# THE ELECTRONIC FUNDS TRANSFER SYSTEM. 1974



SUZANNE PARKER
Analyst in Money and Banking
Economics Division

May 20, 1974

THE ELECTRONIC FUNDS TRANSFER SYSTEM

Table of Contents

# THE ELECTRONIC FUNDS TRANSFER SYSTEM[1/]

## I. Introduction

Predictions of radical changes in the nation's payments mechanism were first voiced in the early 1960's. It was thought then and is maintained still that because of major technological advances, the development of an electronic funds transfer system would be almost certain. In fact, changes which bring us closer to such a system have already taken place.

In mature form, it is envisioned that many of the present material forms of money will be eliminated in the electronic payments system. This system will be a computer controlled accounting system in which all payors and payees have an account in which will be recorded all transfers of credit balances. Many of the present uses of cash, checks or credit cards to affect these transfers would be replaced by electronic means of transfer.

Whether the electronic funds transfer system as envisioned and described above will become a reality remains uncertain at present. Development of the system has not been unified to date and as a result there is much controversy as to how a unified, nationwide system could be made operational. In addition, because the effects of any changes will be so widespread, there is strong advocation that more in-depth study is needed before any further steps toward the implementation of the new system are taken.

---

1/ Contained in this report is certain material provided by Bruce P. Moore, formerly of the American Law Division of the Congressional Research Service.

The author wishes to acknowledge the helpful comments of Miss F. Jean Wells and Dr. Henry B. Schechter of the Congressional Research Service on an earlier draft of this paper.

This paper will discuss the development of the system to date as well as those changes which are visualized. In addition the possible impact of the system on various segments of the economy will be covered. Finally, discussion of the proposals relating to how the system should be implemented and controlled will be included.

II. Status of the Present System

The present payments system is based on transaction settlement by currency or by check; however, the vast majority of all payment in dollar volume is effected by check. As the volume of checks continues to grow the present payments system will become less efficient and more costly.

The exact cost of the present system is difficult to calculate; however, it has been estimated that the direct cost of manufacturing currency and coin is between $40 million and $45 million annually.[1/] In addition, there are other costs involved in using cash such as the upkeep and destruction of the bills and coins as well as protection and security systems necessary in the handling of currency and coin. The cost to the public of the checking system is estimated to be approximately $10 billion annually.[2/] There are additional costs involved in the present system which also must be considered. Among these are the costs of processing credit card transactions and costs due to fraud and losses of both credit cards and checks. These costs are not limited to the financial institution. Business entities as well as the consumer must also bear the cost disadvantages

---

1/ An Assessment of Less Cash/Less Check Technology, a First Phase Report to the National Science Foundation, prepared by Arthur D. Little, Inc., February 1, 1974, p. 4.

2/ Ibid., p. 12.

related to the processing and loss or theft of checks and credit cards.

III. Possible Major Components of the New Electronic Payments System

As a generic term, the electronic funds transfer system encompasses, among other things, automated clearing houses, retail point-of-sale terminal systems, nationwide networks, regional on-line systems and preauthorized payments and receipts services. Some of these components have already been introduced and are in limited use in the financial system.

A. Automated Clearing Houses

To this point, clearing operations have been operated almost entirely by the Federal Reserve Banks; however, efforts have been made both by public and private institutions to introduce more complex communications networks and supporting clearing operations which will make the clearing operations of the nation's financial institutions more economical. At the present time the Fed Wire and the Bank Wire offer a national network for funds transfer[1/] and national bank card systems each operate their own national authorization networks. In addition, local automated clearing houses are either in existence or will be operating in the near future. These clearing operations generally have been established as joint efforts by the Federal Reserve System and commercial banks and are operated by the Federal Reserve.[2/]

---

1/ The Fed Wire is under the complete control of the Federal Reserve System. Transfers are made in Federal Funds and direct access to the system is limited to member banks and Treasury agencies.

The Bank Wire is controlled by a managing committee of owner-bank directors and is operated under contract by Western Union. The system can be used for funds transfer as well as administrative communications.

