CONVERGENCE IN ELECTRONIC BANKING: TECHNOLOGICAL CONVERGENCE, SYSTEMS CONVERGENCE, LEGAL CONVERGENCE

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Walk through a neighborhood arts and craft fair and witness the convergence of payment systems firsthand: the jeweler manually makes a carbon copy of your Visa or will take a check if it is all you have; the glass blower accepts credit and debit cards with her wireless card reader; the woodcarver submits all payment information on his portable laptop; and the t-shirt vendor lets you take home a souvenir after submitting your card information via iPhone.[1] From paper to Wi-Fi, the payment mediums and the systems through which they travel are becoming increasingly interchangeable.

With the emergence of the electronic age, convergence has become a constant theme. Initially, the term convergence was used to describe the convergence of the means of communication: cable, telephone, or broadcasting. Once distinctly separate means of communication, today one can use the telephone over cable, or receive certain broadcast programs over telephone wires. More recently, there has been digital convergence: a phenomenon that has been observed in a variety of information technology industries including handheld computing, telecommunications, consumer electronics, networking, residential broadband, and broadcast video, among others. It has been observed that this digital convergence increases the value and flexibility of products and services, as well as the interchangeability of products that were previously

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1. Applications can now turn iPhones into mobile credit card terminals, or more recently, can enable customers to deposit checks using images captured with their phone cameras. *See* Frederick H. Lowe, *USAA Offers Check Deposit by iPhone; An Ideal Option for Banks Lacking ATMs?*, ATM & DEBIT NEWS, Aug. 13, 2009, at 1.

in distinct industries.[2] As more and more payment systems are taking advantage of the benefits afforded by technological advances, these payment systems are experiencing convergence—and indeed convergence has emerged as a persistent theme in the payments area.

The European Union has recognized the importance of "convergence" in the payments arena. The Single Euro Payments Area (SEPA) initiative involved the creation of a zone for the euro in which all electronic payments are considered domestic, and where a difference between national and intra-European cross-border payments does not exist. The 2007 Payment Services Directive[3] went even further in creating single, cross-border deposit accounts and harmonizing payment obligations and laws for credit transfers, direct debits, and payment cards across borders and payment instruments. The Directive's goal was to create a "harmonised" legal framework supporting a Single Payment Market resulting in improved economies of scale, competition, and reductions in payment system costs. This convergence is not technological; rather, it is convergence between domestic and foreign systems, and between the disparate legal regimes that govern the various payment systems.

The United States is also experiencing "convergence" in the payments area, but that convergence is distinctly different than what is occurring in the European Union. First, it is convergence between the various types of payment systems that exist. Second, that convergence is not being driven by governmental mandate but rather by the evolution of the systems themselves. In particular, the distinctions that previously existed between paper-based systems and non-paper-based systems are losing their validity, and the systems that support the different payments models are beginning to converge. Transactions processed through the check processing systems, the traditional paper-based system, and transactions traveling

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2. *See* FIONA M. ALEXANDER, ADAPTING POLICIES AND REGULATIONS FOR CONVERGENCE IN THE INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) SECTOR: A COMPARATIVE ANALYSIS OF NEW ZEALAND AND THE UNITED STATES 6 (2007), *available at* http://www.fulbright.org.nz/voices/axford/docs/axford2007_alexander.pdf.

3. Council Directive 2007/64/EC, 2007 O.J. (L 319), 0001, 0001–0036 (EC), *available at* http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:319:0001:01:EN:HTML (made in November 2007 by the European Parliament and the Council of 13 on payment services in the internal market amending previous other directives).

through the automatic clearing house systems are beginning to look more and more alike, just as transactions utilizing debit and credit systems share many common characteristics. Granted, the convergence is not yet complete: two transactions begun in the identical manner by a payor may be processed in different ways by the payee; in some instances, the payor has an option of which processing system to use, as the convergence between processing systems is not complete.[4] What is noticeably absent is convergence of the legal structure that governs those systems. There still remain different legal structures—and different legal authorities—governing the various payment systems, resulting in divergence that challenges the growth of newer payment systems in the United States.

This paper examines the way in which retail payment systems in the United States are beginning to converge, both from a practical perspective as well as from a legal perspective. In particular, it focuses on the convergence occurring between the traditional paper-based check processing system and the electronic funds transfers system. As will be noted, convergence is also occurring to some degree between the various "card" systems (debit, credit, and stored value) at the technological level. Legal convergence, however, remains elusive. The evolution of newer payment models, mobile payments, for example, introduces elements of both divergence and convergence. Lastly, small steps are being taken towards convergence on an international level between the structures governing payment systems in Europe and the United States.

I. CHANGES IN PAYMENTS: A LOOK AT THE NUMBERS

Statistics on the use of various payment devices in the United States evidence the convergence of the systems and the emergence of electronic payments as the wave of the future. Data published by the Federal Reserve documented that for the first time in 2003 the number of electronic payments (those made through credit card, debit card, and automated clearing

4. It should be noted at the outset that the focus of this paper is on retail payments rather than wholesale payments. There is still divergence between the retail and wholesale payment systems, reflecting the need for consumer protection in the former rather than the latter, as well as the practical differences that exist in the marketplace for wholesale payments. It is not beyond the realm of probability, however, to envision convergence between these two systems as well.

house (or ACH) networks) exceeded the number of check payments.[5] A recent report based on a 2007 Federal Reserve Systems study[6] revealed that by 2006, the number of electronic payments was more than double the number of check payments, or about two-thirds of all noncash consumer payments.[7] A more detailed look at the numbers, however, shows more than simply the rise of electronic payments; it demonstrates that the differences between paper transactions and electronic transactions are beginning to disappear.

A. Check Usage

The use of checks as a payment device is rapidly declining. Moreover, after decades of being the dominant noncash payment type, by 2006 checks paid amounted to only one-third of all noncash payments.[8] The total number of checks written (irrespective of the manner in which they were collected and settled) declined 4.5 billion, or 4.1% yearly, from 2003 to 2006 (as compared to a decline of 3.5% from 2000 to 2003). This rapid decline can be traced in part to the rise of other payment devices such as credit cards, debit cards, electronic funds transfers, and stored value cards. However, while this decline is significant, two other noteworthy trends are evident that demonstrate systemic convergence.

First, of the total number of checks written that actually enter the check processing system, an increasing amount are truncated[9] and the paper check eliminated, resulting in elec-

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5. Geoffrey R. Gerdes, Jack K. Walton II, May X. Liu & Darrel W. Parke, *Trends in the Use of Payment Instruments in the United States*, 91 FED. RES. BULL. 180, 180–201 (2005), *available at* http://www.federalreserve.gov/pubs/bulletin/2005/spring05_payment.pdf; Geoffrey R. Gerdes & Jack K. Walton II, *The Use of Checks and Other Noncash Payment Instruments in the United States*, 88 FED. RES. BULL. 360, 360–74 (2002), *available at* http://www.federalreserve.gov/pubs/bulletin/2002/0802_2nd.pdf.

6. FED. RESERVE SYS., THE 2007 FEDERAL RESERVE PAYMENTS STUDY: NONCASH PAYMENT TRENDS IN THE UNITED STATES: 2003–2006 14 (2007), *available at* http://www.frbservices.org/files/communications/pdf/research/2007_payments_study.pdf.

7. Geoffrey R. Gerdes, *Recent Payment Trends in the United States*, 94 FED. RES. BULL. A75, A75 (2008), *available at* http://www.federalreserve.gov/pubs/bulletin/2008/pdf/payments08.pdf.

8. The value of electronic payments has also grown substantially, but in 2006 they still accounted for less than half the value of noncash payments (45%). *Id.*

9. In the check processing system, "truncation" refers to several methods of removing paper checks from the forward collection or return process while at the same time sending the

tronic processing of the payment and electronic check presentment. In early 2007, an estimated 57% of all interbank checks in the United States were presented in original paper form; the remaining 43% were truncated and ultimately presented to the paying bank either electronically or as a substitute check.[10] Of those checks that were truncated, 66% were presented electronically.[11] The number of checks presented electronically in 2007 was approximately three times the number presented electronically just one year earlier. That number has continued to increase. The data for June 2008, for example, indicate that about 53% of checks presented to depositary institutions through the Federal Reserve Banks were presented electronically, compared with about 30% in early 2007. Indeed, the rise of truncation and electronic presentment has resulted in the restructuring of the Federal Reserve Bank check processing system and the consolidation of forty-five check processing facilities into one.[12]

A second trend that emerges from the data is that while the number of checks *written* has significantly declined, of those checks that are written, the total number of checks *paid* through utilization of typical check payment systems[13] has declined even more sharply, from an estimated 37.3 billion in 2003 to 30.5 billion in 2006—a decline of 6.5% a year compared with an estimated decline of 3.8% a year from 2000 to 2003. In

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check data forward in the collection system. *See generally* RONALD MANN, PAYMENT SYSTEMS AND OTHER FINANCIAL TRANSACTIONS 125 (4th ed. 2008).

10. The statistics in this paragraph are drawn from Gerdes, *supra* note 7, at A75.

11. Some checks are presented for payment through electronic transmission, but with delivery later of the physical paper check to the payor bank. This manner of presentment predates the advent of the Check 21 Act (discussed later in this paper), and, with the ability afforded to banks by that statute to truncate all checks and replace them with electronic images, this method of check presentment is likely to decline.

12. In 2003, the Federal Reserve Banks began a multi-year restructuring of their check operations as part of a long-term strategy to respond to the declining use of checks by consumers and businesses and the greater use of electronics in check processing. By the end of 2009, the Reserve Banks expect to process paper checks at one full-service check processing location, down from forty-five in 2003. *See* Memorandum from Fed. Reserve Bank of Minneapolis Vice President Mary Vignalo to the Chief Operations & Check Contacts at Depository Inst. in the Minneapolis Zone 1 (May 22, 2009), *available at* http://www.frbservices.org/files/communications/pdf/2009restructure/052209_minneapolis_date.pdf.

