United States General Accounting Office

GAO

Report to the Subcommittee on Financial Institutions and Consumer Credit, Committee on Banking and Financial Services, House of Representatives

July 1998

# Retail Payments Issues

# Experience With Electronic Check Presentment

GAO/GGD-98-145

GAO

**United States**
**General Accounting Office**
**Washington, D.C. 20548**

**General Government Division**

B-277713

July 14, 1998

The Honorable Margaret Roukema
Chairwoman
The Honorable Bruce Vento
Ranking Minority Member
Subcommittee on Financial Institutions
and Consumer Credit
Committee on Banking and Financial Services
House of Representatives

The Expedited Funds Availability Act (EFAA), enacted in 1987, limits the time that banks[1] can hold funds deposited into customer accounts before the funds are to be made available for withdrawal. In 1996, the Board of Governors of the Federal Reserve System (Federal Reserve Board) recommended that the maximum permissible "hold period" for local checks be extended from 2 to 3 business days after the day of deposit to give banks adequate time to identify fraudulent checks that should be dishonored.[2] Consumer groups disagreed with that recommendation and countered that giving banks an additional day would create hardships for consumers. The 2-day hold period for local checks remains in effect.

Concerns about both check fraud risk and depositors' access to funds have heightened interest in how technology can help the check-collection process by potentially speeding up the return of checks dishonored due to insufficient funds, fraud, or other reasons, while continuing to allow ready access to deposited funds. According to the Federal Reserve Board, the experience of depositary banks (the first bank at which a check is deposited) in receiving returned checks is one of the most significant factors to consider in assessing uniform time schedules under which bank deposits should be made available to depositors.

You requested that we provide information about the current role of electronic check presentment (ECP) in the collection process for "interbank checks"—checks for which the depositary bank and the paying bank are not the same entity. With ECP, the check is presented electronically to the paying bank by transmission of the magnetic ink character recognition (MICR) line data at the bottom of the check, which identify the routing number of the paying bank, the amount of the check,

[1]In this report, the term "bank" includes any depository financial institution, such as a commercial bank or savings bank.

[2]Checks are "dishonored" for reasons that include being written on a closed account or one with insufficient funds to cover the check, showing evidence of check counterfeiting or forged signatures, or other evidence of fraud.

the number of the check, and the account number of the customer. With ECP, the paying bank must decide whether to honor the check, or have the check returned to the depositary bank, upon receipt of the electronic data rather than the paper check.

As agreed with your offices, our objectives were to (1) identify and describe the ECP services offered to U.S. banks; (2) determine the ECP volume in the United States for 1995 through 1997; (3) determine whether ECP affects the length of time that it takes for a dishonored check to be returned to the depositary bank; (4) identify any factors that may limit ECP use; and (5) determine how ECP may affect banks' risk of check fraud.

## Background

In 1996, an estimated 64 billion checks were written in the United States. Approximately 30 to 35 percent of these checks were "on-us" checks—that is, checks for which the collecting bank (any bank except the paying bank handling the item for collection) and the paying bank (the bank on which the check is drawn) are the same entity. On-us checks never enter the interbank check-collection process. The remaining 65 to 70 percent (about 45 billion checks in 1996) of the checks written were interbank checks.[3]

Interbank checks are cleared and settled through an elaborate check-collection process. The check-collection process includes, among other steps, check presentment and the final settlement of checks.[4] Check presentment occurs when the checks are delivered to the paying banks for payment and the paying banks must decide whether to honor or return the checks. Final settlement of checks occurs when the collecting banks are credited and the paying banks are debited, usually through accounts held at either Federal Reserve Banks or correspondent banks.[5]

In the check-collection process, depositary banks generally sort deposited checks by destination and dispatch them for collection. Depositary banks can physically present paper checks to paying banks through several methods:

- direct presentment of the paper checks to the paying banks;

[3]The figure used for the interbank check market includes share drafts drawn on credit unions.

[4]This process is described in greater detail in Payments, Clearance, and Settlement: A Guide to the Systems, Risks, and Issues (GAO/GGD-97-73, June 20, 1997).

[5]A correspondent bank is a bank that holds deposits owned by other banks and performs banking services, such as check collection.

- exchange of paper checks at clearing houses in which the depositary banks and the paying banks are members;
- presentment of the paper checks through intermediaries, such as correspondent banks or Federal Reserve check offices; or
- some combination of the above methods, such as depositary banks using correspondent banks to collect checks and the correspondents collecting those checks through local clearing houses or Federal Reserve check offices.

When paying banks decide not to pay certain checks, they must return the dishonored checks to the depositary banks.[6] Under the Uniform Commercial Code (UCC), the paying bank generally has until midnight of the day following presentment ("midnight deadline") to return dishonored checks or send notices of dishonor. (The UCC and other laws and regulations governing the check-collection processes are described below.) Banks use this period to decide whether or not to pay checks. Dishonored checks are returned for several reasons, such as insufficient funds in the check writer's account, issuance of a stop-payment order on the check, or because the check was written on a closed account. Banks vary considerably in their policies for making pay/no pay decisions and may view these decisions as a matter of customer service. Thus, even if banks have earlier information indicating that some checks may have to be returned, using the entire period permitted by the UCC may enable the bank to honor the check. The paying banks may return dishonored checks, commonly referred to as return items, directly to the depositary banks, through clearing house associations, or to any returning bank (a bank handling a returned check), including the Federal Reserve Banks.

Although most paper checks are physically presented to the paying banks, checks can be presented electronically by agreement with paying banks. When checks are electronically presented, the MICR data are electronically transmitted by the presenting bank to the paying banks and the receipt of these data constitutes presentment, rather than the paying banks' receipt of the paper checks. The paper checks may be sent to the paying banks at a later time or may be "truncated" or held, at some point in the collection process, depending upon the terms of the applicable electronic presentment agreement. When checks are truncated, the check writers do not receive the cancelled checks. Checks can be truncated at depositary banks or at intermediary banks, such as Federal Reserve Banks or correspondent banks.

[6]In providing check clearing services, Federal Reserve Banks are collecting banks.

The check-collection process is regulated by a complex system of laws and regulations. The primary laws affecting checks are Articles 3 and 4 of the UCC, as adopted in each state; EFAA; and the Federal Reserve Board's Regulations CC and J. The UCC is a set of model laws that govern commercial and financial activities. Efforts have been made to encourage each of the 50 states to enact UCC articles in a uniform manner. The UCC's Articles 3 and 4 govern negotiable instruments, including checks and bank deposits, and collections, respectively. Article 4 was revised in 1990, in part, to promote the efficiency of the check-collection process by making the provisions of Article 4 more compatible with the needs of an automated system and to facilitate the adoption of programs allowing for the presentment of checks by electronic transmission of information. Although the UCC allows for the use of electronic check presentment, paying banks still have the legal right to insist on paper presentment. EFAA, which is implemented through Regulation CC, limits the time that banks can hold funds deposited into customer accounts before these funds must be made available for withdrawal. Regulation CC, which preempts the UCC or other state law to the extent that either is inconsistent with Regulation CC, also governs the collection and return of checks. Regulation J governs checks collected through the Federal Reserve System.

