

Automated Clearinghouses¹

Current Status and Prospects *By Carl M. Gambs*

Electronic funds transfer systems have been widely discussed since the mid-1960's. While early forecasts of their growth and development have proved to be exaggerated, substantial growth in several types of EFT systems has occurred in recent years. Some of these systems are highly visible to the **public**—for example, the automated teller machines now used by many banks and other financial institutions, and the point of sale terminals used by a number of department store chains. Other systems are invisible except to the financial community—for example, the Federal Reserve System's wire transfer system and the Clearinghouse Interbank Payment System (CHIPS) operated by the New York City Clearinghouse Association.

One electronic funds transfer system already affecting a large number of individuals is the system of automated clearinghouses (ACH's) that now covers most of the United States.¹ This article will discuss the origin and development of ACH's, and then examine their **current** status and the plans to create a nationwide ACH network. The article will then analyze the costs and benefits of ACH's to the various users and to the institutions that

provide payments services. Finally, there will be a discussion of the role of the Federal Reserve System in the provision of ACH services and a brief look at the outlook for ACH development.

ORIGIN AND GROWTH OF ACH'S

ACH's are institutions analogous to the clearinghouses existing in many cities for the interchange of paper checks. In an ACH payment, however, instructions are carried on magnetic tapes, while in a check clearinghouse, payment instructions are carried on paper checks. Two types of payments move through **ACH's**—**credit** payments and debit payments. Credit payments are payments such as Social Security or wage payments which result in a deposit of funds to an individual's account. Debit payments are payments which transfer funds from an individual's account to the account of a firm—for example, an insurance or mortgage **payment**.²

When a credit payment is made by check, the check is delivered to the recipient of the

¹ The only states not currently served by ACH's are Alaska, Hawaii, Nevada, and part of West Virginia.

² Every payment, of course, involves a credit to one account and a debit to another account. In ACH terminology, a credit payment is a transfer from the originating firm or Government unit to an individual's account and a debit is a transfer to the firm originating the payment.

payment, then deposited with a commercial bank, next placed in the check clearing system, and finally arrives at the bank on which it is drawn. ACH credit payments are made using a magnetic tape created by either the originator of the credits or its bank. The tape contains the amounts of the various payments, along with the names, bank numbers, and bank account numbers of the individuals to be paid, and the name of the firm or Government unit originating the payments. The ACH uses the tapes provided to it to prepare tapes for individual financial institutions³ which list the payments being made to each institution's account holders. The tapes are then delivered to individual financial institutions, which credit the accounts of the appropriate individuals. Debit transfers occur in much the same way, except that the tape is prepared by the firm or bank which will be **receiving** the payment, with information on the amounts to be paid by various customers included on the tape. Most debit transfers are recurring payments such as insurance premiums and mortgage payments.

The first ACH's began operation in San Francisco and Los Angeles in October **1972**. These ACH's were the outgrowth of the work of the Subcommittee on Paperless Entries (SCOPE) set up by the bank clearinghouse associations in the two cities in April **1968**. The actual implementation of the ACH's was made possible when the Federal Reserve Bank of San Francisco agreed to perform the operations of the ACH's. The pattern established in California, with local ACH associations handling ACH organizational and marketing matters and Federal Reserve Banks performing the operations, became the norm as ACH's were developed in other parts of the country. The only exceptions are Chicago and New York

³ ACH transfers may be made to and from accounts at thrift institutions as well as at commercial banks.

Table 1
NUMBER OF ACH'S IN OPERATION
AT YEAREND

<u>Year</u>	<u>Number</u>
1972	1
1973	2
1974	4
1975	17
1976	25
1977	32

SOURCE: National Automated Clearinghouse Association (NACHA).

where local clearinghouses handle the operations.⁴

The California ACH operations were followed by the introduction of ACH's in Atlanta in **1973** and in Boston and Minneapolis in **1974**. Beginning in **1975**, there was a rapid **spread** of ACH's to the rest of the country, with **32** ACH's in operation by the end of **1977**.⁵ (See Table 1.)

The growth of ACH operations was given a substantial boost by the U.S. Government's interest in eliminating the mailing of checks. In September **1973**, the U.S. Air Force conducted a test utilizing the Denver Branch of the Federal Reserve Bank of **Kansas** City and the California and Atlanta ACH's to directly deposit approximately **20,000** payroll entries. The test was considered highly successful and, beginning in **1974**, the Air Force began depositing its regular payroll electronically. The Social Security Administration began depositing Social Security payments electronically

⁴ The Chicago ACH recently announced that it may turn its processing over to the Federal Reserve Bank of Chicago.

⁵ The California ACH performs operations at both Los Angeles and San Francisco and the Mid-America ACH performs operations at Kansas City and Omaha.

early in 1976 and other Government payments have been gradually added. By the end of 1977, payments from eight different Government programs were being sent through the ACH system. These **Government** payments now constitute about 85 per cent of all ACH **transactions**.⁶ Plans are underway for making additional types of Government payments through ACH's.

