

Chicago Fed Letter

Implementing the Check 21 Act: Potential risks facing banks

by Tara Rice, financial economist

The Check Clearing for the 21st Century Act (the Check 21 Act) was designed to facilitate technological innovation by accelerating the transition to electronic check processing. Yet, in adopting Check 21-related processing, banks must also appropriately identify and mitigate potential risks associated with this new federal law.

Banks are using the authority under the Check 21 Act to move gradually to an electronic check processing paradigm.

The Check Clearing for the 21st Century Act (the Check 21 Act), effective October 28, 2004, is designed to foster innovation in the payments system and to enhance its efficiency by reducing some of the legal impediments to check truncation.¹ It introduces a new negotiable instrument, called a substitute check, and makes it the legal equivalent of the original check. Before the Check 21 Act, absent an agreement of the paying bank to take presentment of the check in electronic form, collecting banks had to send the original paper check to paying banks. Since the Check 21 Act became effective, collecting banks may instead truncate the original check and, without the paying bank's agreement, send a substitute check to the paying bank.²

A substitute check is a paper reproduction of an original check that 1) contains images of both the front and back of the original check; 2) bears a Magnetic Ink Character Recognition (MICR) line that, except as provided under the generally applicable industry standard for substitute checks, contains all the information appearing on the MICR line of the original check at the time of issue and any other information encoded in the MICR line before the image was captured; 3) conforms to the generally applicable industry standard for substitute checks; and 4) is suitable for automated processing in the same manner as the original check. To be the legal equivalent of the original check, the substitute check also must accurately represent all the information contained on the front and back of the check at the time the original

check was truncated and must contain the legend, "This is a legal copy of your check. You can use it the same way you would use the original check." A new Subpart D of Regulation CC implements the Check 21 Act by incorporating its requirements. Subpart D specifies ANS (American National Standard) X9.100-140 as the industry standard for substitute checks.

In this *Chicago Fed Letter*, I discuss the potential operational risks involved with creating and transferring substitute checks. Operational risk is the risk of loss resulting from inadequate or failed processes, people, and systems or from external events. While banks have traditionally had processes in place to control specific operational risks, only recently has this risk been defined and managed in a systematic way, comparable to that for credit risk and market risk. The information in this article has been collected through an informal survey of banks, discussions with industry professionals, and a review of published material on the topic. In general, the risks identified are not new risks per se, but variations of risks that exist with current payment instruments. Overall, I find that banks are using the authority granted under the Check 21 Act to move to Check 21-related image exchange and substitute check creation, while substitute check standards, security features, and bilateral and multilateral agreements are evolving to address associated risks. It appears that banks are appropriately identifying and mitigating those potential risks.

1. Summary of operational risks posed by the Check 21 Act

Risk	Explanation/definition	Average risk rating	Solutions offered
Fraud	Forgery, counterfeit, and alteration of original checks, which may not be detectable by looking at a check image or substitute check.	High/Medium	Fraud detection systems, procedures, and software, including positive pay and image-survivable security features.
Duplicate debits	Multiple copies of the substitute check, electronic image, and the original check may be processed by mistake, resulting in duplicate debits from the customer's account.	Medium	Controls at the site of original check truncation and image capture, software that recognizes duplicate debits, and establishment of procedures to detect multiple printouts of substitute checks.
Poor quality of substitute checks	The warranty in the Check 21 Act states that responsibility lies with the reconverting bank.	Medium	Agreements sending warranties upstream or back to the problem source. Image quality assurance (IQA); bilateral or multilateral agreements (clearinghouse rules).
Noncompliance with expedited recredit provision	This provision in the Check 21 Act allows a consumer who receives a substitute check and suffers a loss associated with that check to file an expedited recredit claim with his or her bank. The bank must recredit the consumer's account within a limited time period.	Low	Ensuring that policies and procedures are in place to handle expedited recredit. Provisions in the Check 21 Act allow a bank to defer availability of the expedited recredit in certain situations, including recently opened accounts and multiple overdrafts in a short time period.
Noncompliance with consumer notification regulations	Subpart D in Regulation CC includes consumer notification and consumer awareness provisions.	Low	Consumer notification following recommendations in Subpart D in Regulation CC; employee (teller) training.