2/ These clearing houses are located in Atlanta, California, Boston, and the Twin Cities Area (Federal Reserve System operated systems). Other systems are being considered in North Carolina, Baltimore/Washington and Denver.

It is also envisioned that a system will be developed to transfer funds electronically throughout the nation. This system would be made up of local and regional electronic systems which would interconnect businesses and financial institutions through unit terminals such as point-of-sale terminals and interconnecting networks on the local level.

B. Point-Of-Sale Terminals

The point-of-sale device is expected to replace the cash register in the retail merchant's operation. This point-of-sale device would serve to connect the retailer to the payments system. With the use of an identification card, the merchant's customer would be able to make immediate withdrawals from his demand deposit account and possibly from his savings account or against a credit service, as with a credit card, for purchases through the point-of-sale terminal. This system could also be used for credit verification of customers as well as for keeping merchant records of sales for inventory and control purposes. All information for customer billing independent of the transfer mechanism could also be stored in this device.[1/]

C. Preauthorized Payment and Receipt Systems

Preauthorized systems for payments and receipts have also been proposed as a part of the new electronic payments system and in some cases these services have been introduced on a limited basis.[2/] Through this system an employee could

---

1/ Experiments using point-of-sale terminals have been conducted in Cleveland and Columbus, Ohio through the cooperation of banks, merchants and card holders. In addition, other pilot programs are being planned for other parts of the country.

2/ At present a system similar to the preauthorized deposit system is used by large payroll distributers such as the Federal Government. In these systems, checks for employees having accounts at the same financial institution are consolidated into one or more large checks and sent to the institution where the individual deposits are made.

prearrange with his employer to have his pay deposited directly into his checking account at a commercial bank. The deposit is automatic and immediate. The employee receives a receipt from his employer and deposits are shown on his monthly bank statement.

It is envisioned that once this system is developed to its final form, salary and wage checks could be deposited by an employer's financial institution directly or through electronic transfers offered by automated clearing houses into the employee's bank or thrift institution.

This system could also include prearranged transfers by the customer for the payment of certain recurrent bills such as mortgage, rent, utilities, loans, and insurance premiums. Such systems already have been instituted on a limited, experimental basis by commercial banks 1/ and thrift institutions. 2/

These prearranged payments would be handled directly by the financial institution under a blanket authority for payment of certain bills each month or under a specific monthly authority. In the former system, the customer's bills would be sent directly to the customer's financial institution for payment. In the latter system, the bills would be sent to the customer who would authorize payment by sending the bill or a summary of the bill to the financial institution.

---

1/ A "bill-check" system was established in Atlanta with the cooperation of private banks and the Federal Reserve's automated clearing house. This system is similar to the prearranged payment system described above by which bills are sent directly to the customer. However, instead of returning the payments authorization stub to his financial institution for payment, the stub is returned to the billing organization. Collection is made by this organization's bank from all payees' banks through the automated clearing house.

2/ Similar programs have been instituted or planned by thrift institutions as well. In July 1972, the Mutual Institutions National Transfer System (MINTS) was begun and the Wilmington (Delaware) Savings Fund Society has introduced a package of funds transfer components. Transmatic is a payment-savings plan developed in Lincoln, Nebraska by savings and loan associations.

In both cases, the customer would receive a monthly statement indicating the payments which had been made and provisions would be made to insure that an account is not overdrawn and that the means to make alterations in the payments procedure existed.

## IV. Possible Impact of the Electronic Funds Transfer System

The effects of the new payments system would be widespread, but at this point in time it would be difficult to determine the exact influence which the system will have upon the various sectors of the economy. However, for the purposes of this paper, the discussion of possible impact has been limited to the effects of the system on such public interest questions as competition, the consumer and monetary policy. Some of the issues raised below are also discussed further in the final section of this paper: the Question of Ownership, Control, and Regulation of the System.

### A. Competitive Environment for Financial Institutions

The question of competition in the environment of the electronic funds transfer system primarily involves the position of the small banks, the thrift institutions, and the retail institutions.

