

**Check 21: The Details**  
**By Ian Dew-Becker**  
**July 2004**

The Check Clearing for the 21<sup>st</sup> Century Act (Check 21) was signed into law by President Bush on October 28, 2003, and takes effect on October 28, 2004. It was designed to facilitate the use of check images within and between banks, and requires a bank to accept a “substitute check” in place of a check and to educate its customers on how it will use substitute checks.

Currently, absent an agreement otherwise, banks are required to present the original paper check to the paying bank for payment. Banks can only exchange electronic check images if there are agreements between the banks to do so.<sup>1</sup> As a result, banks may process and present some checks electronically but must process and present other checks in paper form. Already, many larger banks have imaging technology in place, some having installed it as early as ten years ago.<sup>2</sup> Likewise, many banks save money by no longer sending customers their original checks. They also provide new services by allowing customers to see images of their checks online.

The major change effected by Check 21 is that it gives legal recognition to substitute checks. Electronic check images have no legal recognition beyond the warranty that Federal Reserve regulations require a sending bank to provide.<sup>3</sup> Many industry experts agree that the main incentive provided by the Act is to move to a system of image exchange.<sup>4</sup>

### **Substitute Checks**

Substitute checks must meet both basic legal requirements and minimum industry standards set by the American National Standards Institute (ANSI).<sup>5</sup> According to the Act, a substitute check must contain an image of both sides of the original check, be MICR encoded with all the relevant information from the original, be machine readable, and contain the legend, “*This is a legal copy of your check. You may use it in the same way as you would use the original check.*”<sup>6</sup> Since the substitute check will be of a standard size and have MICR encoding, it will be completely machine readable. Furthermore, the proposed Federal Reserve regulations make no specific requirements about the size and shape of a substitute check, only that it meets industry standards, which are those set by the ANSI.<sup>7</sup> The bank that creates the substitute check is called the reconverting bank and the substitute check must identify it as such. In addition, no matter when a check is converted to an image or substitute check, all indorsements that were on it at the time must remain.<sup>8</sup>

The Federal Reserve has set minimum image quality standards as a black-and-white image conforming to ANSI X9.100-140.<sup>9</sup> The other option for minimum standards would have involved gray-scale, i.e., using different shades of gray to reproduce the image of the original check. If it had chosen gray scale, a number of large banks would have found that their systems were already obsolete, and the equipment necessary for producing substitute checks would have been more expensive. However, banks may still find that more advanced imaging systems are to their advantage. Because of new legal standards set on liability, a company investing money to implement a more advanced imaging system may find that it can reduce the risk of fraud and lost checks. But nobody knows exactly how great those risks will be or whether the cost of more advanced imaging systems will be worth the resulting reduction in risk.

---

<sup>1</sup> Schall and Wu (2004)

<sup>2</sup> Costanzo (2004 a), 38

<sup>3</sup> Board of Governors (2004), 41

<sup>4</sup> Cline (2004 b), 32

<sup>5</sup> Board of Governors (2004), 12

<sup>6</sup> Stallings (2004), 6

<sup>7</sup> Board of Governors (2004), 8

<sup>8</sup> Board of Governors (2004), 39

<sup>9</sup> McNair (2004), 2

## **Expedited Recredit**

Check 21 also initiates an expedited recredit system.<sup>10</sup> Under this system, if a customer disputes a charge in good faith within 40 days of receiving his or her statement and has suffered a loss, then his or her bank has ten days to investigate the claim. If the bank cannot complete its investigation of the claim within that time, it must recredit the customer up to \$2,500 plus interest on the next day, and the remainder on the 45<sup>th</sup> calendar day.<sup>11</sup> If, on the other hand, the claim is found to be correct, then the bank must issue a full recredit plus interest by the next business day. A bank can prove that it made the charge correctly and avoid any recredit with either the original check or a better copy of the substitute check that meets all legal standards (a “sufficient copy”). The timing requirements contain exceptions for accounts that have been open less than 30 days or have recently been overdrawn, and for where there is good reason to believe the claim could be fraudulent. Also, if a customer has acted in bad faith then their indemnity is to be reduced in an amount proportional to the bad faith.<sup>12</sup>

