

# payments system research briefing

December 2007

FEDERAL RESERVE BANK of KANSAS CITY

## The Evolution of the ACH<sup>1</sup>

by Terri Bradford, Payments System Research Specialist

The Automated Clearinghouse (ACH) has become one of the principal payment mechanisms in the United States. According to the recently released *Federal Reserve Payments Study*, ACH transactions now account for more than 40 percent of the value of noncash payments.<sup>2</sup> This *Briefing* article summarizes the beginnings of the ACH, exciting changes under way today, and possible further changes in the future.

### The ACH of Yesterday

In 1968, out of a desire to address the banking industry's concern that the increasing volume of paper checks would eventually outpace the technology and equipment used to clear them, check clearinghouse associations organized the Special Committee on Paperless Entries (SCOPE). At about the same time, the American Bankers Association sponsored a Monetary and Payments System (MAPS) study to address improving the overall payments system. The outcome of these efforts was the determination that an electronic ACH should be created as a payment mechanism alternative to primarily small-value, recurring paper check payments. With this, the groundwork was laid, and, in 1972, the first ACH association was formed in California. Soon after, other ACH associations

were formed throughout the country, and agreements were made between emerging regional associations and Federal Reserve Banks to provide facilities, equipment, and staff to operate regional ACH networks. In 1974, the National Automated Clearinghouse Association (NACHA), the industry association responsible for managing the development, administration, and governance of the ACH network, was formed to coordinate the ACH nationwide. And, in 1978, jointly with the Federal Reserve System, local ACH associations were linked at a nationwide level. By the late 1980s there were four ACH operators that processed payments among the financial institutions originating ACH transactions and the financial institutions receiving them. Three, the American Clearing House Association, the Electronic Payments Network (EPN), and Visa were private sector operators, and the fourth was the Federal Reserve. Today, EPN and the Federal Reserve remain.

For the majority of their early existence, ACH services were geared toward facilitating recurring consumer credit disbursements, such as payroll, retirement benefits, dividends, and annuity payments; recurring consumer debits, such as payment of insurance premiums, utility bills, mortgage

payments, rent payments, contributions and dues, installment loans, and retail bills; corporate cash concentration and disbursement payments; corporate trade payments and the financial information related to those payments and invoices; and government payments, including electronic benefits transfers, disbursement of benefits (for example, Social Security), and collection of federal and state tax payments.

In 2000, after just more than a quarter-century in existence, 6.9 billion payments worth \$20.3 trillion were processed through the ACH system. Almost half of those payments were the result of direct deposits and payments, 1.8 billion and 1.6 billion, respectively.

## The ACH of Today

The ACH has experienced dynamic change during the last seven years. NACHA's introduction of several electronic check (e-check) applications in 2000 marked a new phase of expanded use of the ACH. Applications were introduced that allowed for the capture of check MICR line information to create ACH transactions at the point of purchase (POP), at drop and lock box locations (ARC), via the Internet (WEB), and over the phone (TEL). In addition, an application that provided for the elimination of those checks needing to be re-presented (RCK) was introduced. As a result, in addition to consumers, corporations, and government entities being able to utilize the ACH, these new check applications enabled retailers, operating both in physical and virtual spaces, to opt to process payments via the ACH.

By 2006, the volume of ACH payments had more than doubled from that processed in 2000, with nearly 15 billion payments processed, worth \$31 trillion. E-check applications accounted for approximately 38 percent of that volume. And NACHA continues to identify opportunities that will have the impact of further reducing usage of paper checks. In March of this year, NACHA introduced the back office conversion (BOC) application. BOC enables retailers, financial institutions, and others to make the decision to convert check payments they have already accepted to ACH transactions during the back office processing of those payments.

To date, innovations in the ACH have primarily been associated with check payments. However, innovations associated with traditional debit card payments are beginning to be seen as well. Just as companies like PayPal developed new ways of utilizing credit cards to initiate payments, other companies are introducing innovations related to debit cards. For example, Tempo Payments (formerly known as Debitman Card), an operator of a proprietary ACH-based PIN debit card network, has been working with merchants to offer merchant-branded, ACH-based debit card products for some time now. Tempo's model attempts to appeal to merchants by offering a less expensive card acceptance fee structure as compared to traditional debit networks and to assist those merchants in making their cards appealing to customers by offering rewards and linking to existing loyalty programs. To acquire such a card, consumers provide the participating merchant with their demand deposit account (DDA) information, which is then linked to the merchant's debit product. While having experienced some measure of success with getting retailers to accept ACH-based debit cards, success with acquiring issuers of the cards has been more modest. To facilitate the issuing process, in May 2006, Tempo formed a strategic alliance with HSBC Retail Services, an issuer of private-label retail cards.

Then, in June of this year, a variation of the ACH-based debit card emerged. This new product, called decoupled debit, not only removes the necessity for an individual to have an account with the issuer to obtain a debit card, but the debit card being issued is also network branded. Capital One, in partnership with MasterCard, launched a decoupled debit product. PayPal also offers a MasterCard-branded decoupled debit product. For these cards, being network branded brings with it acceptance everywhere the brand is accepted, a hurdle that has thus far hindered the success of the previous model. The result is the potential for debit cards to be issued in a manner similar to credit cards, with the issuer of the debit card not being the financial institution at which the consumer's DDA is held. To the consumer and the merchant, the transaction appears to be no different than

a traditional debit payment. For the issuer, authorization for the transaction is completed by the card network and settlement of the transaction occurs via the ACH. In July, Tempo Payments announced that it would begin marketing its payment platform technology to financial institutions that may want to use it to issue their own decoupled debit cards, which could run over any network where the financial institution is a member.

