



The Future of Check Handling: Creating a Better Experience

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I. Overview

In the past 10 years, checks have evolved from an established role as the dominant noncash payment mechanism in the U.S. to a position in a changed market in which they represent less than one-quarter of noncash payments.¹ Yet, despite a significant decline in check volume, transaction analysis shows that both businesses and consumers continue to actively use and place value on checks. Today, the average consumer check total of \$440.09² is 10 times greater than the value of an average consumer debit card transaction.³ These figures suggest that for higher-dollar transactions, consumers are not treating debit cards as a substitute for checks. Instead, consumers appear to associate a greater level of importance to the transactions they choose to pay by check. In addition, the legislative and technological changes of the past 10 years have preserved and even enhanced the utility and cost-effectiveness of handling check-based payments. As innovation has dramatically changed the functions of check acceptance, deposit, processing, and check clearing and settlement, the value proposition and economics of checks have been redefined.

¹http://www.frbservices.org/fedfocus/archive_general/general_0311_01.html, accessed Sept. 20, 2011.

²Harland Clarke Corp. internal study derived from client transactional data.

³http://www.federalreserve.gov/aboutthefed/boardmeetings/20110629_REG_II_FR_NOTICE.FINAL_DRAFT.06_22_2011.pdf, accessed Sept. 29, 2011.

II. Repositioning Checks via Processing Improvements

Traditionally, check-processing systems relied on expensive and labor-intensive processes to move and manage paper. Not so many years ago, checks were physically exchanged by banks, requiring couriers and truck or air transportation, causing some items to take a week or longer to clear through the originating institution. Processing required data entry and handling of physical items. Corporate services such as remote disbursement, cash concentration, and lock-box were developed to either take advantage of or reduce the inefficiencies associated with managing the paper check system.

Today, as a result of advancements such as check conversion, image-based processing pioneered by the Check Clearing for the 21st Century Act (commonly known as Check 21), and remote-capture technology (detailed further in the appendix to this report), checks are processed in a largely electronic environment. Checks are now commonly converted at the point of sale or on the same-day in a back-office merchant environment, or they are scanned on a receipt by an individual or a bank. Whether converted to an ACH transaction or processed as images, checks are now nearly 100% electronic. As a result, checks compete with debit card transactions; each now has the ability to process and settle funds on the same day, although settlement in either case could require up to three days. A difference between checks and debit cards is that the debit networks authorize transactions at the point of sale. This process places a hold on funds required for the transaction, which is favorable to the merchant, but the authorization process can also decrease a consumer's available funds and therefore be less favorable to the consumer. Notably, despite recent debit-fee reductions fostered by the Durbin Amendment regulations, check-associated fees are generally lower for merchants than debit card fees—averaging \$.05 to \$.16 per check cleared through the Fed⁴ vs. an average \$0.24 for debit card interchange and fees.⁵

New electronic deposit and processing options can also reduce check-associated expenses. For example, USAA Bank proAccesses mobile deposit capture (MDC) items at \$0.04 per transaction compared to \$1.21 per check that is deposited and processed through traditional methods (see Figure 1).⁶ Between August 2009 and March 2011, USAA processed 5 million checks using MDC at a cost that was 97% lower than traditional deposit methods.⁷