13. The Federal Reserve study counted as checks that were paid through the check payment system checks that were "on us," as well as those that were paid through the interbank clearing system, including both cases where the paper check itself was presented as well as where the check was truncated and replaced with either an electronic image or a substitute check that was presented for payment.

other words, while paper checks are written, they are not being processed as check payments and never enter the check processing system. This decrease can be traced to the rapid rise in the conversion of check payments into electronic funds transfers or ACH payments. The percentage of checks never collected through the check collection system, but converted for collection as electronic funds transfers, has doubled each year for three years. The statistics on those processes show that in 2006, about 8% of all checks written were converted to ACH payments, compared with less than 1% in 2003. The number of checks converted to electronic payments rose from 0.3 billion in 2003, to 2.6 billion in 2006.[14] These checks were typically converted by the companies or merchants who received them: some were converted at the point of sale (where the paper check was either returned to the customer or destroyed) or in the back office (where the paper check was either archived or destroyed). Recent reports from National Automated Clearing House Association (NACHA)[15] reveal that its newest "E-check" transaction, the back office conversion (or BOC), grew by 1,772% in 2008 to a total of 78,460,461 payments.[16]

Thus, the numbers show that (1) the use of paper checks has declined; (2) where paper checks are used, they are eliminated in the check processing system and processed electronically; and (3) paper checks are even more frequently used simply as mechanisms for initiating electronic funds transfers.

B. Electronic Payments[17]

While the use of checks in the United States is rapidly declining, the use of electronic payments is on the rise. The number of payments made over the major electronic payment systems in the United States—the ACH system, debit and

14. Gerdes, *supra* note 7, at A75.

15. NACHA, "The Electronic Payments Association," is a not-for-profit association that oversees the ACH Network, one of the largest electronic payment networks in the world. *See generally* NACHA Home Page, http://www.nacha.org (last visited Dec. 3, 2009).

16. Press Release, NACHA, NACHA Reports More than 18.2 Billion ACH Payments in 2008 (April 6, 2009), *available at* http://www.nacha.org/News/news/pressreleases/2009/2008%20ACH%20Stats%20(Final).pdf.

17. All subsequent statistics in this section can be found at the NACHA website, *see supra* note 15.

credit card systems, and the EBT (or electronic benefits transfers) system—grew from 44.1 billion to 62.8 billion between 2003 and 2006, for an annual rate of growth of 12.5%. More than half of that growth occurred in the debit card networks. Among the major payment systems, however, the highest annual rate of growth (18.7%) was recorded by the ACH system, which started the period with a much smaller base than debit cards. Although the rate of growth of electronic payments was somewhat slower between 2003 and 2006 than between 2000 and 2003 (13%), there was still an increase over the earlier period of 5.1 billion in the number of electronic payments. Overall, these increases in the number of payments made over the major electronic payment systems are due to an increasing use of both traditional and innovative ways of initiating payments. In addition, the use of private label prepaid cards, an innovation not included in the figures for the major electronic payment systems, has become significant.

C. Prepaid Cards

Within the industry, estimates both for current prepaid volumes and for future projections of volume vary among analysts. Sometimes these estimates vary substantially from one source to the next, ranging from $95.4 billion in spending for all prepaid cards in 2006 to $50 billion for closed-loop gift card sales in 2006 to $160 billion in open-loop, branded prepaid cards in 2007.[18]

What do these payments trends show? Arguably they demonstrate the fall of paper (the use of checks) in the system and the rise of electronic payments. But, more importantly, they show that the systems by which the various payments are made have begun to merge. First, a paper check may never enter the check processing system; instead, processing through the check processing system can be initiated electronically in addition to being carried out electronically. Second, the check processing system itself (as will be seen in more detail below) has become less paper-centric: while a paper check may enter the processing system, the bulk of the processing is being car-

18. FED. RESERVE SYS., THE ELECTRONIC PAYMENTS STUDY: A SURVEY OF ELECTRONIC PAYMENTS FOR THE 2007 FEDERAL RESERVE PAYMENTS STUDY 28 (2008), *available at* http://www.frbservices.org/files/communications/pdf/research/2007_electronic_payments_study.pdf.

ried on electronically. Third, even though a paper check may be present, the processing may occur *not* through the check processing system, but through electronic funds processing systems. The evolution of these two systems has gradually blurred the rigid distinctions between check processing on the one hand and electronic funds processing on the other. The check processing system, once paper-based, is beginning to look more like electronic funds processing, and the electronic funds processing system is beginning to include transactions begun with checks.

II. THE METAMORPHOSIS OF THE CHECK: FROM PAPER TO DIGITAL INFORMATION

The statistics demonstrate that the use of checks in the United States has declined drastically over the years. Their use at the checkout counter for point of sale transactions has been overtaken by the use of credit cards and debit cards. Their use for third party payments (e.g. bill payments) has declined as consumers have increasingly resorted to telephone banking and online banking. Their use as an access to cash has been replaced by the rise of the automated teller machine (ATM). In each case, the resulting efficiencies in terms of cost and convenience have benefited both the bank and the user.[19] What is more revealing is the nature of the "metamorphosis" that checks have experienced, and their integration into the realm of electronic payments.

Checks, or bills of exchange, are paper-based instruments; indeed, a signed writing is one of the traditional and indispensable requirements for meeting the definition of a check. At the turn of the twenty-first century, lawmakers and industry leaders championing the notion that an electronic message or data message could not be denied legality or enforceability solely because of its electronic form went out of their way to exclude checks and other negotiable instruments. Indeed, the mainstays of electronic commerce legislation in the United

19. From the bank's perspective, paper checks are more costly to process in comparison to electronic payments. The use of a check by the issuer may often involve more effort and time (e.g., meeting by person or sending by mail) as the receiver of a check incurs more transaction costs and, frequently, less immediate access to funds.

States, the Uniform Electronic Transactions Act[20] and the Electronic Signatures in a Global and National Commerce Act[21]—which were intended to eliminate distinctions between paper-based records and electronic records—excluded checks from their coverage.[22] As progress has been made in the elimination of paper in all areas of commerce, questions have been raised about whether paper payment instruments can successfully migrate to electronic instruments, and whether concepts such as negotiability are still relevant.[23] The discussions in the

20. The Uniform Electronic Transactions Act (UETA) is a product of the National Conference of Commissioners on Uniform State Law, who draft and propose uniform laws for enactment by the states and territories of the United States. The UETA has been adopted in 49 jurisdictions including the District of Columbia and the U.S. Virgin Islands. For more information, see www.nccusl.org. The text of the UETA may be found at http://www.law.upenn.edu/bll/archives/ulc/fnact99/1990s/ueta99.htm (last visited Dec. 3, 2009).

21. Electronic Signatures in Global and National Commerce Act (E-SIGN) §§ 101–121, 15 U.S.C. §§ 7001–7021 (2000). Unlike the UETA, E-SIGN is federal legislation.

22. The general scope provisions, section 3(b)(2) of the UETA and section 103(a)(3) of E-SIGN, exclude from coverage transactions governed by the Uniform Commercial Code (UCC) (other than those governed by sections 1–107 and 2–206, and Articles 2 and 2A of the UCC); that would exclude the application of the UETA and E-SIGN to checks and notes governed by Article 3, the check collection process under Article 4, and electronic funds transfers under Article 4A. Although the UETA did introduce the concept of a "transferable record," that concept was limited in its application to electronic records that would be notes (as opposed to checks) if the electronic record were in writing. U.E.T.A. § 16(a). *See also* E-SIGN § 201(a)(1)(A). As the UETA official comments note:

> Paper negotiable instruments and documents are unique in the fact that a tangible token—a piece of paper—actually embodies intangible rights and obligations. The extreme difficulty of creating a unique electronic token which embodies the singular attributes of a paper negotiable document or instrument dictates that the rules relating to negotiable documents and instruments not be simply amended to allow the use of an electronic record for the requisite paper writing.

U.E.T.A. § 16 cmt. 1. The decision to exclude checks from the UETA's provisions was justified on the grounds that revisions to the entire check processing system might be required:

> Notes and Documents of Title do not impact the broad systems that relate to the broader payments mechanisms related, for example, to checks. Impacting the check collection system by allowing for "electronic checks" has ramifications well beyond the ability of this Act to address. Accordingly, this Act excludes from its scope transactions governed by UCC Articles 3 and 4. The limitation to promissory note equivalents in Section 16 is quite important in that regard because of the ability to deal with many enforcement issues by contract without affecting such systemic concerns.

U.E.T.A. § 16 cmt. 2.

23. *See generally* David Frisch & Henry D. Gabriel, *Much Ado About Nothing: Achieving Essential Negotiability in an Electronic Environment*, 31 IDAHO L. REV. 747 (1995) (concluding that negotiability is readily attainable by parties employing electronic technologies); Ronald J. Mann, *Searching for Negotiability in Payment and Credit Systems,* 44 UCLA L. REV. 951 (1997) (showing basic concepts of negotiability irrelevant to current check processing system); James Steven Rogers, *The Irrelevance of Negotiable Instruments Concepts in the Law of the Check-Based Payment System*, 65 TEX. L. REV. 929 (1987) (stating that negotiable-instruments-law concepts

United States have focused on two important themes. The first is a philosophical and jurisprudential one: whether it is physically possible for an electronic record to satisfy the underlying prerequisites of negotiability. The second is a more practical one: whether the concept of negotiability is outmoded in today's world, rendering the concept of an "electronic negotiable instrument" or electronic check unnecessary and regressive.

