Retail Store Solutions
August 2004

Getting more from electronic check conversion: using electronic image capture to reduce risks and costs.

Contents

Introduction

While check usage in the retail environment has declined with the proliferation of debit card payment systems, it is by no means on the way out. In fact, by some estimates, checks will play a role in funds transfer for 20 more years. The most recent Federal Reserve Financial Services study on checks determined that as recently as 2000 there were nearly three times as many check transactions, with more than five times the dollar value, as credit card transactions.[1] This underscores the continued popularity of the paper check. And as long as checks are a preferred payment method of consumers, retailers need ways to offset the traditionally high costs of processing paper checks compared to other tender types. Recognizing that, of all tender types, checks offer the best opportunity for cost savings, many retailers are turning to electronic check conversion (ECC) to reduce these costs.

Designed by the National Automated Clearing House Association (NACHA), ECC is the process by which a paper check transaction is converted to an electronic transaction at the point of sale (POS) and processed via the nationwide Automated Clearing House (ACH) system. ECC benefits can include lower back-office labor expenses, faster transactions, reduced exposure to fraud, improved collection rates and potentially lower bank fees on a per-check transaction basis. However, ECC is not without risks. If retailers rely on their own databases or third-party electronic authorization services without creating a digital or physical copy of checks, they face an increased risk of loss if errors occur during processing or if a check goes to collections.

To help you reduce risks and optimize the value and savings from ECC processes, IBM offers the IBM SureMark™ Printer TI8 platform with an electronic image capture and high-accuracy MICR-reading solution for the POS. This white paper examines the benefits of the IBM approach to ECC, as well as important considerations and steps you need to take prior to implementing ECC processes.

Highlights

Electronic check conversion (ECC), developed by NACHA to process paper checks more efficiently by leveraging the ACH system and network, offers many potential benefits.

Choosing to implement only fundamental ECC procedures can create vulnerabilities that could offset the potential benefits of ECC.

ECC benefits and challenges and the IBM solution

The ACH Network, which was introduced in the early 1970s, has evolved into a "highly reliable and efficient nationwide, batch-oriented, electronic funds transfer system governed by the NACHA Operating Rules, which provides for the interbank clearing of electronic payments for participating depository financial institutions."[2] NACHA developed ECC as a way to process paper checks more efficiently by leveraging the existing ACH system and network. Essentially, the NACHA ECC process begins by scanning a check's magnetic ink character recognition (MICR) number into the POS system and then completes the transaction using an electronic funds transfer (EFT). As part of the process, the customer signs an EFT receipt—which is similar to a credit card receipt—that authorizes the retailer to debit the customer's checking account. The potential benefits of ECC include:

- *Reduced back-office labor expenses*
- *Shorter transaction time, resulting in higher customer satisfaction*
- *Reduced expense to collect on insufficient fund (NSF) transactions, and higher collection rates*
- *Lower bank fees on a per-check transaction basis*
- *Streamlined processes through consolidation of banking relationships*
- *Increased interest income resulting from improved funds availability*
- *Lower transportation costs (for example, fewer parcels for armored car services) and lower risk of losing paper checks in transit.*

However, if you choose to implement only fundamental ECC procedures, the new vulnerabilities that you will face could offset many of these benefits. This is because once checks are processed (that is, the number from the MICR line is read) using ECC, they are returned to the customer. As a result, you will have no record of the individual's name or address if the check is returned or if an error occurs when reading the MICR line.

Highlights

Without an actual check or check image, it is very difficult for collections to identify consumers when their checks are returned. To address this issue, many retailers employ their own databases or use fee-based consumer identification databases to track down individuals. However, the databases are expensive to maintain, and results from fee-based services are often inconsistent. Inevitably, with these and similar methods, some returned checks will not be identifiable, which can result in significant revenue losses.

Regardless of the quality of a MICR-reading system, the potential for errors exists, creating an increase in difficult-to-trace administrative returns—and lost revenues.

Regardless of the quality of a MICR-reading system, there is always a potential for substitution errors, where one number is misread as another. And unlike magnetic stripe data on credit cards, not all MICR fields include check digits to identify inaccuracies. So when a misread does happen, the error can go undetected by the system. And because ECC is completely driven by MICR information (NACHA forbids manual keying of MICR numbers), and not all MICR readers are specifically designed to handle this business-critical function, you should expect an increase in difficult-to-trace administrative returns—and thus lost revenues—when employing legacy MICR readers for ECC.

