling bank statements and processing insufficient funds checks. According to one estimate, the annual cost of basic banking services to the average American households have more than doubled in the past five years ("A blizzard of bank charges," 1984).

Rising operating costs, deregulation of interest rates, and the demise of cross-subsidies among accounts are factors which have contributed to major changes in the pricing of financial products and services (Fernstrom, 1984). With a strategy of explicit pricing, institutions are now charging more for many services and charging for some services that were previously "free." These costs were implicit in lower interest rates paid on passbook saving accounts, for example, but were "invisible" to the average consumer.

CONSUMER RESPONSE

Deregulation and technology have spawned convenience, increased options, prospects for financial gain, and new consumer concerns. Consumers now receive higher rates of interest on deposit accounts and can open interest-bearing demand accounts. They can shop around for "best buys" in financial services or meet many of their needs through one-stop shopping at a financial supermarket.

Consumers can make deposits in distant banks by mail or wire, withdraw money via automatic teller machines, take out long distance credit card loans and mortgages and go through an out-of-state bank to buy and sell stocks. Interstate banking carries the promise of a far wider choice of financial services, more convenience, and better prices. Many banks will now handle securities transactions, although they won't give investment advice. In the few states where banks are allowed to sell life insurance, policies sold by banks are among the least costly on the market (Quinn, 1984).

Some banks and savings and loans have begun to list their mortgage loans on centralized computer services. A home buyer can check these loans against the offerings at the local banks. Half a dozen computerized mortgage services are now on the market. If the pilot efforts are successful, consumers will be able to shop the entire country for the best mortgage terms (Quinn, 1984). Visa, Mastercard, and American Express are spinning cross country ATM webs, so that holders of any of those cards soon will have little reason to obtain a local bank ATM card. And as the ATM network spreads, there will be little need for traveler's checks.

The extent to which technological advances in the financial services industry will benefit the consumer depends not only on the services provided, but on the willingness of customers to adopt new technologies. Based on widespread media coverage of the computer revolution and the heavy investment of the financial services industry in technology, one might assume that the general public has quickly adopted such advances. However, results from a 1984 national survey conducted by Money (William and Marshall, 1984) indicate that although the American public is very aware of the existence of personal computers, only a minority has used them. Ninety-five percent have heard of personal computers but only 25% have used them. Ownership of personal computers is greater among higher income people, college educated persons, and those who are in professional and managerial occupations. Forty-five percent of the respondents in the Money survey favored using home computers for banking and catalog shopping while 30% opposed it. Four of 10 respondents opposed buying stocks and bonds, mutual funds, insurance, and groceries via home computers, compared with a little more than 2 of 10 people who favored buying them. Higher income and younger people were much more likely to favor the idea of buying various products and services via home computers than lower income people and older people.
As with personal computers, most people have heard of automatic teller machines, but a minority has used them. The vast majority (97%) had heard of ATMs, but only 36% had used them. William and Marshall (1984) state that after a recent period of marked expansion, the level of use of ATMs has flattened out. Results of this survey show that use of ATMs is higher among higher income, better educated people, those in managerial and professional occupations, and younger people. And as with personal computers, strongest resistance to ATMs is registered by the 65 and older age segment.

Consumer response to a highly automated financial service industry has not been all positive. Many consumers have come to regard bankers as greedy and impersonal. They often focus their annoyance on the ATM. Ironically, banks installed the 24-hour ATMs because they hoped to reduce operating costs once the technology was perfected. The number of ATMs in the United States grew from 1,936 a decade ago to 48,118 at the end of 1983. New York's Citicorp found itself in an embarrassing situation in 1983 when it tried to force customers with less than $5,000 in their accounts to use an ATM rather than a human teller. The bank scrapped the plan after a storm of "very human" protests ("Banking takes a beating," 1984).

New pricing schemes have also met resistance. Consumer advocates maintain that individuals with $1,000 or less in their accounts pay service charges while wealthy depositors have almost no fees and receive lavish services. In order to protect vulnerable segments of the population from such developments, Massachusetts has adopted "lifeline" banking. In 1984, the legislature passed a law requiring state chartered savings, commercial, and community banks to provide no fee checking accounts to residents in any person younger than 18 or older than 65 ("Banking takes a beating," 1984).

Not all customers are complaining about high fees, impersonal service, or long teller lines. Wealthy depositors seldom experience any of those indignities. For them, banking has become more convenient and financially rewarding. Marketing experts divide preferred customers into several layers. Upscale depositors, with accounts of $25,000 or more, receive far better banking services than the majority of retail customers. The best treatment, however, is reserved for the truly wealthy, the 1% of customers who receive so-called private banking. At this level, officers will provide any financial service imaginable.

