

University of Mississippi  
eGrove

---

Touche Ross Publications

Deloitte Collection

---

1977

# Electronic banking: Myth vs fact

Michael J. Coie

Follow this and additional works at: [https://egrove.olemiss.edu/dl\\_tr](https://egrove.olemiss.edu/dl_tr)

 Part of the [Accounting Commons](#), and the [Taxation Commons](#)

---

## Recommended Citation

Tempo, Vol. 23, no. 1 (1977), p. 22-25

This Article is brought to you for free and open access by the Deloitte Collection at eGrove. It has been accepted for inclusion in Touche Ross Publications by an authorized administrator of eGrove. For more information, please contact [egrove@olemiss.edu](mailto:egrove@olemiss.edu).

# ELECTRONIC BANKING: MYTH VS. FACT

by MICHAEL J. COIE, National Service Director for Banking, Seattle

Another tradition may be dying. Across the nation, banking is being done in grocery stores, parking lots, and by telephone. Machines, plastic cards, and secret numbers are implementing an Electronic Funds Transfer System (EFTS) that enables one to handle most financial transactions without actually visiting a bank. Instantaneously, checks are cashed, bill and loan payments made, and deposits or withdrawals completed.

No longer are these transactions referred to as experiments or tests. Does this mean we are finally entering the cashless society? What is happening to the payment systems of our country? Why are these changes occurring, and what do they mean to the individual?

One recalls the old saying: "The more things change, the more they remain the same." In the beginning, man operated in a cashless society, using barter to pay for goods. Then he introduced a rudimentary payment system, employing proxies. Under this system, one item of value was exchanged for another. Originally, the relationship between the proxy and the item of value was direct. Thus, a note describing the quantity and quality of a commodity was accepted by a purchaser in exchange for the goods. However, this relationship soon was lost. Proxies were exchanged in which the value of each had been negotiated.

*Both the constitutionality and the expediency of the law creating this bank [of the United States] are well questioned by a large portion of our fellow citizens, and it must be admitted by all that it has failed in the great end of establishing a uniform and sound currency.*

—ANDREW JACKSON, 1829

For example, one unit of one commodity was worth two units of another commodity. From these exchanges arose the need for a new standard for expressing all other media. Thus, "money" was born. And since it was a medium in which the value of all goods and services could be expressed, proxies were no longer necessary.

The fact is that "money" has no intrinsic value. It has assumed a value because of its role in exchanging items of value. Currency and coin have been called the only "true" money, but they are simply physical items made acceptable in the exchange process by legislation and convention. They have the same use as other forms of money—deposits in banks, checks, negotiable instruments, and the like. Their value is only within the exchange process.

The misconception about money's intrinsic value and about currency and coin being the only "true" forms of money is probably what creates anxiety and confusion when the question is asked: "Are we entering a cashless society?" Actually, the question should be: "Are we changing the medium used in our payment system?"

The answer is yes, but change has been occurring for a long time.

## The Paper Evolution

Hundreds of millions of payment transactions now take place routinely each day. However, the effectiveness of this transfer process has been achieved relatively recently. A little over one hundred years ago, currency transactions were anything but simple. Prior to the National Currency Act of 1863, currency was issued by individual banks in their own design and denomination, and its use outside of the immediate area of the issuing bank was severely limited. One reason was reflected in a book published in 1858, *Nicholas Bank Note Reporter*, which provided 4,500 separate descriptions of fraudulent notes in circulation—at a time when there were but 7,000 authentic notes in use.

Perhaps the most fundamental change in our payment systems occurred after World War II. According to a recent study by the National Science Foundation, approximately 27.5 billion checks were written by businesses and individuals during 1974, making checks the second most popular media in our payment system. Such volume became possible in two stages. First, in 1945 the American Bankers Association and the Federal Reserve System developed a uniform numbering system to identify each bank and the drafts (checks) of the United States Department of the Treasury. In 1956, a system was developed to print the numbers in magnetic ink on each check; this provided a code that could be read by machines for automatic sorting and handling. The code is the series of



numbers appearing in the lower left of most checks today.

When a check is accepted by a bank, a customer is given cash or a credit to his account. To recover the amount of this check, the bank must present it to the account it was drawn on. The receiving bank gives the sending bank credit for the amount of the check and charges the individual customer who wrote the check. Because a bank can receive a check drawn on any one of some 14,000 banks throughout the country, a network of check collection systems has been developed, involving Federal Reserve Bank branches and major banks. Despite this massive surface and air transportation network, however, delays in the collection cycle do occur and are costly to banks—because cash or credit has been given a depositor while the bank will not receive credit until the check is honored by the drawee bank.

Another change in our payment system brought a new version of the promissory note—the credit card. With it, a person could execute a single note—and use it for a variety of transactions over an extended period of time. Until recently, most credit cards were restricted in use to a particular company or store or to a special purpose, such as travel or entertainment. But in the early 1960s banks began issuing credit cards that were accepted by many companies for a variety of purchases. Today it is estimated that over 350 million credit cards exist, and that over 5 billion transactions are initiated with them annually.