## The ACH of the Future

In addition to the existing activity in the ACH, there are a number of NACHA pilots either in progress or on the horizon. These pilots include efforts to enhance electronic billing and payment, to expand the use of ACH for online consumer payments, and to capitalize on opportunities associated with utilizing the ACH to facilitate electronic processing of low-value check payments. These pilot initiatives are the Electronic Billing Information Delivery System (EBIDS), Secure Vault Payments, and Deposited Check Truncation (DCT), respectively.

Currently under way, the EBIDS pilot presents an alternative format for electronic bill presentment and payment. The intent of this pilot is to make electronic billing, and subsequent payment, as easy for consumers and corporations as utilizing direct deposit. Using EBIDS standards, billers present e-bills to consumers' financial institutions via the ACH, providing consumers the benefit of receiving their billing information in the same location at which they ultimately pay their bills. When consumers make those payments, the billers not only receive a credit, which is a guaranteed payment, but also the corresponding payment remittance information. The EBIDS service also offers new revenue opportunities for financial institutions.

The Secure Vault Payments pilot is scheduled to begin in early 2008. For this pilot, payments will flow as Web-based ACH transactions between consumers' and merchants' financial institutions. On the merchant side, to accept Secure Vault Payments, merchants must be sponsored into the network by their financial institution. On the consumer side, when purchases are initiated, participating financial institutions will authenticate

their customers and authorize purchase transactions. The benefit to consumers is that payment information remains private. For the merchants, the service provides an alternative to card acceptance. And for financial institutions, instead of charging ACH origination fees, a structure of fees more like those levied on card payments will apply.

The DCT pilot also is scheduled to launch in early 2008. The intent of this check truncation service is to provide a means for collecting banks to electronically present check information from low-value consumer checks to paying banks that are as yet unable to accept a check image. Though Check 21 volume continues to experience fairly rapid growth, it is anticipated that a significant number of paper checks will remain into 2009. The DCT service is expected to provide an alternative means of electronic presentment that will minimize the need for presentment of paper checks or image replacement documents. This will be an 18-month, opt-in pilot. And, because check information is being captured but checks are not being converted, transactions processed utilizing the DCT standard entry class code will be covered by the Uniform Commercial Code Articles 3 and 4 and by Regulation CC, not the Electronic Funds Transfer Act/Regulation E. This is relevant in terms of the handling of return items and consumer protection issues.

Beyond the above mentioned pilots, in March 2009, a new standard entry class code for international ACH transactions (IAT), will go into effect, taking the place of the existing CBR and PBR codes used for corporate and consumer cross-border payments, respectively. Today it is estimated that international transactions make up 1 to 2 percent of U.S. ACH volume, with the Federal Reserve processing payments to participating countries, which include Canada, Mexico, the United Kingdom, the Netherlands, Switzerland, Austria, and Germany. This new rule will result in the Federal Reserve processing incoming credits from these countries as well.

Finally, while not a formal initiative, consideration is being given to making the ACH system more real time. While ACH transaction processing is done in batches twice a day, ATM,

credit, and increasingly debit card transactions post in real time. Though there may be a desire and/or need for real-time ACH processing, the costs associated with updating batch systems to real-time systems are rather substantial. Further, achieving real-time processing in the ACH would require the buy-in and participation of the financial community at large to achieve the desired results. In the interim, to simulate a more real-time environment, some financial institutions are running ACH batches more frequently than the ACH's established twice-daily processing cycles and showing the amount of

anticipated ACH transactions in their customers' account balances even though the transactions have yet to settle.

## Conclusion

What began as a way to replace small-value, recurring paper check payments has evolved into much more. Thirty-five years after its introduction, the ACH of today has become a principal payments mechanism. And innovations and initiatives under way may make the ACH even more prominent in the future.

## Endnotes

<sup>1</sup> Revised January 2008.

<sup>2</sup> The 2007 Federal Reserve Payments Study, *Noncash Payment Trends in the United States: 2003-2006*.

# payments system research

Web site: [www.KansasCityFed.org/home/subwebs.cfm?subweb=9](http://www.KansasCityFed.org/home/subwebs.cfm?subweb=9)

The Payments System Research function of the Federal Reserve Bank of Kansas City is responsible for monitoring and analyzing payments system developments. Staff includes:

### Terri Bradford

Payments System Research Specialist  
[Terri.R.Bradford@kc.frb.org](mailto:Terri.R.Bradford@kc.frb.org)  
816-881-2001

### Christian Hung

Research Associate  
[Christian.Hung@kc.frb.org](mailto:Christian.Hung@kc.frb.org)  
816-881-4721

### Zhu Wang

Senior Economist  
[Zhu.Wang@kc.frb.org](mailto:Zhu.Wang@kc.frb.org)  
816-881-4742

### Fumiko Hayashi

Senior Economist  
[Fumiko.Hayashi@kc.frb.org](mailto:Fumiko.Hayashi@kc.frb.org)  
816-881-6851

### Rick Sullivan

Senior Economist  
[Rick.J.Sullivan@kc.frb.org](mailto:Rick.J.Sullivan@kc.frb.org)  
816-881-2372

### Stuart E. Weiner

Vice President and Director  
[Stuart.E.Weiner@kc.frb.org](mailto:Stuart.E.Weiner@kc.frb.org)  
816-881-2201

*The views expressed in this newsletter are those of the author and do not necessarily reflect those of the Federal Reserve Bank of Kansas City or the Federal Reserve System.*