AUTOMATED CLEARING HOUSE CHECK CONVERSION WHITE PAPER

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EXECUTIVE SUMMARY

The United States payment system has reached a tipping point – check payment volume is declining and electronic payment volume is increasing. This migration toward electronic payments began more than thirty years ago with the consumer application of Direct Deposit. Over the years, different electronic payment options have become available to consumers, businesses, financial institutions and government entities.

In 1999, a process of converting paper checks to electronic payments – called check conversion – was first introduced to the marketplace. The same reliable and secure network used for Direct Deposit and Direct Payment, the Automated Clearing House (ACH), is used for check conversion. Check conversion has become a valuable solution to address some of the challenges of paper check collection such as potential for fraud, vulnerability to the transportation infrastructure and improvements in efficiency for business and consumers.

Currently there are three major types of check conversion including the following:

- **Back Office Conversion (BOC) –** Available on March 16, 2007 – Allows businesses to collect checks written at a business payment counter and convert them to electronic payments later in a centralized location.
- **Point of Purchase (POP)** – Introduced in 1999 – Used for checks written at a point of sale, voided, returned immediately to the customer, and processed as a converted check.
- **Accounts Receivable Entry (ARC)** – Introduced in 2002 – Mailed checks used for bill payment that are converted into electronic payments by the billing company.

Consumers are aware of the check conversion process and the following systemic safeguards are in place to protect the consumer.

- Federal Regulation E protects consumers from unauthorized or fraudulent debits;
- Specific consumer notification requirements are in place;
- Businesses must offer consumers and "opt-out";
- Bank statements provide consumers with transaction detail that includes the check number, the date of the check, the amount of the check, and the payee.

This document was written for individuals or organizations that want to know more about ACH check conversion, including BOC, the newest conversion application. The document provides a historical and legal overview of the ACH network, the impact and use of the ACH network applications by consumers, specific details about the check conversion process and a comparison between check conversion and the recent Check Clearing for the 21st Century Act (referred to as Check 21).

OVERVIEW OF THE AUTOMATED CLEARING HOUSE NETWORK

The ACH network is a batch-processed, store-and-forward for future settlement system. This means that transactions received by a financial institution during the day are stored and processed later in a batch mode, rather than sending each payment separately. In

1974, the National Automated Clearing House Association (NACHA) was formed to coordinate the ACH movement nationwide. Through the joint efforts of NACHA and the Federal Reserve System, local ACH networks were linked electronically on a nationwide basis in 1978. The main benefits associated with the development of the ACH network were cost reduction and improved efficiency over paper check transactions.

For a more detailed description of the ACH network, please see the appendix section at the end of this document or visit the web sites listed below.

Log on to http://www.electronicpayments.org/individuals/in.direct-deposit.how.php for and illustration of how payments move through the ACH network.

For an explanation of the rules and regulations that guide the ACH network (*ACH Operating Rules*), log on to http://nacha.org/ACH_Rules/ach_rules.htm.

BACKGROUND

Evolution from Paper Payments to Electronic Payments

No other industrialized nation relies on paper checks as much as the United States. In the United States check volume peaked in the mid-1990s. Since those peak years check volume has been declining. *(In 2002, the Federal Reserve processed 16.9 billion checks, a 2% decrease from 2001 – Source: 2002 Federal Reserve Annual Report)*

Since the advent of digital technology, nearly all industries making and accepting payments have promoted moving the U.S. economy from a check-based payments system to one based on electronic payments over time-tested, secure networks. The technological development and advantages in electronic payment processing have advanced to the point that the processing is seamless and for the most part, transparent and beneficial to the consumer. The Federal Reserve, which has official responsibility for overseeing the U.S. payments system, devotes considerable resources toward improving the safety of the system and exploring ways to increase efficiencies in the system through the use of electronic payments.

Businesses and consumers have also driven the movement toward electronic payments. The U.S. economy depends on the ability of consumers and businesses to make and receive payments routinely, safely and efficiently. Over the years, consumers and businesses have successfully taken advantage of opportunities to move away from paper to electronic payments. As a result, debit card payments, ACH payments (Direct Deposit and Direct Payment), and credit card payments have grown rapidly in volume and popularity.

