



FEDERAL RESERVE BANK  
OF DALLAS

TONY J. SALVAGGIO  
FIRST VICE PRESIDENT

June 24, 1991

DALLAS, TEXAS 75222

Notice 91-54

**TO:** The Chief Executive Officer of each  
financial institution and others concerned  
in the Eleventh Federal Reserve District

**SUBJECT**

**Establishment of an All-Electronic ACH Service**

**DETAILS**

The Board of Governors of the Federal Reserve System has approved a requirement that all depository institutions that originate or receive commercial automated clearinghouse (ACH) transactions through the Federal Reserve Banks establish electronic access to the Reserve Banks for ACH services by July 1, 1993. The requirement is the result of a proposal that was issued for public comment in December 1990.

An all-electronic ACH will improve the efficiency of the ACH mechanism by promoting timely posting of ACH payments to customer accounts and will enhance the attractiveness of the ACH system by allowing greater processing flexibility. It will also enhance the integrity of the ACH mechanism by reducing credit and fraud risk, providing a higher level of security, and improving contingency and disaster recovery capabilities.

**ATTACHMENT**

A copy of the Board's notice (Federal Reserve System Docket No. R-0718) is attached.

**MORE INFORMATION**

For more information, please contact Vinton Myers at (214) 698-4349, B. B. Sessions at (214) 651-6403, or Larry Ripley at (214) 651-6118. For additional copies of this Bank's notice, please contact the Public Affairs Department at (214) 651-6289.

Sincerely,

A handwritten signature in cursive script that reads "Tony J. Salvaggio".

**FEDERAL RESERVE SYSTEM  
DOCKET NO. R-0718  
Federal Reserve Bank Services**

**AGENCY:** Board of Governors of the Federal Reserve System.

**ACTION:** Notice of Final Action.

**SUMMARY:** The Board has approved a requirement that all depository institutions that originate or receive commercial automated clearing house (ACH) transactions through Federal Reserve Banks establish electronic access to the Reserve Banks for ACH services by July 1, 1993. The Board anticipates significant increases in nonelectronic input and output fees in January 1992 and January 1993, reflecting the higher cost of providing those aspects of the ACH service in an increasingly electronic environment. The Board has determined that the anticipated increases in nonelectronic input and output fees should provide sufficient encouragement for depository institutions to convert to electronic access. Therefore, the Board has not adopted the per transaction surcharge to nonelectronic endpoints that was proposed to be implemented in January 1993.

An all-electronic ACH will improve the efficiency of the ACH mechanism by promoting timely posting of ACH payments to customer accounts and will enhance the attractiveness of the ACH system by allowing greater processing flexibility. Also, an all-electronic ACH will enhance the integrity of the ACH mechanism by reducing credit and fraud risk, providing a higher level of

security, and improving contingency and disaster recovery capabilities.

**EFFECTIVE DATE:** The requirement that institutions that originate or receive commercial ACH transactions through Federal Reserve Banks establish electronic connections to the Reserve Banks for ACH services will be effective July 1, 1993. The new fee structure for the nonelectronic aspects of the ACH service will be effective January 1, 1992.

**FOR FURTHER INFORMATION CONTACT:** Louise L. Roseman, Assistant Director (202/452-3874), Gayle Brett, Manager (202/452-2934), or Scott Knudson, Senior Financial Services Analyst, (202/452-3959), Division of Reserve Bank Operations and Payment Systems; for the hearing impaired only: Telecommunications Device for the Deaf, Dorothea Thompson (202/452-3544).

**SUPPLEMENTARY INFORMATION:**

Background

The ACH is a value-dated electronic payments mechanism that supports both debit and credit payments. In ACH debit transactions, funds flow from the depository institution receiving the transaction to the institution originating the transaction. Debit payments include the collection of insurance premiums, mortgage and loan payments, consumer bill payments, point-of-sale transactions, and corporate cash concentration transactions. In ACH credit transactions, funds flow from the depository institution originating the transaction to the institution receiving the transaction. Examples of credit payments include direct deposit of

payroll and corporate payments to contractors and vendors. In 1990, the Reserve Banks processed 490.8 million commercial debit transactions valued at \$3.18 trillion, and 424.5 million commercial credit transactions valued at \$989.2 billion.<sup>1</sup>

Unlike Fedwire, in which funds transfers are processed individually and settled immediately at the time of processing, the ACH is a batch-processing system in which transactions are generally deposited at Reserve Banks for processing one or two days before the settlement date and are processed and delivered to receiving institutions during either the day or night processing cycle.