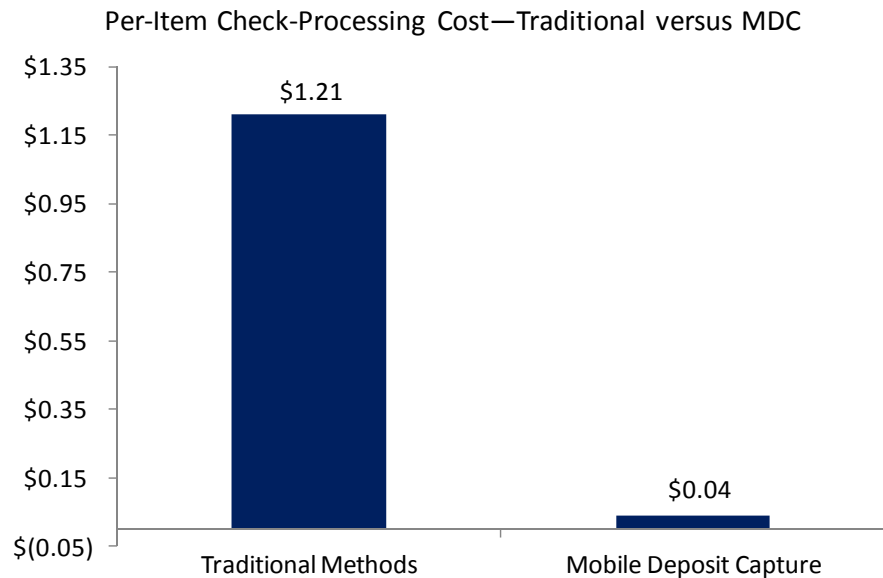
⁴<http://www.bos.frb.org/economic/ppdp/2010/ppdp1001.pdf>, accessed Nov. 7, 2011.

⁵**The Durbin Amendment: Planning for Six Billion in Change to Banks, Networks, Merchants, and Consumers**, Javelin Strategy & Research, August 2011.

⁶**Mobile Remote Deposit Capture: Creating a Compelling Business Case for Mobile Servicing**, Javelin Strategy & Research, May 2011.

⁷*Ibid.*

Figure 1: Cost of Processing Checks: Traditional Methods vs. Mobile Deposit Capture



In addition to cost advantages, financial institutions also view mobile deposit capture as a means of improving the client experience. This is particularly true for small banks, as explained by a vendor participating in the “State of the Check” study recently published by Javelin Strategy & Research: “We are getting very close to a tipping point for mobile deposit. I think it’s been driven by consumer demands, and we are seeing a great deal of interest from a lot of the smaller community banks who obviously have a need and desire to expand their deposit networks. They are not like Bank of America that has ATMs or branches on every corner.... The recent data show that mobile really provides a good hook into a consumer and contributes to loyalty.”⁸

Creating awareness that checks have changed is important to repositioning these payment options for long-term viability. The new deposit and processing options available to both consumers and businesses have dramatically reduced the time that checks exist as a paper option. Today, a check spends the majority of its life span as an electronic transaction. Benefits of this transition include the following:

- Cost and time required to transport, process, settle, and store check transactions is reduced.
- Deposit timelines are accelerated, as float is reduced.
- Errors are reduced as manual handling and data entry are eliminated.
- Customer service is improved with timely access to electronic information.
- Recovery for nonsufficient funds (NSF) items is improved, and the related collection timeline is accelerated.
- Checks are able to retain their usefulness and value as “physical documents.”

⁸Current State of the Check: FIs and Vendors Qualitative Report, Javelin Strategy & Research, June 2011.

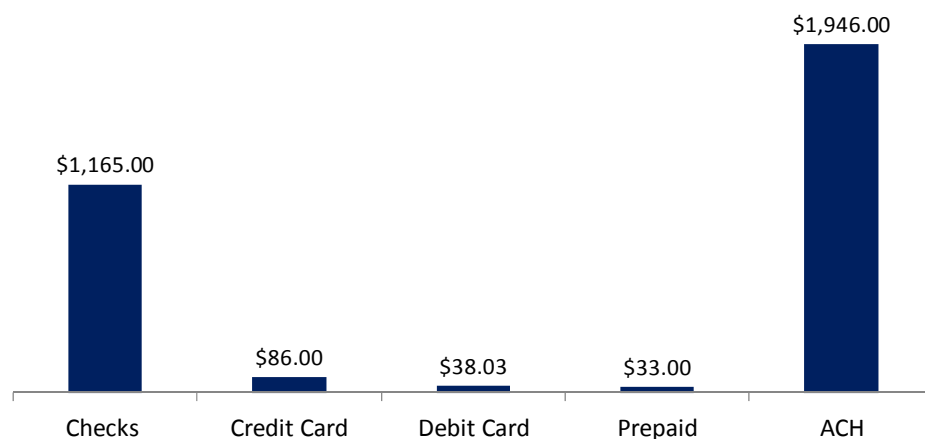
III. The Future of Checks

Dramatic changes in check processing and settlement will continue to advance paper checks in the electronic era.

