



Predictions of a cashless society were commonplace in the 1950s and 1960s when plastic cards seemed to be taking over the world and major advances in electronic technologies promised to make all things possible. But today, neither checks nor currency plays a less significant role in our economic life than two or three decades ago. Public subsidies to the check processing system, the relatively high cost of electronics, and the structure of this country's financial services sector all have served to retard the development of electronic payments, despite their potential for increasing the efficiency of the entire system and the convenience they offer to consumers and other individual users. Electronic funds transfer (EFT) in the form of direct debits at the point-of-sale, home banking, and automated clearinghouse (ACH) payments has been slow to take hold. The ACH is the main driving force for most forms of electronic payments; yet its growth has been halting and problematic. A look at the history of the ACH will lay the groundwork for the rest of this special *Economic Review*, which considers both the ACH's promise and the obstacles to its development.

This issue is the first of two that examines the automated clearinghouse to determine

Despite nearly two decades of growth and promise, the ACH has yet to become a serious alternative for check payments.

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why electronic payments have yet to be as widely accepted as forecasters had predicted. Our contributors also look at what is likely to happen to the ACH in the future.

An automated clearinghouse is a payment mechanism through which participating depository institutions exchange funds electronically, thus creating an alternative to the common method of transacting payments with checks. The ACH replaces the check with a series of electronic impulses transmitted over data links or, more commonly, by magnetic tapes or floppy disks. Participants in the clearinghouse use a common format for coding information and abide by operating rules of the National Automated Clearing House Association (NACHA) and regional associations. Automated clearinghouse associations are nonprofit corporations owned by member depository institutions.

The ACH grew out of concern that traditional check clearing facilities (which process paper items mechanically) would be unable to accommodate the rapid economic expansion and corresponding increase in check volume that characterized the late 1960s. The costs of labor and transportation involved in moving paper items were rising rapidly. During the middle to late 1960s, the amount of paper traveling through the check system was increasing at an unprecedented rate, and payments specialists recognized the need for a faster, more efficient method.¹

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The First Stages of Growth

The ACH is a relatively new payment mechanism compared with other methods in use today; paper money was introduced in the Middle Ages and checks were first used in the United States in the late 1600s.

The ACH began in April 1968 when the San Francisco and Los Angeles Clearing House Associations authorized the creation of a joint committee to make recommendations for exchanging paperless entries among banks. In August 1970, a group of 10 California banks formed the Special Committee on Paperless Entries (SCOPE) and obtained approval to initiate a pilot project, resulting in the computer software to operate the ACH for interbank paperless entry exchange. In August 1972 the San Francisco and Los Angeles Clearing House Associations approved the rules and legal agreements. The Federal Reserve Bank of San Francisco and the Los Angeles Branch provided the first automated clearinghouse services beginning in October 1972.

Monetary and Payments System Committee. Following this regional initiative, a national program was set in motion in 1970. In that year, the American Bankers Association formed the Monetary and Payments System (MAPS) Committee to study ways to improve the payments system by meeting the myriad changes occurring in the financial community. The MAPS committee was charged with addressing the need for changes in the existing payments system, determining what the changes should be, and assessing their impact on commercial banking. During this time the banking industry was affected by three major economic forces: the changing needs of retail and corporate customers, profitability pressures, and mounting competition in the marketplace.² The ACH concept was intended as a natural extension of the check payment system that would convert the growing volume of paper processing at commercial banks and other depository institutions to electronics, thus responding to some of the compelling problems of the day.

The MAPS committee determined that it would be "a costly mistake" for the industry "to remain static with the present payments system and rely too heavily on the check processing method of funds transfer. Rising labor expenses will continually expand the relative costs of bank operation," the committee reported.

"These additional costs will either reduce profitability, which is already a concern, or increase the expense to our customer. Neither outlook is attractive."³

MAPS recommended two critical areas for change: first, establishing a clearing and distribution system for electronic payments by the banking system, and, second, developing the full potential of the bank card. The committee concluded in its 1971 report that automated clearing and distribution facilities should be established locally and linked together nationally to accommodate paperless debit and credit transfers. The report emphasized the need for industry standards for paperless entries. It also recommended a comprehensive nationwide clearing and settlement system for electronic payments that would not depend solely on or be controlled by the Federal Reserve System. This clearing system, according to the report, eventually should be able to handle bank, corporate, government, and consumer payments.