CURREIUTACHUSAGE

In December 1977, approximately 9.3 million payments, most either to or from individuals, were made through ACH's. While this is small relative to the number of checks written (perhaps 3 billion in December 1977), it is growing extremely rapidly. (See Chart 1.) The two ACH's in the Tenth Federal Reserve District, the Rocky Mountain Automated Clearinghouse—which serves Colorado, Wyoming, and northern New Mexico—and the Mid-America Automated Clearinghouse serving the rest of the District—handled about 800,000 of this total.

The ACH's are used for three types of transactions: private debit transfers, private credit transfers, and Government credit transfers. Government payments dominate ACH volume in all parts of the country, but private payments, particularly debit transfers, are growing rapidly in both the nation and the Tenth Federal Reserve District. (See Charts 1 and 2.)

⁶ The Government payments and private ACH programs are technically different, but, with the exception of New York and Chicago, use the same facilities and operating techniques. Both are treated as ACH operations here. All data in this article include both the private ACH's and the Government payments made through the Federal Reserve Banks.

Government Payments

In December 1977,⁷ Government payments made up 85 per cent of the items moving through ACH's nationally and 72 per cent of the items in the Tenth District. Nationally, 80 per cent of these items are various types of Social Security benefits. The remainder are Air Force payroll items; Civil Service, CIA, and Railroad Retirement benefits; Veterans Administration benefits; and Revenue Sharing payments. Additional Government payments will be added later, with U.S. Navy Retirement benefits scheduled for May 1978.

Private Credit Transfers

Virtually **all** private ACH credit transfers are payroll items. Although direct deposit of payroll checks is not new, having been practiced by certain firms and the Federal Government long before ACH's came into existence, it remains confined to a relatively small percentage of the work force. In December 1977, there were 619,000 private credit items, about 6.6 per cent of total ACH volume. While private credit volume in December 1977 was 118 per cent above the December 1976 figure, it was far below the hopes of the early developers of ACH's. For example, SCOPE had predicted that more than 8 million paychecks per month would go

⁷ ACH statistics are slightly exaggerated by the practice of sending a test item through the ACH prior to the first time an actual payment is made. Test items are exactly like regular ACH items, except that they have a zero amount. The receiving financial institution reports any error (for example, an erroneous bank account number or non-existent account) to the originator. These "prenotifications" normally lead to a minor overstatement of ACH volume. However, the December commercial debits figure was overstated by more than 60,000 items because of first-time ACH use by a large insurance company in the Tenth District.