While these changes have been fundamental ones, they have all been directed toward improving the effectiveness of paper as the primary medium of our payment system. By the late 1960s, however, many systems being used in the financial community reflected a change from paper media to electronic media. But since the change did not affect individuals directly, the systems received little attention outside of the financial community.

### **The Un-Paper Systems**

Banks complete billions of dollars in transactions each day. International transactions involving banks in New York City, for example, are completed through a network that functions by computers transmitting directly to other computers. One of the latest systems, called CHIPS (the New York Clearinghouse Interbank Payments System), currently processes over \$50 billion a day. A more

expanded system, SWIFT (Society of Worldwide Financial Telecommunications), is scheduled to begin operation soon and will link European financial institutions with each other and with banks in the United States and Canada.

Automated clearinghouses (ACH) also use computer media as a substitute for cash or currency. In a typical transaction, an employee authorizes the employer to deposit his pay directly into his bank account. To do this, a magnetic tape encoded with the required information is sent to the employer's bank. If the employee's account is with the same bank, the bank credits his account. If his account is at another bank, the information goes to the automated clearinghouse on a new tape, where transactions are machine sorted to the proper bank. Thus, the employee's account is credited without a payroll check being prepared. Conversely, an individual can authorize automatic withdrawals, to pay debts.

Twenty-four automated clearinghouse associations now exist, and both the government and private companies are beginning to use them. For example, last December the Treasury Department sent 2.4 million Social Security checks directly to financial organizations as the first step toward paperless payments. Early in 1977, the Treasury will eliminate the remaining checks and use computer media for the direct deposit program.

The next change directly involving consumers will be to change the time of the transaction to the point of sale. Through a POS (point of sale) system, the customer pays for goods at the time of purchase by automatically transferring funds from his account to the merchant's account. The customer carries a plastic card which activates a terminal in the store. The terminal "talks" to his bank's computer by means of magnetic characters encoded in stripes on the back of the card. There is an immediate change in customer and merchant balances that differentiates this transaction from a "credit" transaction, in which the customer has the option of paying the amount over a period of time. POS cards are called debit or asset cards, to distinguish them from the credit cards they resemble.

POS systems also permit one to cash checks and make withdrawals or deposits when one is traveling or otherwise cannot get to one's bank. But these systems are not to be confused with automated teller machines (ATMs), which banks have placed in shopping centers and airport lobbies, and which differ from POS terminals because transactions



## ELECTRONIC BANKING: MYTH VS. FACT

through them involve only the customer and the financial institution, not a third party such as a merchant. These terminals also allow customers to cash checks and make deposits, withdrawals, or transfers among individual accounts.

Until this decade, changes were made to improve the use of paper in payment systems. This decade has seen some paper replaced by electronic media. But there are important differences of opinion within the financial industry concerning why these changes are occurring.

### The New Issues

Three developments created these differences of opinion.

- The new payment systems represented a way for banks to reduce operating costs. The cost to process checks in 1974 was estimated at 15 to 30 cents per check, or approximately \$4.2 to \$8.4 billion. With check volumes increasing, and computer technology available, eliminating checks in certain transactions seemed desirable.

- Electronic transfer systems enabled bankers to extend their service beyond the traditional working time of 10:00 am to 3:00 pm. Such expansion of service is costly, of course, because the increased costs are supporting existing customers rather than generating new ones. On the other hand, the unmanned ATMs, operating 24 hours a day, 7 days a week, enabled banks to remain "open," without incurring such costs, and to open new offices without requiring new construction.

- Finally, managers of institutions in the so-called thrift industry saw electronic banking as a vehicle for offering payment services even though, by law, they were prohibited from providing such demand accounts. Concerned over the commercial banks' aggressive pursuit of individual savings and time deposits—thus enabling them to offer customers both checking and savings accounts under one roof—thrift leaders saw electronic banking as a way to offer their customers the advantages of checking-type accounts, without having to incur the costs of processing checks.

What was the result? Early in 1970 began the series of suits and countersuits that continue today. Banks brought suit against other banks to block installation of remote ATMs in states where branching is not allowed—claiming the units to be *de novo* branches. Other banks challenged thrift associations on the grounds that electronic funds transfer systems represent prohibited third-party transfers. Regulators were challenged for allowing certain experiments and, at the same time, faced suits by other groups because certain experimental systems were not approved. The entire financial industry, including federal and state regulatory bodies, still finds itself embroiled over rules,

regulations, and conventions for operating electronic funds transfer systems. In fact, the issue of EFTS is an important element of efforts in Congress to reorganize the operation and regulation of the nation's financial industry.

As a result, some national systems are in operation involving only commercial banks, while others are shared between banks and thrift institutions, and still others involve only thrifts. With the entry of thrift institutions into EFTS, attention has shifted toward defining the role of the consumer in the operation of EFTS networks.