EFAA and Regulation CC establish the specific funds availability schedules for checks. Generally, funds are to be made available for withdrawal within 2 business days after the day of deposit for local checks and within 5 business days for nonlocal checks. Local checks, in general, are those for which the depositary bank and the paying bank are located in the same Federal Reserve check-processing region. Nonlocal checks, in general, are those for which the depositary bank and the paying bank are located in different Federal Reserve check-processing regions.

EFAA and Regulation CC also require that the first $100 of a depositor's aggregated checks and certain other types of checks, such as Treasury, state and local government, or cashier's checks, are to be made available for withdrawal by the next business day after the day of deposit. Under EFAA and Regulation CC, banks are permitted to hold checks longer for, among other things, checks over $5,000 or suspicious checks. In certain circumstances, such as when banks have reasonable cause to believe that certain checks are uncollectible or when an account is new, the banks may delay the availability of funds. In such a case, the banks must notify the customers, explain the delay, and indicate when the funds will be available.

## Results in Brief

The Federal Reserve System is the leading ECP provider in the United States with broadly available services; it offers three ECP services nationwide. For these services, the collecting banks send the paper checks to the appropriate Federal Reserve check office, which then presents the checks electronically to paying banks. These ECP services differ in how the paper checks are handled after they have been electronically presented to paying banks. For example, the Federal Reserve's basic ECP service provides the paper checks to the paying bank on the same day as presentment. However, with another Federal Reserve ECP service, checks are not delivered to the paying bank. Delivery of the MICR line data serves as presentment, and the checks are truncated at the Federal Reserve check office serving the paying bank. In addition to the three nationwide services, the Federal Reserve Bank of Minneapolis (FRBM) offers the Electronic Check Clearing Service (ECCS) to banks located in the Upper Peninsula of Michigan. The fundamental characteristic of ECCS that distinguishes it from other ECP services is that depositary banks electronically transmit the MICR data to the FRBM, rather than transporting the paper checks.

ECP volume accounts for a small, but growing, percentage of the overall U.S. interbank check volume. From 1995 to 1997, ECP volume increased 114 percent. In 1997, ECP volume was about 2.2 billion checks, almost 5 percent of the estimated U.S. interbank check volume. The 2.2 billion ECP checks represented approximately 14 percent of the almost 16 billion checks that the Federal Reserve collected in 1997.[7]

Our analysis of a limited sample of return items that were initially electronically presented suggests that use of the three Federal Reserve ECP services that were nationally available may not have a substantial effect on the percentage of dishonored local checks that are returned to depositary banks within the 2-day hold period. For these three ECP services, the percentage of local checks returned within 2 days during this period at the Federal Reserve check offices was only marginally higher than the percentage returned within 2 days using the paper-check presentment method.

For ECCS, the percentage of local checks returned within the 2-day hold period was substantially higher than the percentage of paper checks that were physically presented and returned. This comparison of ECCS and paper-presentment methods showed that substantial improvements in

[7]Since the Federal Reserve check offices process checks through reader sorters from which they maintain an accounting of the processed checks, the volume figures for the Federal Reserve's check collection services should be considered exact.

check-return performance occurred for those banks when the paper checks were held at the depositary bank until the checks were finally paid. Given the small sample size of this comparison and the particular conditions of the Upper Peninsula of Michigan (such as the remote location of banks and a relatively low check volume), it is not possible to know whether these improvements could be achieved in other geographical areas or nationwide.

Our interviews with regulatory and banking officials identified several factors that, in their views, deter banks from accepting the electronic presentment of checks. These factors include (1) the concern that ECP may increase a paying bank's vulnerability to check fraud, (2) the lack of a clear economic incentive to use electronic presentment, and (3) a perceived consumer preference for receiving cancelled checks. In addition, certain types of state laws have been identified as having the effect of impeding ECP because of the laws' reliance on paper checks.

While ECP may allow paying banks to identify checks that might not be honored sooner and deter certain types of check fraud, banking officials we talked with expressed concerns that ECP could also make paying banks more vulnerable to other frequently occurring types of check fraud. In interviews and written responses, officials at five large banks told us that forged signatures and endorsements, along with counterfeit checks, have created the highest check fraud losses in the period since 1995. Because the receipt of the MICR line data does not provide a paying bank with information viewed as adequate for identifying forged signatures, these banking officials said they have continued to insist on paper presentment.

## Scope and Methodology

To identify and describe the ECP services offered to U.S. banks, we interviewed officials from the Federal Reserve Board and FRBM and reviewed Federal Reserve Board documents that described the Federal Reserve's ECP services. We also interviewed officials at the New York Clearing House Association (NYCHA), the Electronic Check Clearing House Organization (ECCHO), and the American Bankers Association (ABA).

To determine the volume of checks that were electronically presented in the United States from 1995 to 1997, we collected data from the Federal Reserve Banks on their ECP services. To calculate the percentage of the ECP volume in the U.S. interbank check-collection market, we used the number of interbank checks cited in the January 1998 report by the Committee on

the Federal Reserve in the Payments Mechanism.[8] The number of interbank checks is an estimate because the actual number of checks that are cleared through clearing houses and correspondent banks, and by direct presentment, as well as the number of on-us checks, is unknown.

To determine how ECP affects the length of time it takes for a dishonored check to be returned to a depositary bank, we used data from a survey coordinated by the Federal Reserve Board and conducted by four Federal Reserve offices. At our request, the Federal Reserve collected information on the return cycle time for a small sample of items that were initially presented by either paper check or electronic transmission and that were returned as dishonored through four Federal Reserve check offices. This information was collected for a sample of 2,258 return items, primarily during the week of January 12 through 16, 1998.[9] The four check offices were selected because they had higher-than-average ECP volumes. Also, the Federal Reserve Board applied the same ECP return item survey to FRBM's additional ECP service, ECCS, which is offered only to banks located in the Upper Peninsula of Michigan. For comparison purposes, we also collected comparable check-return data from 10 judgmentally selected banks in the Upper Peninsula of Michigan that do not participate in ECCS.

Because the sizes of the samples were small and not selected on a random basis, we could not make any statistical generalizations regarding the entire banking industry or the Federal Reserve's ECP services on the basis of these surveys. Since the samples were selected during an 1-week period at 4 Federal Reserve check offices, we could not ascertain whether our results would differ if the samples were taken over a longer period of time or collected at more of the Federal Reserve's 45 check offices. Furthermore, our results may not fully reflect differences among paper presentment and ECP services because the checks are not assigned to these processes on a random basis, but rather on the basis of each paying bank's decisions. It is reasonable to expect that paying banks make decisions to accept electronic presentment based on a number of criteria, such as price and availability of services. Thus, the returned checks collected from the different presentment methods may well have different characteristics; these could, in turn, affect the time required for their return if they are dishonored by the paying bank. This nonrandom selection process limited our ability to determine whether ECP services available nationwide had any effect on check return cycles.

