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The Consumer of Financial Services

Introduction

Consumers[1] of financial services have characteristics distinct from all other financial service user groups. Approximately 80 million households comprise this group; and as such, it is an important part of the U.S. economy. Household deposits provide the financial service industry with nearly $2 trillion in loanable funds. In addition, consumers have a diversity of needs and compose a highly segmented market, Consumers, in comparison to their use of other instruments, also make the least use of technology-based financial services and products.

It is readily accepted that although some movement has been made toward consumer acceptance of technological devices in banking, the time horizon for acceptance by the total population will be much longer than 10 years. There are currently some highly visible examples of the effect of technological change on this market segment (e.g., the rapid acceptance of automated teller machines (ATMs)), but certain institutional relationships have been affected little by the technology. As some new systems are implemented, however, and certain of the institutional problems with these implementations are resolved, the effects of technology on the consumer of financial services are bound to become more evident.

Historically, the banking sector of the financial service industry has been either enamored of or totally uninterested in pursuing the consumer as a potential customer. It appears, however, that competition is changing some of the indifference of banks toward this market. "It was not regulation or legislation that allowed nonbank institutions to exploit the opportunities available in upscale credit cards (American Express), in discount brokerage (Merrill Lynch), and in automated payroll services (ADP). Rather it was the failure of banks to engage in effective marketing and their lack of innovation and understanding of consumer attitudes that gave the near-bank competitors the upper hand in these product areas."[2] As a result, the consumer is beginning to wield more power in product development; recent events are changing consumer financial services from being product-driven to being market-driven. It is not clear, however, if all consumers are benefiting from these changes.

Consumer protection regulation has in the past dealt with the protection and fair treatment of consumers in the financial service system. Implicit in the formulation of public policy has also been the recognition of the potential impact of technology-based systems on the consumer. However, it is important to fully understand the changes taking place, their impact on the role and behavior of the consumer, what new issues will arise because of these changes, and existing issues that have not been adequately addressed.

[1] The consumer, as defined here, is an individual user of personal financial services.

[2] Richard Rosenberg, Vice Chairman of Wells Fargo, as quoted in *The Retail Banking Revolution: An International Perspective*, Patrick Frazer and Dimitri Vittas (eds.) (London: Michael Lafferty Publications, 1982), p. 7.

Consumer Financial Services

Consumers seek financial services to facilitate payment, to balance current income against future consumption through savings instruments, to balance present consumption against future earnings with credit instruments, to secure growth in capital, and to safeguard their assets. A rational consumer who wants to maximize his objectives will desire control over the means (i.e., assets and income) to those ends. The degree of his control is measured by the extent to which his assets meet his needs.

In this regard, Professor William White, in his report to the Investment Company Institute, *The Outlook for Money Market Mutual Funds,* defines the demand of consumers for specific financial products and services as arising not from the particular product or service, but from features of the consumer and his environment. Demand arises first from the necessity for the individual consumer to meet certain basic needs, which can be classified as convenience, return, liquidity, security, credit availability, and, to some extent, personal service. The investment behavior of the consumer is related to the relative importance of each of these needs, which in turn is based on the individual's economic environment and his lifecycle stage. Also of importance is the less tangible factor of individual tastes and preferences.[3]

Consumer Savings and Investment Behavior

The term "investment" throughout this section is not used in its macroeconomic sense, that is, the purchase of capital goods. For this chapter the term means the commitment of money specifically to earn a profit, most often by purchasing securities. "Savings" are defined as asset accounts in which an individual accumulates funds for future consumption. For the most recent statement of total outstanding assets and liabilities for the household sector, see table 9.

The primary savings instruments used by individuals are time and savings deposits, pension funds, and home mortgages. In recent years, more consumers have begun using the money market fund for savings. The figures for 1982 do not reflect, however, the more recent movement of funds out of money market funds into their depository equivalent, money market deposit accounts. These figures will be reflected in 1983 end-of-year accounts.

Life insurance funds are also used for accumulating savings; however, because of their low rate of return, their primary function is insurance against risk. Individuals also invest a considerable amount in securities, both corporate and government.

Home mortgages, although they represent a liability relationship for the consumer, are, in effect, instruments of negative savings in which the consumer initially creates a debt relationship with an institution. However, as the consumer decreases his debt, he earns equity in the property; as the value of the property increases over time, it increases the net worth of the individual.

The relationship of assets to liabilities and the choice of instruments for investment varies with the age and income of the consumer. This is depicted graphically in figure 14. The primary earning years are between the ages of 20 and 70, when generally the consumer earns more than he consumes. With age, savings and investment behavior of the consumer changes. Generally, in youth, the consumer will be more consumption-oriented; as age and income progress, the consumer will be more future-oriented. The consumer's basic needs of convenience, higher return, security, liquidity, credit availability, and personal security often correspond with this lifecycle and directly influence which financial service and products he selects.

Although aggregate information on the savings habits of consumers reflects a propensity to invest, an overall tendency to save rather than borrow, and a pattern of savings highly correlated to age, consumers differ in their objectives for asset management. The financial service industry has recently begun to react to these differences and to provide services to meet very individual needs in addition to providing instruments that have widespread use (e.g., checking and savings accounts, bank credit cards, or mortgages).

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[3]William L. White. "The Outlook for Money Market Mutual Funds, " *Report to the Investment Company Institute,* Sept. 30, 1982, pp. 28-29.

Table 9.— Household Financial Assets and Liabilities, 1982 (billions of dollars)

Assets:					
Deposit and credit market instruments	$2,781.3				
Deposits		1.982.7			
Checkable deposits and currency			307.3		
Small time and savings deposits			1,322,9		
Money market fund shares			206.6		
Large time deposits			145.9		
Credit market instruments		798,6			
U.S. Government securities			377.0		
Treasury issues				291,8	
Savings bonds					68.3
Other Treasury					223.4
Agency issues				85.2	
State and local obligations			129.0		
Corporate and foreign bonds			64.5		
Mortgages			186,5		
Open market paper			41.6		
Corporate equities	1,316,2				
Mutual fund shares		89.5			
Other corporate equities		1,226,8			
Life insurance reserves	1,316.2				
Pension fund reserves	935.3				
Security credit	16.0				
Miscellaneous assets	85.3				
Total assets	$5,381.0				
Liabilities:					
Credit market instruments	1,674.4				
Home mortgages		1.101,0			
Other mortgages		36.4			
Installment consumer credit		344.8			
Other consumer credit		85,9			
Bank loans n.e.c.[a]		33.3			
Other loans		730			
Security credit	28.8				
Trade credit	22.2				
Deferred and unpaid life insurance premiums	15.5				
Total liabilities	$1,740,9				

NOTE Households Include not for profit organizations

[a]Not elsewhere classified

SOURCE Board of Governors Federal Reserve System *Flow* of funds Accounts: August 1983