Overall, the ACH network volume has doubled in the past five years with nearly 14 billion ACH payments made in 2005. This growth has been spurred primarily by newer applications like check conversion. In fact, check conversion applications are the fastest-growing type of electronic payment ever. In 2006, the number of checks converted to ACH debits rose by 36 percent. *(Source: NACHA, 2006)*

Types of ACH Payments
ACH transactions are typically categorized as either consumer payments or corporate payments, depending on the relationship between the parties involved in the transaction and the type of receiver account. Other payments are distinguished as federal government payments (representing automated disbursements originating from the U.S. government).

Consumer Payments
Consumer ACH applications include Direct Deposit, Direct Payment (direct debit), check conversion, and in some cases on-line bill payment.

- Direct Deposit is the most widely used electronic payment. In 2005, 4.4 billion payments were made using Direct Deposit, a 5.1 percent increase over the previous year. As many as 145 million Americans (68% of employees) use Direct Deposit to receive their pay or government benefits. *(Source: NACHA, 2006, Dove Consulting, Study of Consumer Payment Preferences)*

  Almost three out of four workers receive their pay through Direct Deposit and the satisfaction rate of people who use it is 97%. *(Source: NACHA and the Federal Reserve Banks)*

- More than half of all U.S. households use Direct Payment for at least one recurring payment. In 2005, more than 3.1 billion payments were made by Direct Payment, an increase of 5.3 percent from the previous year. Direct Payment usage more than doubled from 1997 to 2002. However, consumers still make 63% of recurring bill payments by check. *(Source: NACHA, 2006, Dove Consulting Study of Consumer Payment Preferences)*

Corporate Payments
Corporate ACH applications include cash concentration and disbursement, corporate trade payments, state and Federal tax payments, and financial electronic data interchange (EDI).

- Although use of electronic payments in this segment is growing, research suggests that transaction cycles in the business environment continue to be conducted via paper – not electronic options. Of the estimated 9.58 billion business-to-business transactions in 2004, 80% were completed by paper check. *(Source: NACHA, 2006)*

Federal Government Payments
Federal government ACH applications include Social Security benefits, military and civilian payrolls, retirement benefits, tax refunds, and disbursements for state and federal

revenue sharing programs.

- More than 80% of Social Security recipients receive their benefit by Direct Deposit *(Source: Social Security Administration, 2006)*
- Almost half of U.S. tax filers (56 million) received their 2005 tax refund via Direct Deposit. *(Source: IRS, 2006)*

CHECK CONVERSION OVERVIEW

Check conversion is the process of converting a payment made by check into a one-time electronic payment. Other names commonly used for check conversion include electronic check and e-check.

Currently, there are two types of ACH check conversion applications – Accounts Receivable Entries (ARC) and Point-of-Purchase (POP) – and businesses are taking advantage of these conversion options today in record numbers. On March 16, 2007, Back Office Conversion (BOC), a third type of check conversion application, will become available within the ACH network. Many businesses are now converting checks to ACH debits to decrease costs and increase operating efficiencies.

Usage of ARC and POP – 2005-2006 (in millions)

	2005	2006	Percentage Increase
POP	224	350	64%
ARC	2,154	2,850	32%

The three check conversion applications are similar in that each is simply a method some businesses use to electronically process payments made by checks. The check conversion applications are processed through the ACH Network – the same network used to process millions of payments securely. The difference between each application is based on how the check is accepted by the business doing the check conversion.

The ARC application is used to convert checks received by a business through the mail to pay a bill or placed a bill payment "drop box." The POP application is used for converting checks at the point of sale and returning the original checks to the consumer as they finish the check out process. Beginning in March 2007, the BOC application can be used for checks received at the point of sale or a staffed payment location, retained by the business and later converted in a "back office."

A business must notify their customers that their check payment may be processed using check conversion. The notification allows that by providing a check payment the consumer has authorized a one-time electronic payment from their account. After the consumer makes a payment, the check is used as a source document to retrieve the information necessary to create an ACH transaction in lieu of processing the paper check. First, information is electronically captured from the magnetic ink character recognition (MICR) line at the bottom of the check. MICR line contains the routing number of the

consumer's bank, the account number of the consumer's account and the number of the check. The amount of the check payment is also captured. The original paper check is either returned back to the individual at the point of sale or securely retained by the business and later destroyed after the ACH payment has been processed.

The information about the electronic payment is compiled in an ACH file for delivery to a financial institution for processing, where a one-time debit is applied to the consumer's account. Once the individual's account is electronically debited, the payment is listed on their bank or credit union account statement with the date of the payment, name of the company paid, check number, and amount of payment.