As of March 31, 1991, approximately 7,200 of the 10,050 endpoints that receive commercial ACH services directly from the Reserve Banks did not have electronic data communications links with the Reserve Banks for ACH services. These nonelectronic endpoints receive ACH transactions using magnetic tape, diskette, or paper media. Some nonelectronic endpoints use messengers to deposit ACH input and either pick up ACH output or receive it by Federal Reserve check courier or by mail.

Because of the additional time required to deliver ACH output to nonelectronic endpoints, ACH credit payment information necessary to update customers' accounts may not be received by some

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<sup>1</sup>Commercial ACH transactions are ACH transactions originated by depository institutions. Government ACH transactions are originated by the federal government.

receiving institutions until after the opening of business on the settlement day. In addition, the need to deliver some ACH output nonelectronically restricts the Federal Reserve's ability to offer ACH deposit and distribution schedules that better meet the needs of depository institutions and their customers. Moreover, the need to originate many ACH credit payments up to two days prior to settlement date in order to help ensure timely receipt by the nonelectronic endpoints makes the ACH system unattractive for certain payment applications and increases credit risk in the system. Finally, the security and disaster recovery capabilities associated with nonelectronic delivery of ACH payments are inferior to those associated with electronic transmission.

Proposal to Implement an All-Electronic ACH

The Board believes that the Federal Reserve could make significant improvements to its ACH service if all participating institutions accessed the service electronically to originate and receive ACH transactions. Some of these improvements cannot be fully achieved unless all ACH endpoints send and receive ACH transactions electronically.

The Monetary Control Act directs the Federal Reserve to consider, in its pricing principles, the provision of an adequate level of service nationwide. This provision relates not only to the availability of the service to all depository institutions, but also to the level of service that is provided. The Board believes that the establishment of an all-electronic ACH is consistent with the Monetary Control Act and Federal Reserve policies concerning

payment services in that it will enable the Federal Reserve to make major improvements to its ACH service.

An all-electronic ACH will enable Federal Reserve Banks to make significant improvements to their processing schedules. Current schedules are constrained by the timing of check courier dispatches because check couriers deliver ACH output to many receiving institutions. The elimination of these constraints will allow for later deposit deadlines, thereby facilitating the use of the ACH for a broader range of payment applications.

Another benefit of an all-electronic ACH is the increased speed with which ACH payments can be delivered. This would ensure that all institutions, regardless of their volume or location, would receive ACH output on a timely and consistent basis to enable them to post payment information to customers' accounts sooner and thereby provide more prompt funds availability. The assurance of timely delivery may facilitate the use of the ACH for payments, such as hourly payroll, that are not generally made via the ACH today.

Depository institutions in an all-electronic environment will be able to reduce the credit risks associated with ACH credit transfers because the time between the time of deposit and settlement of transactions can be reduced. Credit risk associated with debit return items is also reduced because the originating institution generally will receive the return item one or two days sooner than if it were received in nonelectronic form.

An all-electronic ACH network will result in a higher level of security for all ACH transactions. The Reserve Banks currently offer data encryption and other security procedures to electronic endpoints to ensure confidentiality of ACH transactions and authenticity of the sender. This provides a significantly higher level of security than for nonelectronic deposit and delivery alternatives.

Finally, an all-electronic ACH will improve disaster recovery and contingency processing capabilities. Electronic access to ACH services will eliminate delays associated with transporting nonelectronic input and output media to and from a remote site in a contingency processing or disaster recovery situation.

The Reserve Banks have already taken certain steps to require electronic access. Beginning January 1, 1991, new commercial ACH receiving points (including endpoints that had received only government ACH transactions but begin to receive commercial transactions) were required to receive ACH transactions from the Reserve Banks electronically. In addition, beginning July 1, 1991, new sending points will be required to originate ACH transactions to Reserve Banks electronically.