The reality is that the importance of paper in the check payment arena is rapidly fading, as the result of a number of developments. The check collection process is a cumbersome, expensive process, involving the transportation, sorting and delivery of billions of pieces of paper drawn on thousands of financial institutions and deposited throughout the United States. In an effort to streamline the process, and reduce the costs of handling these items, banks have explored various ways of eliminating the paper trail. "Check truncation" has emerged as a way to eliminate or "truncate" the check-transportation process, i.e., remove the paper check from the forward collection or return process while sending the check data forward electronically in the check collection system.[24] As truncation has increased in the check processing system, the system itself has become increasingly electronic. Costs have played a large part in the electronic migration: as the cost of paper items (now called "legacy" items) increases, service providers have an incentive to raise prices, which encourages financial institutions to resort to truncation to lower costs. The road to check truncation has not been easy, however, with both statutory requirements as well as consumer expectations creating hurdles toward the elimination of paper.

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are often misleading in understanding the law of check systems); Albert J. Rosenthal, *Negotiability – Who Needs It*?, 71 COLUM. L. REV. 375 (1971) (encouraging thinking critically before labeling negotiability a "Good Thing").

24. *See* Check 21 Act § 2(18), 12 U.S.C. § 5002(18) (2004) (defining "to truncate" as "to remove an original paper check from the check collection or return process and send to a recipient, in lieu of such original paper check, a substitute check or, by agreement, information relating to the original check (including data taken from the MICR line of the original check or an electronic image of the original check), whether with or without subsequent delivery of the original paper check").

Short for Magnetic Ink Character Recognition, a MICR line is the machine readable code at the bottom of a check that facilitates electronic processing. The line contains the bank routing number, customer's account number, customer's check number and the amount of the check.

A. Payor Bank Truncation

The first attempts at check truncation were by the payor banks: upon presentation of and payment for the check, the payor bank would either destroy or store the check, providing the customer with a statement along with an image of the item or details describing the item. Payor bank truncation required changes to Uniform Commercial Code (UCC or "Code") Article 4 governing check collection: prior to 1990, the UCC required that the payor bank return paid items to its customer, but the 1990 revisions to the Code authorized payor bank truncation as long as either the item or the requisite detailed information was provided to the customer.[25] While the 1990 revisions have been adopted by the majority of states, two states (New York and South Carolina) have not adopted these changes.[26]

B. Depositary Bank Truncation or Electronic Check Presentment

Paper can theoretically be eliminated at any point in the collection process; the earlier in the process it is eliminated, the greater the cost savings. To achieve the greatest savings in cost and convenience, the depositary bank that takes the item for deposit could utilize the information contained on the check for collection purposes, while retaining the physical item or an image of the item. The information from the check would then be presented to the payor bank electronically, in what is referred to as "electronic check presentment" (or ECP). Electronic check presentment has two major benefits: presentment occurs more quickly than if the physical check had to be transported for presentment, and the process is less costly.

One of the biggest obstacles to complete elimination of paper in the check collection process was the reality that any particular depositary bank may accept deposits of checks drawn on any of the hundreds of banks, savings and loan or other financial institutions in the United States. While a depositary bank may desire the speed and efficiency that comes with

25. U.C.C. § 4–406(a) (2002). Under this provision, a bank that provides the item number, amount, and date of payment has provided the detail necessary to satisfy its requirements.

26. In New York, consumer advocates have opposed the enactment of the revisions on the grounds that truncation deprives the consumer of the necessary information and evidence that is needed to prove payment.

check truncation (and conversion of the physical object into an electronic object for purposes of collection and presentment), there is no guarantee that the particular payor bank upon which the item was drawn may not demand the paper item before honoring its obligation to pay. There is nothing in United States law requiring a payor bank to accept or honor a check, much less to accept or honor a check that is no longer in physical form. Indeed, others in the check payment system (people who write checks, or who receive checks which are dishonored) may demand paper evidence to document that a payment has been made, or a check dishonored. Consequently, the depositary bank that truncates sending forward an electronic image for collection may find that its presentment is dishonored or that it could be confronted with a demand for the paper check before payment, thus defeating the goals of truncation.

C. Electronic Check Negotiation and Check 21

In 2007, Congress passed the Check Clearing for the 21st Century Act ("Check 21"),[27] which was designed to foster innovation in the payments system and to enhance its efficiency by reducing some of the legal impediments to check truncation. Check 21 does not require parties to take electronic presentments or electronic checks, but it does address the concerns that arise when a demand is made for a paper representation of an item that has been the subject of truncation; in other words, it deals with the situation where in the course of collection a paper check is replaced with an electronic image but a party further down the collection process demands a paper check. The law facilitates check truncation by creating a new negotiable instrument called a substitute check.[28] It

27. 12 U.S.C. §§ 5001–5018 (2004). Check 21 is implemented by regulations adopted by the Federal Reserve Board. 12 C.F.R. § 229.1 (2006).

28. A substitute check is defined in section 3(16) of Check 21 as:

> a paper reproduction of the original check that (A) contains an image of the front and back of the original check; (B) bears a MICR line containing all the information appearing on the MICR line of the original check, except as provided under generally applicable industry standards for substitute checks to facilitate the processing of substitute checks; (C) conforms, in paper stock, dimension, and otherwise, with generally applicable industry standards for substitute checks; and (D) is suitable for automated processing in the same manner as the original check.

12 U.S.C. § 5002(16).

should be clarified, however, that a substitute check is not an electronic equivalent of a paper check. Rather, it is the paper printout of an electronic image of a paper check that has been "dematerialized" (i.e., converted to an electronic image) and then "reified" or "rematerialized" (i.e., printed out again). Check 21 permits a bank to truncate the original paper check, to process check information electronically, and then (if a paper item is demanded at some point in the check clearing process) to print out and deliver a substitute paper check to any bank or individual that wants to continue receiving paper checks. A substitute check, the printout of the electronic image that includes all the information contained on the original check,[29] is made the legal equivalent of the original check "for all purposes."[30]

The law does not require banks to accept checks in electronic form nor does it require banks to use the new authority granted by the Act to create substitute checks. Banks retain the discretion to choose whether or not to truncate, and they retain the discretion to decide whether or not to demand a paper item for processing. Arguably, Check 21 is not as supportive of truncation and imaging as might be imagined; indeed, it recognizes and facilitates the ability of payor banks to refuse electronic presentations and demand paper. Check 21 simply removes barriers to truncation by ensuring that there is a substitute item that can function as the paper check for all legal purposes if and when a paper substitute is demanded. Nonetheless, Check 21 does protect banks that truncate or accept truncation by dealing with three important issues that arise when a paper item is digitized, and then later when the digitized image is reconverted into paper. In addition, Check 21 does deal with some unique issues that arise when information in paper form is converted to electronic form.

The first major issue is the potential that the electronic image may not accurately reflect the check. Check 21 deals with this issue through a device traditionally used to allocate loss in the checking system generally: the imposition of a warranty. Under Check 21, a bank that transfers, presents, or returns a substitute check and receives consideration for the check makes a warranty that the substitute check meets all the requirements

29. *Id.* (definition of a substitute check).

30. 12 U.S.C. § 5003(b); *see* 12 C.F.R. § 229.51(a).

for legal equivalence under section 4(b) of the Act.[31] A second and related concern is that, whether or not the new item meets the requirements of the Act for a substitute check, the substitute check will not be sufficient and may cause loss to a party who no longer has access to the original item. Check 21 addresses this problem by imposing an indemnity obligation on a reconverting bank to reimburse a party for the loss it suffers as a result of receiving the substitute check rather than the original item;[32] that obligation is incurred by the reconverting bank as well as each bank that subsequently transfers, presents, or returns a substitute check in any electronic or paper form, and receives consideration.[33]

A third problem dealt with by Check 21 goes to the core of negotiability. The requirement of a paper item arguably results in a situation where it is difficult if not impossible to have two parties claiming to be holders entitled to payment under the instrument as it is impossible for each of them to be in physical possession of the same paper item at the same time. The existence of a single, unique token capable of possession by only one holder disappears when the item is digitized: first, there is now both a paper item which may or may not have been destroyed, as well as a digital item that may be infinitely replicated with little ability to distinguish the original from any copies. The problem is further compounded by the possibility that the digital image may be converted into a substitute check, not merely once, but potentially more than once. Check 21 does not attempt to impose any requirement on substitute checks for them to be "unique" or singular; instead, it imposes a warranty obligation on a bank that transfers, presents or returns a substitute check that:

> no depositary bank, drawee, drawer, or endorser will receive presentment or return of the substitute check, the original check, or a copy or other paper or electronic version of the substitute check or original check such that the bank, drawee, drawer, or endorser will be

31. Check 21 Act § 5, 12 U.S.C. § 5004. This warranty is made "to the transferee, any subsequent collecting or returning bank, the depositary bank, the drawee, the drawer, the payee, the depositor, and any endorser." *Id.*

32. *Id.* § 6(a), 12 U.S.C. § 5005(a).

33. *Id.*

> asked to make a payment based on a check that the bank, drawee, drawer, or endorser has already paid.[34]

The key attribute of this approach is that, rather than trying to require that the substitute check have all the attributes that can be ascribed to a normal negotiable instrument, Check 21 sets up a mechanism to allocate risks that arise from the failure to have a single unique item.[35]

This overview of truncation within the check processing system illustrates that the check processing system is no longer a paper processing system, but increasingly an electronic payments processing system. Though a paper check may initiate the process, the process itself is electronic. As will be demonstrated below, however, increasingly the process itself is not being initiated by a paper check, but by electronic means.