It would seem that large banks will be more capable of implementing the electronic funds transfer system due to their advantages in raising long-term funds and other economies of scale. It would be necessary for small banks to strengthen their correspondent relationships and to engage in cooperative ventures with other small banks in order to compete in the new payments system.

The possibility that the electronic payments system could cause increased concentration in the banking structure must also be considered. At present a small percentage of the banks do a vast majority of the business, and it is expected that the electronic transfer system would reinforce this situation.

Without assurances of non-discriminatory access, small banks might not be able to compete because of their inability to purchase the necessary equipment for participation in the electronic payments system. In this case they could be forced to merge with other banks in order to survive. It would seem that some provisions assuring access to the electronic funds transfer facilities on reasonable terms may be necessary to preserve the small financial institutions.

There is also the question of the competitive edge which some banks would have in the electronic payments system due to their prior development of bank credit card systems and preauthorized payments systems. Because of the equipment and expertise developed in these preliminary areas of automatic transfers, these banks will be able to convert more readily to a fully electronic system.

The implications of the impending changes in the payment system on the ability of thrift institutions to play an appropriate role in the economy are vital to consider. Many officers in thrift institutions, in particular those in savings and loan associations, feel that in order to participate in the electronic funds transfer system, thrift institutions will have to imitate many of those functions now performed by commercial banks.

The future role of the thrift institutions in the economy has been greatly discussed in recent years. Testimony given to the Presidential Commission on Financial Structure and Regulation (the Hunt Commission) and the Commission's final report indicate the need for serious consideration of the powers and responsibilities of thrift institutions. Consideration of these powers will be even more important as the electronic funds transfer system develops.

In considering the role of the thrift institution in a future payments system, one must also consider the development of certain interrelated issues which would change the powers of thrift institutions. Among these issues are

the right to offer depositors checking account services such as N.O.W. (Negotiable Order of Withdrawal) accounts,[1] and the differential in the rates of interest paid on savings and time deposits by commercial banks and thrift institutions.[2]

Historically thrift institutions have been the primary source of mortgage funds in the nation. Thus, given the present conditions governing the supply and demand for these funds any policy which acts to decrease funds flowing into thrift institutions will also affect the availability of funds for the housing market.

It is the position of the thrift institutions that in order to avoid savings outflows which would result in a reduced flow of funds for the housing market, they must be able to offer a full range of customer services as well as a higher savings rate. To provide this full range of services, the thrift institutions advocate the expansion of their powers to include the ability to make third party payments and full participation in the payments system. Without these services and without the right to offer higher rates of interest on savings, the thrift institutions would assertedly be unable to maintain their present level of customer accounts.

Commercial banks, however, feel that expansion of such services while maintaining the interest rate differential would give the thrift institutions a competitive edge in attracting individual's deposits. In addition, direct access to the payments system by thrift institutions would alter the present competitive structure in that the commercial bank would no longer be the nation's only vehicle through which funds could be transferred.

---

1/ These accounts are indistinguishable from conventional checking accounts except that interest is paid on the collected balances. They are currently being offered by thrift institutions in New Hampshire and Massachusetts.

2/ Regulation Q provides for a differential in the ceilings in favor of thrift institutions.

The thrift institution's entrance into an electronic funds transfer system will be closely related to the development of the expanded services outlined above. Serious consideration of the future functions of thrift institutions will be necessary in any decisions regarding the working structure and operations of the electronic funds transfer system.

The role which the retailer will play in the financial structure also could affect the competitive environment for financial institutions. If point-of-sale terminals become widely installed and used, the retailer could conceivably become a financial intermediary by offering such services as the cashing of checks and withdrawals or transfers involving demand and savings accounts at financial institutions. The development of such a situation would depend largely upon the services offered through the point-of-sale terminal and upon the ownership of the terminal.