Chart 1
U.S. ACH ACTIVITY

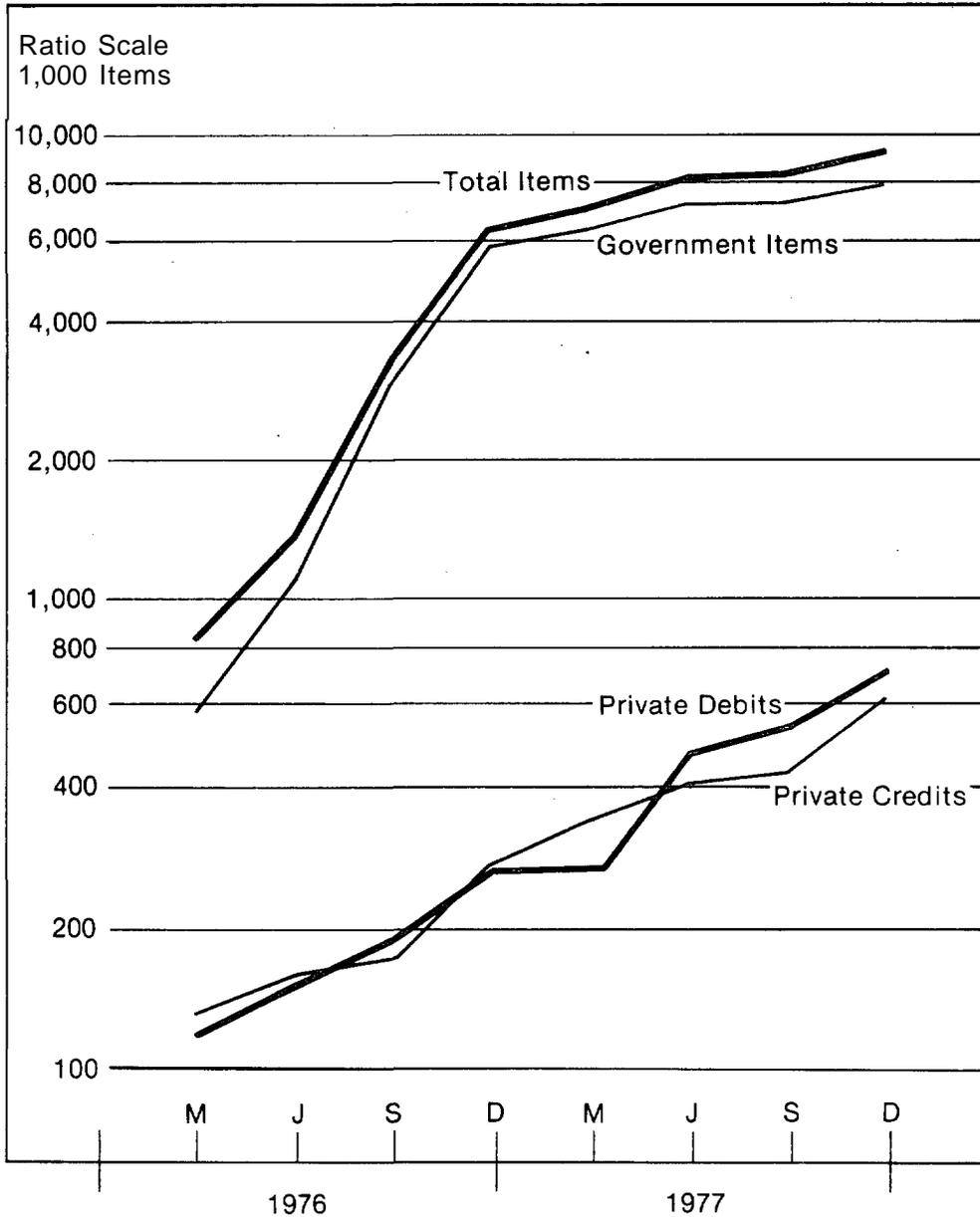
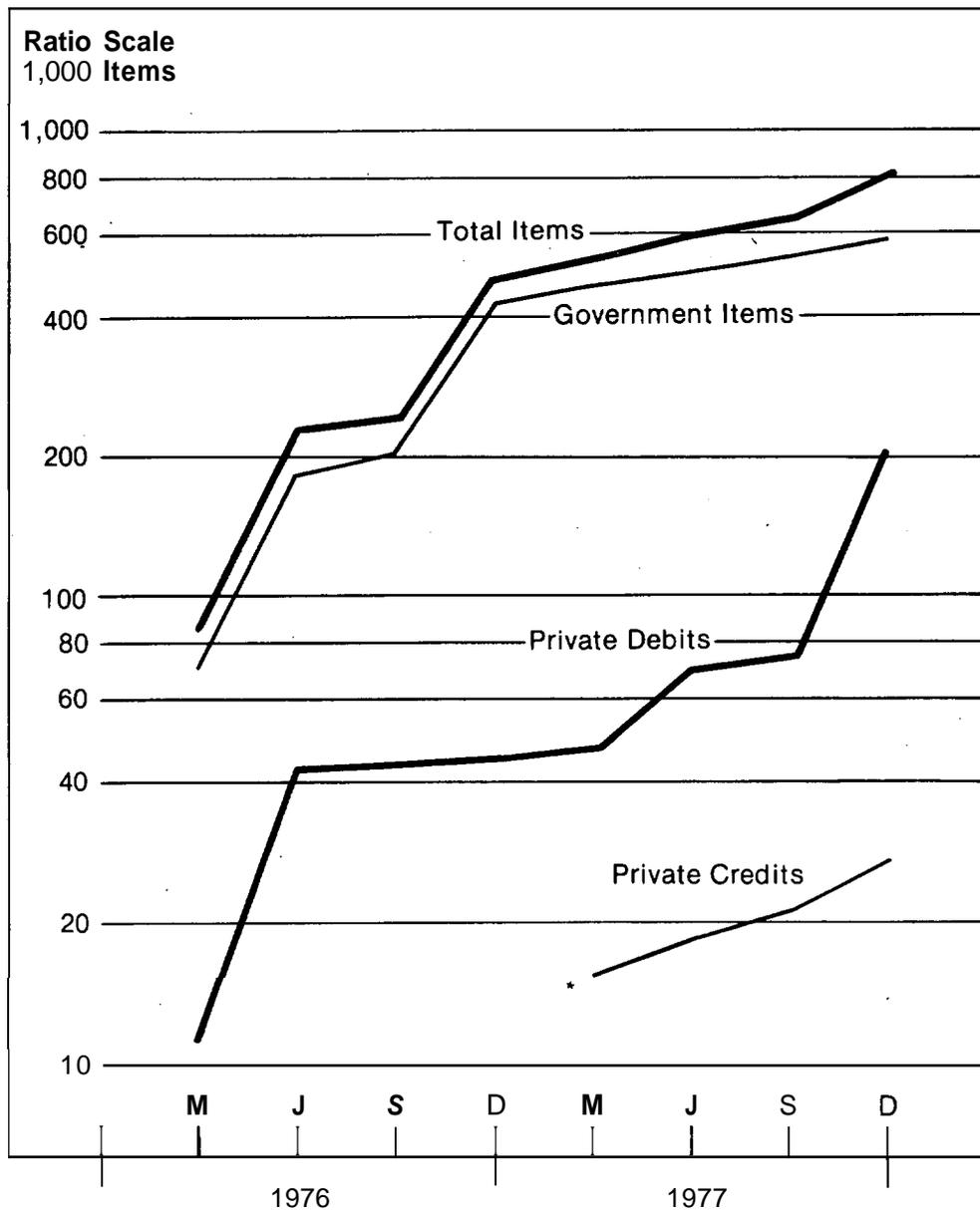


Chart 2
TENTH FEDERAL RESERVE DISTRICT
ACH ACTIVITY



*The volume of private credits in 1976 was too small to plot.

through the California ACH alone by 1977. As discussed later, the less than expected growth probably reflects the fact that many firms and their employees believe that there are few benefits in direct deposit.