Going forward, process advancements through check conversion, Check 21, and remote deposit technology will continue to play a major role in extending checks’ longevity. FIs’ adoption of these new check-handling methods indicates that FIs are interested in investing in check solutions that improve process flow, expand client convenience, and increase demand deposit account (DDA) profitability by keeping operational costs low and ensuring customer retention. It’s notable that such investments are occurring even as check transaction volume has been declining. According to the Federal Reserve, 27.5 billion checks were written in 2009, accounting for 12.7% of monthly payments and 8.2 transactions per month per consumer. However, at the same time, check transaction volume dropped from 32% of noncash payments in 2006 to just 22% in 2009. Nevertheless, the average value of check transactions has continued to rise above that of other payment vehicles such as the debit card, indicating that consumers and businesses use checks for the transactions they consider most important. In its 2010 Payments Study, the Federal Reserve found the average value of all checks—including business and consumer transactions—to be \$1,165 (see Figure 2). Similarly, in 2011, Harland Clarke Corp. found that the average consumer check totaled \$440.09, or 10 times the average consumer debit card transaction of \$38.03.¹³ These averages suggest that, for higher-dollar transactions, consumers continue to place value on checks and choose checks, rather than debit cards, as their preferred payment mechanism.

Figure 2: Average Transaction Value of Noncash Payment Methods: 2006–2009

Average Transaction Amount – Business and Consumer Transactions



⁹2009 Survey of Consumer Payment Choice, Federal Reserve System.

¹⁰2010 Federal Reserve Payment Study: Noncash Payment Trends in the United States: 2006–2009, updated April 5, 2011, Federal Reserve System.

¹¹Ibid.

¹²Harland Clarke Corp. internal study derived from client transactional data.

¹³http://www.federalreserve.gov/aboutthefed/boardmeetings/20110629_REG_II_FR_NOTICE.FINAL_DRAFT.06_22_2011.pdf,

The value consumers and businesses associate with checks ensures a continued demand for checks. The need for checks will persevere as there remain many circumstances in which both consumers and businesses see value in using checks rather than other payment options. Fully 63% of consumers use checks to pay rent, and close to 65% use checks to pay state and federal taxes.¹⁴ Check usage is also driven by convenience and consumers' need to be organized, have accurate records, and maintain financial control. As one consumer noted, "I use checks so I can have proof that I paid. It is hard to keep up with the little receipts that you get with credit cards." About 68% of the consumers surveyed by Javelin said they use checks because they provide a paper trail and offer more control than debit cards.¹⁵ Another consumer said, "With a check you have a paper record, you have control. With the debit card you are just having funds taken out of your account right away." In addition, consumers continue to attach emotional value to checks as symbols of financial responsibility and reliability. A consumer noted his dependence, saying, "I still need my checks. It is something I cannot let go because I still need them for some purposes."¹⁶

Businesses also value and use checks regularly for day-to-day transactions. Small-business owners note that checks continue to be acceptable for situations in which other methods are not feasible, such as C.O.D. or in-person payments.¹⁷ Companies interviewed by Javelin indicated that customers often do not have the cash on hand to pay for certain goods or services and prefer the cash-control advantages of paying by check rather than credit card. They also appreciate the paper trail associated with checks. As one owner noted, "Getting a hand signature ... on a check ... will hold up in court." Importantly, there is still significant use of checks and sufficient transaction volume to justify continued process improvements for checks.