B. The Consumer

The effects of the electronic funds transfer system on the consumer would be widespread. In addition to offering greater convenience, the System could offer the consumer greater access to consumer credit in a mechanistic way. However, the substantive results of this increased access will depend upon changes in the credit policies of those institutions which would provide sources of credit through the new system. In considering an environment of greater credit access, it is also important to note that historically as access to consumer credit has increased, the number of personal bankruptcies has increased at an equal rate. It would seem necessary that the advantages of greater access to credit for the consumer be weighed against the possible disadvantages which would result from the unwise use of credit.

There are also other questions about the impact of the system on the

consumer which should be considered in determining the final structure of the system. One of these is the possiblity that the consumer could feel that he has lost control of his finances if the system becomes widespread. In a fully operational electronics transfer system, the major portion of the consumer's present financial transactions would be carried out by a financial institution. The consumer's check would be automatically deposited in a financial institution and withdrawals from his account for savings and the payment of bills could be automatically transacted by the financial institution. Although the consumer would have to authorize the financial institution to make such transfers, this authorization could be a blanket authorization giving the institution the authority to make certain payments each month.

It would seem necessary that, if such a fully electronic system becomes a reality, provisions will have to be made to insure an accessible way in which the consumer can make corrections in incorrect bills and bank statements and in which the consumer can bring claims against merchandise which is unacceptable. In providing a system which will allow for such corrections, decisions will have to be made as to how much liability the financial institution will take in the event that claims are brought against merchandise and as to how long after a transaction has been consummated that claims can be brought.

The cost of the electronic funds transfer system could also affect the consumer. Assuming that the cost of establishing or operating the system will be eventually passed on to the consumer, provisions will be necessary to assure that service charges are not out of line.

Security and privacy issues will also be important to the consumer. Provisions will have to be made to deal with stolen identity or point-of-sale cards. In addition security measures may have to be taken in order to protect the

increased financial information which will be available through the electronic funds transfer system.

The question of the customer's right to privacy has been considered with respect to the present financial structure and this right will certainly be even more critical in the new transfer system due to the fact that more information will be available and will be retained more easily. The Supreme Court has consistently held that records of customer transactions are the property of the financial institution involved rather than that of the customer.[1/] The Bank Secrecy Act and the regulations issued thereunder already provide governmental access to banking records. It would appear that with the transfer systems in operation that the basis for governmental access would remain the same; however, access might well become more convenient for the government because of the means by which the information is recorded. It would appear that the most substantial danger would be if the government was to institute some system by which the records of financial transactions were automatically provided to the government by a direct electronics link with the transfer systems' computers. This situation possibly could raise First, Fourth, Fifth and Ninth Amendment questions.

Access to records by private entities also raises substantial and serious questions. Financial institutions already provide limited access to customer records to private entities (e.g. credit reporting services); however, the potential access which transfer systems could provide to these entities presents definite problems concerning the customer's right to privacy. While there is

---

1/ See California Bankers Association v. Shultz, No. 72-985, decided April 1, 1974.

certainly some business justification for providing private entities with access to records of certain limited financial transactions, there is probably no legitimate business interest which would justify complete access to customer records. It would, therefore, seem appropriate to severely limit access to customer records to those major transactions in which business has a substantial interest.

C. Federal Reserve System's Monetary Policy

Another area which could be affected by the electronic funds transfer system is the Federal Reserve System's responsibility for formulating and implementing monetary policy. Depending upon how the final system is structured and operated, the Federal Reserve's control of the money supply could be altered. An added variable is possible future changes in the structure of the nation's financial system.

For example, in a system with no change in the structure and powers of the present financial institutions, the Federal Reserve's implementation of monetary policy could be influenced by the possibility that the new system will affect monetary velocity. Because the coordination of receipts and payments is the key variable in the present payments system which serves to determine the velocity of money, it is possible that in the new system, through direct deposit and other transfer mechanisms, that the amount of idle cash will be reduced and thus the velocity of money will be increased. Some economists maintain that because the velocity of money is now increasing at approximately the potential rate of real economic growth any future net long-run increase in the money supply could produce secular inflation. This situation would result because the financial requirement for real growth could conceivably be met entirely by increases in velocity.