Committee on Paperless Entry. During this same time the Federal Reserve Bank of Atlanta, working with Georgia Institute of Technology, also studied the possibilities of paperless entries. After this joint research project was completed in September 1971, several major Atlanta banks formed the Committee on Paperless Entry (COPE). The COPE banks agreed to implement a Fed-managed ACH, and purchased software from SCOPE to run it. The Georgia Automated Clearing House became the second ACH, beginning operations in May 1973, just seven months after the California clearinghouse.⁴

Federal Reserve Involvement

The Federal Reserve Board also played an active part in developing the ACH. The Board stated in 1971 that it supported rapid development of a viable EFT system. It sought to decrease the number of paper items being handled, speed settlement by minimizing the handling of checks, and reduce commercial bank and Fed float resulting from delays. Unlike the role the MAPS Committee envisioned for Fed involvement in the ACH, the Fed anticipated playing an active part. It viewed its involvement in the clearing process as necessary to ensure the safety and soundness of the payments mechanism. In the spring of 1972,

the Fed agreed to operate clearinghouses for the San Francisco and Los Angeles and the Atlanta clearing associations using the software developed by SCOPE. It would also develop and operate a nationwide automated clearing facility. The Fed agreed to supply space, equipment, and management for the local ACHs, because it felt electronic systems at the local level would create "nodes" that the Federal Reserve could then link together through its communications network into a national electronic payments system.

By 1973 there were 23 SCOPE-type committees set up across the country. Strong national coordination was necessary to achieve the level of compatibility required for interregional and eventually national data interchange. An ACH task force to develop standards for interregional exchange of ACH entries and to study educational and marketing possibilities was commissioned by the American Bankers Association.⁵ Using the groundwork provided by the MAPS committee, this task force became the forerunner of what is known today as the National Automated Clearing House Association.

NACHA Arrives on the Scene

NACHA was formed in mid-1974 by local associations to devise national rules and standards, develop educational programs, and provide technical assistance in setting up automated clearinghouses. Eighteen charter members from regional associations representing all twelve Federal Reserve districts were among the original members.

Thirteen ACHs began in 1975, even though data could be transferred between regions only through the physical exchange of tapes. The federal government began processing Social Security payments via the ACH in 1975. The government's participation in direct deposit of Social Security payments and, more recently, its use of electronic payments to vendors have promoted the ACH. As with any payments system, volume is a key factor in lowering costs. Federal government involvement in the ACH has substantially increased volume and hence lowered costs, encouraging more development of the system. In September 1978, the Fed implemented electronic interregional interchange, resulting in a truly nationwide clearinghouse system. The ability to exchange data

electronically between regions made it more practical for businesses to use the ACH for the concentration and disbursement of funds, again increasing volume and furthering development and use of the system.

The Monetary Control Act of 1980

The Depository Institutions Deregulation and Monetary Control Act of 1980 (hereafter the Monetary Control Act of 1980) requires the Federal Reserve to price its services, including the ACH, at actual operating cost plus a private sector adjustment factor and the cost of the float. This charge was included to account for costs encountered by a firm in the private sector but not by the Federal Reserve (for example, income taxes). The Act also allows all depository institutions access to Federal Reserve priced services. Previously, Reserve Banks provided these services to members at no charge. The pricing provision was designed to improve efficiency of the payments system through increased competition. To encourage the use of electronics, the Fed priced ACH services not on current volumes and costs, but instead on "mature volumes." This kept the cost of ACH transactions lower than checks. The subsidy was phased out in progressive steps and full-cost pricing began January 1, 1986.⁶

Expansion of ACH Services

The Fed began processing debits during the night processing cycle in 1979, allowing companies to concentrate funds. In October 1983 the Fed began processing credits as well as debits on the night cycle and providing next day settlement. Despite a surcharge for using the night cycle, many institutions prefer to take advantage of the later deadlines.

In 1983, NACHA and the Fed introduced a pilot program to facilitate corporate trade payments (CTPs) through the automated clearinghouse. The CTP permits companies to transmit trade payment information such as terms of sale and quantity (information similar to that found on an invoice) along with the payment. These electronic transactions promised to eliminate a large amount of the paper involved in payments. The CTP program was declared a success by NACHA, expanded and opened up

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to any user in January 1984. However, volume has been disappointing, running only several hundred transactions per month.