[8]The Federal Reserve in the Payments Mechanism, Committee on the Federal Reserve in the Payments Mechanism, Federal Reserve System, January 1998.

[9]See appendix I for a more detailed discussion on the methodology of the ECP return item survey.

To determine potential legal and operational impediments to ECP, we interviewed officials at several large banks, the Federal Reserve Board, the Federal Reserve Banks of Minneapolis and Boston, and NYCHA. We asked these officials how certain provisions of the UCC's Articles 3 and 4, EFAA, and the Federal Reserve Board's Regulation CC and other issues may impede increased ECP use.

To determine how ECP may affect a bank's risk of check fraud, we interviewed officials at the Federal Reserve Bank of Boston (FRBB), NYCHA, and three large commercial banks in New York City. In addition, we sent a survey of written questions regarding ECP and check fraud risk to six large commercial banks that are members of ECCHO. Five of the six banks responded to our survey questions.

We obtained written comments on a draft of this report from the Federal Reserve Board. Their comments are discussed near the end of this report and are reprinted in appendix II. We did our work from July 1997 to April 1998 in Washington, D.C.; Minneapolis, MN; and New York City in accordance with generally accepted government auditing standards.

## The Federal Reserve Offers ECP Services Nationwide, While the Private Check Clearing Houses Offer Electronic Check Information Services

The Federal Reserve Banks offer banks three ECP services: basic MICR presentment (Basic), MICR presentment plus (MICR Plus), and check truncation (Truncation). In addition, FRBM offers ECCS to banks located in the Upper Peninsula of Michigan. For all four ECP services, Federal Reserve check offices transmit the electronic data to the paying banks and receipt of these data constitutes presentment. Under the three nationally available ECP services, the collecting banks deposit checks with the Federal Reserve check offices, but the three ECP services differ in how the Federal Reserve check offices handle the paper checks after they have been electronically presented to paying banks. The return process for Basic items is the same process used to return checks that were physically presented. The other two nationally available ECP services, MICR Plus and Truncation, use different processes to return checks than those used to return physically presented checks.

The fundamental characteristic of ECCS, which distinguishes it from other Federal Reserve ECP services, is that banks using the service do not deliver paper checks to FRBM; instead, they electronically transmit the checks' MICR data to FRBM. Since depositary banks keep the deposited checks until the checks are finally paid, they can pull any paper checks that are

dishonored by the paying banks. Under ECCS, depositary banks receive notices of dishonored checks from paying banks through FRBM.

Table 1 lists the four Federal Reserve ECP services and explains (1) how collecting banks deposit checks with the Federal Reserve check offices and (2) how paper checks and return items are handled after electronic presentment.

**Table 1: Descriptions of the Four Federal Reserve ECP Services**

| ECP service | How banks collect checks using Federal Reserve check offices[a] | How paper checks and return items are handled after electronic presentment |
|---|---|---|
| Basic | Collecting bank deposits the paper checks with the Federal Reserve check office. | Federal Reserve check office delivers paper checks to the paying bank on the same day as electronic presentment. Paying bank returns items as it would under paper presentment. |
| MICR Plus | Collecting bank deposits the paper checks with the Federal Reserve check office. | Federal Reserve check office serving the paying bank holds paper checks for 1-3 days after electronic presentment and pulls and delivers return items from stored checks at the paying bank's request. After 1-3 days, the remaining paper checks are delivered to the paying bank. |
| Truncation | Collecting bank deposits the paper checks with the Federal Reserve check office. | Federal Reserve check office serving the paying bank holds the paper checks after electronic presentment and pulls and delivers the return items from the stored checks at the paying bank's request. Generally, after 60 days, the paper checks are destroyed.[b] An image of each paper check (front and back) is stored at the Federal Reserve check office for 7 years. |
| ECCS[c] | Collecting bank provides MICR data electronically to FRBM. | The depositary bank stores the paper checks for 1 day. The paying bank returns items electronically through the FRBM to the depositary bank, which pulls the checks. The depositary bank delivers the remaining paper checks to the FRBM. FRBM sorts the paper checks by the paying bank and either delivers the checks to the paying bank or truncates the checks. |

[a]The collection of checks (ECP or otherwise) may involve two Federal Reserve check offices.

[b]Some physical checks are retained longer as established by agreement between the paying bank and the Federal Reserve Bank.

[c]FRBM offers ECCS to banks located in the Upper Peninsula of Michigan.

Source: Federal Reserve Board.

## Private Check Clearing Houses' Electronic Services Do Not Constitute Presentment

Private clearing houses offer electronic check information services to banks. These services transmit the MICR data to the paying banks, but they do not constitute electronic presentment of checks.[10] Industry officials we interviewed noted that, while agreements between or among banks that

[10]In addition to ECP products, the Federal Reserve Banks also offer an electronic check information product. This product is similar to the electronic check information products offered in the private sector. In 1997, the Reserve Banks' MICR information volume totaled 1.4 billion items.

would enable them to present checks directly and electronically are possible under the UCC, few such agreements exist. NYCHA offers electronic check informational services to banks in which the MICR data are transmitted to paying banks with the paper presentment to follow. Banks perceive some advantages to receiving MICR data before the paper checks are physically presented. One banking official told us that electronic transmission of MICR data, used as an informational service, may assist a paying bank with its cash management services or allow the bank to debit a customer's account earlier than it otherwise could. Such information may also provide for earlier identification of checks that cannot be paid. For instance, checks written on closed accounts cannot be paid and thus are returned to the depositary bank. NYCHA estimated that in 1997 its members electronically transmitted data on 53 million checks, or approximately 19 percent of the total volume of checks exchanged at NYCHA. Additionally, several commercial banks formed ECCHO in 1989 to coordinate the use of electronic check information among banks and to design standards for the use of electronic check information. In 1997, ECCHO reported that its members transmitted data on 567 million checks.[11]

## ECP Represented a Small but Growing Percentage of U.S. Interbank Check Volume in 1997

In 1997, 2.2 billion checks were electronically presented in the United States—almost 5 percent of the estimated U.S. interbank check volume (about 45 billion checks). According to a recent Federal Reserve report, the Federal Reserve Banks accounted for about 35 percent (about 16 billion checks) of the total interbank check-collection market in 1996. The remaining 65 percent of the market (about 29 billion checks) were presented directly or through private, local clearing houses. The 2.2 billion checks electronically presented by the Federal Reserve in 1997 represented 14 percent of the total number of checks the Federal Reserve collected that year.

Electronically presented checks as a percentage of the Federal Reserve's overall check collection volume grew from 1995 to 1997. During this period, the Federal Reserve's ECP volume increased 114 percent, from slightly more than 1 billion checks to 2.2 billion checks. From 1996 to 1997, the Federal Reserve's ECP volume increased 56 percent, from 1.4 billion to 2.2 billion checks.

Although all 12 Federal Reserve Banks offered ECP services, ECP volume was concentrated primarily in the southern and midwestern Federal

[11]According to NYCHA officials, ECCHO's report of 567 million checks may include check data transmitted by NYCHA members.