For an illustration of how check conversion works, log on to http://electronicpayments.org/individuals/in.check-conversion.how.php.

Back Office Conversion

On March 16, 2007, Back Office Conversion will be available to businesses. BOC allows businesses to accept a paper check written at the point of sale (e.g. checkout counter, staffed payment location, service location) and convert it to an electronic payment in a centralized "back office" location.

In order for a check to be converted under BOC, the business is required, under the ACH Operating Rules, to perform the following steps:

1. Post a notice at the point-of-sale or payment location stating the check may be converted to a one-time electronic payment.
2. Provide a handout, "take-away" to the customer with information about the electronic process.
3. Include a customer service phone number on the posted notice and handout for customers that may have questions about check conversion.
4. Image the original check and retain the image or photo for at least 2 years.
5. Securely store the original check until it is appropriately destroyed.

The Impact of Check Conversion on Consumers

The majority of consumers are receiving or making payments electronically today either through receipt of pay through Direct Deposit, debit card payments or payment of bills through Direct Payment. Check conversion is simply a method of payment processing and should have limited impact on consumers. Consumers want accurate information and better control of their account balances. Businesses want to process payments quickly and efficiently with the least amount of risk and fraud. And, check conversion applications have helped improve the processing efficiencies of our nation's payment system.

The process of converting a paper check into an electronic payment preserves the choice of payment medium for a consumer when making a payment. For example, with Accounts Receivable (ARC) conversion, the consumer continues to write a check in order to pay a bill. With Back Office (BOC) conversion, the consumer continues to pay for goods or services in person by providing a check to the business. In both cases,

consumers can opt out if they choose.

Consumers may notice that the converted payment may be listed in a different location on their bank or credit union statement. Many will see the converted payment included with the ATM withdrawals, Direct Payments and other electronic debits. On the statement, the converted check payment will include date of the payment, the name of the company paid, the check number, and the amount of the payment. The information on the statement provides the consumer with an advantage - they now have the name of the company paid by check on the bank or credit union statement. The *ACH Operating Rules* stipulate specific posting requirements for the Receiving Financial Institution that guarantee that the consumer sees the necessary payment detail on their statements. Furthermore, bank or credit union statements are generally considered proof of payment and the IRS accepts an account statement as proof of payment.

If checks are converted using ARC, POP or BOC, consumers will not receive a copy of the cancelled check with their account statement. Research and anecdotal evidence shows that approximately 75 percent of consumers already choose not to receive their cancelled checks from their financial institution. And more consumers are choosing to use their online banking system to keep track of payments and account transactions rather than receiving paper bank statements. *(Source: BITS Financial Services Roundtable)*

The Impact of Check Conversion and ACH Processing on the U.S. Economy

Check conversion is one component of the nation's overall migration from paper to electronic payments. The check conversion process reduces the handling and transport required of paper check processing. In the Federal Reserve's 2002 annual report, the costs associated with paper check processing remained constant at 4.5 cents per transaction, while the costs associated with ACH processing decreased to 1.3 cents per transaction. According to the Federal Reserve, the U.S. economy is saving close to $1.62 per ACH payment versus check payment, in direct and indirect costs. Additionally, the U.S. Department of the Treasury saves $0.61.9 per transaction when paying by Direct Deposit versus a check. Use of the ACH in 2000 alone saved consumers, businesses, and the government an estimated $8.4 billion.

Due to accelerated processing times and return notification to the business accepting the payment, the check conversion process yields fewer bad checks, earlier fraud detection, and fewer processing errors. In addition, electronic settlement of payments falls under regulatory standards and protections. These advantages are increasingly important in today's environment.

The most recent American Bankers Association (ABA) Deposit Account Fraud Survey Report estimates financial institutions lost $698 million in 2001 and attempted check fraud was $4.3 billion, doubling for the second time in four years. *(Source: American Bankers Association)*

When a paper check is converted to an electronic payment the consumer is protected under the Electronic Fund Transfer Act of 1978, which is implemented by the Federal

Reserve's Regulation E. The most tangible difference between check law (UCC and Regulation CC) and EFT law (Regulation E and the *ACH Operating Rules*) is the time and process by which unauthorized debits to the consumer's account can be reversed.