Evolving check technology will continue to enable FIs to transform practices, reduce inefficiencies, and decrease costs while enhancing customer loyalty with a better banking experience. Based on increased demand from consumers and businesses, banks continue to show great interest in and a desire to expand alternatives to check acceptance, especially in the area of mobile deposit technology.¹⁸ A vendor participating in Javelin's "State of the Check" study claimed, "The recent data shows that mobile really provides a good hook into a consumer and contributes to loyalty."¹⁹ Javelin's research on consumers shows that 30% of customers of large FIs desire mobile deposit capture. About 13% of them would switch to FIs that provide some mobile capabilities.²⁰ In addition, the consumers most likely to adopt mobile remote deposit capture monitor their finances through the Web or their mobile phones at a higher rate than all other consumers, which lowers operational costs for FIs. Improved availability of funds is also crucial to small businesses, which often function with limited staff and cash.

¹⁴State of the Check: Consumer Quantitative Report, Javelin Strategy & Research, July 2011.

¹⁵Ibid.

¹⁶State of the Check: Consumer Qualitative Report, Javelin Strategy & Research, June 2011.

¹⁷State of the Check: Small-Business Owners, Javelin Strategy & Research, June 2011.

¹⁸State of the Check: Vendor and FIs Qualitative Report, Javelin Strategy & Research, June 2011.

¹⁹Ibid.

²⁰2011 Mobile Remote Deposit Capture: Creating a Compelling Business Case for Mobile Servicing, Javelin Strategy & Research, May 2011.

With the automation of check processing and eventual success in driving out paper, checks have become more convenient for many small businesses, and Javelin's research shows that 28% of small-business owners desire mobile deposit capture services to increase their deposit efficiency.²¹

FIs have huge potential to improve their relationship with existing customers and to acquire new customers if they can rapidly adapt to check-based technology and introduce new features and services as they become available. A vendor in Javelin's "State of the Check" research explains, "Electronic processing is always perceived as contributing a much greater margin than paper-based services. Not only is paper in decline, it also contributes a less impressive margin. So, all of the larger banks should be highly focused on having the best electronic capabilities."²²

FIs' move toward the electronic exchange and settlement of checks has been accomplished largely through the use of third-party processors, and this drive is expected to continue. As banks and credit unions evaluate their priorities, they realize that outsourcing check processing is the solution to keep them from digressing from their core business and keep processing costs low. The use of third parties also enables FIs to keep pace with technology. As simply put by a vendor, "FIs don't have to invest and wait to develop their own technology if they outsource."²³ The outsourcing trend will continue to generate economies of scale as check processing becomes increasingly centralized. Check-processing vendors recognize that the shift to electronic technologies plays to their strengths, indicating that the volume of outsourced checks will continue to grow in the coming years.

Regulation will continue to influence check usage. Revenue streams that have been important sources of income for banks for decades are disappearing with the implementation of the Durbin Amendment and Regulation E overdraft guidelines. As FIs become increasingly constrained in the ways they can generate revenue, free services are being replaced by fee-based or relationship-based pricing. Also, limits to rewards and transaction activity are being implemented. In Javelin's "State of the Check" research, consumers were asked about their check usage if a higher fee for credit or debit transactions were to be levied. Forty-eight percent of low check users said they would write more checks if card fees were increased. Fifty-five percent said they would use more checks if a fee were implemented for online bill payment.²⁴ It is clear that regulatory changes have the potential to create demand for checks in the coming years as banks reposition their consumer and business product lines to maximize revenue and reduce costs.

²¹Ibid.

²²State of the Check: FIs and Vendors Qualitative Report, Javelin Strategy & Research, June 2011.

²³Ibid.

²⁴State of the Check: Consumers Quantitative Report, Javelin Strategy & Research, July 2011.