The IBM solution

IBM offers tools on the IBM SureMark Printer Model TI8 platform that are designed to efficiently and cost-effectively help offset the MICR-reading and record-keeping challenges of ECC.

IBM offers tools on IBM SureMark Printer Model TI8 platforms that are designed to efficiently and cost-effectively help you offset the MICR-reading and record-keeping challenges of ECC. These distinct tools, which enable you to use ECC to reduce check transaction costs while helping to mitigate the associated risks, include:

- *Optical character recognition (OCR)/MICR—Helps improve the accuracy of MICR reading and helps you identify fraudulent tampering with the MICR line by combining check imaging with magnetic reading*
- *Electronic check imaging—Facilitates the process of capturing and storing check images, enabling you to retrieve customer information should it be needed later for collections, fraud prevention, demographic data or other purposes*

Highlights

- *Built-in application-control functionality—Available with IBM 4690 Supermarket Application and IBM SurePOS™ ACE solutions, enabling you to use your IBM applications to rapidly deploy ECC solutions today.*

Transitioning to the flexible IBM solution for ECC has a minimal impact on application programming and user operations.

ECC solutions enable the SureMark printer to scan check images and transmit them to the central POS controller. Alternatively, check images also can be printed on receipt paper from the SureMark printer. And, as an offline fail-safe feature in the event of a controller outage, nonvolatile memory in the printer can store up to 100 images. The controller can then retrieve images stored in the printer once it returns to normal operation after the outage. The transition to this flexible solution has a minimal impact on application programming and user operations (solution elements are discussed starting on page 10 of this paper).

The benefits of enhanced MICR accuracy and electronic check imaging can add up quickly, speeding your return on investment (ROI).

Although this additional functionality is not required by NACHA, the benefits of enhanced MICR accuracy and electronic check imaging can add up quickly, hastening the return on investment (ROI). For example, IBM designed the OCR/MICR tool to significantly reduce the misread rate when compared to existing IBM MICR-reading solutions. Furthermore, IBM benchmarks have shown that the IBM solution can be several seconds faster than some competitive alternatives. And the faster check-processing speed can translate into shorter transaction times and higher customer satisfaction.

Once your company chooses its ECC solution, the real work begins. Implementing an ECC solution requires the transformation of numerous business and IT processes. And before beginning this process, it is important for your IT team to consider many issues related to the company's relationships with banks and third-party check service providers, as well as the supporting infrastructure.

Highlights

Before implementing an ECC solution, many factors require careful consideration based on individual business needs.

Because faster transaction times are a key benefit of ECC solutions, you must consider the number of checks for which you will require a completed check image.

Considerations for choosing an ACH processor and bank

When implementing ECC, your business must decide whether it wants to use a check guarantee process. If so, then it must also meet the technical and process-related requirements of its chosen third-party check processor company. In many cases, this means you will need to copy checks or send a check image before the company will guarantee a transaction. You should know in advance the kind of images and other data the third party will want from you. For example, a processor company may require only the MICR number and the transaction amount, or it may need a driver's license number, or even a digital image of a completed check. These types of factors must be considered before writing new applications and changing business processes.

The check guarantee process is constantly evolving. For example, many third-party check processor companies now use image replacement documents (IRDs) to process administrative returns for business, corporate and/or courtesy checks that are submitted to banks via ECC. An IRD provides a legal means for retailers, third-party check processors and banks to print copies of administrative check returns using magnetic ink and send them back through the system—without the hassle and cost of contacting the end customer. As a result, for higher-value checks, check processor companies that use IRD may require you to provide an image of a completed check in order to process a transaction. Because faster transaction times are one of the key benefits of ECC, you must consider the number of checks for which you will require a completed check image. This could impact your ROI from your ECC solution, so it is important to evaluate early.

The bank you choose will also affect ECC processes. In fact, ECC is poised to redefine and streamline retailers' relationships with their banks. Currently, for reasons related to logistics and processing time, many retailers use local banks to process checking transactions. As a result, some large retailers maintain

Highlights

ECC can use both ACH and debit transaction types; each has advantages and disadvantages based on the transaction dollar amount and/or the customer's risk profile, and your approach will affect the ROI.

relationships with hundreds of banks (or the third party that sells their service) in different locales. When you adopt ECC, you are no longer constrained to local banks to process checking transactions. Instead, you can consolidate electronic check processing into a single, cost-competitive bank.