Under check law, a consumer's bank or credit union has until midnight of the business day following receipt of the check to return it through the payment system. Typically, the consumer will not even know that his or her check has been presented for payment fraudulently or inaccurately, until well after this deadline has expired (i.e., when he or she receives and reviews his or her checking account statement). Regulation E is an easily understood regulation that expressly limits the consumer liability for an unauthorized transaction. The consumer's bank or credit union may then return an unauthorized transaction and credit the consumer's account through the ACH network.

PAYMENT INDUSTRY TRENDS

Check 21 and Check Conversion

In 2000, the Federal Reserve Board staff began investigating a concept that would facilitate check truncation, foster innovation in the check payment system, and improve the payments system overall. In 2003, President Bush signed the Check Clearing for the 21st Century Act into law and it went into effect on October 28, 2004.

This legislation, also know as Check 21, has added to the momentum of the changing payments landscape. Check 21 allows financial institutions to use printed images – called substitute checks – to expedite the collection of funds from banks in place of the original paper checks. By definition, a substitute check must meet certain qualifications. A substitute check must contain both the front and back image of the original check, it must bear the original MICR line, and it must also conform to applicable industry standards allowing it to be suitable for automated processing.

Under Check 21, the following electronic process may take place:

- An image is captured of the original paper check. (This is not specifically covered by Check 21)
- A financial institution – called the reconverting bank – uses the digital image to create a substitute check, which is a paper reproduction of the original check.
- The substitute check may be used for processing and settlement purposes in the paper check collection system.
- A financial institution may use the image in order to process the check payment through an image exchange agreement with the paying bank. (This is not specifically covered by Check 21)

Although proposed and developed under a similar premise – moving the payment landscape toward electronic processing and away from the paper-based system – there are key differences between Check 21 and ACH check conversion. Check 21 transactions flow through the check clearing process, not the ACH Network like check conversion items. Another important difference is the legal framework in place to protect

consumers. Check 21 does have consumer protection provisions, however the check legally remains a check and check law applies. Check law allows limited time for a consumer's bank to address inaccuracies or mistakes. With check conversion, the check has now been moved to the ACH network. When the check moves to the ACH network, the consumer benefits from the error resolution protections under the Federal Reserve's Regulation E.

While there may be some confusion between ACH check conversion and Check 21, most experts agree that both check conversion and Check 21 will play critical roles in the continuing evolution and modernization of the nation's payment system. Both provide a framework the can ultimately benefit the nation's payment system by handling payments in a more efficient manner, while allowing consumers to continue to write checks.

WHO WE ARE

Back Office Conversion Education Task Force
The Back Office Conversion Education Task Force membership consists of leading financial institutions, government agencies, ACH operators, retailers and non-profits. The Task Force's mandate is to proactively reach out to businesses, financial institutions, regulatory agencies, legislative bodies and other interested parties to help educate consumers and entities on the new methods available to process checks.

NACHA – The Electronic Payments Association
NACHA is the leading organization in developing electronic solutions to improve the payments system. NACHA represents more than 11,000 financial institutions through direct memberships and a network of regional payments associations, and 650 organizations through its industry councils. NACHA develops operating rules and business practices for the Automated Clearing House (ACH) Network and for electronic payments in the areas of Internet commerce, electronic bill and invoice presentment and payment (EBPP, EIPP), e-checks, financial electronic data interchange (EDI), international payments, and electronic benefits transfer (EBT). Visit NACHA on the Internet at www.nacha.org.

MORE INFORMATION

www.electronicpayments.org

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APPENDIX

OVERVIEW OF THE AUTOMATED CLEARING HOUSE NETWORK

The definition of the Automated Clearing House (ACH)

The ACH network is a batch-processed, store-and-forward for future settlement system. This means that transactions received by a financial institution during the day are stored and processed later in a batch mode, rather than sending each payment separately. This process provides significant economies of scale. It also can provide faster processing than paper checks, which must be physically handled and transported. Instead of using paper to carry necessary transaction information, ACH transactions are processed electronically between financial institutions according to specific formats.

Typically, five participants are involved in an ACH transaction:

1. the originating company or individual (Originator),
2. the Originating Depository Financial Institution (ODFI),
3. the ACH Operator,
4. the Receiving Depository Financial Institution (RDFI), and
5. the receiving consumer, company, or employee (Receiver).

The History of the ACH

In 1974, the National Automated Clearing House Association (NACHA) was formed to coordinate the ACH movement nationwide. Through the joint efforts of NACHA and the Federal Reserve System, local ACH networks were linked electronically on a nationwide basis in 1978. The main benefits associated with the development of the ACH network were cost reduction and improved efficiency over paper check transactions.