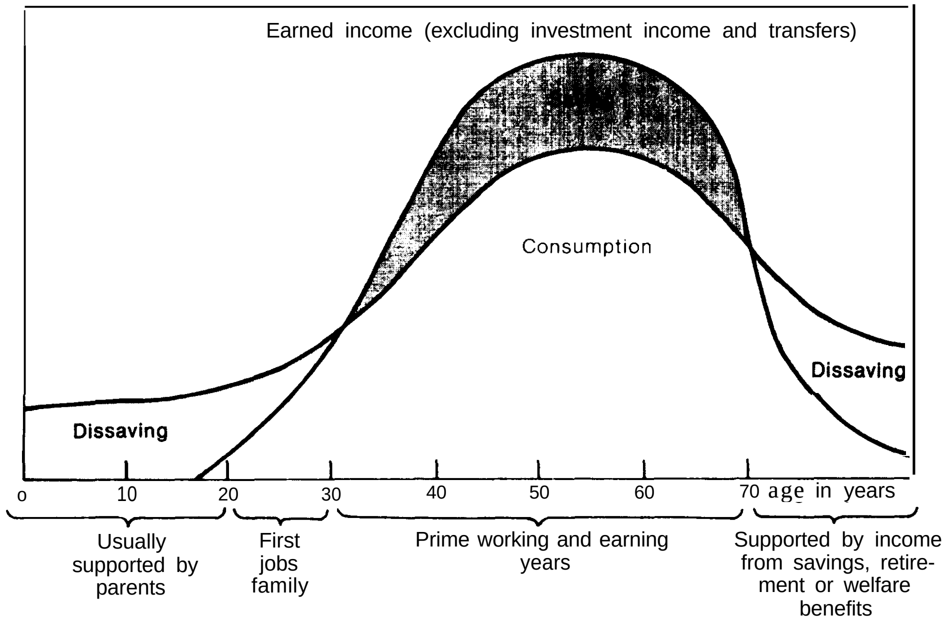
Providers of Consumer Financial Services

For the most part, consumer needs cannot be met without the assistance of an intermediary that provides access to payment systems and markets, expert knowledge and advice, the pooling of a large number of individual risks (as with insurance protection), or a diversified portfolio for a minimum investment (as with investment companies).

In the past, consumer financial institutions specialized in individual products and services. As a result there were some institutions that provided for the payment needs of the consumer, some which provided for his/her savings and credit needs, and still others that provided for his/her insurance needs, Regulation tended to support this specialization. Recent trends in the marketplace and in regulation are beginning to break down the strict distinctions between institutions. Many consumers are adapting readily to the changes and are changing traditional relationships with some financial institutions.

Prior to these recent events, the most widely recognized financial relationship for the consumer was with a depository institution, especially with a bank. Banks provided the consumer access to the payments mechanism through checking accounts and met some credit and savings needs. Savings institutions pro-

Figure 14.—Lifecycle of Consumer Needs



For the purposes of the financial services industry, people do not become consumers (do not buy) financial services usually until at least their teens:

General age	New financial activities	Resulting financial service(s) requirements
Teens-20's	First jobs (though often still with parent support). Often, college. Often, car or other major purchase.	Transaction accounts, simple savings accounts or instruments (e.g. U.S. savings bonds). Education loans. Auto or other loans Auto insurance.
20's	First home purchase or more saving to prepare for home purchase. Marriage and first children. Related: perceived need for greater security to protect family.	Home mortgage. More sophisticated savings instruments, Various loans (general credit). Insurance, savings life, health, home insurance,
30's 60's	Prime working-and earning years: Higher income, Larger saving base being built, as foundation for children education and other expenses, and for old age. More business travel. More income for personal travel. High of time working, especially two career couples (2 earner families): result - need for greater convenience in transactions, more mail order and overall purchases.	Tax shelters More sophisticated investment vehicles: securities, money target funds, real estate, insurance purchases. real-estate pension plans. Financial advice often desired. Traveler's checks, travel and entertainment credit cards. Cash dispensers, debit cards.
60's	Often retirement or less working time, more leisure, less earned income.	Financial advice, to plan for supporting a standard of living lesser risk, higher current Income (securities), investments, pension trust, estate planning.

SOURCE William L White, "The Outlook for Money Market Mutual Funds, " 1982 vialed savings and mortgage services. Credit unions provided services similar to those provided by both commercial banks and savings institutions.

Recent research shows that the typical consumer deals with only one or two banks and will accept fairly standardized products.[4] However, it also shows that there is very little consumer loyalty toward a particular institution; if another institution can meet the needs of the consumer better, the consumer usually moves his business. A consumer "wants to be able to use a credit card to purchase goods and services from merchants, and he wants to be able to use a piece of plastic (preferably the same one, perhaps) to obtain cash from a machine. He does not care who issued the card or who wrote the programs accessing the machines any more than he cares who manufactured the machine. This has been borne out by the rapid movement of funds out of traditional deposit accounts in the 1970's to accounts with a higher rate of return. In the past, most so-called consumer loyalty was illusory in that banks had a monopoly on certain types of transaction accounts and often had a geographic monopoly, as well.

Individuals with higher discretionary incomes, a desire for high growth of assets, and lower risk aversion will generally have a relationship with a securities house. High income, or, in its place, low risk aversion, was generally necessary to offset the risk associated with the instruments offered through these institutions.

It is evident that consumers have also had fairly complex financial relationships with nontraditional financial service providers. Historically, retailers have extended credit to their customers to purchase goods and services. From this has developed a fairly substantial number of consumers with revolving credit lines, and credit cards to access these lines of credit. Sears and J. C. Penney have two of the largest card bases in the United States and have filled certain consumer financial needs for years. Both are favorably placed in the financial service marketplace because the consumer recognizes their names. As the consumer becomes used to nontraditional providers of financial services, he may willingly accept retailers as providers.

Consumers may obtain cash from a variety of other places besides banks; for example, individuals routinely cash checks at a grocery or convenience store solely for the purpose of cash acquisition. Although these retailers are not financial institutions in the traditional sense, they certainly have provided consumers with financial services in the past. Grocery stores have used check guarantee systems for a number of years, and as mentioned earlier in this report, some are beginning to offer more technologically sophisticated services—for example, onsite ATMs.

The ways in which the financial service industry is changing are described more fully elsewhere in this report. The effect of these changes on the consumer has been to offer him a greater realm of choice in the institutions with which he can do business.

Consumer Payment Methods

Like the business sector, the consumer requires payment mechanisms to acquire goods and services. Recent research has postulated that a consumer seeks as many as 11 specific attributes in a payment system: budgeting, documentation, reversibility, spending control, transaction record, leverage potential, acceptability, transaction time, transfer time, social desirability/prestige, and security.[6] Each consumer will choose his method of payment according to his priorities and to his perception of a particular method as having the specified attributes.

By far, the most commonly used medium of exchange for point-of-sale (POS) purchases is

[4]Arthur D. Little, Inc., *Issue and Needs in the* Nation's Pay*ment System,* The Association of Reserve City Bankers, April 1982, p. 35.

[5]Paul Horvitz, *American Banker, New* York, Sept. 24, 1982.

[6]Elizabeth C. Hirschman, "Situational Perception of Product Prototypes Within the Product Class of Consumer Payment Systems. " *The Journal of Genera) Psychology,* vol.106, 1982, p. 127.

cash, particularly for small transactions. The primary attributes of cash are convenience and acceptability. Since cash is universally negotiable and requires no personal identification for use, cash transactions also have the additional attribute of privacy; however, these same qualities make cash a less secure medium of exchange. For the approximately 17 percent of all households that have no relationship with a financial service institution, either cash or (in specific instances) money orders or cashiers' checks, are the only instruments of payment available.