D. Elimination of the Paper Check by the Depositor: Remote Capture

A depositary bank that opts to truncate its check collection process must still accept and deal with paper deposits. Alternatively, truncation could occur even before the depositary bank takes the item: the depositor (or someone retained by the depositor to expedite payments) can capture the information from the submitted checks and then transmit that information to the depositary financial institution. A depositor who uses remote capture[36] may submit the information to its depositary bank for collection through the check collection process. In those instances, if the information is captured in the form of a substitute check, Check 21 would apply regardless of the fact that truncation was done by the customer rather than the bank; the depositary bank that takes transfers or presents the resulting substitute check (whether in paper or electronic form) would be subject to the warranty and indemnity provisions of the Act. Not all checks may be captured in that manner. At least one bank in the United States is allowing its cus-

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34. *Id.* § 5(2), 12 U.S.C. § 5004(2).

35. Check 21 has not been without its critics. For an insightful argument that Check 21 is meaningless and fails to deal with the pressing issues governing payment systems in general, see Carl Felsenfeld & Genci Bilali, *The Check Clearing for the 21st Century Act—Wrong Turn in the Road to Improvement of the U.S. Payments System*, 85 NEB. L. REV. 52 (2006).

36. A remote capture deposit occurs when the check enters the banking system without physically being presented to the depositary bank.

tomers to deposit paper checks electronically by taking a picture and submitting the images by iPhone.[37] The use of remote capture deposit is increasing, and with it concerns about fraud and security as the safeguards that exist within the banking system are not necessarily present outside that system.[38]

E. Remotely Created Checks

"Remote capture," which, as previously explained, refers to conversion of paper checks to electronic form prior to their entry into the check processing system, is not the only way that check equivalents or electronic check data enter the processing system. Check processing also can be initiated without creating a paper check at all, as it is not necessary for the customer to actually tender a paper check for the checking system to be used. An increasingly common payment transaction in the United States is one in which the customer merely provides the payee with information about his/her bank account, and authorizes the payee to issue a check on his/her own behalf. This payee-created check is known as a "remotely created" check.[39] Once issued, this check then enters the check processing system and is processed either electronically or in its paper form. When these remotely created checks were first utilized, they were in paper form. Increasingly, however, these remotely created items are in electronic form. Thus, the check processing system is being utilized even though a physical paper check was never in existence at any time: an electronic item enters the check processing system and is processed electronically. In other words, a system that was once entirely pa-

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37. *See* Susan Stellin, *Bank Will Allow Customers to Deposit Checks by iPhone*, N.Y. TIMES, Aug. 10, 2009, at B4.

38. *See, e.g.*, Adam J. Levitan, *Remote Deposit Capture: A Legal and Transactional Overview*, 126 BANKING L.J. 115, 119 (2009) (identifying risks such as the risk of errors from the scanning process, the risk that fraud is more difficult to discover because of the inability to access the physical check, and the "unique risk" of duplicate presentment and payment, either by fraud or mistake). To reduce the risks of fraud, USAA, the bank accepting iPhone deposits, limits availability of the application to those customers who are eligible for credit and have some type of insurance through USAA.

39. 12 C.F.R. § 229.2(fff) (2009) (defining a remotely created check as "a check that is not created by the paying bank and that does not bear a signature applied, or purported to be applied, by the person on whose account the check is drawn."). For further explanation, see the 2002 revisions to the UCC defining a "[r]emotely-created consumer item." U.C.C. § 3–103(a)(16) (2003).

per-based is now almost completely electronic from inception to completion.

This evolution in check processing has effectively changed its nature from processing paper to processing electronic information. The check processing system can be initiated by a paper item, or the check processing system can be initiated electronically. Indeed, the paying customer may never create or tender a paper item for the check processing system to be triggered.

F. Use of Checks To Initiate Electronic Funds Transfers

At the same time that electronic information is being used to initiate (traditionally paper-based) check payments, in the parallel universe of electronic funds transfers, the tender of checks by paying customers is increasingly being used to initiate electronic funds transfers. Paying customers may be tendering checks as payment, but those checks are being converted for collection through the electronic funds transfers system rather than being processed through the check collection system. Thus, at the same time that check processing is becoming electronic, electronic funds transfers are being initiated by check.

The ability of merchants to use the checks, or more appropriately the information contained on those checks, to initiate a one-time electronic funds transfer arose as a result of rules introduced by NACHA in 2000 authorizing the initiation of one-time automated clearing house (ACH) debits to consumer checking accounts. Prior to 2000, NACHA primarily dealt with recurring funds transfers such as payroll deposits (on the credit transfer side) and mortgage payments (often on the debit side). NACHA's entry into the one-time non-recurring transfer market poses a challenge to checks, as today, paper checks increasingly are being processed through the electronic funds transfer system not through the check processing system.

The NACHA rules introduced four types of one-time ACH debit products: the point of purchase product (the "POP entry"), the accounts receivable product (the "ARC entry"), the telephone initiated product (the "TEL entry") and the Internet-initiated product (the "WEB entry"). The first two products deal with transactions "initiated" by a paper check. In the first

case (POP) the customer presents the check to the merchant at the checkout counter (or point-of-sale). There the information is used to initiate the electronic funds transfer as tender for an in-person transaction.[40] With the second product (ARC), the customer mails the check (in payment of an account receivable) to the merchant (or more frequently, to the merchant's lockbox), where the relevant information from the MICR line of the check is captured to initiate the transaction and create the ARC entry.[41] The accounts receivable entry is the fastest growing ACH transaction type in the history of the ACH system. In each instance, the original paper check cannot be used for presentation. The original item must be destroyed in the case of ARC entries. When using POP entries, it must be returned to the consumer. What is important about these uses of the check, however, is that the check is not being used to initiate a check payment, but the check is being used to initiate an electronic funds transfer.[42]

The latter two products, the TEL entry and the WEB entry, are used when the customer authorizes the merchant, by phone in the case of a TEL entry and online in the case of a WEB entry, to initiate a one-time electronic funds debit from the customer's account. Although no check is produced or tendered in these cases, prior to the introduction of these products, the customer in such instances might have authorized the

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40. The check (whether completed, partially completed or blank) is used by the merchant as a source of information for the creation of the POP entry. The information necessary to format the POP entry is captured by the merchant at checkout when the merchant runs the check through special equipment that, at a minimum, can read and store the MICR line of the check. The paper check is marked void by the merchant at the point of sale and returned at the time of purchase to the customer. The information obtained from the MICR line is later used by the merchant/payee to create the ACH debit message that is sent for processing over the ACH Network.

41. The invoice sent by the merchant to the customer that triggers the submission of the check will include a statement (often on the back of the invoice) that, by submitting a check as payment, the payor/customer authorizes the biller to use the information on the check to initiate an electronic fund transfer (the ARC entry).

42. Indeed, the requirements for a POP entry require that the paper check be returned to the customer; authorization to initiate the transfer is obtained by having the consumer sign an authorization. The requirements for an ARC entry require the check to be imaged (to prove authorization) and then destroyed; the merchant is also prohibited from presenting the image for payment. The result is that the paper check, while tendered to the merchant, was not itself tendered as a means of payment, but to give the merchant the necessary information to begin an electronic funds transfer. There is a similar product that is used at the return level: a returned check entry (RCK), where a debit transaction is used in place of a paper check after the paper item has been returned for insufficient or uncollected funds.

merchant (by phone or over the web) to write a check on its account, which would have resulted in what is known as a "remotely created check."[43] Thus, the TEL entry and the WEB entry are replacements for these remotely created checks. A merchant is permitted under the NACHA rules to originate a one-time ACH debit to a customer's checking account based on MICR line information provided by the buyer over the telephone, if the buyer and seller have an existing relationship or if the buyer initiates the call. With respect to a WEB entry, no prior relationship is required; the buyer's authorization and MICR line information are obtained on the Internet. In these two cases, a paper check is never created or used; instead, these payment methods are used *in place of* paper checks (or remotely created checks).

In 2007, NACHA rolled out another product: back office conversion (BOC). This application allows retailers and billers to accept checks at the point of purchase or at manned bill payment locations and convert the checks to ACH debits during back office processing. Unlike a POP transaction, the customer is provided with notice prior to writing the check that it will be used to initiate a funds transfer, the check is evidence that the transfer is authorized (and no separate authorization is needed), and the check is retained by the merchant and not returned to the customer.[44]

To the extent that these are payments initiated when a consumer tenders a paper check that, through these various ACH programs, is converted into an electronic item, these one-time ACH transfers are referred to by NACHA as "E-checks."[45] What should be emphasized is that the check used in that manner never enters the check clearing process. Instead, a paper check initiates the process but is converted into an ACH

43. *See* discussion *supra* note 38.

44. *See* ELEC. CHECK COUNCIL, BACK OFFICE CONVERSION (BOC) (2007), http://ecc.nacha.org/docs/boc_checklist.pdf. For an in-depth discussion of the BOC entry, *see also* Roberta G. Torian, Russell W. Schrader, Oliver I. Ireland & Ryan S. Stinneford, *Current Developments in Electronic Banking and Payment Systems*, 63 BUS. LAW. 689, 699–701 (2008).