Transaction types—deciding what's best for you

ECC systems can use both ACH and debit transaction types, and each has advantages and disadvantages based on the transaction dollar amount and/or the customer's risk profile. Whether you choose to employ one or both of these methods, your approach will affect the ROI from ECC.

Comparing ACH and debit transactions

While typically more costly than ACH, debit transactions are often preferable for large transactions because they allow you, or your third-party processor, to determine immediately whether or not customers have sufficient funds in their accounts before closing a sale. Once the transaction is complete, you receive the money more quickly. This does not remove the need for a check image, because there is still the possibility of a MICR misread and the image is needed for recourse. The debit process also eliminates the check float, which may impact customers' purchase habits. However, you could build float into the process.

With ACH, you can't be sure that a customer's account contains enough money to cover a transaction. This means that although ACH transactions are generally cheaper than debit, they can be more risky. But when used in conjunction with a database that contains reliable information about a customer's check history, ACH transactions provide a safe and cost-effective means of processing lower-value transactions.

Highlights

In many cases, retailers will use both ACH and debit transactions as part of their ECC processes.

In many cases, retailers will use both ACH and debit transactions as part of their ECC processes. To balance costs and risks—and optimize profits—retailers may determine which process should be used based on the dollar amount of the transaction and the customer's risk profile. If you use this approach in conjunction with a third-party processor, it will affect ECC process dynamics. For example, if you want to use debit processes for checks over US$150 and guarantee the transactions, the guarantee company may require an image of the completed check to mitigate MICR read concerns. And if you want to take advantage of the lower rate of ACH for checks under US$150, the third party may want an image of a completed check for amounts between US$75 and US$150, in case they are returned administratively. For checks less than US$75, the third party may require only an address and the MICR field, making ECC transactions even faster.

Implications of the Check Clearing for the 21st Century Act

The Checks21 Act allows banks to transfer check images electronically; at the retail POS, this is called check truncation—retailers replace paper checks with two-sided check images sent to financial institutions for processing.

You may wonder how the adoption of the Check Clearing for the 21st Century Act (Checks21) by the U.S. Federal Government will impact your processes. Checks21 allows banks to transfer check images electronically, enabling them to save considerable time and processing expenses by eliminating the costs and challenges associated with paper-based processes. At the retail POS, this emerging process is referred to as check truncation—whereby retailers can replace paper checks with two-sided check images that can be sent to financial institutions for processing. This system has the benefit of accepting all types of checks, including corporate and convenience checks.

Widespread acceptance of check truncation will depend on the ability of both large and small banks to support the electronic transmission of check images. For example, if a large bank that uses the Checks21 process wants to process transit checks with a smaller bank that does not accept check images,

Highlights

it will need to create a substitute check, typically an IRD. And since IRDs are processed as paper transactions, there is no cost benefit to either bank. This inefficiency, along with increased communication bandwidth requirements, might delay general acceptance of check truncation in retail environments until the image infrastructure gains the same ubiquity as the ACH network today. For these reasons, ECC will likely be the process of choice for retailers in the foreseeable future.

Developing effective collections processes

To optimize the ROI from ECC, it is critical to consider collections requirements prior to implementation.