From just two ACHs in the early 1970s, the number has grown to 31 today, serving over 16,000 financial institutions and 34,000 corporations.⁷ Currently, the network is a nationwide interconnection of ACHs, most of which use Federal Reserve facilities for processing, settlement, and delivery. Much of the recent growth in the number of participants can be attributed to new technology, primarily introduction of the personal computer as an affordable means of electronic communication. Thanks to the multiple uses and low cost of a personal computer compared with a mainframe computer, smaller institutions that could not justify the purchase of a computer for ACH entries in the past can do so today.

The ACH now processes approximately 48.1 million electronic payments per month—23.2 million commercial "items," or transfers, and 24.9 million government items. According to Federal Reserve figures, in 1985 the ACH system handled an estimated 298.9 million government and 278.9 million commercial transactions for a total of 577.8 million transactions.⁸ Government ACH transactions have been growing by only 10 to 13 percent annually during the last two years. Growth in government volume has slowed mainly because most people who will voluntarily sign up for direct deposit of their Social Security payments have already done so. Commercial volume, on the other hand, has been growing at about 30 to 50 percent each year. Unlike government payments, commercial volume could continue this growth as more corporations sign on.

As financial institutions begin to market ACH services more aggressively to their customers, the number of participating corporations and consumers will increase. Today there are 34,000 corporations using the ACH, in contrast with the 3,000 that used the system in 1976. Businesses use the ACH to pay employees, as well as their vendors and suppliers. Consumers use the system to receive their payroll and Social Security checks via direct deposit, avoiding long lines at the bank and the possibility of losing a check in the mail. Consumers also make payments using the ACH; home mortgage payments, automobile loans, and insurance premiums normally paid by check can be paid automatically.

Prospects for Greater Volume

Although the number of institutions participating in the network is growing, the volume today still falls short of the optimistic outlook of a few years ago, for several reasons.

Float. Float plays an important role in a company's decision whether or not to use the ACH. (Float is the term for the lag between the time a payor writes a check and when it is actually debited from the payor's account.) The paying company loses the advantage of float normally gained from sending payments through the mail. Often, the loss of float "income" created by checks more than offsets the savings that can be expected from using automated payments. The opposite is true for the company receiving payments via the ACH; it benefits as its account is credited the day payment is received rather than several days later when the payment is processed. Currently there is no way for the receiving institution to compensate the sending institution for loss of float. This tends to discourage institutions from being senders.

Check Improvements. Another reason for the slow growth of the ACH is the low cost of processing checks through the check collection system. Check volume has created economies of scale in processing. This, along with the fact that the current collection system becomes more efficient each year as equipment that reads and sorts checks improves, reduces the incentive for financial institutions to invest time and money to automate payments. Until ACH volume grows substantially, there is also little incentive from a cost standpoint.

Promotion and Development. Promotion efforts by NACHA, members of the banking industry, and the Federal Reserve System play an important role in developing the ACH. Without good marketing, the likelihood of significant growth in transactions is slim even though direct deposit of funds offers recipients many conveniences not afforded by traditional paper checks. Besides removing the danger that a check will be lost or stolen, direct deposit offers the recipient the security of knowing that even if he or she is sick or on vacation, the payment still will be deposited. To enjoy these advantages, however, the potential user must be aware of them.

The ACH is still in its infancy compared with the nation's other payment systems. And, not

all the players agree who should operate it and how it should be operated. Expanding the ACH depends upon further cost reductions that only economies of scale can offer. Increased use of the ACH will require general acceptance

and cooperation by all the players involved. Yet despite such obstacles, advocates are convinced that, as far as payments are concerned, the ACH is the future.

NOTES

¹Atlanta Payments Project, *Automated Clearing Houses: An In-Depth Analysis*, Committee on Paperless Entries: Atlanta, Georgia, 1974, p. 13.

²*Ibid.*, p. 10.

³*Ibid.*, p. 10.

⁴American Bankers Association, *Report of the Automated Clearing House Task Force*, American Bankers Association: Washington D.C., 1974, p. 4.

⁵*Ibid.*, p. 4.

⁶Bank for International Settlement, *Payment Systems in Eleven Developed Countries*, Bank Administration Institute: Park Ridge, Illinois, 1985, p. 271.

⁷NACHA, *Surepay Update*, October/November/December 1985, p. 5.

⁸Federal Reserve Board of Governors, 1985. These numbers differ significantly from those reported by NACHA in *Surepay Update*, as NACHA's numbers include some double counting of interregional ACH transactions.



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