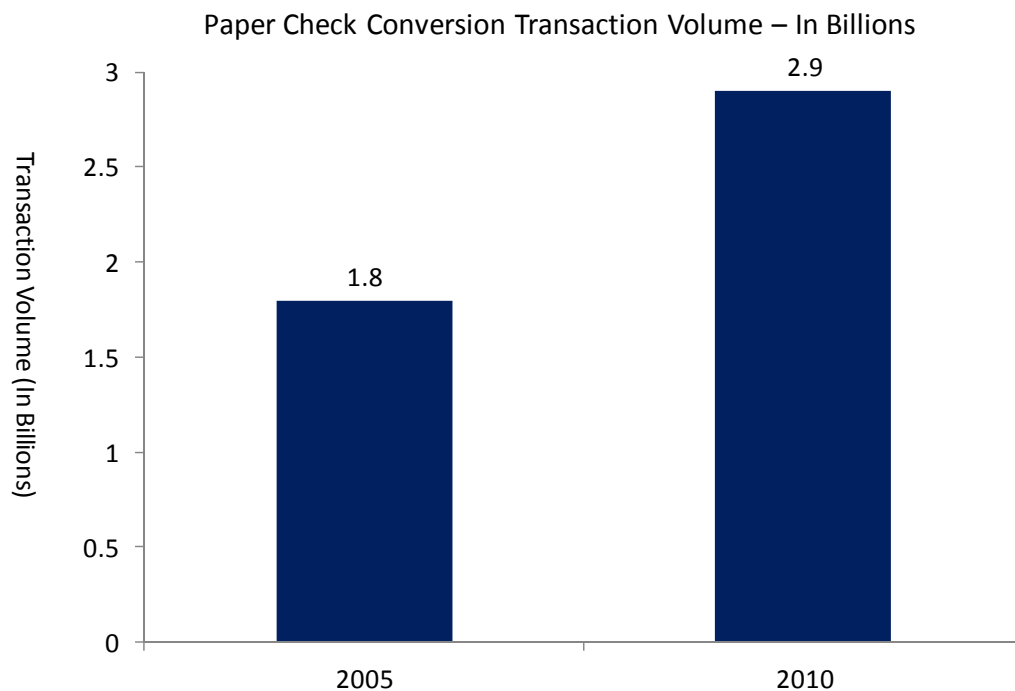
Regulatory changes and technological innovations have combined to create a perfect opportunity for FIs to leverage checks to reduce costs while building DDA profitability, increasing customer retention and driving long-term customer loyalty. FIs should try to cash in on advanced solutions provided by Check 21, check conversion, and remote deposit capture technologies. Also, FIs can also leverage third-party vendors to position checks as a substantively improved payment option. Creating strong messaging about the benefits of checks and positioning checks as an important component of FI's product mix will enable FIs to re-establish the value of checks and benefit from the vast improvements in check processing.

Appendix

Several key advances in check processing have led to the nearly complete electrification of checks:

Check conversion tools change the payment landscape. In the late 1990s, check conversion methods were introduced to transition checks into the electronic age (see sidebar). Check conversion has been advantageous to merchants, billers, and other corporations because it enables electronic transaction access to banks and accelerates the availability of deposited funds. According to the National Automated Clearing House Association (NACHA), more than 1.8 billion paper checks were converted through accounts receivable conversion (ARC), re-presented check entry (RCK), and point-of-purchase (POP) codes in 2005.²⁵ By 2010, as check conversion continued to gain momentum and an additional conversion code was introduced, this volume rose to 2.9 billion.²⁶

Figure 2: Check Conversion Transaction Volume: 2005 and 2010



Source: NACHA – 2005 and 2010 ACH Statistics Summary

²⁵http://admin.nacha.org/userfiles/File/Stats/NACHA_202005_20ACH_20Statistics_20Summary.pdf, accessed Sept. 13, 2011.

²⁶http://admin.nacha.org/userfiles/File/ACH_Rules/Year-End%202010.pdf, accessed Oct. 22, 2011.