Banks can also make expedited recredit claims against other banks. This will happen most often if one of a bank’s (bank A) customers makes a recredit claim against them and it is caused by a substitute check from another bank (bank B). In this case bank A has 120 days from the date of the original transaction to file a claim. The claimant must send the indemnifying bank an explanation of the claim and why the substitute check cannot be charged to its customer’s account. As with consumers, bank B must respond to the claim of bank A within 10 business days with either a recredit or a sufficient copy of the substitute check.

Recredit for electronic funds transfers is covered by Regulation E. Unlike Check 21, under Regulation E, consumers have some limited liability for unauthorized electronic transfers. If a customer fails to report the loss of an access device such as an ATM card within two days, their liability is up to \$500. If they do report it within two days their liability is limited to \$50. If a customer notices unauthorized transfers on a periodic statement, they must notify the bank within 60 days, or else take full responsibility for any losses after the 60 day period ends.<sup>13</sup>

## **Producing Substitute Checks**

The absolute minimum requirements that banks must satisfy to be in compliance with the new law are straightforward and fairly limited. They must accept substitute checks, and they must educate both bank staff and customers on the implications of a substitute check. The staff must be shown how to recognize and process a substitute check, and how to address customer concerns with Check 21. Customers must be told what a substitute check is, that they may receive some or all of their returned checks as substitute checks, what their expedited recredit rights are, and what their bank’s procedures are regarding these areas.<sup>14</sup>

Clearly, some banks will do far more than the minimum of accepting substitute checks. Many will produce substitute checks, especially those banks that already have imaging technology in place, or they may have other companies produce substitute checks for them. It is expected that smaller banks will be more likely to outsource substitute check production since they do not have large enough operations for an investment in imaging to produce a positive return.

When a bank produces a substitute check or has an outside company produce a substitute check for it, it takes on a host of new responsibilities, including a warranty on the document and a guarantee of indemnity.<sup>15</sup> The bank must guarantee that the IRD meets all legal requirements, that payment on that check is not requested more than once, and must indemnify any bank that uses its substitute check for any losses caused as a result of using the substitute check. This warranty runs with the check for the entire clearing process. If there is a breach of the warranty, the reconverting bank must compensate the injured party or

---

<sup>10</sup> Stallings (2004), 10

<sup>11</sup> Stallings (2004), 10

<sup>12</sup> Board of Governors (2004), 42

<sup>13</sup> Regulation E

<sup>14</sup> Stallings (2004), 9

<sup>15</sup> Board of Governors (2004), 60

parties for all losses and any reasonable expenses such as legal fees.<sup>16</sup> For example, if a person's insurance were cancelled because a bad substitute check caused it to not be paid, the bank would not only be liable for making sure that the company gets paid, but would also have to cover all legal expenses and any losses to the consumer associated with the cancelled insurance policy. Conceivably, this could include paying for a house that burned down. As of yet, nobody is sure of the practical extent of this liability, and the courts will likely make the final decision.

The liability does have limits though. If a person suffered a loss as a result of a bank using a substitute check, but there was no breach of warranty, then the indemnity is limited to the value of the check plus interest.<sup>17</sup>

### **Truncation and the Transition to Imaging**

One of the most important expected changes as a result of Check 21 is an increase in check truncation. Truncation is stopping the use of the original check and using the information from the check to move towards presentment in some other format.<sup>18</sup> Currently, the most common form of truncation in the United States is ARC (accounts receivable conversion), which involves using the MICR encoded data at the bottom of a check for an ACH (automated clearing house) transaction.

Since Check 21 allows banks to use only the image of a check, and there is no legal requirement for holding an original check, some industry experts expect that consumers will begin to find that their checks are truncated and returned even at the point of sale. They also believe that truncation will occur more often at lockboxes so that checks can be moved electronically rather than having to be shipped across country.<sup>19</sup> The increase in truncation is expected to lower the per-check cost to banks. Ideally, these cost savings will be passed on to consumers, although banks are under no obligation to do so.