Many consumers use checks to meet these needs. Studies show that the consumer's use of checks has consistently been in the range of 50 percent for bill payment, 31 percent for retail purchases, 9 percent for payments to other individuals, and 8 percent for cash acquisition.[7] The figures for cash acquisition are probably low, since many checks written to retail institutions are actually for acquiring cash. In 1979, consumers' checks accounted for approximately 53 percent of all checks written, or 17 billion transactions.[8]

Until the 1950's, the personal check was truly the only widely used alternative to cash for payments. In recent years, however, the check has become less negotiable; consumers frequently are required to have additional identification and some proof of creditworthiness in order to use a check for POS purchases. In part, the decreasing negotiability and lack of national acceptance of the check led to the explosion in the availability and use of other payment mechanisms for the consumer—e.g., traveler's checks, retail credit cards, travel and entertainment (T&E) cards, the bank credit card (in the 1960's), and, most recently, the debit card.

The traveler's check and the T&E card provided the consumer with payment mechanisms more negotiable than the check, with attributes of convenience and acceptability, yet more secure than cash. T&E cards are charge cards and, except in certain instances, do not provide long-term credit to the consumer. When they were introduced, the consumer did not have highly developed credit needs. T&E cards met the additional consumer needs of spending control and leverage potential. In addition, the high membership fees and apparent exclusivity of the cards provided a sense of social prestige. Although it was thought that with the introduction and widespread use of bank credit cards, the number of T&E cards in circulation would dwindle and their usefulness would be outdated, their number has actually grown.

Bank credit cards[9] are used in most cases as an alternative to cash or checks for POS transactions. Their line of credit added flexibility to consumer payment mechanisms. Bank cards are perceived by the consumer to be more acceptable and less time-consuming to use than checks and less risky than cash. They also provide the consumer with proof of payment, which facilitates returns or reimbursement. The majority of credit card users do not actually use the credit option associated with the card, paying instead the full amount owed each month.[10] The card is viewed more as an instrument of cash management. Tables 10 and 11 show overall consumer holding and use of credit cards.

[7]See *Economic Review*, "Special Issue: Displacing the Check" (Atlanta, Ga: Federal Reserve Bank of Atlanta, August 1983), p. 8.

[8]Ibid., p. 26.

[9]The term "bank credit cards" is rapidly becoming somewhat of a misnomer. This term commonly refers to VISA and MasterCard interchange cards, which in the past were issued by banks. However, these cards (although for the most part still issued by banks) now provide access to a variety of' accounts, including central asset accounts offered by securities houses.

[10]*Economic Review*, Op. cit.

Table 10.—Credit Card Holding (families holding cards as percent of all families)

Type of credit card	Year 1977	1978	1981	1982
Any	63	64	66	70
Gasoline	34	34	30	35
Bank	38	40	45	51
General purpose[a]	8	10	14	14
Retail store	53	50	57	63
Other[b]	6	5	7	NA

[a]Travel and entertainment cards.
[b]Includes airline cards, car-rental cards, and others not classified elsewhere
NA—not available,

SOURCE Data collected for the Federal Reserve Board by the Survey Research Center, University of Michigan.

Table 11.—Credit Card Use
(families using cards as percent of all families)

Type of credit card	1971	1977	1978	1981	1982
Any	50[a]	60	62	62	NA
Gasoline	33	31	32	27	31
Bank	19	25	37	39	47
General purpose[b]	5	7	9	12	13
Retail store	45	50	48	51	57
Other[c]	NA	4	3	5	NA

[a]Data for 1970
[b]Travel and entertainment cards
[c]Includes airline cards and car rental cards
NA—not available

SOURCES 1970 Survey of *Consumer* Finances: 1971-72 Survey *of Consumers,* and data collected for the Federal Reserve Board by the Survey Research Center, University of Michigan

In the 1970's, considerable speculation developed about a future "cashless society" (i.e., a system where cash as well as checks would become obsolete, having been replaced by electronic payment mechanisms). However, despite the growth of electronic alternatives, the use of checks as a method of payment continued to grow at approximately 5 to 6 percent per year throughout most of the 1970's and has only recently begun to slow. It still continues to increase at about 2 percent per year.

Traveler's checks and credit cards do not require a check be written at point of sale; however, the majority of them rely on the check for reconciliation of accounts. The only instruments besides the check that provide the consumer direct access to his account are the debit card, preauthorized payments, and ATM payments. In 1979, 97 percent of all debits to individual accounts were by check. The other 3 percent of debits to consumer accounts were distributed thus: 1.3 percent to preauthorized paper drafts, 0.4 percent to preauthorized automated clearing house payments, and 1.1 percent to ATMs. " The current system is merely a reflection of the acceptance of these alternative media rather than an example of one replacing the other.

Growth of Consumer Credit

The relationship of the consumer to the provider of financial services has grown increasingly complex. In the early part of this century, households operated almost entirely on a current basis; using credit was an indication of mismanagement of household accounts. Prior to the 1930's, credit relationships with financial institutions were not common. Retail establishments were more likely to extend credit in direct relationship to consumer purchases. At that time, it was postulated, households could manage credit to help balance current consumption wants and needs against future income.

Since then, as described earlier in this report, there has been an exponential growth in consumer credit and in institutions and instruments to serve these needs. In the 20 years from 1960 to 1980, total household liabilities as a proportion of total household assets grew from 21 to 35 percent. " This growth also reflects, in part, a change in attitude by the consumer. Credit is no longer the last resort of a mismanaged household, but a means of improving one's living standard.

The primary long-term instrument for decades was the installment loan, where a bulk sum was borrowed by the consumer from a bank or consumer finance corporation to finance a large-ticket purchase of a durable good, and repaid in installments over a specified period of time. Another example of consumer credit was the retail revolving account, in which a consumer could charge a particular amount on store-granted credit and repay the outstanding balance monthly.

In the 1960's the first bank credit cards were introduced, adding yet another source of consumer credit. As mentioned previously, the bank card is used primarily for its convenience; however, the credit uses of these cards, which were innovative when introduced, deserve exploration.

The bank card offers essentially two types of credit options for the consumer: short-term credit to bridge cash shortages between paychecks and longer term installment credit. The

"Ibid.

"Board of Governors, Federal Reserve System, Flow *of Funds Accounts,* August 1983, September 1979.

latter is provided with only one credit application, the consumer may borrow the exact amount he wishes within his credit limit and have considerable payment flexibility. About two-fifths of credit card holders use these options on a regular basis.

Recent Innovations in Consumer Financial Services

In the past decade, inflation, interest rates, and the lifting of particular banking regulations have affected how consumers manage their assets. Events of the last decade have increased the number of investment options open to the consumer of financial services and expanded the range of consumers who use these services. For example, tax-exempt income is available to all consumers through Individual Retirement Accounts (IRAs), and money market funds and money market deposit accounts allow the small investor access to high interest rates.

Nontraditional Providers and Instruments

Recent changes in the industry have also affected the way the industry provides financial services to the consumer and have introduced new players to the marketplace. In the 1970's, the inflation rate and the resultant high opportunity cost of standard consumer savings instruments led to a phenomenon known as "disintermediation." Funds flowed out of the depository institutions into nontraditional instruments and institutions. New instruments were created outside the interest rate-regulated environment of the banking community. One of these, the money market fund, allows the small saver to earn higher interest rates and thereby preserve assets. This instrument is a particularly appealing alternative because it also offers checklike privileges through share drafts. Although there is usually a minimum amount the consumer can withdraw from his account with a draft, in many cases it meets his liquidity needs.

The initial target of these funds was the so-called upscale market; that is, those individuals with relatively high discretionary incomes and minimal risk aversion. In time, as double-digit inflation continued and the spread grew between interest earned in these funds and that earned in bank time deposits, other, more risk-averse individuals began investing in these instruments. This phenomenon was partly responsible for the movement within Congress to deregulate parts of the banking industry, a movement that eventually allowed depositories to offer accounts bearing higher, more competitive interest rates.

