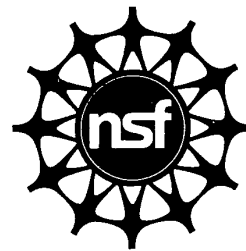


The Consequences of Electronic Funds Transfer

A Technology Assessment
of Movement Toward a
Less Cash / Less Check Society

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mechanisms for making payments will be more convenient, more flexible, and possibly less expensive. Almost all of the proposed systems should result in net social cost savings once they have been implemented and achieved sufficient volume, but the latter is a key proviso; unless consumer acceptance is sufficiently high that the desired volumes are achieved, the introduction of electronic techniques will not provide cost savings to any large group of participants.

The various systems being considered for effecting electronic payments are discussed in detail in the text. Briefly, however, they fall into the following broad categories:

- *Preauthorization Techniques*—With present systems, a great many sequential steps involving moves of pieces of paper are necessary when an individual receives a recurrent payment (such as paycheck, stock dividend, or welfare payment) or makes one to a business (rent, utility bills, insurance premiums, etc.). When a worker receives a paycheck, he deposits or cashes it at a bank or thrift institution, cashes it at a store, or makes a mail deposit with an accompanying deposit slip. When a utility bill is mailed to him, a section of the bill is usually returned by mail with a check. In both cases the check itself must be moved physically back to the bank on which it was drawn and is then filed or returned to its originator.

Preauthorization schemes generally try to short-cut this sequential procedure by using electronic transmission instead of paper. A worker's pay will be deposited electronically in a bank or thrift institution of his choosing; an authorized utility bill will be paid automatically at an agreed-upon date after normal receipt of the bill. In each case, paper records are likely to be provided to the individual, but there will be fewer of them and the sequential return process will be abbreviated.

- *Automated Banking*—The hours during which financial institutions are open for customer service traditionally have been quite limited; and the inconvenience of getting to

one during these hours has led to enormous numbers of checks being cashed at places of employment, food stores, and other retail establishments. Various automated banking techniques have been proposed that enable individuals to make deposits or receive cash at convenient locations either over a relatively long span of hours each day or even on a 24-hour basis. The transactions are generally recorded in electronic form, thereby cutting down on the paper handling necessary to maintain account records.

- *Point-of-Sale Devices*—Systems that operate with point-of-sale devices can be regarded as supplementing and replacing some portion of cash, checks, and the plastic cards and associated recording equipment now used for credit purchases. The systems under development generally capture data relating to the transaction (customer, merchant, merchandise, price, and date) at the point of sale, so that electronic records are generated and can be manipulated thereafter. The systems are to be employed to authorize and perhaps effect credit purchases (corresponding to the present mode of card use), to verify and perhaps guarantee a check, or to make an immediate transfer from the individual's bank account to the business from which he has made a purchase (thus substituting for cash or check).

In addition to the above items, a variety of other systems have been proposed, such as the use of pushbutton telephones connected to a computer to effect some types of payments.

Not all of these approaches are entirely new. In some cases there are existing paper analogs, such as direct deposit of payroll by single or composite paper check means. This procedure has been available for many years to employees of some businesses. Telephone transfers of funds have been possible on a limited and special basis for quite a long time. What is new is that a mix of what used to be rather specialized services plus a range of entirely new ones are being developed for widespread use through modern electronic techniques. As has been true of all past payment systems, each will have its own set of characteristics with regard to

—Government concern over high payroll, social security, and welfare check production and distribution costs—especially over delivery difficulties and theft in the latter two categories;

—Government concern over the impact of float on monetary control.

Overall, however, the present performance is entirely adequate, and dissatisfaction is not the primary reason why so many proposals for changes have arisen.

Proposals for Change and Recent History

The two main sources encouraging changes to our payment systems appear to be:

- The government, through a variety of facilitative actions, including programs to encourage direct deposit of federal payrolls, social security, and other transfer payments; and
- The actions of market leaders among depository institutions and associated organizations, retail merchants, and others.

By providing new systems and services, these market leaders introduce a range of competitive factors that rapidly force other organizations to follow in their path or to develop alternative innovative services. This trend is being followed even though the immediate financial returns from EFT systems might not warrant investment by a prudent businessman. The potential future market positions and resulting financial gains have apparently seemed adequate to the leaders to start the process, and competition takes over thereafter. This leadership process is not confined to large organizations with major resources; Citibank, Bank of America, Chase Manhattan, and the two bank card companies are among the leaders, but pioneering work has been done by much smaller organizations, such as the Hempstead Bank of Long Island and the First Federal Savings and Loan Association of Lincoln Nebraska.

The main thrusts of the proposed changes were described in Chapter 1 and include the following:
Preauthorized Procedures

This is of particular interest for payroll and transfer payment (social security and welfare)

deposits and for payment of relatively fixed, recurring bills (monthly life insurance premiums, rent and mortgage payments, utility bills, etc.).

The technical system supporting preauthorization techniques is a network of local but interconnected automated clearinghouses (ACH's). Six ACH's are now in operation, and current plans call for an essentially nationwide network by the end of 1977. The existing ACH's have been poorly utilized to date, at least partly because they have been restricted to a few local areas. Growth of the interconnected system will be aided by government programs that will encourage individuals receiving federal payments to accept direct electronic deposits.

Automated Banking Techniques

Numerous devices fall in this category—automated teller machines, credit and check verification and check guarantee services, and a range of manned equipment for communications between customers and depository institutions of all types. These devices provide locational convenience and up to 24-hour-a-day availability of access by depositors to their funds or credit resources. Most systems of this type are likely to be established in major retail establishments and in places with heavy traffic by potential customers, such as airports and railroad stations.

Approximately 3000 ATM's are in use, and 1700 were on order at the end of 1974. Relatively few of the other types of equipment are in place, but rapid expansion is under way; many banks and thrift institutions have specific plans for system installation, and thousands of units will be operating within the next few years. Consumer acceptance to date has been excellent.

Point-of-Sale Systems

These systems are aimed almost entirely at retail business or service operations; if successful, they will replace and supplement current credit card systems with electronic devices that will also be able to replace some or all usage of cash or checks by immediately transferring funds from a consumer's to a retailer's bank account.