Reserve Districts. As shown in table 2, the check offices comprising the Federal Reserve Bank of Atlanta electronically presented the highest volume of checks (420 million). The Federal Reserve Bank of Boston electronically presented the lowest number of checks among the Federal Reserve Districts in 1997 (46 million).

**Table 2: The Federal Reserve ECP Volume in 1997, by Federal Reserve District**

| Federal Reserve District | ECP volume[a] (millions) | Total checks collected (millions) | ECP percentage of total checks collected |
|---|---|---|---|
| Atlanta | 420 | 2,366 | 17.8% |
| Kansas City | 316 | 1,161 | 27.2 |
| Cleveland | 234 | 1,104 | 21.2 |
| St. Louis | 222 | 903 | 24.6 |
| Minneapolis | 203 | 973 | 20.9 |
| Dallas | 192 | 1,205 | 15.9 |
| Richmond | 169 | 1,732 | 9.8 |
| San Francisco | 164 | 2,030 | 8.1 |
| Chicago | 113 | 1,688 | 6.8 |
| New York | 113 | 1,226 | 9.2 |
| Philadelphia | 49 | 718 | 6.9 |
| Boston | 46 | 862 | 5.3 |
| **System total** | **2,241** | **15,949** | **14.0%** |

[a]ECP volume for each Federal Reserve District includes Basic, MICR Plus, and Truncation. The volume for Minneapolis also includes ECCS.

Source: Federal Reserve Board data.

The most commonly used Federal Reserve ECP service was Basic presentment. In 1997, about 1.5 billion checks were presented using the Basic presentment service. Truncation was used to present about 558 million checks, and MICR Plus was used to present about 204 million checks.

## A Limited Sample of ECP Return Items Suggested That ECP Services Available Nationally Had Little Effect on the Percentages of Checks Returned Within Permissible Hold Periods

Our analysis of a limited sample of returned checks collected in four Federal Reserve check offices during the week of January 12 through 16, 1998, indicated that the use of ECP services that are available nationwide did not have a substantial effect on the percentage of dishonored local checks returned to depositary banks within the 2-day hold period. On the basis of our analysis of the 1-week sample, the percentage of dishonored checks initially presented through Basic, MICR Plus, and Truncation services and then returned to depositary banks within the 2-day hold period was only marginally higher than the percentage of returned checks under paper presentment. However, our analysis did show that the percentage of local checks returned within the 2-day hold period using ECCS was substantially higher than the comparable percentage of physically presented paper checks. Our comparison of ECCS and paper-check presentment methods indicated that substantial improvements in check-return performance occurred when the paper check was held at the depositary bank until the expiration of the "midnight deadline" specified in the UCC. Given the small sample size of this comparison and the particular conditions of the Upper Peninsula of Michigan (severe winter weather conditions and the low volume of checks electronically presented through ECCS), however, it is not possible to know whether these improvements could be achieved in other settings or nationwide.

### Results Showed Marginally Better Local Check-Return Performance for ECP Services Compared With Paper-Check Presentment

Our analysis of a 1-week sample of returned checks indicated that the percentages of dishonored local checks returned within the holding period were only marginally higher for checks electronically presented through Basic, MICR Plus, and Truncation services compared with checks presented in paper form. Almost 15 percent of the electronically presented local checks in our sample were returned within 2 business days after they were deposited compared with only 6 percent of the physically presented local paper checks.

**Table 3: Dishonored Local Checks in Sample That Were Returned Within 2 or 3 Business Days, by Presentment Method**

| | Dishonored local checks in sample returned within | | | | |
|---|---|---|---|---|---|
| | 2 business days | | 3 business days | | Total sample items reviewed |
| Presentment method | Number | Percent | Number | Percent | |
| ECP services offered nationwide | | | | | |
| Basic | 53 | 14% | 311 | 82% | 381 |
| MICR Plus | 0 | 0 | 228 | 85 | 269 |
| Truncation | 122 | 22 | 472 | 87 | 544 |
| Paper | 17 | 6 | 201 | 69 | 291 |

Source: Federal Reserve Board.

The majority of the electronically presented checks were not received by the depositary bank until the third business day. (See table 3.) Truncation produced the best 2-day cumulative percentage of the electronically presented checks: 22 percent. However, at 3 business days, paper-check presentment's cumulative percentage was 69 percent, which was less than the cumulative percentages of Basic, MICR Plus, and Truncation services at 82 percent, 85 percent, and 87 percent, respectively.

According to the Federal Reserve Board, the time required to return checks handled by the Federal Reserve likely represents the upper bound of overall check-return cycle times. In a Federal Reserve Board survey, Federal Reserve Banks indicated that, in 1995, they delivered about 15 percent of local returned checks that they processed to the depositary bank by the second business day.[12] This check-return performance is low compared with the bank average reported by the Board in the same survey. Depositary banks received about 48 percent of all local returned checks within 2 business days, according to the survey. The differences in these check-return performances appear to be an indicator of the significance of depositary banks' direct presentment of paper checks to paying banks and exchanges of paper checks at clearing houses. The Federal Reserve Board said that checks returned through one or more intermediary banks, such as Federal Reserve Banks, were not received by depositary banks as quickly as checks returned directly to depositary banks by paying banks. Federal Reserve Board officials said that the Federal Reserve's lower percentage of returned checks delivered within the 2-day hold period reflects, in part, the Federal Reserve's obligation to

[12]Report to the Congress on Funds Availability Schedules and Check Fraud at Depository Institutions, Board of Governors of the Federal Reserve System, October 1996, p. 5.

provide services to handle checks that cannot be easily processed by direct presentment or through a clearing house.

## Results Showed Banks Using ECCS Had a Better Check-Return Performance Than Banks Presenting Paper Checks

We found that ECCS, the ECP service available only to banks in Michigan's Upper Peninsula, provided a better check-return performance than the paper-check presentment method used by banks in the same area. The basis for this finding was a comparison of the percentage of returned checks for which ECCS banks received a return notification within 2 business days after the checks were deposited and the percentage of returned checks received by paper presenting banks within the same 2-day period. (As previously noted, depositary banks using ECCS keep deposited checks until the expiration of the "midnight deadline" specified in the UCC and pull returned checks when they receive a return notice through FRBM from a paying bank.)

This comparison of the ECCS and paper-check presentment methods indicated that substantial reductions in return cycle times are possible when the paper check is held at the depositary bank. For the week of January 12 through 16, 1998, the 8 banks that used ECCS received a return notification on 131 local dishonored checks, while the 10 judgmentally selected Upper Peninsula banks, which constituted our paper presentment comparison group, received 276 dishonored local checks. We found that the return notifications for the 131 ECCS dishonored checks were provided to depositary banks within 2 business days after the checks were deposited. (See table 4.) Moreover, 82 percent of the 131 return notices were received by depositary banks within 1 business day after the checks were deposited. In contrast, only about 8 percent of the 276 dishonored checks that were physically presented were returned to depositary banks within 2 business days after the checks were deposited.