If the benefits of an all-electronic ACH are to be realized within the next few years, the Board believes that the Federal Reserve will have to encourage more actively the development of an all-electronic ACH network. In December 1990, the Board requested comment on a proposal to require depository

institutions that originate or receive commercial ACH transactions through the Federal Reserve Banks to establish electronic connections with the Reserve Banks for ACH services [55 FR 53051, December 26, 1990]. Specifically, the Board proposed that the Federal Reserve's commercial ACH service would no longer be provided to institutions that could not deposit and receive ACH transactions electronically, beginning July 1, 1993. In order to encourage institutions to establish electronic connections prior to the conversion deadline and thus avoid a large number of requests for electronic access immediately prior to the deadline, the Board also proposed that a per transaction surcharge on commercial ACH transactions originated or received be assessed to depository institutions using nonelectronic ACH deposit or delivery alternatives, beginning January 1, 1993. In addition, to further encourage nonelectronic endpoints to convert to electronic access, the Board indicated that ACH fees for nonelectronic input and output media likely would be increased significantly.

Summary of Comments

The Board received 81 comments on the proposal. The following table reflects the number of comments by category of respondent.

	<u>Comments Received</u>
Commercial Banks/Bank Holding Companies	42
ACH Associations	15
Trade Associations	8
Credit Unions	6
Data Processors	4
Savings Bank Corporation	1
Department of the Treasury	1



Federal Reserve Banks	3
Total	81

Seventy commenters supported the Board's proposal to establish an all-electronic ACH. Thirty-three commenters supported the proposal in its entirety, and thirty-seven commenters supported the Board's objective to establish an all-electronic ACH but expressed some reservations about certain aspects of the proposal. The reservations generally centered on the use of incentive pricing (i.e., the proposed transaction surcharge and the anticipated increase in nonelectronic input and output fees), and the cost to small depository institutions of establishing an electronic connection. The commenters that opposed the use of transaction surcharges and nonelectronic input and output fee increases argued that incentive pricing is inconsistent with provisions of the Monetary Control Act and were concerned that the Federal Reserve would use the revenue obtained from the incentive fees to subsidize other ACH fees, thereby creating potential competitive inequities between the Federal Reserve and private-sector ACH processors.

Eleven commenters opposed the proposal. These commenters, which were small depository institutions concerned about the cost to establish an electronic connection for delivery of ACH transactions, generally questioned the benefits to them of an all-electronic ACH. These commenters were generally less than \$50 million in asset size and generally originated and/or received an average of approximately 1,000 items per month.

Commenters generally supported the establishment of a conversion deadline for electronic access. These commenters indicated that transaction surcharges and nonelectronic input and output fee increases alone would not be sufficient to encourage all depository institutions (particularly smaller institutions) to convert to an electronic connection. Commenters generally indicated that there are no significant obstacles to prevent them from converting by the mid-1993 proposed conversion deadline. Several commenters expressed concern that the Federal Reserve may not be able to provide training and installation support sufficient to meet the proposed conversion deadline. Several other commenters expressed a preference for an earlier conversion date.

Overall, the commenters believed that the Federal Reserve's electronic access alternatives -- computer interface (bulkdata or vendor software), Fedline, and FLASH-Light<sup>2</sup> -- are sufficient to meet the institutions' needs. There was some concern, however, that these alternatives may be too expensive for very low-volume institutions. Finally, several commenters

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<sup>2</sup>The Federal Reserve currently offers depository institutions several connection alternatives to facilitate the conversion to electronic access for ACH services. The alternatives are designed to meet the needs of institutions with various transaction volume levels. Medium- to high-volume institutions can use a computer interface connection using either the Federal Reserve's bulkdata software or vendor software that meets Federal Reserve protocol specifications. Low- to medium-volume institutions can use Fedline intelligent-terminal software, and low-volume institutions can use FLASH-Light intelligent-terminal software with receive-only capabilities.

suggested that in order to ensure the success of the conversion effort, there needs to be more publicity and awareness of the effort, and the Federal Reserve System should work closely and cooperatively with the ACH associations and other industry groups.