45. *See* Stephanie Heller, *An Endangered Species: The Increasing Irrelevance of Article 4 of the UCC in an Electronics-Based Payments System*, 40 LOY. L.A. L. REV. 513, 517 (2006). The term is also used by merchants to describe situations where the customer submits information normally shown electronically on a check. Investopedia, a Forbes digital company, defines an electronic check as a "form of payment made via the internet [sic] that is designed to perform the same function as a conventional paper check." Investopedia "Electronic Check" Definition, http://www.investopedia.com/terms/e/electroniccheck.asp (last visited Dec. 3, 2009).

electronic payment and processed through the ACH Network. As a result, the point of purchase and accounts receivable E-check products replace the use of checks at the checkout counter (e.g., supermarkets) and that method for paying bills respectively. The Internet- and telephone-initiated E-check products (also called "check replacement") can be used in place of "remotely created check" or telemarketer drafts (paper checks created by the payee based on information supplied by the payor and "authorized" by phone or other means). To prevent consumer confusion (i.e., to alert consumers that their checks will not be processed as checks, or that no check will be issued), the Federal Reserve Board in 2005 proposed amendments to Regulation E to cover merchants with respect to electronic check transactions. Consumers must now receive notice if their checks will be processed electronically either at the point of sale or when they remit payments as part of a lockbox or accounts-receivable transaction.[46]

G. Conclusion

What conclusions are to be drawn from this analysis of the migration from the processing of paper checks to increasing electronic processing of payment information? One could conclude that the paper system as we know it is disappearing, and being engulfed by the emergence of electronic funds transfers. Or one could conclude that the clear demarcation that previously existed between paper check processing and electronic funds processing is disappearing as the two systems converge. A paper check may be used to initiate the transaction, but once the check enters the system, it ceases to exist and the bulk of the collection process is done electronically. Or a paper check is used *not* to initiate a transaction within the check processing system itself, but as the source of authorization to initiate a transaction within an electronic funds transfer system. An electronic message capturing a customer's banking information may be used to initiate the check processing

46. Today, when a consumer mails a check for payment to a credit card issuer, the transaction may be covered by three separate sets of rules. Consumer confusion may be further exacerbated because the consumer will not know at the time he mails the check which method of processing will be chosen by the credit card biller. *See* 12 C.F.R. § 205.3 (2009); *see also* Mark E. Budnitz, *Consumer Payment Products and Systems: The Need for Uniformity and the Risk of Political Defeat*, 24 ANN. REV. BANKING & FIN. L. 247, 255 (2005).

system or, alternatively, the electronic message may be processed within the electronic funds system.

Signs of convergence are clear. Yet so are the signs of some divergence, as different types of electronic funds transfers appear, each slightly different and involving differing characteristics and requirements. Moreover, certain initiatives such as Check 21 remind us that despite the desire to eliminate paper, the demand for paper may well continue.

But a further observation is important. Migration from paper-based systems to electronic systems happens in a number of different ways. First, technology is used to expedite and facilitate existing systems. This convergence of the old into the new has not only increased the flexibility of the types of payments systems available, but has increased the interchangeability of the products that were previously distinct and separate. The line between checks, E-checks, remotely created checks, and electronic funds transfers has blurred, as has the distinctions between electronic funds transfers, access cards, stored value or prepaid cards, and credit cards. In the United States, we are slowly moving to a unified system—but we have a long way to go.

Although the systems (checks and electronics) have begun to converge at the front end, they may well diverge at the back end. A check tendered at the point of sale, or sent in payment of an accounts receivable, can be processed either through the check collection system or through the system for processing electronic funds transfers. Similarly, information tendered to a merchant via the Internet or on the telephone can be treated as authorization for the merchant to write a check on the customer's account, or to process an electronic funds transfer drawing on the customer's account. This circumstance may lead to a certain amount of confusion for the consumer, who may not know or appreciate the distinctions between the various uses.[47]

A second and integrally related point is that, depending upon the way that the check (or information) is processed,

47. Additional consumer confusion may result from the rise of online banking, where the consumer utilizes the website of its bank to initiate a payment transaction. It is not uncommon for the consumer to initiate and authorize payment without knowing whether its instructions will be implemented by the bank through issuance of a check (in paper or electronically) or through an electronic funds transfer.

there continue to be distinctions between the legal structures applicable to the transactions. A check processed through the check processing system subjects the entire transaction to the provisions of Articles 3 and 4 of the UCC, and to the check processing regulations promulgated by the Federal Reserve Board. Information processed as an electronic funds transfer through the ACH system does not have as clear a legal structure. While the transaction may be governed in part by the provisions of the Electronic Funds Transfer Act (EFTA),[48] to a large extent the major requirements governing these transactions can be found in the NACHA rules[49]—rules adopted by the automated clearing houses themselves.[50] According to one commentator, an unfortunate result of the increased migration from utilization of the check processing system to the use of electronic funds transfers for payment processing is that "public law is dead."[51] Many of the newest products and services are processed through the ACH system, which is subject to private rulemaking from which consumers are excluded, and applicable public law (federal or state) is limited.

By contrast, checks processed electronically, not as E-checks or through electronic check conversion but through truncation within the check processing system, do not fall under the EFTA. Legally, these checks are still checks though they are processed electronically. The electronic processing aspects of these checks are governed either under bank-to-bank agreements or under the Check 21 Act. Yet Check 21 applies only if the electronic processing of the check results in the printout of a paper item that satisfies the definition of a substitute check.

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48. The Truth in Lending Act, codified at 15 U.S.C. §§ 1601–1667e (2000), is Title I of the Consumer Credit Protection Act, 15 U.S.C. §§ 1601–1693r (2000).

49. *See* NACHA ACH Rules & Regulation, http://www.nacha.org/ACH_Rules/ach_rules.htm (last visited Dec. 3, 2009).

50. If a paper check is written but never enters the check processing system, the normal rules governing check collection found in Article 4 of the UCC would be inapplicable. Moreover, Check 21 would not apply, as no "substitute check" would be involved. Rather, the rules applicable to ACH systems and electronic funds transfer would apply. As will be discussed below, these rules may result in lack of transparency at the initial stages of a transaction as to the type of payment being made. A study committee is currently considering whether Articles 3, 4, and 4A should address checks that are issued, but processed using ACH or other "non-check" channels. *See* Memorandum from Linda J. Rusch, Reporter, to Study Comm. on Payments Issues 16 (Oct. 6, 2009), *available at* http://nccusl.org/Update/Docs/Payment%20Issues_Rusch%20Memo_Oct%206%2009.pdf.

51. Mark Budnitz, *Commentary: Technology as the Driver of Payment System Rules: Will Consumers Be Provided Seatbelts and Air Bags?*, 83 CHI.-KENT L. REV. 909, 909 (2008).

If the original check is digitized, and the information from that check is processed electronically and there is an electronic presentment, the provisions of Check 21 do not apply. This circumstance leads to a situation where a customer's rights depend not upon what can be determined by the customer at the outset of a transaction, but solely upon actions taken within the banking system of which the customer is unaware. As an example, electronically processed checks covered by Check 21 trigger a right of recredit within ten business days only if a substitute check is returned to the check-writing consumer and only up to the first $2,500 in dispute.[52] Yet whether a substitute check is returned (and recredit rights are triggered), is up to the sole discretion of the banks in the check collection process, including the customer's own bank, which make the decision about whether to print out and return a substitute check.[53] Outside of the limited Check 21 right of recredit, check law sets no guaranteed time period for the recredit of disputed funds.[54] Thus, the customer's rights, and the legal structure governing them, cannot be determined at the front end of the transaction, and may well depend upon bank-to-bank agreements.

The result is incomplete convergence: convergence of the legal structures governing these systems has yet to be achieved.

III. FROM PAPER TO PLASTIC: OF CREDIT CARDS, DEBIT CARDS, AND OTHER PLASTIC DEVICES

As noted above, the total number of noncash payments in the United States (payments by check, ACH, debit and credit card, and EBT) has increased greatly over the years. More than half the growth in electronic payments has occurred in the debit card networks. In addition, the use of private label prepaid cards, an innovation not included in the figures for

52. Check 21 Act, 12 U.S.C. § 5006(c)(2)(B)(i) (2006). There is a different time frame (forty-five days) for amounts over $2,500. *Id.* § 5006(c)(2)(B)(ii).

53. Gail Hillebrand, *Before the Grand Rethinking: Five Things To Do Today with Payments Law and Ten Principles To Guide New Payments Products and New Payments Law*, 83 CHI.-KENT L. REV. 769, 786 (2008).

54. *See id.* This is a bizarre result in that checks processed electronically under bank-to-bank agreements without the use of electronic check conversion and without the return of a substitute check fall only under the law governing purely paper checks—the UCC. The Code contains no guaranteed time period for recredit of disputed funds.

the major electronic payment systems, has become significant.[55]

As one commentator has noted, a consumer cannot necessarily "avoid the morass in check law by turning to plastic."[56] Instead, there are great possibilities for confusion among the various types of cards that are available to consumers. Similar-looking plastic cards may function very differently, carrying very different legal implications. An ordinary card bearing a Visa or MasterCard logo may fall into one of seven or more categories, with varying levels of protection and risk for the consumer: a credit card; a debit card linked to a traditional consumer deposit account; an employer-arranged payroll card; an employer-arranged flexible spending card; a self-arranged debit card that is not linked to an independent bank account held in the consumer's name, (which may or may not receive periodic direct deposits of the consumer's whole paycheck);[57] a card to draw on special funds such as disaster assistance; or a bank-issued gift card. These are cards issued within the banking system. The consumer may also hold other cards, such as retailer gift cards or phone cards, issued outside the banking system.[58]

Despite the proliferation of different types of cards, there has been some "convergence" in the systems used to process credit and debit transactions, as large retail electronic payments networks such as Visa and MasterCard offering different types of plastic products have merged the processing systems governing those products. This convergence, which is both technological as well as systematic in that the technology

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55. Within the industry, various providers and analysts have published differing estimates both for current prepaid volumes and also for future projections of volume. *See* FED. RESERVE SYS., *supra* note 18, at 28 and accompanying text.