Private Debit Transfers

Private debit transfers constitute the fastest growing type of ACH payment. In December 1977, 739,000 debit transfers—7.9 per cent of total volume—were made through the ACH's. Total debit transfers were 161 per cent above the year-earlier total. Most of these debit transfers involve the payment of a fixed recurring sum by individuals to businesses. The largest volume of debit transfers involves payments to insurance companies, with mortgage payments probably occupying second place. Premium payments to two Tenth District insurance companies accounted for more than 100,000 transfers during December 1977. However, there are a wide variety of other users. Examples include utilities with customers operating under a "level payment plan," organizations collecting members' dues payments, and even a cemetery which sells lots on the instalment plan.

While the primary use of ACH debit payments has been for recurring payments, plans now in use in Atlanta, Philadelphia, and the Fourth (Cleveland) Federal Reserve District demonstrate other possibilities. In Atlanta, a system called "Bill Check" was instituted at the time the ACH was formed. Under Bill Check, a customer may pay bills by returning a signed authorization to his creditor in place of a check. The creditor then prepares a tape which provides the information necessary for an ACH debit transfer.

In Philadelphia, a bank is operating a system which, like systems in other areas, allows the withdrawal of funds at supermarkets equipped with terminals. The unusual feature of this

particular system is that users need not have an account with the bank operating it. Withdrawals by users with checking accounts at other banks are made by means of an ACH debit item.

The U.S. Postal Service is currently using the ACH's in the Fourth Federal Reserve District as a cash management system. ACH debit items are used to transfer funds from many commercial banks to a single account in a Pittsburgh bank.

The ACH's could also be used in a giro payments system—that is, a system where customers send payment orders to their financial institution which in turn transfers funds to individual creditors. A number of financial institutions already offer such services (generally called bill paying services). It would appear to be feasible to move these payments through ACH's without making major changes in ACH procedures.

A NATIONAL ACH SYSTEM

The usefulness of ACH's has thus far been limited because payments through existing ACH's can be made only to recipients in a limited geographic region—either a single Federal Reserve District or a portion of it. Many potential ACH users are not interested in a system that is not nationwide in scope. For example, a number of life insurance companies which collect premium payments by issuing drafts drawn on their customers' accounts nationwide have generally not used the ACH's.

In view of the perceived importance of a national ACH system, the National Association of Automated Clearing Houses (NACHA) requested that the Federal Reserve System attempt a test of an inter-ACH interchange. The interregional test was begun March 1977 using the Federal Reserve communication's system to transmit payments among Federal

Reserve-operated ACH's in the Boston, Cleveland, Atlanta, Dallas, and San Francisco Districts, and the privately operated ACH in New York. By the end of November 1977, 29 firms were making payments through the inter-regional ACH system at the rate of 45,000 items per month. The bulk of the firms were using the system for direct deposit of payroll items, but most of the payments were debit items generated by life insurance companies.

The test was deemed a success on several counts. The interregional movement of funds was confirmed technically and operationally feasible. There also appears to be a substantial demand by firms for an interregional system. Finally, the system did not appear to create problems for consumers. NACHA therefore requested that the Federal Reserve System adopt a permanent interregional system involving all 32 operating ACH's. The Federal Reserve Board of Governors approved a plan for a national system on April 14, 1978. Current plans call for adding ACH's gradually to the interregional system, so that all will be a part of it by the end of 1978. This system will not involve a central ACH, but rather will have each ACH transmit data to all other ACH's for which it has payments. In this regard, it will be much like the present check processing system where checks are sent by each Federal Reserve office to all other Federal Reserve offices.

ACH COSTS AND BENEFITS

Much of the discussion of electronic funds transfer in the 1960's seems to have been motivated by the belief that it was an absolute necessity because check volume would eventually exceed the level that the Federal Reserve and commercial banks could handle. Today this view seems at best naive. Check volume continues to grow about 7 per cent per

year, but it seems clear that this volume growth can be handled virtually indefinitely, although it will be necessary to expand bank and Federal Reserve check processing departments. Contrary to the expectations of many, check processing technology has continued to change, and productivity growth in check processing has been at least as good as that in other areas of the **economy**.⁸ Since it now seems that the payments system can continue to function indefinitely without EFT, it is necessary to evaluate any EFT system with the same cost-benefit approach that would be used with other proposed innovations. Per item costs for ACH's depend very heavily on the volume of items going through the system. Thus, it is not possible to calculate precisely the cost of operating ACH's in some future year without some idea of what ACH volume will be. However, such an estimate is extremely difficult to make. Although past estimates of future ACH usage have sometimes proven too high, ACH use is growing at a rate more rapid than can be sustained indefinitely. It is possible, however, to reach some general conclusions about the costs and benefits of ACH's.