Although there will be continued problems in the formulation and

implementation of the Federal Reserve's monetary policy, the system does stand to gain from the elimination of the current float and from its increased access to information. This information will be in more detail and will be available at a faster rate.

If thrift institutions participate directly in the funds transfer system only to the extent of offering services for making third party payments, the money supply would not be affected measurably. However, it could be necessary for the Federal Reserve to develop a broader reporting system in order to monitor the velocity and volume of funds passing through the thrift institutions. Thrift institutions would probably need greater day-to-day cash balances in order to offer these services; however, these increases should be offset to an unknown extent by the reduction of cash in circulation in the form of household balances to meet day-to-day needs. It would not seem likely that thrift institutions would have reserve positions comparable to commercial bank positions which are important for monetary policy purposes. If the thrift institutions were given the power to provide third party payments services without new powers for the extension of credit and without the commercial bank power to expand the money supply through creation of deposits through loans, based on fractional reserves, there would be no need for broader instruments to control monetary policy. There is a possibility of increased velocity of the money supply, at least for a temporary period until people learn that expenditures and credit via electronic transfer have to be repaid. During such a period, the Federal Reserve might have to exercise greater restraint on the monetary supply.

V. The Question of Ownership, Control and Regulation of the System

A. Need for Regulation

Proposals relating to how the system should be operated and controlled

range from a totally government controlled system to a private competitive system with minimum government control. Although these proposals deal with such questions as ownership, operational structure and access to the system, there has been little discussion of how a final system should be regulated. It would seem that as the system develops, regardless of whether that system is government controlled, privately controlled or a combination of these two extremes, it will be necessary to consider the question of how this final system can best be regulated to protect all concerns. If the system is operated and controlled largely by the Federal Reserve System, should it also be regulated by the System? Also, if the system is largely owned and operated by organizations from the private business sector it would seem necessary to determine what system of regulation will be most effective in dealing with all of the possible components such as the retail merchant, the financial institution and the data processing and communications organizations. There is also the question of intergovernmental relations and the appropriate role for the States in a new system. Thus, the question of effective regulation would seem to be one which deserves further study before the operational structure of the system becomes fixed.

B. Suggested Proposals Relating to the Ownership and Structure of the System

The concept of the Federal Reserve System of its role in the development of the electronic funds transfer system is to provide the nation with a payments system where most transactions are credited and debited electronically through a regional accounting network operated by the Federal Reserve banks.

The Federal Reserve has requested and received comments on its proposals for the development of an electronic funds transfer system.[1/] The proposed new

---

1/ Federal Reserve System, Proposed Transfer of Funds. Federal Register, Volume 38, no. 229. November 29, 1973, pp. 32952 - 32957.

rules are in the form of an amendment to Regulation J. Under these proposals the Federal Reserve would extend its authority to make rules for the collection of checks to include the right to make rules for the electronic payments system. The Federal Reserve would also be authorized to make rules for forwarding credits which is the process of moving funds from one bank to another by authorizing a Federal Reserve bank to debit and credit an account. The Fed would also be authorized to set up the legal machinery for the central bank to impose electronic funds transfer on Federal Reserve System users.

So far there has been no public direction indicating the degree of control which should be maintained by the Federal Reserve System in implementing and controlling the electronic funds transfer system. It would seem important that particular consideration be given to the public interest questions dealing with the consumer's right to privacy and the distribution of the cost of the system to the consumer in establishing an electronic payments system controlled and operated by the Federal Reserve. The Congress might wish to provide by statute for regulation of these areas.

Besides the question of ownership and control under a Federal Reserve operated system, there are other questions which involve access to the system as well as the cost of the system and the allocation of costs among institutions using the system. It is maintained by some that unless Congress restructures the nation's financial system and equalizes the regulatory and reserve obligations, thrift and non-depository institutions should not be allowed direct access to the transfer system and should not be permitted to own or operate facilities which effect third party transfers such as point-of-sale terminals. It seems possible that under a Federal Reserve operated system the thrift institution would have access to the payments system through an adaptation of the "payable through" draft. Deposits could be transferred through the clearing house to a

thrift institution with a commercial bank acting as agent for the thrift institution. The customer would still be able to deal directly with his savings and loan association or savings bank without any contact with the commercial bank.