56. Hillebrand, *supra* note 53, at 786.

57. Katy Jacob et al., *Stored Value Cards: Challenges and Opportunities for Reaching Emerging Markets* 5 (Fed. Reserve Bd. 2005 Research Conference, Working Paper, 2005), *available at* http://www.newyorkfed.org/regional/svc_em.pdf. For an example of one such card, see RushCard, The Prepaid Visa RushCard: How it Works, https://www.rushcard.com/howit works/add.aspx (last visited Dec. 3, 2009) (inviting users to have all or part of their paychecks or government benefits deposited automatically).

58. For an excellent article on the issues concerning prepaid phone cards, see generally Mark E. Budnitz, Martina Rojo & Julia Marlowe, *Deceptive Claims for Prepaid Telephone Cards and the Need for Regulation*, 19 LOY. CONSUMER L. REV. 1 (2006) (recommending that Congress enact a statute mandating a minimum standard of protection for purchasers of prepaid telephone cards, including disclosures, substantive protects and consumer remedies, and authorizing the FTC to issue regulations).

for processing credit cards and debit cards is now unified, has made the acceptance of different types of cards easier for merchants. It has resulted, however, in some confusion among consumers who may not know or appreciate how a given card (which may contain both debit and credit features) is being processed.[59] For example, credit cards and debit cards may be swiped through the same electronic device, requiring the same security features, yet one cannot tell from the terminals being used the type of card at issue.

At the outset, it bears emphasis that credit cards and debit cards are subject to two different legal structures. Credit cards are subject to the Truth in Lending Act,[60] while debit cards fall under the ambit of the EFTA. To a large extent, these federal acts deal with two sets of issues: the disclosures that must be made by the card issuer to the card holder, and the rights that the card holder has in the event of error or in the event of fraudulent use of the card. Enacted at different times, provisions of these two pieces of legislation are inconsistent and irreconcilable in many respects. This discrepancy is particularly evident with regard to the liability of a card holder for an unauthorized or fraudulent transaction. In the event of fraudulent card use, the liability of a credit card holder is capped at fifty dollars, while that of a debit card holder may be fifty dollars, five hundred dollars, or as much as has been obtained by the fraudulent thief, depending upon whether and when the holder notifies the issuer of the loss or fraudulent activity and the contract terms governing the consumer-creditor relationship.[61] A second key difference is the availability of the right to "chargeback" a transaction. A chargeback is the ability of a customer to reverse a transaction for certain reasons. For example if the underlying transaction is disputed and the customer is unable to resolve the matter directly with the merchant, the consumer can notify the issuer/creditor and ask to have a chargeback initiated. The right to chargeback, present

59. *See* Anita Ramasastry, *Confusion and Convergence in Consumer Payments: Is Coherence in Error Resolution Appropriate?*, 83 CHI.-KENT L. REV. 813, 816 (2008). For more information on technological convergence and its effect on markets and consumers, see generally DAVID S. EVANS & RICHARD SCHMALENSEE, CATALYST CODE (2007).

60. 15 U.S.C. §§ 1601–1667e (2006).

61. *See, e.g.*, Clayton P. Gillette, *Rules, Standards, and Precautions in Payment Systems*, 82 VA. L. REV. 181, 205–07 (1996).

in the law applicable to credit cards,[62] does not exist with regard to debit transactions.[63] Although much has already been said about the inconsistencies between credit and debit card law, distinctions in the protections available to consumers still remain.[64]

Further complications arise because the existing legal structures only address the relationship between the cardholder and the issuing bank. For example, while credit card legislation grants consumers a chargeback right in their relationship with the issuing bank, the legislation does not address the multilateral relationship among the consumers, banks, and merchants that are part of the credit card system as a whole. As a consequence, the relationships between the remaining

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62. In the United States, section 170 of the Truth in Lending Act permits credit cardholders to raise against the issuer any claims or defenses they may have against merchants, under four conditions: (1) the cardholder made a "good faith attempt" to resolve the dispute with the merchant, (2) the transaction exceeded $50, (3) the initial transaction occurred in the same state or within 100 miles of the cardholder's billing address, and (4) the claims or defenses are limited to the balance remaining on the card when the cardholder first notifies the card issuer or merchant of the claim or defense. 15 U.S.C. § 1666i(a) (2006).

63. There has been some legislation that applies equally to credit cards and debit cards: for example, recent legislation addressing the risk of identity theft. Identity theft is a risk with respect to both debit and credit cards. A new piece of legislation to protect consumers from this risk, the Fair and Accurate Credit Transactions Act of 2003, amended the Fair Credit Reporting Act to prohibit a merchant from printing a receipt containing more than the last five digits of a credit or debit card number or the card's expiration date. Fair and Accurate Credit Transactions Act of 2003, Pub. L. No. 108–159, § 113(g)(1), 117 Stat. 1952, 1959 (codified at 15 U.S.C. § 1681c(g) (2006)).

64. For a penetrating analysis, see generally Mark Furletti, *The Laws, Regulations, and Industry Practices That Protect Consumers Who Use Electronic Payment Systems: Policy Considerations*, (Fed. Reserve Bank of Philadelphia, Discussion Paper No. 05–16, 2005), *available at* http://ssrn.com/abstract=926370 (concluding that (1) the current protection mechanisms make it more difficult to encourage the adoption of fraud-reduction schemes; (2) the current protections represent a significant cost to banks, merchants, processors, and consumers; and (3) the present federal system of protection, while encouraging innovation and thoughtful regulation, leads to consumer confusion). *See also* Ronald Mann, *Making Sense of Payments Policy in an Information Age*, 93 GEO. L. J. 633, 634 (2005). For an interesting article on the international use of credit and debit cards, and the development of international policies to protect consumers, see generally Arnold Rosenberg, *Better Than Cash? Global Proliferation of Payment Cards and Consumer Protection Policy*, 44 COLUM. J. TRANSNAT'L L. 520 (2006).

Additionally, there have been recent efforts to revise the regulations containing consumer protections to reflect the growing obsolescence of paper. In 2007, for example, Regulation E's requirement of a receipt in all debit transactions was amended to exempt issuers in small dollar transactions of less than fifteen dollars from the paper receipt requirement. Electronic Fund Transfers, 72 Fed. Reg. 36,589, 36,590 (July 5, 2007) (codified at 12 C.F.R. pt. 205). The amendment, which became effective August 6, 2007, was intended to facilitate consumers' ability to use debit cards in retail transactions where making receipts available may not be practical or cost effective.

parties in the system are not governed by positive law, but by contracts and systems rules.[65]

The situation becomes even more complicated when new payment devices have appeared on the horizon, such as prepaid or stored value cards. The use of stored value or prepaid cards has experienced exponential growth in the United States. At the same time, the legal environment applicable to the use of these cards has become complex with a myriad of federal regulations, contradictory laws and regulations in over half of the states, and preemption issues that arise when federal and state laws conflict.[66]

On the federal level, several agencies have become involved in the regulation of stored value cards, and substantial questions concerning the nature and operation of stored value cards have been raised. For example, questions have arisen such as whether large deposits of funds for payroll cards that have been issued are covered by federal insurance issued by the Federal Deposit Insurance Corporation (FDIC). While the FDIC is willing to admit that the funds upon deposit with a financial institution are accounts that might be insured, the larger question is whether the funds are held in individual accounts (those of the cardholders) or in a pooled account (that of the card funders). If the funds are treated as individual accounts, the bank must be able to identify the persons who hold those accounts; whether it has the ability will depend upon how the stored value system is implemented. Unlike the holder of an ATM card who deals directly with the bank, the identity of the purchaser of the stored value card may be unknown. Various solutions to this problem have been suggested, the most recent being a pragmatic one: if the account records show the funds belong to the depositor, then the de-

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65. *See* Adam J. Levitin, *Priceless? The Economic Costs of Credit Card Restraints*, 55 UCLA L. REV. 1321, 1405 (2008) (calling for a reconsideration of merchant restraint rules and the regulation of payment systems in the United States); Adam J. Levitin, *Priceless? The Social Costs of Credit Card Restraints,* 45 HARV. J. ON LEGIS. 1, 1 (2008).

66. Mark Furletti & Stephen Smith, *The Laws, Regulations, and Industry Practices that Protect Consumers who Use Electronic Payment Systems: ACH E-Checks & Prepaid Cards* 1–3 (Fed. Reserve Bank of Philadelphia, Discussion Paper No. 05–04, 2005), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=796164; MICHELLE JUN, CONSUMERS UNION, PREPAID CARDS: SECOND-TIER BANK ACCOUNT SUBSTITUTES 3 (2009), *available at* http://www.defendyourdollars.org/Prepaid%20WP.pdf; Mark Furletti, *Prepaid Card Markets & Regulation* 13–14 (Fed. Reserve Bank of Philadelphia, Discussion Paper No. 04–01, 2004), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=927077.

positor is the beneficiary of the insurance; if there is no mechanism for identifying the card holders, then the depositor is the beneficiary; and if the account records show the funds belong to the card holders, and there is a mechanism for identifying those card holders (from information held by either the depositor or the bank), then the cardholders are the beneficiaries.[67]

The FDIC is not the only federal agency to become involved. Another key player in the establishment of the legal structure for stored value cards is the Federal Reserve Board. The Board implements the EFTA though Regulation E. This regulation controls when a "consumer" uses an "access device" to initiate an "electronic fund transfer" from a "consumer asset account."[68] Recent amendments to Regulation E by the Federal Reserve Board expand its application in the area of payroll cards, and find payroll card accounts to be "accounts" for the purposes of the regulation.[69] It is unclear whether Regulation E covers many other types of stored value cards.