Ultimately, ACH volume will depend on whether using the ACH will provide benefits to users of financial services. Even if ACH's provide substantial benefits to financial institutions and the Federal Reserve System, ACH's will not be used unless the users of the payments system—households, businesses, and Governmental units—find that using the ACH is preferable to using alternative means of payment. Thus, any analysis of ACH costs and benefits should start with these potential users.

⁸ Functional cost data suggests that over the period 1971-76, bank check handling productivity improved by an average of 2.8 per cent per year, as compared with 1.5 per cent per year in the entire nonfarm business sector.

Costs and Benefits to Households

Direct Deposit of Paychecks. From the earliest discussions of ACH's, it has been widely believed that the system would be used extensively for direct deposit of payroll checks. Direct deposit means that a worker need no longer visit his financial institution or mail his check to it, and that his funds reach the bank account faster and more conveniently. These advantages might seem to provide an irresistible combination.

In practice, however, the support given direct deposit by working Americans has not been particularly strong. While most workers do not yet have the opportunity to have their pay directly deposited, only a minority of those who are eligible for direct deposit have used it. Apparently, the trip to the bank to deposit a check is not regarded as a significant cost, or at least is not costly enough to offset reservations about direct deposit, perhaps because many individuals need to obtain currency from the bank in any case. Potential users also cite fears of computer error and the desire to maintain control of their finances. In addition, approximately 20 per cent of households do not yet have a checking account. A major unanswered question affecting future ACH usage is the extent to which time and experience will overcome reservations about direct deposit.

Direct Deposit of Government Benefits. In contrast to experience with direct deposit of payroll, it seems fair to describe the direct deposit of Government benefits such as Social Security as at least a limited success. Early in December 1977, it was estimated that 16 per cent of eligible Government payments were being directly deposited through ACH's. This is a respectable record, given that the program has been in effect for a short time and that the age group receiving most of the payments tends to be relatively conservative.

This record reflects the fact that the potential gains to recipients are fairly high. Unlike most paychecks, Government benefit checks are distributed through the mail. While Social Security recipients may not completely trust the reliability of the banking system, there is also considerable distrust of the postal system. There have been substantial problems in many parts of the country with stolen Social Security checks and replacement is both difficult and time consuming. Since direct deposit eliminates lost and stolen checks, the program has an obvious attraction and its success is not surprising.⁹

Growth in direct deposit of paychecks will eventually encourage greater use of direct deposit of Social Security checks, as retirees who have become accustomed to direct deposit of payroll checks are likely to have Social Security checks directly deposited. The highest percentage of eligible recipients of Government payments currently using direct deposit is among the Civil Service retirees, many of whom have had their paychecks directly deposited.

Debit Transfers. Debit transfer payments exceeded private credit transfers for the first time in 1977, and are continuing to grow at a more rapid rate than are credit transfers. While the rapid growth almost certainly reflects the fact that debit transfers are more attractive to originators than are credit transfers, it also reflects features that make these transfers attractive to households. Debit transfers eliminate the time required for householders to write checks. These transfers also eliminate the cost of postage—a factor which has become increasingly important. First class postage rates have increased by 160 per cent since 1967, approximately twice the 81.6 per cent rise in

⁹ The considerable effort that the Treasury has put into advertising direct deposit is probably also an important factor in its success.

the consumer price index between 1967 and 1977. Furthermore, U.S. Postal Service projections imply an even more rapid rate of increase in postage rates during the next several years than over the last decade.

It seems unlikely, however, that households will be willing to preauthorize the transfer of funds from their accounts to pay bills which are not fixed in amount. Consumer surveys have consistently shown that households do not wish to relinquish control of their checking accounts. There are, however, substantial numbers of recurring payments for items such as mortgage and instalment credit payments. The combination of convenience and rapidly **increasing** postage rates may well incline many customers toward authorizing ACH transfers for these purposes.

The success of an ACH giro system which would allow customers to direct their banks to transfer funds directly to creditors is essentially speculative. Giro transfer systems have been extremely successful in other countries, but in these countries personal checking accounts had never been the dominant means of payment. It may well be that high postage rates will also give an impetus to giro payments, since a number of payments could be authorized with one communication to a financial institution, and the communication could just as well be over the phone as by mail.

Costs and Benefits to Businesses

ACH growth will require business **cooperation**, since most payments which can potentially move through ACH's are between businesses and consumers. Businesses are, of course, quite concerned with the costs of making payments, but they also are concerned with the potential effect of ACH's and other EFT developments on their cash flow. In recent years, businesses have devoted substantial efforts to speeding up receipts and delaying

expenditures, since funds gained in this manner can be invested in short-term **interest-bearing** assets or used to reduce short-term borrowing. One important factor in making ACH decisions will be the impact of the use of ACH's on cash flow.