To gain a better understanding of the impact of change in the financial services industry on consumers, the American Express Company commissioned a study in January and February, 1984 (Kernstrom, 1984). Forty-seven consumer leaders representing government officials, consumer journalists, academicians, consumer advocates, and financial service industry personnel, expressed their concerns about the availability and access to financial services to the public. The issue of access to financial services encompassed cost, price, exclusion, credit availability, and choice. Experts voice concern that current and anticipated changes and technological developments may deprive low-income, physically handicapped, and functionally illiterate consumers of routine financial services. Credit availability was a common concern. It was feared that the mass movement of capital around the country and the world will deprive individual consumers and small businesses of credit. Subtle coercion may deprive consumers of their freedom of choice. For example, financial service institutions are steadily forcing customers into some services or systems they do not want. Mandatory direct deposit of checks, check truncation, pricing differentials for human versus automatic tellers, and conversion of branches to ATMs are cited as examples of service restrictions.

These experts also note that even the most educated consumer cannot begin to handle the complexities of the many new products and services available today. This situation will worsen as deregulation progresses and more providers enter the market. Voluntary, standardized disclosures and some mandated information disclosures are recommended as tradeoffs to deregulation. Experts also suggest improved personnel training programs to enable employees in financial institutions to provide better assistance to customers, especially where pricing incentives limit the amount of human interaction with customers. A broad-based consumer education effort could significantly reduce the number of consumer problems resulting from the revolution in the financial services industry.

IMPLICATIONS FOR EDUCATORS AND RESEARCHERS

Rapid change in the financial services industry presents many opportunities for educators and researchers. A Fortune magazine reader survey has shown that substantial numbers of subscribers are unaware of the product diversification of major financial institutions. Readers have voiced concern about their abilities to manage personal finances due to the pressures of other interests (Fortune, 1983). Such findings point to specific areas in which more education and training are needed.

Content of traditional financial management coursework and extension programs must be reassessed. Educators will need to move beyond descriptions of financial products and the institutions in which they are sold. There is a need to create awareness of the product diversification, but educational programs also should emphasize skills that enable consumers to process information.

The value of decision-making skills will increase. Decision-making models that can be used to assist consumers in making alternatives and to consider short- and long-term consequences of choices will need to be emphasized. Walden (1984) notes, in the case of financial market decisions, that teaching people how to implement these models will be a major educational objective. This task will include the multi-faceted nature of the decision, considering rates of return, risk, liquidity, taxes, and costs and returns over time. Secondly, he argues that consumers should be taught an appreciation for the complexity and dynamics of economic markets. With increased competition, options will constantly change, forecasts will be inaccurate, firms will fail, and investments will be lost. However, since it is prohibitively costly to gather and assess all information necessary to make a decision, consumer decisions will always be made with some element of risk and uncertainty.

Because of the complexities of the market and the time constraints facing consumers, financial decision-making should stress the use of financial advisors. Assessing the need for an advisor, selection of competent advisors, and evaluating financial advisors' recommendations
should be added chapters in courses and programs.

Institutions will continue to use electronic methods to provide financial products and services. In the future, institutions will have fewer people dealing with the public regarding routine financial services. Adult educational programs should help the public expand their "comfort zones" with regard to electronic delivery of such products and services. Such "hands on" experiences should be targeted to the middle-aged and older population. This market segment did not grow up with electronic toys or computers and has been accustomed to buying financial products in a face to face setting.

Research is needed to provide a basis for educational programs, information systems, and policy recommendations. Specifically, research is needed:

1. To identify the impact of products and methods of delivery on the consumers. At present, little is known about benefits and costs of such changes, who bears the costs, or how consumers are coping with these changes.
2. To assess information systems that can provide clear, credible, and timely information to help consumers understand and function effectively.
3. To identify specific changes or enhancements which would make products, or services more consumer-sensitive and more marketable. For example, in an electronic environment, consumers need improved record-keeping and documentation capabilities.
4. To identify and understand problems of special consumer groups, e.g. various income, age, and physically disabled groups, and those consumers who are slow to adopt or never adopt advanced technologies.
5. To assess the need for regulation of a deregulated industry. Privacy, security, and information disclosure issues are currently being debated in the policy arena. Should policy be legislated or adopted as voluntary codes?

CONCLUSION

A new era is upon us. Technological developments and economic pressures combined with demands of more sophisticated consumers are producing major changes in the financial services industry. Enormous innovation is occurring in institutions, services, and delivery systems. Consumers are receiving higher rates of return on savings, as well as access to whole new families of products and services. Yet, in these innovations evolve, those consumers who fail to adapt then find themselves with fewer services and higher costs. A rapid pace of change will continue. Educators and researchers will play important roles in helping consumers develop decision-making skills so that benefits exceed costs of adapting to an industry turned upside down by change.

REFERENCES