Regulation by multiple entities at the federal level is merely one problem; multiple state regulations also exist. Gift cards are now regulated in thirty states, while another nine have statutes or regulations that rule payroll cards in some man-

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67. For a more in depth discussion of the FDIC's consideration of the issue, see Sarah Jane Hughes, Stephen T. Middlebrook & Broox W. Peterson, *Developments in the Law Concerning Stored Value and Other Prepaid Payment Products*, 62 BUS. LAW. 229, 234 (2006). The FDIC in 2008 issued an opinion regarding the insurability of funds underlying stored value cards and other nontraditional stored value products. *See generally* Insurability of Funds Underlying Stored Value Cards and Other Nontraditional Access Mechanisms, 73 Fed. Reg. 67,155 (Nov. 13, 2008) (FDIC Notice of New General Counsel's Opinion No. 8). In that opinion, it limited insurance coverage of stored value products to funds that have been placed at an insured depositary institution, apparently limiting "FDIC deposit insurance coverage to deposits underlying bank-issued stored value products as opposed to deposits underlying merchant-issued stored value products." *See* Obrea Poindexter & Sean Ruff, *Electronic Banking and Prepaid Card Developments*, 64 BUS. LAW. 593, 601 (2009).

68. 12 C.F.R. § 205.2 (2009) (defining all terms in Regulation E). For purposes of the EFTA and Regulation E, an "account" is defined as "a demand deposit . . . , savings, or other consumer asset account . . . held directly or indirectly by a financial institution and established primarily for personal, family, or household purposes." *Id*. § 205.2(b)(1). The term "account" is not limited to traditional checking and other deposit accounts; however, Internet-based payment systems and stored value products may still fall outside of Regulation E's coverage.

69. Electronic Fund Transfers, 71 Fed. Reg. 51,437, 51,438 (Aug. 30, 2006) (codified at 12 C.F.R. pt. 205). *See* Richard P. Hackett, Ryan S. Stinneford, & Roberta Griffin Torian, *Current Developments In Payment Systems, Deposit Accounts, And Electronic Delivery Of Financial Services*, 62 BUS. LAW. 675, 676 (2007).

ner.[70] This patchwork of regulation (state and federal) leads to nonuniformity and confusion about the treatment of these new payment devices.

For more emerging payment systems, particularly Internet-based systems designed to facilitate person-to-person small dollar transactions, such as PayPal and PayDirect, there are additional regulation gaps and concerns.[71] Several of these emerging payment products are merely front-end payment methods to the consumer that use traditional funding and settlement systems behind the scenes. Examples include online bill payment sites that utilize the ACH network for processing; person-to-person (P2P) payments, which are charged to a credit card or routed through the ACH network (e.g., PayPal); deferred payment transactions (e.g., Bill Me Later), and other front-end mechanisms, including transponders (e.g., E-ZPass) which may charge payments to credit cards or debit cards which use the ACH network (e.g., Tempo Debit/Debitman) to withdraw funds from a consumer's bank account.[72] While the back-end payment mechanisms use traditional funding and settlement systems behind the scenes, there has been some concern about the legal and regulatory structure that applies to the front-end provider of these services.

An important example of these emerging payments systems, and one of the areas of most rapid growth in the United States, is what is known as "mobile payments": the use of cell phones or other electronic devices to conduct transactions.[73] The use

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70. Sarah Jane Hughes, Stephen T. Middlebrook & Broox W. Peterson, *Developments in the Law Concerning Stored-Value Cards and Other Electronic Payments Products*, 63 BUS. LAW. 237, 237 (2007). *See, e.g.*, ME. REV. STAT. ANN. TIT. 33, § 1953(G) (2007).

71. There has not been great proliferation of these types of payment providers, in large part because the legal and regulatory structures present obstacles to entry into the area. Non-bank systems operators face state licensing issues under money transmitter laws, and the Uniform Money Services Act, as well as attacks under state and federal law that the payment provider is engaged in the unauthorized business of banking. The application of money laundering laws is also a concern. *See* Jeffrey P. Taft, *Internet-Based Payment Systems: An Overview of the Regulatory and Compliance Issues,* 56 CONSUMER FIN. L.Q. REP. 42, 42 (2002).

72. *See* FED. RESERVE SYS., *supra* note 18, at 24.

73. While mobile payments have gained ground in Asia and Europe, they have not in the United States for regulatory, market, technological, and cultural reasons. Mobile-payment technology has been much slower to catch on because of (i) the large number of wireless providers (and the issue of interoperability between their different systems); (ii) a lack of cooperation among cell-phone service carriers, retailers, and banks; (iii) a lack of infrastructure for m-payment systems; and (iv) the prevalence of long-term contracts between consumers and cell-phone service providers. Angela Angelovska-Wilson & Jaimie Feltault, *M-Payments: The Next*

of cell phones for payment falls into one of three categories: (1) transactions involving the delivery of content (e.g., music, ring tones, videos, information) directly to the mobile phone, known as "in-band" or content payments; (2) "out-of-band" payments or purchases that do not involve delivery to the mobile phone; and (3) proximity payments, where the mobile device communicates with a nearby local device such as a parking meter, vending machine or POS terminal. The payment collection is generally handled in one of two ways. First, in the case of downloads, the micropayments are aggregated and added to the monthly bill of the mobile phone user at the end of the billing cycle. The user then pays for those purchases as part of his/her monthly bill. Alternatively, the merchant may use information sent over the phone (e.g., credit card or debit card information) and process each transaction as a separate transaction. In either event, the net result is that these mobile payments are actually front-end payment methods built on top of the existing payment structures. Therefore, legal principles applicable to the actual payments remain those that govern those traditional systems. These principles leave major issues involving security in the area of mobile payments unresolved. For example, mobile phone calls are notoriously insecure; but that "insecurity" is the insecurity of the connection between the customer and the payment provider that begins the payment process, and falls outside virtually all existing law and regulations in the United States.

Thus, while there has been some technological convergence between credit cards and debit cards, the legal framework is still divergent. Given the maturity of the credit and debit card industry, it may be time for reexamination of that legal framework. The proliferation of alternative payment mechanisms, which has created greater divergence within the realm of plastic and electronic payments, may well serve as the impetus to try to rationalize the field. Unfortunately, it is too early to tell whether or how convergence in those areas may occur.

Payment Frontier – Current Developments and Challenges in International Developments of M-Payments, 22 J. INT'L BANKING L. & REG. 575, 581 (2007). "Analysts agree that our legacy payments infrastructure represents one of the biggest obstacles to mobile payments." *Are Mobile Payments the Smart Cards of the Aughts?*, CHI. FED. LETTER NO. 240 (Fed. Reserve Bank of Chic.), July 2007, at 1, *available at* http://www.chicagofed.org/publications/fedletter/cfljuly2007_240.pdf.

IV. MOVING AHEAD: CONVERGENCE IN THE LAW OF PAYMENT SYSTEMS

To the extent that payment systems have converged in practice, one might expect to find similar convergence in the law governing payment systems. That has yet to happen. The literature is replete with articles examining the deficiencies of the current system, and suggesting frameworks for the establishment of a consolidated treatment of all payment systems.[74] In the late 1970s and early 1980s, well before the current proliferation of payment models that we are seeing today, the sponsors of the UCC considered an ambitious plan to promulgate a law that would unify the private law of all payment systems[75]—the proposed Uniform New Payments Code—but that project encountered considerable opposition and was ultimately abandoned. Instead, more modest revisions to Articles 3 and 4 were drafted in 1990 (and again in 2002), along with a new Article 4A (1989) on wholesale wire funds transfers.[76]

Over the period of time since these revisions, there has been practical convergence between the various payment systems, as well as the emergence of newer payments systems; yet the legal framework for payments in the United States has been characterized by increased fractionalization.[77] But what about the future? What efforts are being made in the United States to respond to the growing misfit between the emerging and

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74. *See, e.g.*, James Steven Rogers, *Unification of Payments Law and the Problem of Insolvency Risk in Payment System*, 83 CHI.-KENT L. REV. 689, 691 (2008) [hereinafter Rogers, *Unification*] ("Saying that there should be a unified body of payments law is not the same thing as saying that all of the rules of that body of law should be the same for all payment systems."); *see generally* Rogers, *supra* note 23 (explaining that history played a big part in the formation of payment systems law); Linda J. Rusch, *Reimagining Payment Systems: Allocation of Risk for Unauthorized Payment Inception*, 83 CHI.-KENT L. REV. 561, 593 (2008) (suggesting one set of policies that may be useful to consider regarding risk allocation for fraudulent payment inceptions or unauthorized debits to a deposit account). The legal rules that govern the various methods of instructing the depositor's bank to move credits to payees have evolved over time and differ significantly depending in large part on the method of giving the instruction to the bank holding the account. Payment systems rules depend upon the method used to give instructions to a bank to make a transfer, and the identity of the payor (consumer or non-consumer). *See* L. Ali Khan, *A Theoretical Analysis of Payments Systems,* 60 S.C. L. REV. 425, 442 (2008); Mann, *supra* note 64, at 642–50.

75. *See* Peter A. Alces, *A Jurisprudential Perspective for the True Codification of Payments Law*, 53 FORDHAM L. REV. 83, 87 (1984); Fred H. Miller, *U.C.C. Articles 3, 4 and 4A: A Study in Process and Scope*, 42 ALA. L. REV. 405, 408–09 (1991).

76. *See* Miller, *supra* note 75, at 410–12.

77. Rogers, *Unification*, *supra* note 74, at 690.

established payments systems, and the archaic legal structures that currently exist? And, as these constantly evolving payments systems continue to converge, what efforts are being made to provide a similar convergence in the legal structure governing them? More specifically, what concrete projects are underway to rationalize or reform payment systems law? And if convergence is desirable, will the domestic legal system in the United States ever be harmonized or converge with the legal structures existing elsewhere in the world, particularly the European Union? It is to these issues we now turn.