In response to competition and profit opportunities, depository institutions have also begun offering discount brokerage services to their customers, making it possible for some consumers to meet a number of their savings and investment objectives with one firm. However, since banks are not allowed to offer advice on investments, except in the case of trust customers, this service is still limited to a financially sophisticated class of consumers. On the other hand, nondepository institutions, such as securities firms, have added services that have the appearance of depository instruments, yet the qualities a consumer seeks for managing his assets. Since consumer perception of the instruments is the same, a consumer may not differentiate between the two choices.

The Depository Institutions Deregulation and Monetary Control Act of 1980 provided new opportunities for the consumer. This act allowed depository institutions nationwide to offer NOW accounts through which the consumer earns interest on an account that is not differentiated in use from a checking account. These accounts already comprise one-third of all checkable deposits. [13] Also enacted by the same legislation was the provision that federally chartered savings and thrift institutions could offer consumer loans for up to 20 percent of assets.

Complexity of the Marketplace

The present marketplace offers greater choice yet greater confusion for the individual.

[13] Board of Governors, Federal Reserve System, Money Stink *Measures and Liquid Assets,* Dec. 30, 1983.

The consumer must be more aware of the particulars of investment and must deal with a changed environment that no longer offers him standard investment opportunities keyed to his position in life. The result is an increasingly complex relationship between financial institutions and the consumer.

For example, high and uncertain interest rates also led to an industry-led innovation in the home mortgage market. During the 1970's, the variable rate mortgage was introduced. In addition, the equity loan was introduced into the home mortgage market. This loan, which allows a homeowner access to the equity in his home, is much the same as a second mortgage; however, second mortgages are traditionally used for specific purposes such as home improvements. Most of the promotion of these loans, under the rubric of "credit managemerit, " encourages their use for virtually all purposes, exposing the consumer to the loss of his home if he is unable to meet payments on the loan.

The solution to this situation is not necessarily to increase the information available to the consumer. Often educational differences or a predisposition by the consumer precludes him from processing the information in a way that would facilitate his decisionmaking. And, it is likely that particular groups of individuals will be more affected than others. Certain groups may beat particular disadvantage; for example, the elderly and the uneducated.

There is also some question whether there *will* be a conflict if the provider of services is also the major provider of information about these services. For the most part, only wealthy individuals have access to financial advice, either through bank trust departments or securities brokers. Discount brokerages provide access to financial markets for less wealthy consumers, but without the advice function. Middle-income consumers have in the past relied on banks for some financial advice, but in more complex systems, banks are often not in the position to offer sound advice to this segment of the consumer markets, owing to a lack of trained personnel. Technology may also push these consumers out of the bank, further limiting their access to information services.

Technology-Based Services

There is little evidence to support the notion that consumers specifically demand technology-based services; the demand for services is still a reflection of the overall needs of the consumer. There is perhaps a particular class of consumers, referred to as "innovators," who willingly accept new technological applications. The market for these services evolved as the consumer discovered that technology-based services had specific attributes of remote location and self-service and that they provided a payment alternative. The use of technology in financial services can help alter consumer demand for financial services by providing him easier access to his assets.

Some financial service innovations mentioned in the previous section were facilitated by technological change; e.g., variable rate mortgages require information-processing facilities in order to be cost effective. This section distinguishes between those innovations that require technology in the backroom sense and those that require the consumer to have direct contact with the technology or those where technology changes the behavior of the consumer with respect to financial services.

Previous sections of this report illustrate the way that communication and information technologies have affected the way the financial services industry operates. The informational nature of the financial service product led to the early application of automation in this industry, particularly in internal and intra-industry operations. However, when these technological solutions were applied to the marketplace, especially as new products and services in the consumer segment, the benefits were not so clear nor the implementations so easy. In particular, when depository institutions attempted to transfer their cost-saving technological solutions to the consumer market, they were faced with a diverse, often reluctant market.

Consumer Acceptance of Technology

Some attempts at introducing technology-based products and services to the consumer of financial services succeeded and some failed. It became evident from these attempts that technological solutions had to consider consumer need. Examples of such new technologies include ATMs, automatic direct deposit systems, preauthorized payments, POS funds transfer and check guarantee, and home information systems, most of which have been described in previous sections of this report. What follows are descriptions of consumer acceptance and attitudes toward these technologies.

Automated Teller Machines

The ATM is an example of electronic funds transfer (EFT) that is highly visible to the consumer of financial services. By 1981, the Bank Marketing Association (BMA) reported that nearly 100 percent of the population was aware of ATMs.[14] Of that figure approximately 32 percent actually use an ATM for financial transactions, which is an increase from 10 percent in 1977. When further broken down, this figure reveals that only slightly more than half of the 32 percent use an ATM more than once every 2 weeks. The growth of ATM use has followed the typical pattern of technological diffusion—that is, from initial use by "innovators" to rapid, widespread use. The Federal Reserve Bank of Atlanta in a recent analysis of check displacement has estimated that the saturation level for the ATM will be reached when the percentage of actual users reaches 65 percent of all possible users.

The primary pattern of use of an ATM is for cash acquisition. According to Linda Fenner Zimmer, a noted ATM consultant, the pattern of use of the ATM has remained relatively constant since its introduction: cash withdrawals represent approximately 75 percent of the volume of use of ATMs; deposits, 19 percent; balance transfers, 4 percent; and payments, 1 percent.[15] It should be noted, however, that the value of deposits received at an ATM far exceeds the value of withdrawals. Also, ATM cash withdrawals tend to be for amounts that are half the value of withdrawals facilitated by a human teller.

Also interesting to note is that use of the machines during normal banking hours is increasing, which represents a change in consumer attitude about the primary attributes of the machines. Originally, ATMs were seen as convenient for obtaining cash 24 hours a day. In this sense they were direct competitors with retailers who provided this service. However, with the change in pattern of use during banking hours, there is some indication that they are beginning to replace the human teller as a source of cash. This is partly due to the greater reliability of the newer machines and to the increasing acceptance of the machines by a greater number of people. In many cases, the institution deploying the ATM encourages its use in order to lower the per-transaction cost of the system and therefore the costs to the institution.