Benefits of the Check 21 Act

The Check 21 Act was designed to offer a number of benefits to banks.³ As is well known, the number of checks written in the U.S. is declining, resulting in an increase in the cost per unit of processing the remaining paper checks.⁴ Despite the decrease in checks, however, it is unlikely that U.S. consumers and businesses will altogether discontinue using checks. Thus, the financial services industry has sought alternative methods for processing checks as per unit costs rise. The substitute check is intended to be an intermediate step toward a more electronic check collection system where banks both send and receive checks electronically, avoiding relatively expensive physical collection processes and, eventually, avoiding the added cost of printing substitute checks. During the transition phase, some banks may convert to electronic check processing, while accommodating other banks (that can only accept paper checks) by printing out substitute checks. Check truncation, image exchange, and, where necessary, substitute check creation should reduce costs, delays, and risks associated with infrastructure costs (e.g., ground and air transportation); cut down labor costs in back-office processing (through electronic sorting rather than physical sorting of checks); and provide faster access

to funds (through decreased processing time). The Check 21 Act offers a number of benefits to customers as well—improved information flow (through access to online images of deposits) and, possibly, faster access to deposited funds (e.g., if banks offer later deposit cutoff hours for some deposits as a result of the processing efficiencies gained from the Check 21 Act).⁵

Despite the benefits that the Check 21 Act offers, the decision of when and how to move to substitute check creation under the Check 21 Act is a complicated one. Banks must decide the extent to which they wish to expand the use of electronics in the collection and return of checks, and their decision on this issue affects multiple bank functions, technology investment decisions, and communication with banks' customers. Since the bank that creates the substitute check generally bears the cost of substitute check creation, the bank must weigh costs of investment in electronic imaging equipment and substitute check creation against benefits of eliminating the physical processing of the original check.

Check processing pre- and post-Check 21 Act

In traditional check collection, a paper check is deposited at the bank of first

deposit (BOFD). The BOFD (or a correspondent bank of the BOFD) then must forward that paper check through the collection process in order to receive funds from the paying bank. The paper check is transported by ground or air directly to the paying bank, or indirectly through an intermediary or a number of intermediaries. When the BOFD is the same as the paying bank, the check is considered an “on-us” check that the bank can clear internally and will not be cleared through the forward collection process.⁶

With Check 21-enabled substitute check creation, the forward collection process remains fundamentally the same, but relies less heavily on processing and transportation of the original paper check. For example, when the original check is deposited at the BOFD, that bank may image the original check at the collection site or transport it to a payment processor for imaging. The image then travels electronically to the paying bank where the image is reprinted as a substitute check. If the paying bank cannot or does not wish to receive the image, the image then travels to an intermediary whose location is close to the paying bank where the image is used to create a substitute check for presentment to the paying bank.

Where we are today

Nine months after the effective date of the Check 21 Act, banks, as expected, are using the authority under the Check 21 Act to move gradually to an electronic check processing paradigm. The Federal Reserve Banks have not witnessed much demand by banks to receive image presentations, but have noticed relatively strong demand by banks to deposit checks electronically. Furthermore, while the volume of substitute checks processed by the Federal Reserve Banks is still low (about 1% of total Fed check volume), the value of substitute checks processed is somewhat higher (about 10% of total Fed check value). This suggests that the dollar size of individual checks is an important consideration for banks in choosing to move to substitute check creation. Check imaging may allow the sending bank to have quicker access to funds. A bank may elect to convert a paper check to an image and/or a substitute check when the float earned off the earlier availability of funds exceeds the cost of converting the paper item (which is now more expensive than processing the original paper item). This suggests that as the cost to create substitute checks comes down (or interest rates rise), the threshold to image the checks will be reduced, and as a consequence, the number of checks imaged will increase.