**Table 4: Dishonored Local Checks in Sample That Were Returned Within 2 or 3 Business Days, by Presentment Method Within the Upper Peninsula**

| | Dishonored local checks in sample returned within | | | | |
|---|---|---|---|---|---|
| | 2 business days | | 3 business days | | |
| Presentment method | Number | Percent | Number | Percent | Total sample items reviewed |
| ECCS (ECP service offered only in the Upper Peninsula of Michigan) | 131 | 100% | N/A | N/A | 131 |
| Paper | 21 | 8 | 113 | 41 | 276 |

Legend

N/A = Not applicable.

Source: Federal Reserve Board data and our analysis of data from 10 banks that did not participate in ECCS.

Conditions in the Upper Peninsula region, such as relatively low check volume and banks that are remotely located, and other factors may well have played a role in showing ECCS to its best advantage in comparison with paper presentment. As a result, it is not likely that the savings in the time between ECCS and paper presentment may be achieved in the banking industry as a whole. First, several regional conditions complicated the return of dishonored checks within the 2-day hold period for local checks using the paper presentment process. These conditions included severe winter weather conditions, the distances between the banks and the most commonly used private check clearing house and the Federal Reserve check office in Minneapolis, and the two time zones dividing the banks in the Upper Peninsula area.

In addition, the composition of ECCS participating banks and the low volume of checks electronically presented through ECCS may have contributed to its better performance. Banks participating in ECCS had to store a fairly limited number of checks and retrieve a small number of return items. All of the ECCS participating banks were small, with assets ranging from $52 million to $350 million. In 1997, ECCS volume was nearly 1.9 million checks. This volume constituted about 0.2 percent of the 973 million checks that the FRBM check office collected in 1997.

## Results Suggested Similar Nonlocal Check Return Performance for All Check Presentment Methods

In our analysis, we also compared return times for electronic and paper presentment of nonlocal checks. Our data showed that the check-return performance against the funds availability schedules of electronically presented nonlocal checks was not very different from that of

paper-presentment checks. Again, we evaluated the return cycle times of nonlocal checks using the applicable availability schedule specified in EFAA for nonlocal checks—that is, the 5-business-day funds availability. We found that a very high percentage of dishonored checks were returned to depositary banks within 5 business days after the day the checks were deposited, regardless of whether the checks were electronically or physically presented. Approximately 90 percent of the electronically presented nonlocal checks were returned within 5 business days to depositary banks, while 89 percent of the physically presented checks were returned within 5 business days.

Our data showed that a considerable number of electronically presented nonlocal checks were returned to depositary banks within 3 business days after the checks were deposited. As shown in table 5, 43 percent of the checks presented through the Basic service and 35 percent of the checks presented through the Truncation service were returned to depositary banks within 3 business days. This compares with 14 percent of the nonlocal checks returned under paper presentment.

**Table 5: Dishonored Nonlocal Checks in Sample That Were Returned Within 3, 4, or 5 Business Days, by Presentment Method Nationwide**

| | Dishonored nonlocal checks in sample returned within | | | | | | |
|---|---|---|---|---|---|---|---|
| | 3 business days | | 4 business days | | 5 business days | | Total sample |
| Presentment method | Number | Percent | Number | Percent | Number | Percent | items reviewed |
| ECP services offered nationwide | | | | | | | |
| Basic | 81 | 43% | 146 | 78% | 176 | 94% | 188 |
| MICR Plus | 0 | 0 | 32 | 43 | 61 | 82 | 74 |
| Truncation | 105 | 35 | 210 | 71 | 272 | 92 | 297 |
| Paper check | 12 | 14 | 52 | 63 | 74 | 89 | 83 |

Source: Federal Reserve Board data.

## Several Factors Currently Limit ECP Use

While some observers believe that ECP may potentially contribute to a more efficient check-collection process, several factors were mentioned as currently limiting ECP use. As previously noted, although the UCC permits the use of electronic presentment agreements between the presenting bank (the last bank in the check-collection process demanding payment from the paying bank) and paying banks, few such agreements have been negotiated, and private clearing houses do not currently offer ECP services. In interviews with regulatory officials and bankers, we identified several

factors that may play a role in discouraging banks from agreeing to accept an electronically presented check, including

- the lack of a clear economic incentive to use electronic presentment;
- laws and regulations that require maintaining cancelled checks in certain situations;
- a perceived consumer preference for receiving cancelled checks with monthly bank statements and state laws requiring that cancelled checks be offered;
- UCC and Regulation CC's requirement that paying banks generally must physically return a dishonored check to depositary banks;
- operating and business factors that limit banks' adoption of ECP; and
- a concern that ECP may increase banks' vulnerability to forged signatures and counterfeit checks.

While there are current impediments to expanded ECP use, the Federal Reserve Banks and some check-collection service providers are working to create a more favorable environment for ECP growth, including possible ways to promote ECP use and establishing standards for using ECP.

## Banks Lack a Clear Economic Incentive to Use Electronic Presentment

For a bank, deciding on the relative advantages and disadvantages of ECP use requires weighing the potential gains in its role as a depositary bank against the potential losses in its role as a paying bank. In its January 1998 report, the Committee on the Federal Reserve in the Payments Mechanism concluded that paying banks have little incentive to speed up the presentment process because they receive benefits from "float." Float occurs in the check-collection process because of the time it takes to process a check—that is, the time between when the check is accepted for payment and when the paying bank deducts the amount of the check from the check writer's account. Since the paying bank has use of the funds during that time, it has little incentive to speed up the process. When a bank is the depositary bank, however, it has a clear incentive to collect the check—and receive payment—as quickly as possible and at the lowest cost.

## Laws and Regulations Require the Retention of the Cancelled Check in Specific Situations

Many states have laws or regulations that require certain individuals, businesses, and organizations to maintain cancelled checks. Cancelled checks also serve as documentation for federal and state tax authorities and as proof of payment for certain categories of commercial transactions. The Federal Reserve Bank of Boston (FRBB) compiled a survey (dated

1997) of federal and state laws and regulations that relate to the retention of an original cancelled check. On the basis of our analysis of the survey, 41 states, plus the District of Columbia, had at least 1 law or regulation that required individuals or organizations to retain their cancelled checks for various purposes, including documentation for state and local governments and by certain businesses. The remaining nine states—Alaska, Georgia, Iowa, Maryland, Michigan, Nebraska, Oregon, West Virginia, and Utah—were not listed as having any laws or regulations that required the retention of cancelled checks.

An example, cited in the survey, of a state law requiring the retention of cancelled checks was a Florida law that provides, in general, that county officials are required to retain cancelled checks as a part of the permanent record of the applicable office. Another example was a California regulation requiring investment advisors to retain cancelled checks for at least 6 years—during the first 2 years of which, the cancelled checks are to be held in a location that is easily accessible.

## Customer Preference and State Laws Regarding Cancelled Checks

The perceived consumer preference for receiving cancelled checks is another operational deterrent to ECP use. If consumers are to receive their cancelled checks in their monthly statements, banks cannot use check truncation anywhere in the collection process. Federal Reserve Board officials and banking officials with whom we spoke expressed a belief that many consumers want their cancelled checks returned.