While truncation is expected to lower per-check costs, the well-known decline in US check volume is resulting in an increase in banks' per-check costs.<sup>20</sup> Many people are moving toward electronic transactions such as credit and debit cards, and many banks now offer online bill payment. This decline in check volume gives banks added incentive to switch to an entirely electronic system to reduce the costs associated with handling large numbers of original checks. Most experts seem to agree that total savings from an electronic system will reach about \$2 billion annually.<sup>21</sup> Much of the savings will come from transportation and storage costs. Savings will also come in the easier handling of checks. Checks can go through fewer sorters, and a bank can move a check to any of its processing departments nearly instantaneously. A study by Alogent and BearingPoint found that a large bank could realize net savings of \$45 million over a 17 month period even using just intra-bank imaging.<sup>22</sup>

However, the cost of transitioning to a system with both intra- and inter-bank imaging could reach \$10 billion.<sup>23</sup> These costs break down into a number of categories and are only discussed at a high level here. First will be the one-time infrastructure costs to buy imaging equipment. Other optional infrastructure costs will include equipment like image-enabled ATMs. Currently, these ATMs cost about 25% more than non image-enabled models, but as production increases their cost can be expected to come down.<sup>24</sup>

The second area of costs is training. At a minimum, employees will need to be trained on how to read and use substitute checks and how to deal with the expedited recredit provision. Banks that have more extensive imaging programs will need to train employees to create substitute checks and perform other functions that become image based, such as returns and adjustments. Check 21 will involve two key variable costs: paper and ink from producing substitute checks, and the bandwidth necessary to transmit large

---

<sup>16</sup> "Check 21, From Paper to Imaging", 24

<sup>17</sup> Board of Governors (2004), 42

<sup>18</sup> Managing Accounts Payable (2004), 1

<sup>19</sup> Murphy (2004), 28

<sup>20</sup> Cline (2004 b), 31

<sup>21</sup> Cline (2004 a), 20

<sup>22</sup> Item Processing Report (2004), 1

<sup>23</sup> Rieker (2004), 1

<sup>24</sup> Brit (2004), 19

numbers of images.<sup>25</sup> Because of the size of fixed costs relative to variable costs, some executives are predicting that there will be a net loss from imaging for the first three years of implementation, and a net gain after that.<sup>26</sup>

One of the biggest questions in how imaging will be implemented and what cost savings it will bring has to do with Day Two processing (returned checks, adjustments, and mistakes in coding on the bottom of checks). A number of banks are able to process checks with images already, but when adjustments are necessary, they often have to switch to paper-based systems. Detroit-based Comerica Inc. began investing in imaging about ten years ago, but it still has yet to switch Day Two operations to an electronic system.<sup>27</sup>

However, the benefits from this transition are expected to be great. Viewpointe, an imaging outsourcing firm, estimates that banks that do no imaging will see their per-check processing costs rise to as high as between seven and eleven cents, from a current range of six to eight cents. However, Viewpointe claims that full image processing for both Day One and Day Two would reduce costs to below four cents, with total savings reaching up to \$17 to \$24 million dollars if a bank shares images both within a consortium such as Viewpointe and also outside of the network.<sup>28</sup>

Although Check 21 does not expressly sanction image exchange (IMEX), it is an obvious outgrowth, and is mentioned in the warranty requirements of the new Federal Reserve regulations. Many executives see IMEX as a necessity given that there does not seem to be much financial incentive in moving to a system of substitute checks without IMEX.<sup>29</sup> Banks are expected to make agreements with each other to transfer check images. Large banks are expected to make this transition first because there are economies of scale both in equipment costs and in setting up and managing agreements on IMEX, and some are already members of consortiums.<sup>30</sup> A market for outsourcing imaging and exchange for smaller banks already exists, so they, too, will have the opportunity to participate in IMEX. Large banks will be making agreements with each other and with companies that represent large numbers of small local and regional banks to set up IMEX.