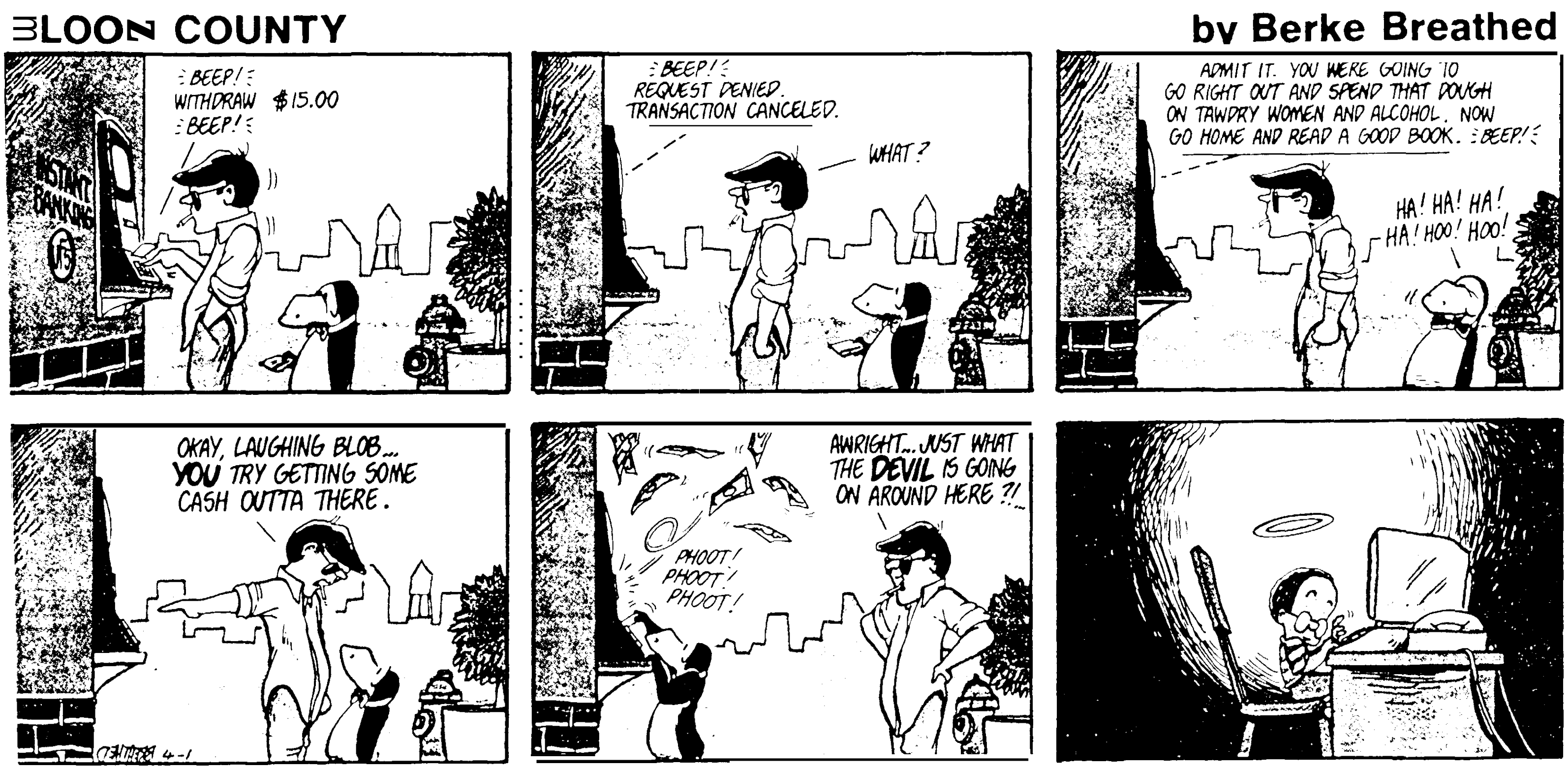
Research shows a strong correlation between age and ATM use. The most frequent user of an ATM is young; use peaks in the 25- to 34-year-old range, with a dramatic fall-off in use among members of the population over 65.[16] There is some evidence that those younger than 25, although not frequent users of ATMs, have a high level of acceptance, and when they establish firmer relationships with financial institutions, they too will become frequent users of the technology. It is expected that the age factor will become less important with time, although when is unclear.

Isolated experiences indicate that one factor that can hinder the use of ATMs by the elderly is inexperience with technology. In certain situations, by providing the elderly customer with assistance, many of these reservations can be overcome. However, this will not always be the case, and it cannot be overlooked that convenience and remote location

[14] Bank Marketing Association (BMA), *Payment Attitudes Change Evaluation* (PACE III 1981), Chicago, p. 2.1.

[15] *Economic Review,* op. cit., p. 17.

[16] Bank Marketing Association, op. cit., p. 2.50,



SOURCE: Washington Post

are not always important to the elderly consumer of financial services. Tradition and the human factor can play important roles in this group's use of financial services, and therefore in their acceptance of technological services.

Automatic Direct Deposit

In an automatic direct deposit system, some form of income is automatically deposited in an individual's account on a regular basis. Examples include direct deposit of Social Security checks by the Government or of payroll by the private sector. Direct deposit is another example of technology-based service of which the general population is nearly 100 percent aware. According to the 1981 BMA survey, 36 percent of respondents' households use automatic deposit, and 80 percent of these had a very favorable opinion of the service.[17] In the 5 years between 1978 and 1981, penetration of direct deposit of Social Security benefits grew from 11 to 33 percent of all such payments. It is the eventual goal of the U.S. Treasury that all Social Security payments be made by direct deposit.[18]

The premise on which direct deposit is sold, particularly with respect to Social Security payments to the elderly, is that it decreases consumer vulnerability to theft. Other aspects of the service to which the consumer responds favorably are convenience, the speed of account crediting, and the regularity of deposits (particularly when the recipient is out of town). On the other hand, the consumer perceives the system raising service charges on his account and providing increased access to others of his personal account information.[19]

Telephone Billpayer

Telephone billpayer systems are not always fully automated, but are considered here because they represent an innovative use of technology-in this case, the telephone—to facilitate consumer payments. Telephone billpayer services are an example of consumer reluctance to use a service to meet needs which they believe are adequately met through other services. Acceptance of this method of payment has not been very high, and there has been little growth in the service in the past few years.

Point-of-Sale Systems

There is little substantial information on consumer attitudes toward POS debit systems or POS check guarantee systems. In general, most consumers are unaware of these systems, except in areas where there have been trials. The introduction of the debit card in the United States was closely tied to consumer reaction to early POS experiments. Consumers found they did not care to carry basic necessities on credit cards.

Home Information Systems

Home information systems are described at length in chapter 4. There is little agreement on the potential for consumer acceptance of this service. One of the major constraints to its growth is the pricing of the systems. There is currently a great debate about what people will pay for these services and about what they perceive the value of these services to be. While these questions remain unanswered, it is difficult to say how rapidly the services will grow and when and if they will become a mass medium and therefore open to every level of consumer.

Once more, the perceived market for the service is the upscale consumer. To the consumer who earns less than $40,000 per year and writes few checks, the system may not be cost effective. For the time being, pricing of both equipment and the services may preclude the participation of the lower income consumer in this case.

Pricing Structures

Past financial services were often perceived by the consumer to be free or, relative to other expenses, inexpensive. There was either no

"Ibid. p. 3.4.
"*Economic Review*, op. cit., p. 33.
[19]Bank Marketing Association, op. cit.

charge or a minimal "service charge. Financial institutions earned their profit through the difference in explicit and implicit rates charged on assets and paid on liabilities. Through competitive and economic pressures this spread narrowed, and the income to banks therefore decreased.

Fee income makes up an increasingly large portion of overall bank income. All evidence indicates that this trend will continue, the pricing structure in the future will be cost-based, and service will be explicitly priced.

In addition, pressures from outside the industry are increasing the price of service to the consumer. For instance, as it becomes more important for the individual to be informed fully in order to make profitable decisions, the cost of information also becomes a factor. A number of such exogenous forces affect the total cost of service to the consumer.

Opportunity Costs

Based on evidence that financial decision-making is becoming more complex for the consumer, opportunity costs are paid because of the greater amount of time the consumer will have to spend in order to make the correct investment. When interest rates are high, the opportunity costs, in the form of foregone income from higher rate investments, are greater. Some of this cost will be lessened by deregulation of interest rates paid on deposits.