Additionally, two states have laws that guarantee bank consumers the right to receive cancelled checks. According to the FRBB's survey, New York and Massachusetts have such laws. A New York law requires, in general, that banking institutions offering consumer accounts offer a consumer account through which cancelled checks are returned to the customer with a periodic statement of the account. In Massachusetts, a state law requires that, if depositors request their cancelled checks, the bank must return the cancelled checks without charging a fee.

## Regulation CC Requires That a Dishonored Check be Physically Returned

Regulation CC, which governs funds availability and the collection and return of checks, requires that paying banks must physically return the original dishonored check to the depositary bank if it is available.[13] This

[13]While Regulation CC provides that, in certain circumstances, a bank may send a copy or notice in place of a check, such notice in lieu of return is permitted only when a bank does not have and cannot obtain possession of the check or must retain possession of the check for protest. Regulation CC commentary provides that a check is not unavailable for return if it is merely difficult to retrieve from a filing system or from storage by a keeper of checks in a truncation system.

requirement applies to all checks, regardless of whether they were electronically or physically presented. The Federal Reserve ECP services were structured so that paper checks can be returned to depositary banks.

Federal Reserve Board officials told us that Regulation CC could be amended to permit banks to return dishonored checks using images in lieu of the paper check but that before Regulation CC could be modified, certain operational and legal issues would need to be resolved.

## Business Factors Could Impede ECP Growth

On the basis of our interviews with banking officials, we also identified business factors that could play a role in discouraging banks from choosing electronic check presentment and truncation, including the current concentration of resources on ensuring that banks' computers are able to handle dates after the year 2000 and the potential for depositary banks to secure access to information on the paying banks' customers.

Banks must ensure their computer systems are able to handle dates in 2000 and beyond. However, many banks may not have sufficient resources to both ensure that their computers are able to handle this date change and make necessary investments to use ECP. Officials of large banks told us that they have allocated significant resources toward ensuring that their computers are able to handle these dates. As a result, any significant changes in check clearing technology are not likely to be considered until after 2000 in many banks.

## Banks Are Concerned That ECP Use May Increase Their Vulnerability to Forged Signatures and Counterfeit Checks

From our interviews and from written responses from banking officials at five large banks, we learned that these banks do not consider MICR data adequate information for detecting certain types of fraud, particularly forged signatures and counterfeit checks. (The potential effects of ECP use on check fraud are discussed in the next major section of this report.)

## Future Plans for ECP Growth

Despite the current limitations previously mentioned, the Federal Reserve Banks, some private organizations, and several large banks in the United States are working to create a more favorable environment for ECP growth. Two of these efforts include (1) the establishment of a working group comprising officials from banks, the Federal Reserve Banks, and check collection service providers and (2) the expected creation of the first multilateral ECP organization, that is, an ECP organization established by an agreement involving more than two banks.

In its January 1998 report, the Committee on the Federal Reserve in the Payments Mechanism concluded that "it is not yet clear" whether the whole check system would benefit from moving toward ECP and truncation. The report recommended that a working group comprising banks, the Federal Reserve, and other check-collection process participants should be convened to determine the cost and feasibility of further ECP use and truncation. The report outlined possible steps that the Federal Reserve might take if this working group concludes that such a coordinated move is both feasible and advisable. For example, the report stated that the Federal Reserve could amend Regulation CC to permit banks to return dishonored checks, or return items, using images or electronic transmissions in place of the original checks.

In addition, several commercial banks, with the assistance of NYCHA, are forming the first national multilateral ECP organization, The Small Value Payments Company, L.L.C., which was expected to begin operations in mid-1998. Thirteen of the largest U.S. banks are to become owners in The Small Value Payments Company. Under current plans, the organization would be established in stages. In the initial stage, banks are to transmit electronic check information among themselves, but the receipt of the paper check would still constitute presentment. According to an NYCHA official, the initial phase would provide The Small Value Payments Company with time to ensure that ECP standards are established and that banks are complying with the standards. As currently proposed, the final phase would be realized when the transmission and receipt of the MICR data constitute presentment and when the checks are truncated at depositary banks. The same NYCHA official acknowledged that The Small Value Payments Company faces obstacles in completing the final phase of its operation. One of these obstacles is state laws that guarantee consumers the right to elect to receive cancelled checks. But the NYCHA official predicted that the final phase may be completed within 4 to 5 years from the initial operating date of The Small Value Payments Company.

## Bankers Said That ECP Use Makes Banks More Vulnerable to Forged Signatures and Counterfeit Checks

In interviews and written responses to our questions, officials at five commercial banks indicated that forged signatures and endorsements, as well as counterfeit checks, have created their highest check fraud losses in the period since 1995. Under the UCC, banks may be responsible for recrediting the account of a customer if the bank charges the account for a check that is not properly payable, such as a check with a forged signature. According to these banking officials, perpetrators of fraud are becoming more sophisticated in committing check fraud. A banking

official told us that large banks in New York City and San Francisco face a greater potential for check fraud than small banks located in rural areas. Of the five commercial banks that responded to our written survey questions, four listed forgeries of either signatures or endorsements as the type of check fraud that has caused them their highest dollar losses since 1995. The fifth bank reported that counterfeit checks constituted its highest fraud losses for the same period.

Banking officials, in interviews and written responses to our questions, informed us that they do not consider the receipt of the MICR data as providing adequate information for detecting certain types of fraud, particularly forgeries and counterfeit checks. According to one banking official, banks need access to the paper checks to detect potential forged signatures or counterfeit checks. Because the receipt of the MICR data does not provide paying banks with information viewed as adequate for identifying forged signatures, these banking officials said they have continued to insist on paper presentment. As previously noted, although the UCC permits the use of electronic presentment agreements between the presenting bank and the paying bank, very few agreements have been negotiated.

A potential alternative to paper checks is a digitized image of checks. According to banking officials, transmitting a digitized image of the paper check along with the MICR data would allow banks to verify signatures. Specifically, a digitized check image would allow paying banks to inspect the image as they would inspect a check for possible fraudulent signatures.

However, we were told that both business and technological considerations currently limit widespread use of digitized check images. First, according to one banking official, banks are unlikely to invest their financial resources in check imaging technology because customers expect to have their cancelled paper checks returned. Second, check images cannot currently be economically transmitted. One check image consists of a massive amount of digital information—that is, about 50,000 bytes of information, compared with 94 bytes of information for a MICR data transmission. The Committee on the Federal Reserve in the Payment Mechanism, in its January 1998 report, stated that imaging technology would require both additional investment and ongoing costs for banks. The committee also noted in the report that "there is some risk that changes in technology and the evolution of the retail payments system will overtake the cost and benefit issues" associated with check imaging. For

example, while "there is little evidence to suggest that the volume of checks is likely to drop substantially over the next several years," check imaging could become obsolete if other electronic payment methods emerge and lead to a decreased use of checks.