These inter-bank agreements will likely apply not only to IMEX, but also to the warranty and liability provisions for substitute checks. Many bankers are worried about the liability from substitute checks. They will be able to reduce this uncertainty by making agreements with each other to define the minimum requirements of a substitute check and to limit their liability for damages as a result of a bad substitute check upstream.

### **New Risks and How They Are Mitigated**

Banks that use IMEX take on a certain amount of risk. All of the warranties and indemnities that apply to a substitute check are also taken on by any bank that transfers an image with the expectation that it will be turned into a substitute check later on. Also, if a bank has a third party, such as an outside vendor, either produce a substitute check or transfer an image of a check, then it is the *bank* that takes on all liability, not the vendor.<sup>31</sup> Although this could have a chilling effect on banks' transition to imaging, it also means that outsourcing firms will likely take on less risk and, therefore, should be more eager to enter the market.

Check 21 introduces new operational risks beyond simple mistakes in imaging. The nature of fraud will be drastically changed. It is expected that IMEX will reduce the time between check cashing and presentment from four days to one. In that respect, banks' exposure to fraud should be reduced.<sup>32</sup> Banks that use image-enabled ATMs will also reduce empty envelope fraud since they will be able to scan checks on deposit to confirm their value. The biggest increase in fraud is expected to come from the fact that no substitute check will ever be identical to the original check, and for that reason "there are no known

---

<sup>25</sup> Williams (2004), 56

<sup>26</sup> Cline (2004 b), 31

<sup>27</sup> Costanzo (2004 a), 38

<sup>28</sup> Costanzo (2004 a), 40

<sup>29</sup> Cline (2004 b), 32

<sup>30</sup> Item Processing Report (2004), 2

<sup>31</sup> Board of Governors (2004), 60

<sup>32</sup> Salas (2004), 1

completely image-survivable security features that are fully effective.”<sup>33</sup> This is especially important considering that the minimum standards implemented by the Federal Reserve include only a black-and-white image, not gray scale. Many of the security features that banks have relied on in the past, such as fading colors will be even less visible with black-and-white images than they would with gray scale.

Disagreement exists over exactly how the loss of certain fraud prevention devices will affect banks. Some argue that banks never manually certified all of their checks anyway, especially since tellers were not highly trained in detecting fraud.<sup>34</sup> This would mean that large banks, which can better afford automated check readers, would be better able to catch forgeries. On the other hand, it is unclear exactly how successful the automated prevention systems would actually be.

One automated payment system is positive pay. This involves having companies send information on all the checks they write to their bank so that it knows which checks are authorized. Another method, called a “Self Authenticated Negotiable Document” or SAND, involves placing a tamper-proof, encrypted barcode on each check, which would contain payment information and identify each check written on an account. This would eliminate the burden of having to send check issue files to the bank routinely.<sup>35</sup> But since both of these methods are only used for the large scale payment operations of companies, neither of them directly protects the typical retail consumer.

A couple of new innovative security features on substitute checks to protect consumers are being discussed. Because of the warranties and indemnities that banks take on when they truncate checks and produce substitute checks, the banks have a large incentive to keep substitute checks from being forged. One new way that they are stopping forgery is with special substitute check MICR bond stock. Reyloco produces paper suitable for substitute checks that includes ultraviolet security marks, and ink that disappears when handled by a person<sup>36</sup>. Security features of this sort could easily be spotted by tellers, as they are already trained to check ultraviolet marks on many large bills.