The Legal Framework of the ACH Payments

The ACH process operates from beginning to end through a series of legal agreements. The agreement binds the originating company to the *ACH Operating Rules*, defines the parameters of the relationship between the all parties, identifies processing requirements for the specific application(s), and establishes liability and accountability for procedures related to certain application(s). In some cases, agreements exist between the RDFI and the Receiver, particularly if the Receiver is a corporate or government entity.

While the *ACH Operating Rules* is the primary document addressing the rules and regulations for the ACH network, additional regulations and laws having a direct bearing on ACH processing include:

- Electronic Funds Transfer Act as implemented by the Federal Reserve's Regulation E,
- Uniform Commercial Code (UCC) Articles 3 and 4, which govern check transactions,
- UCC Article 4A which governs wholesale credit transfers,
- Right to Financial Privacy Act,
- Regulation D regarding reserve requirements,
- Regulation CC regarding funds availability,
- Other regulatory agency directives,
- Federal government ACH payments are controlled by the provisions of 31 C.F.R. Part 210.

APPENDIX – Check Conversion and Check 21 Comparison Grid

	Accounts Receivable (ARC)	**Point of Purchase (POP)**	**Back Office Conversion (BOC)**	**Check 21 (Check Clearing for the 21st Century Act)**
ACH Standard Entry Class Code	ARC	POP	BOC	N/A
Effective Date	2002	1999	3/16/2007	10/28/2004
Description and Use	Check payment received through mail or at unattended payment "drop box" converted to one-time electronic debit	In-person check payment used to make a purchase converted to one-time electronic debit. Voided check returned to consumer at point of sale.	In-person check payment used to make a purchase converted to one-time electronic debit – check imaged and then destroyed. Check converted in "back office."	Creates a substitute check, which permits banks to truncate original checks, to process check information electronically, and to deliver substitute checks to banks that want to continue receiving paper checks.
Types of Eligible Checks and Accounts	Consumer or Business checks that do not contain values in the aux on-us of MICR line	Consumer or Business checks that do not contain values in the aux on-us of MICR line	Consumer or Business checks that do not contain values in the aux on-us of MICR line	All U.S. dollar checks written on a U.S. bank
Dollar Limit	$25,000	$25,000	$25,000	None
Authorization, Notification Requirements	Notification prior to writing check before every payment	Authorization receipt signed at time of purchase	Notification posted and hand-out provided at point of sale	Not specified by Act
Account, MICR Capture Requirements	Electronic	Electronic	Electronic	Not specified by Act

Original Check Requirements	Mailed or deposited at a drop box, retained by biller to which check was delivered	Voided by business and returned to individual at time of purchase	Retained by the receiving business, imaged and later destroyed	Not specified by Act
Individual "Opt Out" Provisions	Yes – can choose to pay via another method – cash, credit card.	Yes – can choose to pay via another method – cash, credit card.	Yes – can choose to pay via another method – cash, credit card.	N/A
Individual Right to Dispute Transaction	Yes. 60 day right of return from posting date. (Reg E error resolution also applies)	Yes. 60 day right of return from posting date. (Reg E error resolution also applies)	Yes. 60 day right of return from posting date. (Reg E error resolution also applies)	Not specified by Act
Key Regulations, Rules (Legal Framework)	• Regulation E • Electronic Funds Transfer Act • ACH Operating Rules • Fed Operating Circular	• Regulation E • Electronic Funds Transfer Act • ACH Rules	• Regulation E • Electronic Funds Transfer Act • ACH Rules	• C21 Act • Regulation CC • UCC, • Clearing house rules • Fed Operating Circular
Maximum Number of Presentments	3	3	3	2, although not specified by Act
Are Stop Payments Allowed?	Yes, prior to posting of item	Yes, prior to posting of item	Yes, prior to posting of item	Yes, although not specified by Act
Check Number Included with Transaction Info on Bank Statement	Yes	Yes	Yes	Yes, although not specified by Act

Business Name Included with Transaction Info on Bank Statement	Yes	Yes	Yes	No, although not specified by Act

*** NOTE:** The ACH Network allows a financial institution to return a consumer debit up to 60 days after the transaction is posted, if the consumer attests it is incorrect or unauthorized. Regulation E provides the consumer protection for electronic transactions for a period of 60 days following the date of the statement.