Information Costs

In order to make profitable decisions, the consumer needs access to more information than previously and will most likely have to pay for this information. In its current form, information is not always accessible to the consumer. Again, it is questionable whether the consumer will willingly pay for information. For the wealthier, upscale consumer, for whom the return is obvious and greatest, there may be a willingness to pay for information. In general, one of the questions facing providers of electronic information is how valuable does the consumer perceive the information to be and therefore how much will he pay?

Communication Costs

It seems inevitable that local communications costs will rise; however, at what rate is still uncertain. The eventual price to the consumer will depend on the structure of Federal regulation of local rates and, barring Federal regulation, the decisions State governments make about regulation of the communication industry. If home information systems become the major way for consumers to obtain information and transact business, the communication costs of these transactions could also rise.

Competition and Costs

In an economic sense, competition is considered good for the consumer in the aggregate: it results in greater options at lower price. Increased competition in the financial service industry has provided the consumer with increased options. Although products and services are now explicitly priced, they may well be cheaper to the consumer because he will receive higher return on assets. However, if other investment motivations of the consumer are considered—e.g., security of assets—the relationship of competition to the relative position of the consumer is less clear.

To really judge the effect of competition on the consumer, the distinctions between the various market segments must be maintained. The consumer with a high discretionary income may benefit from increased choice and from instruments with a higher rate of return. To those who consider financial institutions essentially service organizations and the safekeeper of funds, the high fees for very limited service may place them in a situation where they are worse off than previously. They may have fewer choices in a competitive environment than in a regulated environment.

In his study *Banking and Electronic Fund Transfers: A Study of the Implications,* J. R. S. Revell states that price is the single most important factor affecting the long-term growth of acceptance of EFT services. If the trend in financial service fees continues toward cost-based, or explicit, pricing, there will eventually be an economic incentive for individuals to use EFT. Some financial institutions have already begun to price their services accordingly and are encouraging migration to newer, technology-based services and delivery mechanisms through pricing strategies.

Public Policy and the Financial Service Consumer

An important policy objective of the legislation of the 1930's was to provide for the safety of consumer deposits. This was accomplished through regulations designed to ensure the overall safety and soundness of the system and Federal deposit insurance programs.

Deregulation has made it possible for a number of new institutions to enter the battle for consumer funds. A diversity of institutions now offers similar products to the consumer; one of the major differences between them, however, is the extent of their regulatory control. Depositories are, for the most part, insured and therefore provide a certain level of protection to the consumer. Adherence to certain safety and soundness regulations required of depositories is not required of other financial institutions. However, these noninsured institutions offer services similar to those offered by insured institutions and have, in fact, drawn accounts away from the insured institutions. Only the effect on the consumer, not the equity, of this situation for the various institutions, will be discussed here. Important effects are those which are perceived by the consumer and therefore are reflected as changes in investment behavior and those which are imperceptible to the consumer but may have long-term impacts on his relationship with the financial service industry.

In a recent survey of investor protection pro vialed by various financial intermediaries, the U.S. General Accounting Office found a number of gaps and overlaps in the protections offered depositors and investors. This information is summarized in table 12, which illustrates the variance in investor protections provided to both individual and group investors under different financial arrangements.

Under current Federal and State regulatory structure, the consumer's deposits at a particular depository institution will be covered up to $100,000. In 1970 the Securities Investor Protection Corp. (SIPC) was established by an act of Congress, to protect the investor from nonmarket losses involving funds and securities held by broker/dealers. These losses will occur usually only if the institution goes into insolvency.

Investment companies currently offer no form of direct protection for the consumer's assets. This is of increasing importance since recently more consumers are investing in the instruments of investment companies-i. e., the mutual fund and the money market mutual fund. The consumer is covered neither for market losses nor for losses that are the result of mismanagement. It appears that many consumers consider the money market mutual fund a higher interest-bearing type of deposit, and are not aware that their accounts can be subject to movements in the marketplace. Although these firms are not federally insured, their investment policies provide either complete assurance (when they invest in Treasury bills and insured certificates of deposit) or known risk.

Regulations Relating to Consumer Finance

Product-line extension has allowed new players into the financial service marketplace. Many different types of financial institutions now offer the same services. In many cases the difference between choices among instruments is imperceptible to the consumer in that it is related to the regulatory structure of the in-

Table 12.—Summary of Variances in Regulation and Investor Protection

Type of Institution	Insurance coverage	Who Insures	Insurance backed by	Regulator responsible for	Entities Involved In establishing rules and regulations	Investor protection primarily provided by	Types of services provided	Rate of return	Advertising
Depository Institutions									
. Banks • Savings and loan • Credit unions	$100,000 per account	Federal insurance programs and State-sponsored Insurance programs	Federal Insurance programs-full faith and credit of U S Government State sponsored insurance programs–no one[b]	Banks FRS FDIC OCC State authorities Credit unions NCUA State authorities	Federal and State depository institution regulators	Onsite examination and account Insurance	Deposit accounts checking accounts, commercial and personal loans	Variable	Subject to regulatory requirements
Securities brokers	$500,000 ($100. 000 cash) per account	SIPC[c]	U S Department of Treasury[d]	SEC	SEC and securities Industry self-regulatory organizations	Information disclosure requirements SRO onsite examinations and market surveillance	Securities trading	Subject to strict legal and regulatory requirements	–
Investment companies	None	Not Insured	N/A	SEC	SEC	Information disclosure requirements and onsite examinations	Investment services	Variable	Subject to strict legal and regulatory requirements
Commodities brokers	None	Not Insured	N/A	CFTC	CFTC and commodity futures Industry self-regulatory organizations	Information disclosure, SRO onsite examinations and market surveillance	Commodities trading	Subject to regulatory requirements	–
Commercial bank trust departments	Only funds or deposit In Insured accounts	Not directly insured	N/A	OCC. FDIC. FRS	Federal and State banking authorities	Onsite examinations	Personal Investment corporate trust pensions	Variable	Not strictly regulated

[a]Federal insurance programs have lines of credit with the U.S. Treasury as follows: FDIC $3 billion, FSLIC $750 million, and NCUA $100 million
[b]The Pennsylvania Deposit Insurance Corporation has a $10 million line of credit with the Pennsylvania State Treasury
[c]SIPC insures securities investors against nonmarket losses only
[d]SIPC has a $1 billion line of credit with the U S Treasury
KEY: NA = not applicable, FRS = Federal Reserve System, FDIC = Federal Deposit Insurance Corporation, OCC = Options Clearing Corp, NCUA = National Credit Union Administration, SEC = Securities and Exchange Commission, CFTC = Commodity Future Trading Commission

SOURCE: U S General Accounting Office

dustry. As a result, the consumer also may perceive his relationship with banks and non-bank institutions to be the same.

In choosing between similar instruments, it is difficult to assess the extent to which it is necessary for the consumer to be aware of these regulations. Certainly it is necessary that he know his rights and liabilities with respect to the use of certain instruments. Toward this end, Congress requires that certain disclosures be issued to the consumer. However, often the consumer does not read nor fully understand his rights and responsibilities. This is even more important as services become more complex.

When legislation was first enacted to ensure the safety and soundness of the system and to protect consumer deposits, the economic activity of the consumer was quite different than it is now. Legislation of the last two decades recognizes some of the changes in consumer behavior and his role in the economy, particularly with respect to credit.