Credit Transfers. Most firms do not mail paychecks, but rather distribute them directly to employees, so using the ACH for payrolls will not save significantly on postage expenses. Furthermore, it is necessary to provide employees with a statement of wages and deductions, so using the ACH will provide little, if any, saving in processing costs. Paying through the ACH will, however, lead to a loss of float for businesses, since ACH payments will all be deducted from a firm's account on payday, while paychecks frequently take several days to clear. The net result is that, with the exception of **firms** that mail paychecks, the benefit of paying through an ACH is its value as an employee benefit, while the **loss** of float leads to a definite cost. As long as workers show little interest in this benefit, there would seem to be little reason why firms would move rapidly toward paying employees through ACH's, unless the pricing of the payments system is changed drastically so that checks become substantially more expensive than ACH payments.

Debit Transfers. Debit transfers, unlike credit transfers, can potentially reduce processing and postage costs and speed cash flow. Under the check system, firms generally bill customers, even when the payment is a recurring one (although mortgage and instalment lenders sometimes provide a coupon book in lieu of regular billing). The firm must always bear the expense of opening envelopes, preparing deposits, and manually entering payments data into the firm's accounting system. The use of ACH's can eliminate or automate these tasks, at a potentially substantial cost saving for a large firm.

Furthermore, in most cases, the firm will have speedier access to the funds. Thus, it seems likely that firms will have much greater interest in debit transfers than in credit transfers in the near future.

Costs and Benefits to the U.S. Government

The U.S. Government is the largest user of the payments system and is the user that has been most interested in ACH's, since the Treasury has seen two substantial types of saving from using ACH's: savings in postal costs and savings in investigating and replacing lost and stolen checks.

To the extent ACH use reduces postal volume, and that the reduced volume has a smaller impact on costs than on revenue, ACH's may eventually require a larger subsidy for the U.S. Postal Service than would otherwise be the case. However, this subsidy will probably be small, since the actual effect of ACH's on postal volume is likely to be quite small. Furthermore, the Postal Service can be expected to reduce its costs in response to a lower volume to a greater extent in the long run than in the short run, so much of any necessary subsidy is likely to be transitory. Rather optimistic projections of ACH volume suggest that ACH's are unlikely to eliminate more than 200 million first class mail items by 1980.¹⁰ This would be less than one-half of 1 per cent of current first class mail volume.

Costs and Benefits to Financial Institutions

It is hoped that ACH's will eventually reduce bank costs, as large volumes of items on

magnetic tape would be substantially cheaper to process than paper checks. While there are no data available on the current effect of ACH's on the costs of financial institutions, it does appear that at current volume levels ACH's have not reduced, and may have slightly increased, costs for most participating institutions." Perhaps the only institutions making a profit are a few banks that obtain fee income or deposit balances by originating items for commercial customers, and a small number of savings and loans using the system for mortgage payments.

ACH's affect the flow of funds to financial institutions, as well as to firms and individuals. Banks will generally receive funds quicker when credit transfers move through an ACH rather than the conventional check processing system, while banks originating debit transfers will lose the funds more quickly. Thus, in the absence of some compensating price system, banks have a greater incentive to promote debit transfers than credit transfers. Recognizing this, some ACH's are discussing pricing systems which involve transfer payments from institutions benefiting from the flow of funds in an ACH system to those who lose funds.

Costs and Benefits to the Federal Reserve System

The Federal Reserve's exact cost of operating ACH's is extremely difficult to determine as many of the facilities used in operating the ACH's would be necessary for check processing in the absence of ACH's. Federal Reserve costs for ACH processing in the fourth quarter of 1977 are estimated at about 4 cents per item, as

¹⁰ "Analysis of Anticipated Impact of EFTS on the Postal Service." NACHA Quarterly Update. Supplement Number 6, July 1977, pp. 4-5.

¹¹ Testimony of Virgil Dissmeyer, President, NACHA, in U.S. Senate. 95th Congress. First Session, "Oversight on the Payments Mechanism, the Federal Reserve's Role in Providing Payments Services, and the Pricing of Those Services." Hearings, October 10 and 11, 1977.

compared with approximately 1 cent per item for conventional check processing. However, because such a large part of ACH costs are fixed, unit costs can be expected to decline rapidly as volume increases. Ultimately, it seems likely that ACH costs will be below those of conventional check processing.

The proposed interregional ACH interchange will increase costs somewhat. The Federal Reserve Board of Governors staff estimates that Federal Reserve costs will increase by \$500,000 during 1978 as a result of the interchange and might be as much as \$1.2 million per month higher within 5 years.