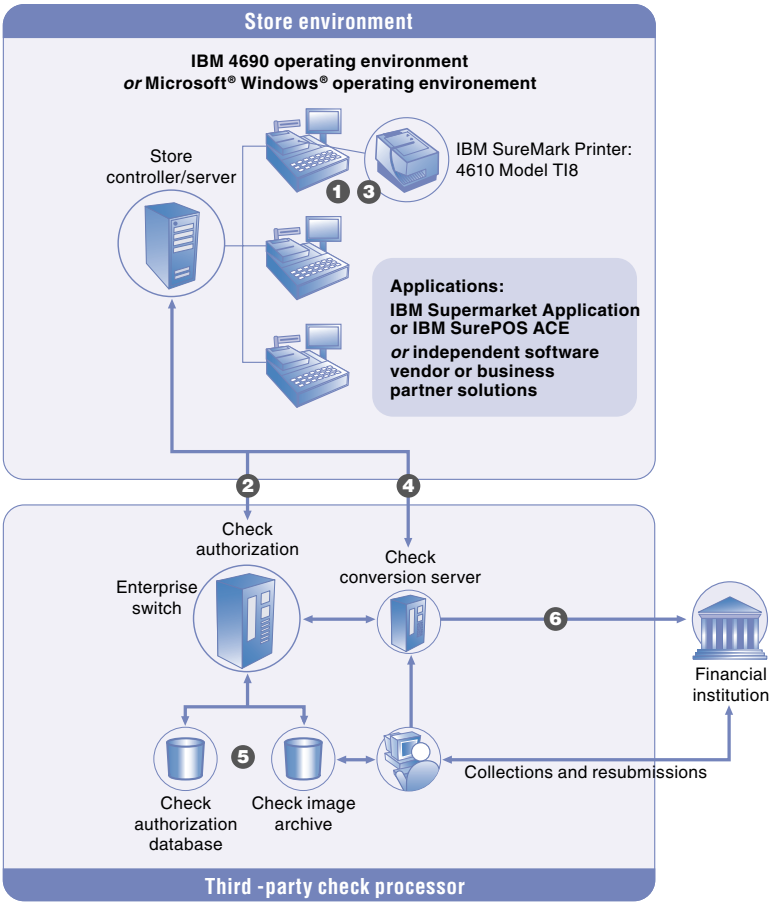
The impact of ECC on check processing sends ripples all the way to collections procedures. You should consider the following types of questions prior to implementing ECC, so you can reduce challenges and save costs in the long run: Who will perform collections? How will we save and retrieve images for collection purposes? Where can we find an archive and retrieval application for check images?

Whether your company handles collections in-house or through a third party, the implications of ECC on the collections process are similar. Without a check image and accurate MICR reading, there is little recourse for insufficient fund (NSF) checks, administrative returns and technical or human errors. Consequently, to optimize the ROI from ECC, it is critical to consider your collections requirements prior to implementation. That way, you can put systems and processes in place to support ECC, as well as collections.

Highlights

IBM SureMark Printer Model T18 provides a platform for collecting check images and MICR transaction data to support the ECC process steps—check authorization, check conversion and collections.

ECC solution elements



1. Printer reads MICR line information and captures digital check image. POS system gathers transaction information.
2. Third-party check processor uses MICR data and transaction information to verify and authorize check transaction.
3. Upon receipt of check authorization, printer produced the ECC-customer agreement. The customer signs and returns the agreement. The operator inserts the check into the printer, which prints “void” on the check. The check is returned to the customer.
4. POS system transfers batch information (MICR line, check image and transaction information) to a third-party check processor.
5. Check image and transaction information are stored in check authorization database and check image archive.
6. MICR data and transaction information is transferred to a financial institution via an ACH or debit transaction.

Highlights

Realizing savings from ECC hinges on your ability to mitigate processing errors and check-tracking risks.

The IBM OCR/MICR and electronic check imaging system is a flexible, reliable solution designed to improve MICR scanning accuracy and provide a manageable, cost-effective means of storing check image data.

Why IBM?

Although ECC is intended as a cost-cutting and efficiency-boosting measure, the amount you can save hinges on your ability to mitigate processing errors and check-tracking risks using advanced tools and carefully planned processes. Without access to visual images of checks, ECC can lead to high returns-processing costs and unresolved returns, while inaccurate MICR readings can result in considerable revenue losses.

The IBM OCR/MICR and electronic check imaging system delivers a flexible and reliable solution that is designed to improve the accuracy of MICR scanning while providing a manageable, cost-effective means of storing check image data, should it be required for collections. IBM has more than 30 years of experience designing, building and implementing efficient, technologically advanced solutions for the retail industry. And we can use our tools and experience to help you optimize the ROI from ECC.

For more information

To learn more about the IBM electronic image capture solution, contact your local IBM representative or visit:

ibm.com/industries/retail/store

IBM Retail Store Solutions
P.O. Box 12195, 3039 Cornwallis Road
Research Triangle Park, NC 27709
U.S.A.

Produced in the United States of America
08-04

---

[1] “Revisions to Federal Reserve Study Suggest Check Use Peaked in the Mid-1990s.” Federal Reserve Financial Services policy committee. Federal Reserve Bank of Boston. August 14, 2002. Accessed at http://www.frbservices.org/Retail/pdf/RetailPaymentsPress.pdf on May 24, 2004.

[2] “What is ACH? The Automated Clearing House Network.” Accessed at http://www.nacha.org/About/what_is_ach_.htm on May 24, 2004.

G581-0246-00