Increased consumerism has been an important factor in the formulation of policy in this area. Consumer protection legislation enacted in this era includes the Consumer Credit Protection Act of 1968 and subsequent amendments, the Fair Credit Reporting Act, the Truth in Lending Act, the Equal Credit Opportunity Act, the Fair Credit Reporting Act, and the Electronic Funds Transfer Act, among others. Each represents additional protection of the consumer of financial services from discrimination and unfair practices. Consumer protection legislation plays an important role in the relationship between the consumer and provider of financial services, as does the regulation derived from this legislation.

Consumer Credit Protection Act

The following congressional acts are consumer-oriented, and most are amendments to the Consumer Credit Protection Act of 1968. That act was one of the first major pieces of consumer credit legislation passed. Federal Reserve Board Regulations Z and M implement Title I of the act, the purpose of which is to help consumers become fully informed about credit and leasing arrangements and to prevent advertising that may be misleading. Title I applies to any institution that regularly offers credit and leasing plans to people involved in transactions for personal, family, or household purposes. This includes consumer finance institutions, banks, credit card companies, and retailers who extend credit.

Regulations Z and M

Covered under Regulations Z and M are three separate acts:

- *Truth in Lending (Regulation* Z)–This act covers closed-end and open-end consumer credit transactions. The primary purpose is to disclose the costs and terms of credit arrangements prior to their consummation so that consumers can compare various plans and fees on an informed basis.
- *Fair Credit Billing (Regulation* Z)–This act affects the manner in which customers are billed on their open-end credit accounts, and how finance charges are calculated, and the way that disputes about the billing can be resolved.
- *Consumer Leasing (Regulation* M)–This act extends Truth in 'Lending to cover leasing arrangements.

Other amendments to the Consumer Credit Protection Act:

- *Equal Credit Opportunity* Act–Owing largely to the activities of consumer groups, Congress acknowledged credit as a necessity for the consumer in the Equal Credit Opportunity Act of 1974 (ECOA). ECOA prohibits discrimination in credit transactions on the basis of sex or marital status and, as later amended, prohibits discrimination on seven additional bases, including race, age, and national origin. In this act, Congress also recognized the importance of credit to the consumer.
- *Fair Credit Reporting* Act–Title VI of the Consumer Credit Protection Act, effective in 1971. The purpose of this act

is to make certain that credit reports on consumers are fair, current, and accurate. It gives the consumer certain rights to examine credit information about himself and to correct any errors that might be present. In addition, the act imposes other responsibilities on the credit reporting agencies—i.e., they must make certain that all users of their information are obtaining reports for legitimate purposes.

- *Fair Debt Collection and Practices Act* — This is Title VIII of the Consumer Credit Protection Act, which became effective in 1978 and limits the amount of communication with a delinquent consumer and prohibits undue harassment and specious activities in connection with consumer debt collection.

Electronic Funds Transfer Act

The Electronic Funds Transfer Act (EFTA) amended Title IX of the Consumer Credit Protection Act by establishing rights and responsibilities for EFTs. These rights and responsibilities are outlined by Regulation E of the Federal Reserve.

Technology has changed the way the consumer participates in the payments system and therefore some of the protections under previous legislation. EFTA was passed by Congress in anticipation of some of the impacts of EFT on the consumer. Although the law provides protection to the consumer, there are some instruments where the level of protection is unclear. In addition, many consumers perceive technology-based instruments to be the same as their paper-based counterparts, not realizing that rights and liabilities may differ, depending on the use of technology.

It is now possible for an individual who possesses what appears to be a traditional bank credit card to be protected from misuse of the card under a variety of legislation, or not at all, depending on the type of transaction. For example, if a bank issues an individual a debit card that is associated with an account with a line of credit and is also compatible with an ATM, the individual can perform a number of different types of transactions with the same card. If fraudulent use is made of the card by accessing the line of credit, he has recourse under consumer credit legislation; if the fraud involves EFT, as in the case of an ATM cash withdrawal or electronic POS terminals, his liability is limited under EFTA (although not to the extent as under the Consumer Credit Protection Act).

If, however, the fraudulent use of the card directly debits the person's bank account in a paper-based transaction, it is not clear whether the consumer has recourse under current legislation. This is an example where the same card represents three different instruments, which, in the case of fraud, would require different actions by the consumer. In recognition of this, the Federal Reserve Board has proposed to update Regulation E to include certain debit card transactions.

In terms of financial management, many consumers are likely to be aware of the difference between accessing a line of credit and directly debiting their bank accounts with the card, but it is doubtful whether they would recognize a distinction between a debit processed electronically and one processed in the paper system. It is also reasonable to assume that the consumer perceives no difference between all of the transactions in a regulatory sense. Regardless of consumer perception, debit card transactions in the paper-based system currently offer little protection to the consumer.

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Transition From Paper-Based to Technology-Based Systems

It is conventional to regard households rather as passive participants in the move towards EFT, slowing down progress by their reluctance to accept change. To a great extent this is a true picture, the proportion of sophisticated households pressing for faster progress being very small, but it is not the whole story. The very passivity of households means that changes will be accepted if they provide the essential requirements of individual persons, and in most industrial countries significant proportions of the population are already accustomed to handling plastic cards; they are not likely to worry greatly whether the plastic card triggers off a paper-based or an electronic payment, and it is clear that the publicity approach adopted by banks is an important element in acceptance by households. [20]

Technology does not in itself meet any consumer needs, and since most consumers are reluctant to accept new services when the old still meet their needs, technology does not insure the acceptance of new services by the consumer. However, the use of computers, both at home and in education, may encourage consumer use of technology-based services by familiarizing the consumer with technology and by creating a new class of consumer for whom the technology is a given.

One aspect of financial systems that may impede the growth of technology-based services is the float. In recent years the float has become increasingly shorter. Technology-based payment systems could eventually make the float nonexistent; all transactions could be settled immediately. Currently, the consumer has the advantage of float in the checking system. Use of the paper-based debit card has managed to undercut the "free ride' associated with credit cards and may eventually wipe out all float in the checking system.

[20] J. R. S. Revell, *Banking and Electronic Funds Transfer* (Paris: Organization for Economic Cooperation and Development, 1983), p. 101.

Nearly all technology-based services are still discretionary -i.e., the consumer can make a decision whether or not to use them since there are paper-based alternatives to meet his basic financial needs. At some point in the future, however, this may no longer be true.

Security of Consumer Assets in a Technology-Based System

Since technology-based systems provide new points of entry into the system, there is potential for new kinds of fraud. The question of computer security and crime touches every aspect of the financial service industry. Discussion here, however, will be limited to those ways in which the technology is applied to consumer services and to the security issues that arise directly as a result of those applications.

Recent concern about consumer financial services has revolved around the relative security of access devices and the need to identify positively the EFT user. As the systems become more complex and as a greater percentage of the population begins to use home banking and POS systems, problems with the current means of identification will become more obvious.

With the ATM, the consumer's loss is limited by the amount of cash he is allowed to withdraw from the system. Although his liability is limited under EFTA for unauthorized transactions, when more sophisticated financial transactions are involved, the consumer's financial loss could be greater if not noted and reported within the period of time required by law. This could have an impact on the willingness of the consumer to use these systems and therefore on the rate of acceptance of them. In that event, the market could force the providers of services to secure the systems better.