ECP use may enhance a bank's ability to identify checks that cannot be paid, such as checks written on closed accounts, and potentially deter some types of check fraud. Fraudulent practices like "paperhanging" and "check kiting" can be created from closed accounts and insufficient funds, respectively.[14] If the MICR data were presented faster to the paying banks than paper checks are, this action might facilitate the identification of a check written on a closed account or a check written on an account with insufficient funds.

However, a Federal Reserve official and a banking official noted that both ECP and paper presentment methods have some limits in detecting some types of check fraud, particularly forged endorsements, and that it would be difficult to judge which method is superior. A banking official noted that forged endorsements often are not detected until the proper payee of a check notifies the check writer that a payment is missing.

## Agency Comments and Our Evaluation

We requested comments on a draft of this report from the Federal Reserve Board. The Board's comments are reprinted in appendix II. The Board agreed with the facts as stated in our report. In addition, the Board provided technical comments, which we have incorporated where appropriate.

We are sending copies of this report to the Chairman and the Ranking Minority Member of the House Committee on Banking and Financial Services; the Chairman and the Ranking Minority Member of the Senate Committee on Banking, Housing, and Urban Affairs; the Chairman of the Board of Governors of the Federal Reserve System; the Presidents of the Federal Reserve Banks of Boston and Minneapolis; and others upon request.

This report was prepared under the direction of James M. McDermott, Assistant Director, Financial Institutions and Markets Issues. Other major

[14]The term paperhanging refers to checks that are deliberately written on closed accounts. Check kiting may take many forms, but it often involves the writing of checks on two or more banks for the purpose of fraudulently obtaining interest-free, unauthorized loans.

contributors are listed in appendix III. Please contact me on (202) 512-8678 if you have any questions about this report.

Susan S. Westin
Associate Director, Financial Institutions
and Markets Issues

# Contents

## Abbreviations

| | |
|---|---|
| ABA | American Bankers Association |
| Basic | Basic MICR Presentment Service |
| ECCHO | Electronic Check Clearing House Organization |
| ECCS | Electronic Check Clearing Service |
| ECP | Electronic Check Presentment |
| EFAA | Expedited Funds Availability Act |
| FRBB | Federal Reserve Bank of Boston |
| FRBM | Federal Reserve Bank of Minneapolis |
| MICR | Magnetic Ink Character Recognition |
| MICR Plus | MICR Presentment Plus Service |
| NYCHA | New York Clearing House Association |
| Truncation | Check Truncation Service |
| UCC | Uniform Commercial Code |

# Methodology of the ECP Return Item Survey

To determine how ECP use affects the length of time that it takes for a dishonored check to be returned to a depositary bank, that is, the return cycle time, we used data from surveys conducted by us and the Federal Reserve Board. The survey instruments we and the Federal Reserve Board used captured the return cycle times and other characteristics of a small sample of returned checks that were initially presented by paper check and by electronic transmission. The Federal Reserve, at our request, sampled dishonored checks as they were being returned by the paying bank to four Federal Reserve check offices (Kansas City, Jacksonville, Minneapolis, and Richmond), primarily during the week of January 12 through 16, 1998.[15] These four check offices were selected on the basis of the amount of their ECP volume and the number of banks that acquire ECP services from the four Federal Reserve check offices. Since ECP is a paying bank service, the samples were drawn at the Federal Reserve office that served the paying bank.

Also, the Federal Reserve Board applied the same ECP return item survey to FRBM's additional ECP service, ECCS, which is offered only to banks located in the Upper Peninsula of Michigan.

To collect a sample of paper checks comparable to those ECCS items obtained from the Minneapolis check office, we judgmentally selected 10 banks located on the Upper Peninsula of Michigan, all of which are in the Minneapolis check processing region, where ECCS is offered. Then, we asked the 10 banks, which did not participate in ECCS, to record return-time data, using the same survey forms and instructions used by the Federal Reserve Board, for all checks returned to them during the study week of January 12 through 16, 1998.

## Return Item Sample Design

For the Basic, MICR Plus, and Truncation ECP services, the 4 Federal Reserve check offices were instructed to select 25 return items daily for each presentment service from a list of return items received from paying banks and to record the return time data. In addition, they were instructed to collect 25 paper items each day during the 5-day study period. Therefore, the weekly sample size of each service (Basic, MICR Plus, Truncation, and Paper) was expected to be 125 items at each of the 4 check offices, and the total sample size for each presentment service was to be 500 items. For determining the return cycle time of ECCS, the Minneapolis check office

[15]Survey data collected by the Federal Reserve Board included 213 items that were outside of the study period out of a total sample of 2,258 items.

was instructed to select 75 return items daily, or all items if there were fewer than 75 returns for any day.

The Federal Reserve check offices were instructed to decrease the likelihood of bias in the sample of return items by allocating the sample across all the cash letters (i.e., a listing of return items) received from banks of various sizes on a particular day, to the extent possible.

The 10 Michigan banks that we selected were instructed to select all of the return items (i.e., dishonored checks) returned to them, as depositary banks, on each day of the study week.

Because the check offices, Michigan banks, and check samples were not selected on a random basis, we cannot make any statistical generalizations regarding the entire banking industry, or the Federal Reserve's ECP services, on the basis of this analysis.

## Survey Data Collection

Return items from 515 paying banks were selected by the 4 Federal Reserve check offices. Data from 2,258 return items were recorded by the Federal Reserve Board, after those items that had been sent through the collection process more than once had been discarded. A depositary bank may potentially send a dishonored check back through the collection process multiple times before a check is paid. The inclusion of those items might have skewed our results because it is very difficult to determine the endorsement and return dates for checks that have been presented more than once. Table I.1 shows the actual sample size for each presentment service.

**Table I.1: Total Size of ECP Return Item Sample, by Presentment Method**

| Presentment services | Number of return items used in study | Number of items presented more than once | Total sample[a] |
|---|---|---|---|
| ECP services offered nationwide | | | |
| Basic | 569 | 72 | 641 |
| MICR Plus | 343 | 32 | 375 |
| Truncation | 841 | 143 | 984 |
| ECCS (ECP service offered only in the Upper Peninsula of Michigan) | 131 | 0 | 131 |
| Paper check | 374 | 47 | 421 |
| **Total** | **2,258** | **294** | **2,552** |

[a]Includes both local and nonlocal checks.

Source: Federal Reserve Board.

The number of paper items in the overall sample was lower than the 500 items originally planned. We were advised by Federal Reserve Board staff that, because Federal Reserve Bank staff collected the sample of paper items during the busy processing cycle, they were generally unable to collect as many paper items as instructed.

Moreover, the MICR Plus sample was also smaller than originally planned. Return items that were initially presented by MICR Plus were sampled at three of the four Federal Reserve check offices. Federal Reserve Board officials advised us that one check office did not have any MICR Plus customers from which they could take a sample of items. However, the other three offices did achieve a total sample size of 421 MICR Plus return items.

The actual number of ECCS items received by the FRBM fell below the sample quota of 75 per day, and all items were selected, resulting in a total of 131 items for the study week. Items that were presented through ECCS were all local paper checks that were not presented more than once. Therefore, to compare the return cycle times of checks that were presented through ECCS with those that were physically presented, we included only the 276 physically presented local paper checks that had not been represented by the 10 Michigan banks in our analysis. (See table II.2.)