THE ROLE OF THE FEDERAL RESERVE IN ACH'S

As has been previously noted, the Federal Reserve System currently performs the operating functions for 30 of 32 ACH's and provides courier service and settlement facilities for all of them. The Federal Reserve has provided these services because ACH's were natural extensions of the traditional Federal Reserve roles in check processing and the provision of services to the U.S. Treasury, and because they had been requested by Federal Reserve member banks and the Treasury. If the Federal Reserve System were not assuming these ACH functions, it is extremely unlikely that there would now be any substantial degree of ACH activity. Before the Federal Reserve began performing courier service for the Midwest ACH in Chicago in 1976, courier services were costing the ACH \$1,000 per week²—nearly 35 cents per item on even the December 1977 payments going through that ACH. It is unlikely that any private enterprise would have been willing to subsidize the startup

¹² "Courier Services to Independent ACH's," *NACHA Quarterly Update*. October 1976, p. 6.

costs for a nationwide ACH to the extent that the Federal Reserve has.

It does not necessarily follow that the Federal Reserve should indefinitely operate ACH's. Indeed, it has even been argued that the Federal Reserve System should get out of conventional check clearing.¹³ Two issues concerning continued Federal Reserve participation in ACH operations are of considerable current concern: the degree to which a public institution like the Federal Reserve should be operating ACH's, and if the Federal Reserve continues to operate ACH's, whether prices should be charged for ACH services.

Public Versus Private Operations of ACH's¹⁴

Opposition to Federal Reserve operation of ACH's has centered on two issues. The first is the general opposition in our economy to Government operation of any activity which could be performed by the private sector. This opposition is to some extent based on philosophical grounds, but also on the belief that private enterprise is more likely to operate efficiently. In general, there is reason to believe that an institution subject to the profit motive will be more inclined to minimize costs. There is also the belief that to the extent that private firms would like to engage in ACH activities, Federal Reserve operations in this area constitute unfair competition.

Proponents of Federal Reserve operation of ACH's argue that this is simply an extension of the Federal Reserve's traditional role in check

¹³ Preston J. Miller, "The Right Way to Price Federal Reserve Services," Federal Reserve Bank of Minneapolis *Quarterly Review*. Summer 1977, pp. 15-22.

¹⁴ George C. White, Jr., "Private Sector Alternative," *Issues in Bank Regulation*. 1 (Autumn 1977), pp. 6, 13-15; and Benjamin Wolkowitz, "The Fed's Role in EFTS," *Issues in Bank Regulation*. 1 (Autumn 1977), pp. 7-12.

processing and that no private institution would be willing to take over the operation of ACH's at a reasonable cost at this time. It is also argued that an ACH is a natural **monopoly**—that is, that only **one** ACH will be required to provide services efficiently in a given market and that if the Federal Reserve operates the system, access can be guaranteed to all potential users on a fair and equitable basis. It has also been suggested that it might be useful to have the Federal Reserve active in EFT operations even if there are also private EFT organizations in operation, in order to serve as "a clearer of last resort" and to ensure that all users have access to the **system**.¹⁵

The Privacy Protection Study Commission has suggested that the Federal Reserve should not be involved in ACH operations because these operations are inherently threatening to personal **privacy**.¹⁶ The fear has been expressed that since the Federal Reserve is a Government entity, the Government might eventually use the ACH's to gain information about individuals' financial transactions which it would not otherwise be entitled to. While the Commission recognized that the ACH's do not currently have the capability to provide this information, there was the fear that such a capability might be developed in the future.

What this argument seems to overlook is that there is no reason to develop such a capability, except for the purpose of invading personal privacy. While commercial banks need to store information on the transactions of individual customers in such a way that it can be retrieved for the customers' statements, ACH's have nothing to gain by doing this. Building the capability to store information so that the

transactions of a specific customer could be retrieved would be extremely expensive, as would the cost of maintaining this information. It seems unlikely that a Government willing to go to this extreme would hesitate to extricate information from an ACH simply because it was part of the private sector. Commercial banks, while part of the private **sector**, are today required to retain copies of all checks written for more than \$100. Thus, the privacy issue does not seem to be an important one as far as determining whether or not the Federal Reserve should operate ACH's.

Under current conditions, the question does not appear to be whether the Federal Reserve or the private sector should operate ACH's, but rather whether the Federal Reserve should operate ACH's or there should be no ACH's at all. As previously noted, there are now two exceptions to Federal Reserve operation, but these two are in the two most important financial centers in the country. The New York case is unique in that the New York clearinghouse, unlike other clearinghouses, was already operating computer facilities. The Chicago ACH has been one of the least successful, if success is measured by the number of private transactions relative to the size of the population in the area served by the **ACH**.¹⁷

The realization that eliminating Federal Reserve participation at this time would eliminate most ACH activity was an important factor in the unanimous recommendation of the National Commission on Electronic Funds Transfers that the Federal Reserve System continue its ACH operations.¹⁸

¹⁵ Wolkowitz, p. 11

¹⁶ *Personal Privacy in an Information Society. The Report of the Privacy Protection Study Commission*, Washington, 1977, pp. 122-24.