ACH Check Conversion Codes 1998–2007

Code Type	Year Introduced	Details
Re-presented check entry (RCK) ²⁷	1998	<ul style="list-style-type: none"> RCK was the first check conversion code. An ACH debit entry, RCK is used to re-present checks with nonsufficient funds (NSF). Banks can electronically recover re-presented funds three to four times faster than by using re-presented paper checks.²⁸
Point of purchase (POP) ²⁹	2001	<ul style="list-style-type: none"> POP enables merchants to convert checks to ACH debits at the point of sale. Cashier scans magnetic ink character recognition (MICR) data from the check and returns the paper check to the customer. Adoption rate has been slow because merchants must make significant investments in equipment and cashier training. Volume increased from 115.5 million transactions in Q1 2010 to 119.2 million in Q1 2011, for a 3.2% increase.³⁰
Accounts receivable conversion (ARC)	2002	<ul style="list-style-type: none"> ARC enables conversion of paper checks into ACH debits in retail lockbox/drop-box scenarios. ARC was responsible for most of the ACH network's transaction growth from 2002 to 2007³² with 2.6 billion transactions in 2007.³³ Funds are available within a day of deposit.³⁴ ARC volume grew from 522 million in Q1 2010 to 568 million in Q1 2011, an 8.8% increase.³⁵
Back-office conversion (BOC) ³¹	2007	<ul style="list-style-type: none"> Merchants accept paper checks from consumers; these checks are scanned in bulk in a merchant's back office. BOC does not require a scanner at every checkout location, and nor does it require cashier training. Volume jumped from 41.7 million transactions in Q1 2010 to 42.9 million in Q1 2011, a 2.9% increase.³⁶

²⁷http://www.achdirect.com/downloads/slick_rck.pdf, accessed Sept. 29, 2011.

²⁸<https://www.banknorthgeorgia.com/?id=312>, accessed Sept. 27, 2011.

²⁹http://199.169.211.83/eventseducation/education/pop_overview.html, accessed Sept. 29, 2011.

³⁰http://admin.nacha.org/userfiles/File/ACH_Rules/1st%20Quarter%202011.pdf, accessed Sept. 29, 2011.

³¹http://199.169.211.83/eventseducation/education/arc_overview.html, accessed Sept. 29, 2011.

³²<http://www.nacha.org/news/newsDetail.cfm/RecentBusinessNewsID/49>, accessed Sept. 29, 2011.

³³http://admin.nacha.org/userfiles/File/Stats/Year-End_202007.pdf, accessed Sept. 27, 2011.

³⁴http://www.frbservices.org/files/eventseducation/pdf/pop_arc_boc_comparison.pdf, accessed Sept. 27, 2011.

³⁵http://admin.nacha.org/userfiles/File/ACH_Rules/1st%20Quarter%202011.pdf, accessed Sept. 27, 2011.

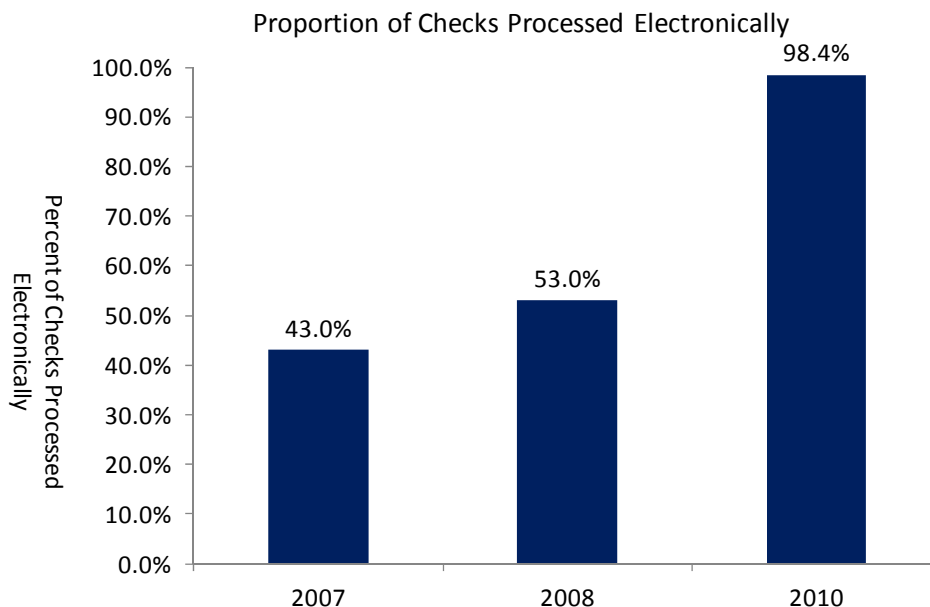
³⁶Ibid.