Although bankers are working to make checks fraud-proof through the imaging process, they are worried about criminals shifting away from forgeries to completely different types of fraud.<sup>37</sup> Bankers are most worried about faceless transactions and account takeovers. These do not require forged checks or dealing with any bank personnel, but rather identity theft. In the end, it becomes clear that what Check 21 may in fact do is to shift the risk of fraud away from large corporations and towards consumers. This is especially worrisome since law enforcement professionals are upset that they will no longer have a physical document to inspect in cases of check fraud. Fingerprinting will be impossible, and handwriting analysis will be made much more difficult.<sup>38</sup>

## **Long-Term Effects**

The long term effects of Check 21 can be somewhat predicted based on the experience of other countries. The U.S. is the last G-10 country to switch to check truncation, so we can look to other countries’ experiences. In France, as in the US, checks were a widely-used, but declining payment mechanism. Prior to 2002, the Bank of France operated its own check processing facilities and shared the market with the private sector. Unlike under Check 21, banks in France moved to a fully truncated check clearing system. All check transactions are now truncated and cleared through the French Interbank Teleclearing System (SIT), where all cashless retail payment media are settled.<sup>39</sup> The Bank of France no longer operates a check clearing facility, but maintains oversight in check clearing principles and standards.<sup>40</sup> The U.S. can most likely look to a continuing decline in check use, and where checks are used, truncation will rise.

---

<sup>33</sup> Salas (2004), 1

<sup>34</sup> Costanzo (2004 b), 2

<sup>35</sup> PR Newswire (2004), 1

<sup>36</sup> McNari (2004), 1

<sup>37</sup> PR Newswire (2004), 1

<sup>38</sup> Costanzo (2004 b), 3

<sup>39</sup> Banque de France Bulletin Digest, April 2003

<sup>40</sup> Banque de France Bulletin Digest, April 2003

**Sources:**

Tony Stallings, "Check 21, Stepping Up to the Plate". *ABA Bank Compliance* March-April, 2004. pp 6-11.

Hope Schall and Angie Wu, "Risk Committee Legal Presentation". Federal Reserve Legal Department Internal Document. June 15, 2004.

Kenneth Cline, "Paper to Pixels". *Banking Strategies* March/April, 2004 .

Kenneth Cline, "Transition Quandry". *Banking Strategies* March/April, 2004.

Steve McNair, "The Image-Quality Conundrum". *Item Processing Report* June3, 2004.

"Check Fraud: A Problem to Reckon With". "Check 21, From Paper to Imaging" a supplement to *American Banker, Bank Technology News & U.S. Banker*, May 2004.

Chris Costanzo, "Investing in Imaging". *Banking Strategies* March/April, 2004.

Matthias Rieker, "Check 21: Plenty of Talk, Except From CFOs". *American Banker Online* June 1, 2004.

Eric Salas, "Will the Check 21 Enhancements Reduce Fraud?". *BankersOnline.com* March 29, 2004.

Phil Brit, "Remote Truncation". *Independent Banker* February, 2004.

"North Dallas Bank's Cash Management Division Introduces New Check Fraud Prevention Service". *PR Newswire* June 10, 2004.

Board of Governors of the Federal Reserve System, Proposed Amendments to Regulation CC. 2004. The complete proposal can be found at:

<http://www.federalreserve.gov/BoardDocs/Press/bcreg/2003/20031222/default.htm>.

Steve McNair, "Substitute checks – Check21's Hidden Secret". *EFT Report* June 23, 2004.

Stuart Williams, "Check 21 or ARC: Convergence or Divergence in Payments". *American Banker-Bond Buyer* July, 2004.

"Alogent's Vijay Balakrishnan Speaks Out on How to Gear up for Check 21". *Item Processing Report* July 1, 2004.

"Is Your AP Department Ready for 'Check 21'?". *Managing Accounts Payable* July 1, 2004.

Patricia A. Murphy "Bankers Need Time to Get Ready for Check Truncation". From "Check 21, From Paper to Imaging" a supplement to *American Banker, Bank Technology News & U.S. Banker*, May 2004.

Chris Costanzo "Special Report: Emerging Technologies". *The American Banker* July 6, 2004.

Federal Reserve, Regulation E. 12 CFR Sec. 205.6. The complete regulation can be found at

<http://ecfr.gpoaccess.gov/cgi/text/text-idx?c=ecfr&sid=635f26c4af3e2fe4327fd25ef4cb5638&rgn=div5&view=text&node=12:2.0.1.1.5&idno=12>.