However, thrift institutions are stressing their need for access to the system equal with other types of depository financial institutions. They maintain that the "payable through" policy would compromise the confidentiality of the thrift institution's relationship with the depositor.

The question of allocation of cost in a Federal Reserve controlled system has also arisen. It has been proposed that no additional charges should be levied for services which are analogous to the check clearing services provided by the Federal Reserve in the present system. However, for other facilities and services, the Federal Reserve should impose transaction charges on an explicit cost basis. These charges should fully reflect those costs which would be incurred by a private sector system in order to assure a climate of viable competition. Charges should be made on an equal basis for both Federal Reserve members and non-members with credit provisions allowed for member bank reserve balances. However, in providing this credit, the system should not impose severe pricing disadvantages on competing systems. Rather the credits should serve as a tangible recognition of the value of reserve balances and also as a reason for maintaining membership in the Federal Reserve System.

The majority of other proposals for the development of an electronic funds transfer system call for less Federal Reserve involvement. The major objection to involvement by the Federal Reserve System seems to stem from the fear that the System would preempt private initiatives and dominate the services to be offered in the new payments system. In addition, the Federal Reserve System's involvement in the point-of-sale switching networks has been questioned as being

beyond the powers intended by Congress. Involvement in this area of the new system would affect the consumer's relationship with his bank, the bank's relationship with the merchant and even the consumer's relationship with the merchant. None of these relationships fall within the Federal Reserve's traditional role of providing a mechanism for settlements between financial institutions.

Those advocates of a system with minimal Federal Reserve involvement maintain that because private business is willing and capable of entering the automatic clearing market, the Federal Reserve's involvement will not be necessary. The Federal Reserve's policy should be to let the electronic funds transfer system develop in the competitive environment with perhaps supporting facilities. Federal Reserve regulation and control should not be introduced until experience proves that it is necessary. On the other hand since electronic transfer rules can have an impact on the velocity of money circulation and, if unregulated, upon credit extension, Federal Reserve regulation may be necessary for effective monetary policy.

In addition to the system which would be under private ownership and control, there have been other proposals for the development of a system which would be owned and operated by a broadly based quasi-public corporation such as AMTRAK or the Tennessee Valley Authority. Regulation and operation as a public utility has also been suggested.

C. Anti-trust Issues

These questions pertaining to control, ownership, and access also must be considered within the context of possible antitrust issues which could arise as the electronic funds transfer system or systems develop. Potential antitrust issues could develop if the system or systems should be owned or controlled by a small number of institutions or individuals, especially if those institutions

or individuals were either banks or connected with banking institutions. Antitrust issues also could develop irrespective of ownership if the persons or institutions controlling electronics transfer systems were to use their connections with particular portions of the financial system of the country in order to gain a monopolistic position. In addition, to the extent that the owners of transfer systems were exempt from the restrictions of the Federal Trade Commission Act, competitive systems might engage in unfair means of competition through exclusive interconnection with various financial institutions.

Antitrust problems could also develop out of the need for compatibility and interconnection between the various data transmission systems in the nation as well as between computer hardware and software. This compatibility would be necessary for the transfer systems to be fully effective and to reach their full potential. However, because computer hardware and software companies and companies engaged in data transmission do not provide for compatibility and interconnection, the purpose of transfer systems would be to some extent negated. If one or more companies in either of these areas should gain a monopolistic position thus not providing for compatibility and interconnective capability, antitrust issues would arise.

It would appear that the most serious antitrust issues could be avoided if complete interconnectivity between all systems and financial institutions were required. Any system then could not compete on the basis of its clientele but would have to compete on the basis of price and quality of service. It is just these considerationsthat have prompted some to argue for extending the public utility concept to this field.

dd