Risks that banks have identified

Figure 1 summarizes the operational risks identified by survey participants. It also lists the degree of the risk (low, medium, high) and potential solutions to those risks.⁷

Fraud

Fraud is one of the most often cited risks of substitute check creation—and the only risk listed in figure 1 that was identified as a high/medium risk. The category of fraud includes, more specifically, forgery, counterfeit, and alteration of original checks, which may not be detectable by looking at a check image or substitute check. The effect of the Check 21 Act on fraud detection is not yet known. It could make detection of existing fraud opportunities more difficult. Fraud could increase if industry participants are unaware of the weaknesses of the newly created substitute checks and of their own processes and procedures for clearing those checks. Since

the original checks could be destroyed, traditional security features, such as watermarks or the texture of the paper, will no longer be available.

Solutions identified in figure 1 to mitigate fraud include quicker processing time, positive pay systems, and image-survivable security features. Fraud could be reduced through faster processing of checks via electronic transmission. The longer an item takes to clear, the greater likelihood of fraud not being detected prior to funds leaving the banking system, all else being equal. Also, sending an image (perhaps to be printed as a substitute check at some point in the process) often involves fewer “touchpoints” (people that handle the check), which could also reduce the likelihood of fraud.

Positive pay is a common method of check fraud deterrence available to bank account holders, generally corporate customers. The positive pay process entails a daily reconciliation of a company’s issued checks to checks presented for payment. Checks presented for payment at the company’s bank that fail to match with checks issued by a company are rejected or placed on a “suspect check” list, which is delivered to the company to be resolved before the bank approves payment on those checks. It is not anticipated that positive pay will be affected by the Check 21 Act; it will work just as well with substitute checks as with original checks.

To address the loss of the paper check security features, firms are currently developing fraud detection and prevention techniques and shifting the focus of fraud detection to image-survivable security features. However, image-survivable security features will be most effective when they can be used to prevent fraudulent items from entering the banking system in the first place. This requires that banks share the security features so that these safeguards can be verified at the point of deposit. Currently, multiple image-survivable security features are being used by banks. To enable verification of security features at the point of deposit, some organizations are examining ways to make image-survivable security features interoperable across multiple banks.

Duplicate debits

Duplicate debits, or double posting, occurs when a customer’s account is debited more than once for the same

check, (e.g., if a bank charged a substitute check [or image] as well as the original check.) Figure 1 identifies this as a medium risk. A customer’s account will be debited for both items, which could result in an overdraft on a customer’s account. Duplicate debits could occur either through fraud or error. One solution to this potential problem is to develop and install software that detects duplicate debits at a bank before it debits funds from a customer’s account. Intermediary banks could also install duplicate debit detection software to prevent duplicate files from being forwarded to the paying banks. Another solution is to ensure that procedures are in place to detect multiple printouts of substitute checks.

Poor quality of substitute check

The Check 21 Act provides that, to be the legal equivalent of the original check, a substitute check must accurately represent the information on the front and back of the original check at the time that the original check was truncated. If a substitute check does not satisfy this requirement, the law places responsibility for associated losses on the reconvert bank,⁸ even if the substitute check resulted from a poor quality image that the reconvert bank received from another party. A poor quality substitute check is listed as a medium risk in figure 1. The

Michael H. Moskow, *President*; Charles L. Evans, *Senior Vice President and Director of Research*; Douglas Evanoff, *Vice President, financial studies*; David Marshall, *Vice President, macroeconomic policy research*; Richard Porter, *Senior Policy Advisor, payment studies*; Daniel Sullivan, *Vice President, microeconomic policy research*; William Testa, *Vice President, regional programs and Economics Editor*; Helen O’D. Koshy, Kathryn Moran, and Han Y. Choi, *Editors*; Rita Molloy and Julia Baker, *Production Editors*.

Chicago Fed Letter is published monthly by the Research Department of the Federal Reserve Bank of Chicago. The views expressed are the authors’ and are not necessarily those of the Federal Reserve Bank of Chicago or the Federal Reserve System.