The current means of identifying an authorized user at an ATM is a personal identification number (PIN). The use of a PIN has a number of flaws. For example, if the number is long, it could be easily forgotten; if it is short or a variation on a number with which the consumer is familiar, such as an address or telephone number, the "code" could easily be broken. With a proliferation of electronic debit cards, there has been an equal proliferation in PINs, making them all the more difficult to remember. Although consolidation of services in a single card would help alleviate this problem, there is little evidence that this will happen in the near future. PINs are also insecure in that they do not positively identify the cardholder as an authorized user; they can be transferred to other individuals. Some consumers will keep the PIN together with the card, a combination as negotiable as cash.

Technologists are currently working on solutions to the identification problem. Examples of alternatives to the PIN are "warm-body" identifiers; included in this classification are thumbprints, voice prints, and signature dynamics. Thumbprint recognition is less likely to be acceptable to the public, since it would require that every individual who uses EFT has his thumbprint on record. Although there are certain problems with development, most industry analysts see signature recognition, or the more complex technology of signature dynamics, as the most acceptable alternative to both the industry and the consumer, since it is the predominant means of identification used in financial services today. It will be some time, however, before the technology will be applied to financial services.

The use of ATMs presents personal security problems, beyond those purely associated with financial security. Individuals using the machines may be particularly vulnerable to robbery. During normal business hours a traditional "brick and mortar" structure provides the individual security during and after a transaction. An ATM located away from this structure could place the user in a vulnerable position. Even those ATMs located at bank branches can be insecure when used outside of banking hours. It is difficult to assess the seriousness of the problem, because most institutions are unwilling to divulge information on security for fear of discouraging use of the systems.

In addition, it would appear that the consumer is more vulnerable in technology-based systems. For example, in a bank robbery, the bank absorbs the loss; in the case of electronic robbery, specific accounts are debited. There is no electronic "till." The responsibility shifts to the consumer to note and report the crime.

Some perceive technology as a solution to problems that can plague the consumer of financial services. Credit card fraud, which is frequently cited as a growing problem in the industry, can be made more difficult by the use of sophisticated technologies. In many ways fraud is a provider problem; the consumer is protected under legislation from illicit use of his credit cards, and if sufficiently informed he can prevent all but a minimal financial loss from the fraudulent use of his card. Both VISA and MasterCard have introduced or are planning the introduction of cards that are expensive and difficult to counterfeit. It is difficult to say whether these cards will in the long run reduce fraud, since it will be some time before the effect of their introduction and use will be felt; the cost to produce the cards is much greater. However, if these cards reduce fraud, for which the consumer implicitly pays, it may ultimately lower the financial burden for the consumer.

Privacy

Any discussion of the issue of privacy and the consumer begins with the difficulty of defining privacy and therefore what it means for the consumer to be vulnerable in this area. In its basic definition, privacy is the freedom from unauthorized intrusion, the authority in this case coming from the individual. However, in the course of everyday life the consumer has given up some of these rights, *or* has "authorized" certain intrusions into his life. The distinction between what is explicitly authorized and what is not is unclear. Privacy is considered one of the primary concerns of the individual when choosing financial services.

Much controversy surrounds the issue of EFT and privacy; that is, whether the systems that constitute EFT make the individual more vulnerable to violations of privacy. In the final report of the National Commission on Electronic Fund Transfers, privacy was defined as "... the individual's expectation of control over what information about himself is communicated to or used by others." Further, "the object of the consumer's concern regarding privacy under EFT is the potential use of his financial transaction information to develop a personal profile."[21] This use could be as seemingly harmless as an individual receiving product solicitations, based on his income and profession, from the financial institution where he does business, to the capability of the system to provide sensitive information about the individual's behavior patterns.

As mentioned earlier, cash is a private method of payment. Checks, although less private, are a paper-based mechanism, and are perhaps easily tracked on a case-by-case basis. Although electronic payments secure the consumer from some types of prying, they may in fact make him more vulnerable on a large scale. EFT transactions are recorded and stored automatically and provide the potential for invasion of privacy.

Some studies show that privacy currently ranks low as a concern for the individual-it has been dismissed by certain experts as a subject only of academic concern. A 1982 BMA study shows that users of home computers strongly disagree with the statement that computers would violate privacy. Even nonusers did not list privacy as a major concern; they were either "not sure," or were in disagreement. Fewer than 20 percent of total nonusers agreed with the statement.

Even when the issue is more clearly defined there is only slightly more resistance to electronic systems because of privacy issues. For example, in the same BMA survey, 20 percent of users and 25 percent of nonusers said that the possibility that someone else would have access to their account information could create problems in a telephone bill paying system. This represents a higher percentage of users, but about the same percentage of nonusers who agree that privacy was an issue for concern in the use of home computers. The same is true for data on automatic deposit services. The lowest response to the question was in reference to the ATM; there is some evidence that transactions performed by ATMs are considered more private than transactions using a human teller. It appears that consumers for the most part do not perceive privacy as a major issue for concern in their choice of EFT systems; other, more market-oriented questions seem to determine consumers' use of these systems.

The newer technology-based services, in particular home banking, provide new opportunities for invasion of privacy. As yet there are no uniform privacy standards for information gathering. The Videotex Industry Association (VIA), the trade association for the U.S. videotex industry, has recommended voluntary guidelines for maintaining the privacy of videotex subscribers. These guidelines suggest ways in which providers of videotex services can protect the data that they accumulate and therefore inspire consumer confidence. Additional recommendations cover collection of information, government access, security, subscriber access, correction of errors, applications to third parties, future revisions, and retention of information.[22]

These guidelines are not binding to the industry, and certain VIA members plan to adopt their own company privacy code based on VIA guidelines. Several financial service institutions, in particular bank card providers, have corporate guidelines to protect the privacy of their account holders.

Consumer Rights to Financial Services

Technology may increase access to the system for a number of people and expand choice

[21] National Commission on Electronic Fund Transfers, *EFT in the United States: Policy Recommendations and the Public Interest,* Oct. 28, 1977, Washington, D. C., p. 19.

[22] Videotex Industry Association, "Model Privacy Guidelines for Videotex Systems," June 1983.

for still others; however, because of price there may be a tendency in technological systems for certain groups to be either excluded or perhaps more heavily taxed than others. For example, although bank cards will be a primary vehicle for introducing some of the new systems to the consumer, there are many consumers who are ineligible to use them. As a result, nonusers may in effect be blocked from certain types of financial services.

Technology makes it possible to serve lower balance consumers through ATMs, and therefore lowers the cost of servicing these accounts. Certain needs of these consumers may not be met by the technology; however, more personalized services may be unavailable to them. This tendency plus fee-for-service pricing may transfer the costs to the consumer in a way that is inequitable. Even if the cost of home information services technology drops and communications costs rise, certain lower middle-income segments of the population may still be barred from participating in the system. That segment of the population that cannot maintain a minimum balance in a traditional account may be served by other nonregulated institutions (e.g., retailers, and perhaps local grocery or liquor stores) or they may be forced from the system completely. This brings into question the safety and soundness of these nonbank depositories and whether they should be regulated.

The trend of a universal electronic payments system may put pressure on the financial service system to accept people who otherwise would not have accounts at financial service institutions. It may necessitate Federal guarantees to banks that service low-income or low-balance consumers. This is particularly important when one considers the policy of the U.S. Treasury to encourage direct deposit, and the possible requirement that some consumers must participate in the system via government transfer payments processed electronically.

In the 1970's in the ECOA, Congress recognized that in order to be a productive member of American society, the consumer must have fair access to credit. Although consumer use of technology-based systems is still minimal, there is some evidence that access to technological systems or the financial system in general will eventually be a necessity. In the future, Congress may have to consider to what extent this access may also be a right.