

# At Your Service

A Newsletter from the Federal Reserve Bank of Kansas City

Fourth Quarter 2000



Stuart Weiner and Terri Bradford, who lead the Tenth District's payments system research efforts, will provide regular updates.

*Illustrating our continued commitment to covering emerging payments issues, we are pleased to tell you that this edition marks the first of a regular series of articles written by our payments system research staff. As you may recall, Stuart Weiner, vice president and economist, was appointed just over a year ago to lead the new payments research function in the Tenth District. He, along with Terri Bradford, consulting analyst, look forward to keeping you up-to-date on evolving electronic payments and e-payment instruments —Ed.*

## Electronic Checks on Upswing

**W**ith the growing trend of converting paper checks to electronic forms of payment, you've probably heard the term "electronic check." This term is often used with an array of payment processes, ranging from traditional electronic check presentment to hybrids of paper check collection and electronic networks to completely paperless payment processes. Let's take a look at these variants of electronic checks, some of which will likely become more prominent in the future.

### Traditional electronic check presentment

In recent years, the Federal Reserve Bank, clearing house associations and the banking industry in general have strived to electrify various aspects of the check collection process. This effort is called electronic check presentment (ECP), a process by which the routing number and payment information on a paper check are extracted from the check itself and transmitted electronically to the paying bank. In the most electronic form of ECP, known as truncation, the paper check never follows the transmission but instead is held by one of the banks or processors in the collection chain. In another form

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# Electronic Checks *Continued from page 1*

of ECP, the paper check is eventually sent to the paying bank, negating some of the cost savings that would result from truncation but still making the check collection process faster and more efficient.

Of the nearly 17 billion checks processed by the Federal Reserve System last year, more than 3 billion, or 19.4 percent, were presented electronically, whether truncated or with checks to follow. The Federal Reserve Bank of Kansas City processed more than 1.3 billion checks, of which nearly 400 million, or 30 percent, were presented electronically. In the private sector, consortiums of financial institutions also exchange check payment information electronically. For example, Small Value Payments Company (SVPCo) processes 900,000 electronic check presentments a day.

Traditional ECP represents a first step in the electronification of checks. A second category of electronic checks combines the benefits of the paper check with the efficiency of collection over existing electronic payments networks.

## **Paper check conversion**

Relatively new on the scene are payments mechanisms that are initiated by a paper check but converted to an automated clearing house (ACH), or potentially an Electronic Funds Transfer (EFT), item. These hybrid payments move the check further along the electronic continuum than the traditional ECP process.

Perhaps the most visible of the hybrids is Point-of-Purchase (POP) Conversion. A consumer presents a check to a merchant, who runs it through a scanner to capture payment information. The merchant stamps or marks the check "void" and either returns it to the consumer or keeps it. The consumer signs a receipt authorizing the electronic transaction and allows the merchant to initiate an electronic debit.

To date, most of these payments flow through the ACH network. The National Automated Clearing House Association (NACHA) reported that in January 1999, more than 6,200 merchant locations were

offering a POP check conversion option. By January 2000, this payment option had become much more prevalent, with more than 24,600 merchant locations offering it and 1.5 million checks converted to ACH debits. At current estimated growth rates of 6.4 percent per month, NACHA predicts that 25 million checks will have been converted to ACH debit payments in 2000.

Use of EFT networks for POP Conversion is also on the horizon. SafeCheck, a pilot of SVPCo, leverages the existing point-of-sale debit transaction infrastructures to allow merchants to verify almost immediately whether a customer who has presented a paper check has the funds on account to cover the transaction. By 2001, it is expected that SafeCheck will also enable merchants to use the "online" point-of-sale networks to debit the customer's checking account for the amount of the check.

A second hybrid payments process is lockbox truncation. More than 18 billion checks are mailed to lockbox and remittance locations each year. Lockbox truncation enables billing companies and their financial institutions to truncate consumer checks received at these locations and collect the payments more cost effectively through the ACH network. Consumers either opt in or opt out, but continue to send checks to the remittance address as directed by the billing company. If the consumer opts in, the biller then captures the payment information and uses it to create an ACH debit to the consumer's account.

Although 12 financial institutions have signed lockbox truncation participant agreements with NACHA, just one credit union and three depository institutions are currently operational.

A third example of a paper check/electronic network hybrid is re-presented checks — paper checks that have been returned to the bank of first deposit electronically through the ACH network. Instead of attempting to collect the funds again through check channels, an ACH debit is initiated in its place. This

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allows the bank of first deposit or the payee to time the re-representation of the item in a manner that enhances the likelihood of collection. Supermarkets, collection agencies, and major retailers use the ACH for re-presented checks, but before they can do so, they must visibly place notification at the point of sale or on a monthly statement. Such notification to the maker of the check serves as authorization to re-present the check electronically if it is returned.

### Electronic checks

Further along on the continuum of check electronification are paperless electronic checks. The maker of an electronic check never puts pen to paper at all. Instead, the maker provides payment information over the telephone or via a PC online. Transactions that fall into this category are Telephone Initiated Checks, Internet Checks, and eChecks.

Telephone Initiated Checks are used to make payments to billers as well as to purchase products using the ACH network. These transactions are initiated when a consumer provides check data, such as the account number, routing number and amount to a merchant or biller via telephone. Either the consumer or a merchant can initiate the call. In either instance, the merchant must verify the customer's identity and account information. Additionally, the merchant must either record the consumer's verbal authorization or provide written confirmation to the consumer in advance of the transaction's settlement date. Telephone Initiated Checks will become a new NACHA standard entry class code in September 2001.

Another paperless electronic check payment option is the Internet Check, which involves entering checking account information from a paper check into a secure online payment form. In some scenarios, the information is only entered once, and when users opt to make future purchases by check, they use a password and PIN combination that is associated with their account information. In other scenarios, users must enter information from a specific

check each time a transaction is completed. The Internet check payment option is becoming more prevalent on online auction sites. In addition to these consumer-to-consumer types of transactions, Internet checks are beginning to be used for consumer-to-business and business-to-business payments as well. Although there are subtle differences in how transactions are processed with the existing array of Internet check products, in general they all make use of checking account information provided by a consumer/business to effect secure online payments through the ACH.

At the furthest end of the electronic continuum is eCheck. Developed by the Financial Services Technology Consortium (a group of banks, government agencies and other financial industry participants), eCheck is now supported by a private sector entity, CommerceNet. The eCheck is modeled after the paper check but is completely electronic. Each step of the process — writing, delivering, depositing, clearing and settling the check — is done electronically. Because the eCheck is designed to be robust enough for use on the Internet, it uses advanced security technologies. The eCheck is currently being tested on a limited basis by the U.S. Department of the Treasury.

The term "electronic check" is being used to refer to a number of payment methods all based in one way or another on the traditional (and still dominant) paper check. However, in all cases, to varying degrees, electronics are being substituted for at least a portion of the processing of the paper item. "Electronification" of checks will no doubt continue into the future. As electronic check processes continue to evolve, it is likely that the line between the familiar paper check and various forms of electronic payments will continue to blur.

In future articles, we will delve more deeply into many of these emerging forms of payment.

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