**Table II.2: Total Size of Upper Michigan Bank Sample for Paper Checks**

| Paper check type | Total sample |
|---|---|
| Local | 276 |
| Nonlocal | 73 |
| Represented | 127 |
| **Total** | **476** |

Source: GAO.

We did not verify that this data-collection process was followed at the Federal Reserve check offices or at the 10 Michigan banks. However, we examined check endorsement and presentment and return dates for out-of-range values and logical consistency. We also resolved, to the extent possible, data coding and entry problems with respondents at the banks and officials at the Federal Reserve Board.

## Data Elements Collected by the Return-Item Survey

We and the four Federal Reserve check offices used the same data collection instrument to record return cycle times and other check characteristics. This instrument was similar to one developed and administered by the Federal Reserve Board in previous check return time surveys. The ECP return item survey instructed the Federal Reserve Bank staff and officials at the 10 Michigan banks to collect certain data elements located on paper checks. These data elements included (1) the endorsement date or the date the check was deposited, (2) the date the check was presented to the paying bank, and (3) the date the check was returned to the depositary bank. In addition, the survey instrument collected the ABA numbers of both the depositary banks and paying banks so that checks could be categorized as local or nonlocal. Also recorded were the reasons the checks were returned, whether the checks had been represented, and whether intermediaries were involved in the return process.

## Calculating the Return Cycle Time

To ascertain the return cycle times for both local and nonlocal checks, we calculated the number of days from the endorsement date (the date the check was deposited at the depositary bank) to the return date (the date the dishonored check was received by the depositary bank). For the checks sampled at the Federal Reserve check offices, we added 1 day to the return cycle for nonlocal checks because the samples were drawn and the final date was recorded at the Federal Reserve offices that served the paying banks. Since the samples were not drawn at the depositary banks,

we needed to adjust the recorded return dates to include the time required for transporting the return items from the Federal Reserve check offices to the depositary banks.

According to the Federal Reserve Board official who supervised the ECP Return Item Survey data collection, because the samples were drawn at the Federal Reserve check office serving the paying bank, any nonlocal return items would have been delivered overnight to the Federal Reserve check office serving the depositary bank. The official acknowledged that there may have been instances in which the return item took more than 1 day to actually reach the depositary bank, but these instances would have been rare and nearly impossible to identify. We agreed that the Federal Reserve Board's approach of adding 1 day to the return cycle time for nonlocal checks seemed to be reasonable, given that the sample could not be drawn at the Federal Reserve check office serving the depositary bank and that the understatement of return cycle times would be small.

For local checks, no adjustments were made to the calculated return cycles because the same Federal Reserve check office served both the depositary bank and the paying bank. Again, we felt that any understatement of return cycle times would be small.

Because the dates on which the 10 Michigan banks recorded their check data also represented the actual return dates for checks so recorded, no return cycle time adjustment was necessary.

Return dates for checks were recorded, and cycle times were calculated, in whole days. Weekends and holidays were excluded from the elapsed times. Some of the return dates fell outside of the study week. The 213 such cases in the Federal Reserve data were included in the analysis, while cases that were outside of the study period were excluded from the Michigan bank data. For those return items with return dates falling on a weekend date, the dates were adjusted to have been returned on the next business day because checks cannot be collected or returned on a nonbusiness day, weekend date, or holiday.

# Comments From the Board of Governors of the Federal Reserve System

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON, D. C. 20551

CLYDE H. FARNSWORTH, JR.
DIRECTOR
DIVISION OF
RESERVE BANK OPERATIONS
AND PAYMENT SYSTEMS

June 12, 1998

Ms. Susan S. Westin
Associate Director
Financial Institutions and Market Issues
General Government Division
United States General Accounting Office
Washington, D.C. 20548

Dear Ms. Westin:

Thank you for the opportunity to comment on the General Accounting Office's draft report on *Retail Payments Issues: Experience with Electronic Check Presentment*. We believe the report describes accurately the results of the returned check survey we conducted on behalf of the GAO and provides a balanced discussion of the issues related to electronic check presentment.

We have provided your staff with several technical comments on the draft report under separate cover.

Sincerely,

# Major Contributors to This Report

## General Government Division

Nancy Eibeck, Evaluator-in-Charge
Carl Ramirez, Senior Social Science Analyst
Catherine M. Hurley, Computer Specialist
Jerry Sandau, Social Science Analyst
Desiree W. Whipple, Communications Analyst

## Office of the General Counsel

Geoffrey Hamilton, Senior Attorney

# Glossary

| | |
|---|---|
| Clearing House Association | A voluntary association formed by banks that establishes a meeting place for the exchanging of checks drawn on those banks. |
| Collecting Bank | Any bank except the paying bank handling a check for collection. |
| Correspondent Bank | A bank that holds deposits owned by other banks and performs banking services, such as check collection. |
| Depositary Bank | The first bank at which a check is deposited. |
| Float | The time between when the check is accepted for payment and when the paying bank deducts the amount of the check from the check writer's account. |
| Interbank Checks | Checks for which the depositary bank and the paying bank are not the same entity. |
| Intermediary Bank | A bank other than the depositary or the paying bank to which a check is transferred in the course of collection. |
| Magnetic Ink Character Recognition (MICR) Line | The line at the bottom of a check that identifies the routing number of the paying bank, the amount of the check, the number of the check, and the account number of the customer. |
| Midnight Deadline | Midnight on the next banking day following the banking day on which the paying bank received the check. |
| On-Us Checks | Checks for which the collecting bank and the paying bank are the same entity. |
| Paying Bank | The bank on which the check is drawn. |
| Presenting Bank | The last bank in the check-collection process demanding payment from the paying bank. |

| | |
|---|---|
| Returning Bank | A bank handling a returned check. |

**Ordering Information**

**The first copy of each GAO report and testimony is free. Additional copies are $2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. VISA and MasterCard credit cards are accepted, also. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.**

**Orders by mail:**

**U.S. General Accounting Office**
**P.O. Box 37050**
**Washington, DC 20013**

**or visit:**

**Room 1100**
**700 4th St. NW (corner of 4th and G Sts. NW)**
**U.S. General Accounting Office**
**Washington, DC**

**Orders may also be placed by calling (202) 512-6000 or by using fax number (202) 512-6061, or TDD (202) 512-2537.**

**Each day, GAO issues a list of newly available reports and testimony. To receive facsimile copies of the daily list or any list from the past 30 days, please call (202) 512-6000 using a touchtone phone. A recorded menu will provide information on how to obtain these lists.**

**For information on how to access GAO reports on the INTERNET, send an e-mail message with "info" in the body to:**

**info@www.gao.gov**

**or visit GAO's World Wide Web Home Page at:**

**http://www.gao.gov**

**United States**
**General Accounting Office**
**Washington, D.C. 20548-0001**

**Bulk Rate**
**Postage & Fees Paid**
**GAO**
**Permit No. G100**

**Official Business**
**Penalty for Private Use $300**

**Address Correction Requested**