© 2005 Federal Reserve Bank of Chicago
Chicago Fed Letter articles may be reproduced in whole or in part, provided the articles are not reproduced or distributed for commercial gain and provided the source is appropriately credited. Prior written permission must be obtained for any other reproduction, distribution, republication, or creation of derivative works of *Chicago Fed Letter* articles. To request permission, please contact Helen Koshy, senior editor, at 312-322-5830 or email Helen.Koshy@chi.frb.org. *Chicago Fed Letter* and other Bank publications are available on the Bank’s website at www.chicagofed.org.

ISSN 0895-0164

solution to insulate reconvert banks from the liability for a poor quality substitute check that results from a poor quality image captured by another bank is to establish bilateral or multilateral agreements (such as those in clearinghouses) to allow the warranty (or liability) to flow upstream to the party that created the poor image. These agreements are occurring rapidly. Another solution is for industry standards to evolve to address image quality issues. Finally, the solution to preventing transfer of a poor quality substitute image is to develop and install image quality control software at the point of image capture.

Consumer regulation noncompliance

The Check 21 Act contains two provisions intended to protect consumers. Both provisions are identified in figure 1 as low risk. The first provision is the expedited recredit provision, which allows a consumer who receives a substitute check and suffers a loss associated with that check to file an expedited recredit claim with his or her bank if he or she needs the original check (or a better copy) to show that the claim is valid. The expedited recredit provision establishes time frames within which a bank must act on

a consumer's claim and sets forth a bank's options for handling the claim. This provision includes the criteria a bank must satisfy to deny a claim and describes the rules for making a recredit if a bank does not deny the claim. While the expedited recredit provision is complicated, banks can control risks related to handling expedited recredit claims by ensuring that their procedures adhere to the regulations.

The second consumer-specific provision requires banks to provide a disclosure to consumers in certain circumstances. This disclosure must explain that a substitute check is the legal equivalent of the original check and describe the consumer expedited recredit right. The Check 21 Act requires the Federal Reserve Board to publish a model form that a bank could use to comply with this disclosure requirement and provides that appropriate use of the Board's model form would serve as a safe harbor.⁹ Compliance with the consumer notification provision requires that the bank either establish its own acceptable forms or use the Board's "safe harbor" model forms. Employee training for both consumer

provisions is also recommended for banks as a solution to ensure compliance with these provisions.

Conclusion

The Check 21 Act has already begun to spur changes in check processing in the U.S. Benefits that are expected to accrue to banks include reduced infrastructure and back-office processing costs as well as decreased processing time. Customers are also expected to benefit through improved information flow and possibly quicker access to deposited funds. However, the banking industry has identified a number of operational issues associated with Check 21-related image exchange and substitute check creation. The risks identified are generally not new risks, but variations of existing risks in payments processing. It appears that banks are appropriately identifying and mitigating those potential risks. Finally, as originally envisioned, it appears that the Check 21 Act is indeed facilitating technological innovation by accelerating the transition to electronic check processing as banks move to Check 21-related image exchange and substitute check creation.

¹ The author thanks Joe Baressi, Bob Chakravorti, Tom Ciesielski, Geoff Gerdes, Dick Porter, Adrienne Threatt, Jeff Vetterick, Jack Walton, Joe Wicklander, and David Walker for comments and suggestions.

² Check truncation is the process of stopping the paper check before it gets to the paying bank.

³ A bank here generally refers to any deposit-taking institution.

⁴ See Federal Reserve Payments Study, 2004, available at www.frbervices.org/Retail/pdf/2004PaymentResearchReport.pdf.

⁵ Banks are not required to pass on improved funds availability to customers. However, the Check 21 Act requires that the Federal Reserve Board studies and reports on funds availability by April 2007.

⁶ Currently, about 24% of all checks processed in the U.S. are "on-us" checks.

⁷ See Paul Kellogg, 2003, "Evolving operational risk management for retail payments," Federal Reserve Bank of Chicago, working paper, No. S&R-2003-1E.

⁸ The reconvert bank is generally the bank that creates a substitute check.

⁹ The Board's model form is model C-5A in Appendix C to Subpart D of Regulation CC.