The Board, after considering the comments received, has adopted a mandatory conversion deadline for an all-electronic ACH of July 1, 1993. In addition, the Board anticipates that it will increase significantly, beginning January 1992, the nonelectronic tape input and output fees and paper output fees to reflect the higher cost of providing these aspects of the ACH service in an increasingly electronic environment. The Board believes that these fee increases also will serve to provide sufficient encouragement for depository institutions to convert to electronic access for Federal Reserve ACH services and therefore has not adopted the per transaction surcharge to nonelectronic endpoints proposed to be implemented in January 1993. The following discusses the specific issues raised by the commenters and the Board's response.

Conversion Deadline. The Board proposed that the Federal Reserve will no longer provide commercial ACH services to depository institutions that have not established an electronic connection for ACH services, beginning July 1, 1993. Sixty-seven commenters supported the imposition of a conversion deadline for electronic access. Of those, six commenters expressed concerns regarding the Federal Reserve's ability to convert the large number of nonelectronic endpoints by that date. Seven commenters that supported a conversion deadline indicated that the Federal Reserve

could set an earlier target date to achieve an all-electronic ACH and two commenters recommended that the Federal Reserve set an earlier conversion date. Two commenters that supported the concept of an all-electronic ACH questioned the need for a mandatory conversion date.

The Board has adopted the proposed July 1, 1993, conversion deadline. This deadline should provide reasonable time for depository institutions to establish electronic access. The Board believes that this schedule is ambitious but realistic in terms of the ability of the Federal Reserve Banks to support the conversion. The Reserve Banks have developed conversion plans and are devoting additional resources to the electronic conversion effort. To ensure that the conversion deadline is achieved and to avoid a large number of conversions at the end of the transition period, nonelectronic endpoints should allow sufficient lead time when requesting electronic access to allow for ordering equipment, testing, and training their staffs. Therefore, depository institutions requiring computer interface (bulkdata or vendor software) connections should place orders for the connections no later than February 28, 1993. Depository institutions planning to use Fedline or FLASH-Light connections should place orders no later than March 31, 1993. The earlier date for computer interface connections reflects the additional time required for testing and training when installing these connections.

Nonelectronic Input and Output Fee Increases and Transaction Surcharge. The Board proposed that a transaction

surcharge be assessed on commercial ACH transactions originated and received by nonelectronic deposit and delivery alternatives, beginning January 1, 1993. The Board also indicated that ACH fees for nonelectronic input and output media would be increased significantly, beginning January 1, 1992. Forty-one commenters supported the fee increases or indicated that higher fees would encourage the conversion to electronic connections. Fourteen commenters opposed the use of the surcharge. Although the Board did not anticipate that the proposed fee increases would result in an overrecovery of the cost of providing ACH services, eleven commenters opposed the nonelectronic input and output fee increases and transaction surcharges on the grounds that all fees should be based on the cost of providing the service. They argued that, if the Federal Reserve were to base fees on factors other than cost, these fees could be used to subsidize the ACH transaction fee assessed to electronic endpoints, which could create competitive inequities between the Federal Reserve and private-sector ACH processors. Other commenters opposing the surcharge stated that the higher costs could be punitive for small depository institutions, which may elect to cease participation in the ACH.

Under the current fee structure, both paper and tape output are assessed the same fee, with a higher fee assessed for output delivered by the Federal Reserve rather than picked up by the depository institution. To reflect more accurately the significant differences in cost between tape and paper output,

separate fees will be assessed for tape and paper output, beginning January 1, 1992.

Nonelectronic input and output fees have increased significantly in recent years to better reflect the cost of providing these aspects of the ACH service. In its request for comment, the Board indicated that nonelectronic input and output fees may increase by 50 to 100 percent in January 1992. The Board anticipates that the tape input and output fees and paper output fees will increase substantially in 1992 because, in the case of the tape fees, the current fees do not fully recover the cost of providing these nonelectronic aspects of the ACH service, and because the fixed costs of providing these input and output options will be spread over fewer nonelectronic endpoints as conversions occur. These fees will further increase in 1993 as the number of nonelectronic endpoints continues to decrease.