¹⁷ The Chicago metropolitan area has about 3.5 per cent of the U.S. population, but its ACH had only 0.9 per cent of the private volume in December 1977.

¹⁸ *National Commission on Electronic Fund Transfers, EFT in the United States. Policy Recommendations and the Public Interest*. Washington, 1977, pp. 213-14.

Should the Federal Reserve Charge for ACH Services?

The Federal Reserve System has generally provided its services free of explicit charge to member banks. Under Federal Reserve rules, member banks could, in most cases, have the Federal Reserve perform work for nonmember banks free of charge. When Regional Check Processing Centers (RCPC's) were introduced in the early 1970's, nonmember banks were allowed to deposit checks directly with the RCPC. ACH operations have always performed transfers for nonmember banks, and now perform them for thrift institutions as well, without a charge.

When the Federal Reserve System performs services without charge, private firms obviously find it difficult to compete, although private institutions do compete with the Federal Reserve to some extent in check processing and wire transfers. Offering a service below cost also leads to resources being used **inefficiently**.¹⁹ For example, the Federal Reserve may perform functions that could be performed more cheaply by private firms. Or services may be performed to a greater extent than is desirable, because banks will tend to use Federal Reserve services up to the point where the value of an additional unit of service is zero, even if the services are costly to **perform**.

Because of these considerations, there has been considerable discussion of charging for Federal Reserve services. However, the requirement that Federal Reserve member banks hold funds in noninterest-bearing deposits at Federal Reserve Banks or vault cash puts member banks at an earnings disadvantage relative to nonmember **banks**.²⁰ For this reason, the Federal Reserve System has

always felt that it was desirable to partly offset this membership burden by providing free services. In light of the substantial attrition of Federal Reserve member banks **in** recent years, the Federal Reserve felt that it is undesirable to price Federal Reserve services without a solution to the membership **problem**.²¹

The pricing of ACH services also presents a serious problem because of the substantial economies of scale in this activity. Increases in volume will substantially reduce per item ACH costs. Should ACH services be priced at the level of current costs or of lower expected future costs, or at the marginal (or incremental) cost level? Pricing at current costs would deter a desirable increase in ACH activity, while pricing at expected future costs would make it more **difficult** for the private sector to compete with the Federal Reserve. Marginal cost pricing would, as long as costs are diminishing with volume, lead to the Federal Reserve operating **ACH's** at a loss and would deter private competition. In spite of these difficulties, the Board of Governors, at the time the interregional ACH interchange was approved, decided that a pricing schedule for ACH services would be developed in the future, possibly along with prices for other services.

CONCLUSION—THE FUTURE OF ACH'S

At the end of 1977, **ACH's** were handling payments at the rate of more than **100** million

²⁰ Robert E. Knight, "Comparative Burdens of Federal Reserve Member and Nonmember Banks," Federal Reserve Bank of Kansas City *Monthly Review*, March 1977, pp. 13-28.

²¹ Philip E. Coldwell, statement to the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, October 11, 1977, in *Federal Reserve Bulletin*, 63 (October 1977), p. 906.

¹⁹ Miller.

items per year with volume growing at a rate of 40 to 50 per cent per year. At this rate of growth, it will be at least 3 or 4 years before ACH's will have a discernible effect on check volume. If this rate of growth continues for a decade, ACH's could actually induce a decline in check volume.

For ACH growth to continue, however, it will be necessary for private transactions to move in ever increasing numbers through the ACH's. It is clear that there now are a substantial number of recurring debit payments that could be automated with benefits to the parties on both sides of the transactions. There is not, however, any strong incentive for paychecks and other credit transfers to move through ACH's.

Conceivably, if ACH costs eventually fall far below the cost of check handling, banks might provide their customers with price incentives to use ACH's and ACH volume might rise substantially. However, as long as banks are not permitted to pay interest on checking accounts, they have an incentive to compete for deposits by offering checking accounts with low or zero service charges,²² and have little room for offering ACH services at costs lower than check services. Interest-bearing checking accounts might eventually lead to higher priced

check services and provide a stimulus for ACH growth.

The institution of a giro system using ACH facilities could also assist in facilitating ACH growth, and continued increases in postal rates may give such a system a boost. In the absence of such a system, it seems unlikely that ACH use will lead to a substantial decline in check volume.

The goal of the Federal Reserve System in supporting ACH's was not simply to reduce check volume, but to reduce the cost and improve the quality of the payments system. The ACH's, by speeding payments and making their arrival time more certain, have improved the quality of the system. However, ACH volume has as yet been insufficient to reduce payment system costs—in fact, costs have probably increased slightly as a consequence of the ACH's. Nonetheless, there is reason to believe that sustained increases in volume will eventually lead to ACH costs below those of the check system.

²² Bryon Higgins, "Interest Payments on Demand Deposits: Historical Evolution and the Current Controversy," Federal Reserve Bank of Kansas City *Monthly Review*, July-August 1977, p. 8.