Check 21 drives FIs toward further electronic handling of checks.

Introduction of Check 21 established a further dimension enabling electronic processing of checks. Since this law's enactment in 2004,³⁷ the trend of exchanging checks electronically has been rising as FIs moved to fully automated image exchange rather than paper image replacement documents (IRDs).

According to the Federal Reserve, by the end of 2007, 43% of checks were either exchanged electronically or presented as substitute checks; in 2008, it was 53% (see Figure 4).³⁸ Today, the Federal Reserve effectively receives all the checks it processes for clearing as electronic check images. In December 2010, the Federal Reserve Banks received about 99.7% of checks deposited for forward collection electronically and presented about 98.4% of checks electronically.³⁹ In this dramatic shift in the processing of checks, the collection and presentment of these transactions have become virtually 100% electronic.

Figure 4: Transition of Checks From Paper to Electronic Processing: 2007, 2008, and 2010



Source: Federal Reserve Bulletin 2008: Recent Payment Trends in the United States; Federal Reserve System 12 CFR Part 229, Availability of Funds and Collection of Checks

³⁷<http://www.creditunionmagazine.com/articles/check-21-image-is-everything>, accessed Sept. 13, 2011.

³⁸<http://www.federalreserve.gov/pubs/bulletin/2008/articles/payments/default.htm>, accessed Sept. 13, 2011.

³⁹<http://www.occ.gov/news-issuances/bulletins/2011/bulletin-2011-25b.pdf>, accessed Sept. 21, 2011.

As electronic check processing practices continue to expand, check processing has become increasingly centralized. For example, since 2003, the Federal Reserve Banks have been reducing the number of sites that process paper checks. Before the banks' restructuring initiative began, the Fed processed checks at 45 locations. But as requirements for paper check volume and paper check handling continued to decrease, so did the need for multiple locations near various FIs. In early 2010, the Fed transitioned to a single, centralized processing center located in Cleveland.⁴⁰ Lockbox service providers have similarly become centralized as the need to operate multiple centers across the country has declined with the rise in the use of electronic image exchange.

Remote capture technology marks a new era in the payment landscape. In recent years, remote deposit capture (RDC) has become the most sought-after technology to meet the continuing need for check payment efficiency and cost control. The widespread acceptance of images enabled FIs to rapidly adopt RDC, which captures check images closer to the point of the transaction or point of deposit. Merchants, consumers, and bankers can use RDC technology to convert paper checks to images that can then be deposited and processed electronically. Using RDC alternatives, FIs have been able to take advantage of economies of scale, with lower per-item processing costs, because they can reduce staff and leverage centralized processing models. In the past, the cost of handling checks was nearly \$1.00 per item; but now, many FIs calculate the cost of settling a check in pennies.⁴¹

Capture Type	Overview
Merchant deposit capture	<ul style="list-style-type: none"> Merchant deposit capture allows merchants to capture images of checks at the point of sale and remotely send these images to a bank for processing. Software or scanning devices may be used for this purpose.
Branch deposit capture	<ul style="list-style-type: none"> Branch deposit capture enables FIs to capture check images at branch teller stations. Items are validated, endorsed, proofed, balanced, and electronically archived, resulting in improved item-processing deadlines, lengthening end-of-day branch cut-off times, and easing peak-time staffing requirements.
Mobile deposit capture	<ul style="list-style-type: none"> Mobile deposit capture (MDC) allows consumers to use their camera-equipped Smartphone or tablet to send an image of a check to their bank for processing and deposit. Other remote deposit capture services use a scanning device such as those integrated into a printer.

⁴⁰http://www.frbservices.org/communications/check_restructuring.html, accessed Sept. 22, 2011.

⁴¹State of the Check: FIs and Vendors Qualitative Report, Javelin Strategy & Research, June 2011.