The Board anticipates that it will set the tape input fees at the same level as the tape output fees and that these fees will be in the range of \$12.00 to \$15.00 (compared to \$4.50 or \$5.25 for output or \$6.00 for input in 1991). The Board anticipates that paper output fees in 1992 will be in the range of \$6.00 to \$9.00 (compared to \$4.50 or \$5.25 in 1991). Output fees may be set somewhat higher for output delivered by the Federal Reserve rather than picked up by the depository institution. The Board anticipates that these increases in nonelectronic input and output fees should be sufficient to encourage an orderly migration

to an all-electronic environment, and thus has not adopted the proposed transaction fee surcharge.

Depository institutions that wish to establish an electronic connection in 1991 and thus avoid the 1992 nonelectronic input and output fee increases should allow sufficient lead time when requesting electronic access. Depository institutions planning to establish Fedline or FLASH-Light connections in 1991 should request their conversion to electronic access no later than September 30, 1991. Depository institutions that plan to establish computer interface (bulkdata or vendor software) connections in 1991 should request their conversion no later than August 31, 1991. To avoid further nonelectronic input and output fee increases in 1993, depository institutions that plan to establish computer interface connections (bulkdata or vendor software) during 1992 should request their connections by August 31, 1992. Institutions that plan to establish Fedline or FLASH-Light connections during 1992 should request their connections by September 30, 1992. A depository institution that requests, by the applicable date noted above, to establish an electronic connection will not be assessed the increased input and output fees that take effect the following year if there is a delay in the installation of the electronic connection that is not attributable to the depository institution.

Several commenters suggested an alternative approach to the proposed pricing incentives that would encourage depository institutions to convert to electronic access prior to the conversion deadline. They recommended that the Federal Reserve

waive the installation and training fees that are assessed when an electronic connection is established, noting that this approach would be similar to measures taken by the New York Clearing House in its all-electronic ACH conversion effort. Although the Board agrees that this approach would provide further incentive to depository institutions to establish electronic access for ACH services, it believes this approach would be unfair to those depository institutions that have already established an electronic connection and paid the applicable training and installation fees.

Electronic Access Alternatives. Twenty-six respondents commented on the acceptability of the currently available electronic access alternatives. Ten of these commenters indicated that the alternatives are acceptable and meet the needs of depository institutions. Fourteen commenters, however, believed that the alternatives are expensive, especially for low-volume institutions, and may not provide enough features to be cost effective for all institutions. A few commenters believed that the personal computers on which Fedline is run cannot be used efficiently for other purposes, and noted that institutions with FLASH-Light connections lack the ability to originate return items and notifications of change (NOCs) electronically.

Depository institutions are not required to dedicate a personal computer to Fedline use. The personal computer used for Fedline can be used to support other software applications. A recent System study of Fedline users indicated that currently about 40 percent of the users also use their Fedline personal



computer for other purposes. Federal Reserve Bank personnel are working closely with institutions to improve their level of service by dedicating their personal computers for Fedline use to only certain peak times during the day. The Federal Reserve will continue its efforts to improve the ease of use and the efficiency of the Fedline software. Software compression techniques have been developed to make the Fedline applications run more efficiently, and the capability of offering Fedline on a modular basis is being researched. In addition, the Federal Reserve will enhance the FLASH-Light software to enable it to receive Fedwire funds transfers, in addition to ACH transactions.

To enable FLASH-Light users to have a more automated means of originating return items and NOCs via telephone access, all Reserve Banks will offer return item database services by year-end 1991, and telephone voice-response access capabilities by year-end 1992. These services will create the return item or NOC transaction from information about the transaction that is stored on a database and accessed via touch-tone telephone by the depository institution. Although the cost of these services is more than the cost of an electronically originated return item or NOC, it is considerably less than the current cost of a paper return or NOC.