### The Meaning to Individuals

While it does appear that new payment systems will become part of our financial life, differences of opinion may also arise in the public's mind. Certain transactions—preauthorized by individuals to cover a variety of receipts and disbursements—will be recorded by electronic media at the time and place they occur. Because the economics of these new systems require substantial transaction volumes to meet the savings projected, consumers clearly will help determine the extent to which these systems become integrated into the overall payment system.

Will consumers use the systems? Experience indicates that consumers will try a new product or service for one or more of the following reasons: 1. Dissatisfaction with the existing service. 2. Perceived benefit of a new service over an existing one. 3. Economic advantage of a new service. 4. A breakthrough without an existing equivalent. 5. Appeal as a novelty or experiment.

How do the new payment systems meet these criteria?

*Dissatisfaction.* It is generally agreed that existing systems are adequate. The fact that almost 90 per cent of the households in this country have checking accounts shows how widely accepted they are. Also, while currency and coin are cumbersome and subject to loss, use of them for small transactions is convenient.

*Perceived benefit.* Both preauthorized and transaction-based systems must be measured. Transactions through automated clearinghouses indicate that preauthorized, direct deposits are recognized as a benefit. On the other hand, preauthorized charges have not been readily accepted, and transaction volumes are low.

What are the benefits of preauthorized charges? They save the time required to prepare a check, the cost of mailing or otherwise delivering the payment, and any penalty incurred by late payments.

Apparently consumers are concerned about their potential loss of control over when a payment will actually be made, as well as flexibility to stop or cancel a payment. An attempt has been made to alleviate these concerns by



notifying the consumer prior to the time the charge will be made to allow for any changes or cancellations. Despite this, consumers apparently do not think that preauthorized charges are of benefit to them at this time.

Turning to transaction-based systems, the benefits include convenience of service location and the existence of a single medium (the plastic card) which would be used for most current transactions by currency or check.

*Economic advantage.* There has been little attempt to cite a direct, economic benefit to the consumer. Cost reduction relates more to participating businesses and financial institutions. Of course, pricing could be used to stimulate usage, but lower costs to the consumer are frankly unlikely.

*A breakthrough in service.* These systems provide new services whose appeal is relatively straightforward, such as guaranteed direct deposit of an employee's pay. Also, unmanned teller machines permit the consumer to decide when to do business. "Hours" are no longer a constraint.

*Banks may often err from want to skill and occasionally be injurious, as steam is—but it is not the less true, that the banks of this country have been the great instruments of its improvements, and that during all the convulsions of the last fifteen years, for every American bank which has failed, at least ten English banks have failed.*

—NICHOLAS BIDDLE, 1837

Other new services are still untested in terms of consumer appeal. One problem that consumers face today is collecting and analyzing information about their purchases and disbursements. Electronic transfer systems can provide consumers with information broken down by object of expenditure, tax deductible items, or totals by merchant or business. Thus, a by-product of the exchange itself is usable, historical information.

*The novelty appeal.* Clearly, the novelty of the new systems has encouraged some customers to test their new plastic cards. But novelty is a limited factor in a new payment system. In the long run, it is the other potential benefits of the system which will determine the degree of use.

Clearly, consumers will receive certain benefits in using the new payment system, but will they be enough? The response may vary not only by individual but over time, as each success encourages further experimentation. Ulti-

mately, consumer response may depend on the resolution of profound and far-reaching questions which are now being raised about the power of this new technology.

### Professional Issues

In February of last year, the first meeting was held of the National Commission on Electronic Funds Transfer. The commission, mandated by Congress, is composed of 26 persons, representing both the public and financial institutions. Its purpose is to study the policy implications of EFTS and recommend legislative and administrative action. Some of the issues to be faced are:

- The system will operate across state lines, providing a potential for interstate branching/banking, currently prohibited or severely restricted.
- The system will require an unprecedented cooperative effort among competing types of financial institutions.
- Substantial information about customers will be recorded on computer records.
- The possibility of error in any computer system will exist in the larger customer base of an EFTS network.
- A new possibility of fraud will exist through manipulation of the plastic cards, and also the system's software.
- Another set of regulations, perhaps even regulators, may emerge and be perpetuated.

The implications of these questions are many, but none of them appears insolvable. A new working alliance between regulators, financial institutions, and consumers would appear to be a major step in resolving such issues.

Regulators would exercise their responsibility to maintain order in the system on one hand, and on the other to allow effective competition to move into a new era. Financial institutions would ensure that proper safeguards are in place to control the possibility of error, fraud, or the abuse of information. And consumers, by their individual decisions of whether or not to use these new payment systems, would negate or ratify the effectiveness of the regulators' and financial institutions' actions.

Does all of this mean the cashless society is upon us? And are our banks going to disappear? No, the payment systems now coming into operation represent a logical evolution of our current payment system. They simply use new electronic technology. They do not signal the end of currency and checks.

How quickly and how extensively will these new systems become operable? The answers depend on how the public evaluates the potential increase in convenience and service that the systems offer.