Two respondents indicated that reductions in the up-front cost of establishing an electronic connection could be achieved if a larger variety of personal computers is certified by the Federal Reserve. The Federal Reserve System has certified Fedline software

to run on IBM and some IBM-compatible personal computers. In addition, some districts have certified other compatible personal computer hardware. The majority of personal computers in use should be capable of running Fedline software. The Federal Reserve Banks will work with institutions to identify whether a specific model of personal computer will support Fedline software if there is sufficient demand. To assist those depository institutions that might not have a compatible computer, the Federal Reserve Banks have entered into group purchase agreements with a number of vendors in order to obtain equipment at a reasonable cost.

The Board acknowledges that in some cases very low-volume depository institutions may conclude that they cannot justify the cost of an electronic connection for their ACH activity and may elect to stop participating in the ACH. In lieu of incurring the cost of an electronic connection, these institutions can continue to participate in the ACH through a correspondent institution or other service provider that has established an appropriate electronic connection with the Federal Reserve.

Two commenters that indicated that the current electronic access alternatives are too expensive identified the need for a low-cost fax alternative for the very low-volume depository institutions. The Federal Reserve System recently completed a pilot test using current fax technology for low-volume ACH receivers. The results of the study indicated that current fax technology does not meet the minimum security standards required by the Federal Reserve for its ACH service. Once adequate security

features are added, the cost of fax would exceed the cost of intelligent-terminal access.

Additional Issues. Fourteen commenters stated that in order for the Federal Reserve System to establish an all-electronic ACH within the projected timeframe, there needs to be a strong education and marketing effort that is closely coordinated between the Federal Reserve Banks and ACH associations and other industry trade groups. The Federal Reserve Banks are working closely with the appropriate ACH groups to encourage conversion to electronic connections. For example, the Reserve Banks have informed the local ACH associations of which of their members obtain Federal Reserve ACH services electronically and nonelectronically and have provided a contact name at each Federal Reserve Bank, enabling the associations to work with their members interested in establishing electronic connections to the Federal Reserve. In addition, the Federal Reserve will continue to work with other trade associations that are interested in disseminating information regarding the all-electronic ACH effort to their memberships.

Seven commenters stated that government-only ACH receivers should be treated the same as commercial ACH receivers and also be required to establish electronic connections to more fully realize the benefits of an all-electronic ACH. The Board believes that the majority of the benefits of an all-electronic ACH environment can be derived for commercial ACH participants even if some government-only endpoints remain nonelectronic. Nonetheless, an all-electronic environment for government ACH transactions would

provide benefits both to the receiving institutions and to the U.S. government. Therefore, the Board is continuing to work with the Treasury on plans to establish an all-electronic ACH for government-only receivers, and anticipates that it will request comment in late 1991 on a proposal to achieve this objective.

Several commenters raised issues related to contingency backup in an all-electronic ACH environment. They suggested that magnetic tape capabilities should continue to be made available for backup purposes. Improved contingency processing and disaster recovery capabilities are benefits of an all-electronic processing environment. Electronic access to ACH services would eliminate the delays associated with delivering physical input and output media from a remote processing site in a contingency processing or disaster recovery situation. Moreover, depository institutions can send payment file corrections to their Reserve Bank more quickly through electronic transmission than if physical delivery of the payment file information were necessary, reducing the likelihood of a delay in normal processing as well as in a contingency processing situation. For those contingency situations where electronic backup cannot be utilized, the Federal Reserve plans to maintain capabilities for nonelectronic input and output options.

The Federal Reserve Bank of Minneapolis recently lost its primary computer processing capability and was required to begin processing its ACH and other electronic payments at the Federal Reserve's backup processing center in Culpepper, Virginia. This experience demonstrated that depository institutions that were

electronically connected to the Reserve Bank were able to send and receive ACH transactions on a more timely and efficient basis than were nonelectronic depository institutions.

Competitive Impact Analysis

The Board does not believe that this action will have any adverse effects on the ability of other ACH service providers to compete effectively with the Federal Reserve in providing ACH services. The New York Automated Clearing House currently requires its members to send and receive ACH transactions electronically. Other ACH service providers also predominately serve participants electronically.

By order of the Board of Governors of the Federal Reserve System, June 13, 1991.

(signed) William W. Wiles

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William W. Wiles  
Secretary of the Board