A. Payments Reform in the United States

In 2008, the National Conference of Commissioners on Uniform State Laws, which in partnership with the American Law Institute (ALI) is responsible for the Uniform Commercial Code, created a Study Committee on Regulation of Financial Institutions and Payment Systems (the "Study Committee").[78] The name was shortly thereafter changed to the Study Committee on Payment Issues[79] to reflect its charge to:

> 1. Monitor developments at the federal level, particularly with respect to the Federal Reserve Board, Treasury Department, and relevant congressional committees;
>
> 2. Communicate to those and other interested entities the Uniform Law Commission's (ULC)[80] expertise related to payment systems and the regulation of financial institutions;
>
> 3. Present the advantages of maintaining a balance of federal and state regulation in these areas; and
>
> 4. Make any recommendations it deems appropriate to the Scope and Program Committee concerning the ad-

78. The Study Committee superseded two prior study committees on bank deposits and on payment systems.

79. The name change was suggested to more adequately reflect the focus of the Study Committee—on payments—and remove the impression that the Study Committee was going to look at the types of financial regulatory issues raised by the recent financial crisis in the United States.

80. ULC is the new name of the National Conference of Commissioners on Uniform State Laws. *See* ULC Home Page, http://www.nccusl.org (last visited Dec. 3, 2009).

> visability of establishing a ULC, or joint ULC/ALI drafting project in these areas.[81]

After meeting with various interest groups, the Study Committee considered four possible drafting projects: (1) amendments to Articles 3 and 4 focused on litigated issues and technical glitches, and the convergence of paper and electronics in the collection of checks through the banking system; (2) amendments to Article 4A addressing litigated issues and technical glitches; (3) a uniform law regarding stored value products; and (4) other payment issues, such as the inconsistency between credit card and electronic funds transfer rules. After receiving comments from interested parties and after further deliberations, the Study Committee decided to narrow its focus to possible revisions to Articles 3 and 4, abandoning for the present the notion of a broader project encompassing more than simply the check processing system. In March 2009, the Study Committee issued a "Request for Comments on Issues under UCC Articles 3 and 4," a working document intended to solicit input and reactions from payment systems participants: this was followed by a later memorandum discussing potential amendments to Articles 3, 4, and 4A.[82]

It is unlikely that the request for comment and related future actions process with its limited scope will be sufficient to deal comprehensively with the convergence that has occurred in the payments arena. It is probable, however, that these actions will further the convergence needed in the legal framework in several ways.

1. New technologies and new participants

First, any proposed revisions are likely to deal at least partially with the reality that as a result of the increased use of technology in the check collection process, new participants (payments processors) have emerged to assist financial institutions in check processing; the legal regime currently in place

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81. Minutes of the Exec. Comm. ULC, (July 22, 2008), *available at* http://nccusl.org/Update/Minutes/ECMin072208.pdf.

82. *See* Memorandum from Fred H. Miller, Chair, Study Comm. on Payment Issues, and Linda J. Rusch, Reporter, Study Comm. on Payment Issues, to Payment Systems Participants 1 (March 19, 2009), *available at* http://nccusl.org/Update/Docs/Payment%20Issues_MillerRusch%20Memo_031609.pdf. *See also* Memorandum from Linda J. Rusch, Reporter, to Study Comm. on Payment Issues, *supra* note 50, at 16.

does not appropriately accommodate the roles played by these new actors.[83] Similarly, proposed revisions are likely to accommodate the new roles that existing participants play, such as customers who utilize remote deposit capture to image checks for deposit with their financial institutions, submitting to those institutions either the images of the checks for collection or the information from those checks needed for electronic presentation.

2. Elimination of paper requirements as the trigger for the existence of warranties

As it is currently written, the UCC effectively requires the transfer or presentment of a paper item to trigger the operation of its transfer and presentment warranties.[84] The existence of these warranties is integral to the Code's allocation of risk of loss in the event of fraud or forgery. Such warranties are as important, however, in an electronic environment as they are in a paper regime. Though the gap in the legal structure of the Code has been filled to some extent by regulations passed by the Federal Reserve Board,[85] these regulations apply only if the transfer is made to a Federal Reserve Bank or by a Federal Reserve Bank. Thus, there remains a gap if the transfer is made between banks, or if the check is collected through another clearing house.[86] Revising the Code so that it covers these issues, and accommodates electronic check images or electronic check collection, would facilitate convergence of the rules governing paper-based and electronic check processing, as well as providing for potential convergence of the state and federal legal structures.

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83. The primary area where this occurs is in the calculation of time in which each bank has to act in processing checks. These time periods contemplate that each bank or bank branch acts separately without regard for the fact that payments processors often centralize the entire process.

84. *See* U.C.C. §§ 3–416, 3–417, 4–207, 4–208 (2002).

85. *See* 12 C.F.R. §§ 210.5, 210.6 (2006).

86. Similarly, U.C.C. § 4–110, which provides for electronic presentment agreements does not clearly govern entities who may have dealt with the image prior to presentment of that image to the payor bank (such as the bank of first deposit). *See, e.g.*, Memorandum from Linda J. Rusch, Reporter, to Study Comm. on Payment Issues, *supra* note 50, at 6–9.

3. Accuracy of electronic information and double payment

Although warranties are the primary means of allocating the risk of loss between the participants in the check processing system, there is a notable lack of warranty provisions when checks are converted into electronic information. The only provision in the UCC dealing with encoding and retention warranties is section 4–209, which provides that a person who encodes information warrants that the information is correctly encoded. This warranty, which was designed to deal with the encoding of information on the MICR line of a check, does not deal with the electronic capture of information on that check (either in an image, a MICR line, or other manner). Again, the Federal Reserve Board has partially dealt with these problems in Regulation J, which provides that the sender of an electronic item makes a warranty to each Federal Reserve Bank handling the item: that the electronic image accurately represents all of the information on the front and back of the original check; that the information portion of the item contains a record of all the MICR-line information required for a substitute check; that the item conforms to the required technical standards for an electronic item that are necessary for it to be processed; and that no person who has paid the electronic item will be asked to make a second payment based on the original item or a paper or electronic representation of the original item.[87] These warranties again, however, are made *only* to Federal Reserve Banks who handle the electronic item, and to transferees who receive items processed through the Federal Reserve System as a result of a comparable warranty the Federal Reserve System makes available to transferees.[88] These warranties do not cover other parties or other methods of processing outside the Federal Reserve System. Consequently, no warranty may apply in cases where the check is converted to electronic form and collection is not done through the Federal Reserve. The Study Committee report cites the following example:

> Consider a party that engages in remote deposit capture and transmits electronic files to its depositary bank. It creates duplicate files and both files are routed through its depositary bank to the payor bank and the

87. 12 C.F.R. § 210.5(a)(4) (2006).

88. 12 C.F.R. § 210.6(b)(3)(i) (2006) (with emphasis).

> payor bank pays each item. There is no substitute check created and there is no contract right as between the payor bank and the party that initially transmitted the duplicate check or the depositary bank. The payor bank will have to recredit its customer's account as only one item was properly payable but has no clear ability to collect from either the capturing party or the bank of first deposit.[89]

Such gaps could be addressed by the addition of warranties of accuracy, processibility, and of no double payment.[90]

4. Garbled transmissions

Additional questions arise when an electronic presentation is made that does not provide the payor bank with the information necessary to determine whether or not to honor the item, either because the information is garbled or other technical standards are not met. Whether or not there are warranties, there is the question of what rights and responsibilities the payor bank has when the electronic item is presented. It is unclear, for example, whether the payor bank has the ability to request additional or clarifying information before dishonor (and the impact of such a request on deadlines that exist for return or rejection of the item), what constitutes "properly payable" items, and what constitutes dishonor of such items.

5. Electronic return

Although the prior revisions to UCC Article 4 contemplated the possibility of an electronic return of an item, they require an agreement between the payor bank and the party to whom it returns the item.[91] Returns, however, often involve multiple parties—such as the depositary bank, collecting banks, and the bank making the presentation—and there is no clear rule on what governs the electronic return when these other parties are involved. Similarly, the Federal Reserve Board regulations

89. Miller & Rusch, *supra* note 82, at 6.

90. *See* Memorandum from Linda J. Rusch, Reporter, to Study Comm. on Payment Issues, *supra* note 50, at 6–9.

91. U.C.C. § 4–103(a)(2) (2002) authorizes the return of an image of an item "if the party to which the return is made has entered into an agreement to accept an image as a return of the item and the image is returned in accordance with the agreement."

allow for the return of a copy of an item, but only if the original item is unavailable for return—leaving unclear whether the payor bank that has the original item may opt to destroy the item and return a copy instead.

6. Enforcement of contract liability related to a check that has been truncated to only an electronic image or MICR line information

An overriding concern in the move to truncation and electronic check processing and presentment is the ability of the transferee of an electronic item (whether it be an electronic image or MICR line information) to enforce that item against the drawer or other parties to the instrument. Traditionally, the rights to enforce have been given to the holder of an item,[92] which has in turn been defined as the person in possession of an item.[93] Further, to qualify as an item under the UCC, the check must be in writing, and, as a result, possession has been equated with physical possession of the physical item. Thus, the ability of a party to enforce an electronic item, which is not in "writing" and is not capable of physical possession, is not clearly dealt with in the statute. Indeed, under the Code, a person not in possession of an instrument is not entitled to enforce it unless special circumstances are met.[94] While this is not a problem if the electronic image satisfies the requirement of a substitute check, which is given the legal equivalence of the paper check under the Check 21 Act,[95] the problem remains if the image or electronic information is not sufficient to create a substitute check or no bank wants to create a substitute check.

Even if the right to enforce the check exists, there is the additional question of what defenses can be raised to the enforcement attempt. The rules that govern holder in due course status also do not appear to apply when all that is transferred is electronic information. First, as noted above, the transferee of electronic information does not qualify as a holder. If, however, the transferee after the dishonor requests and receives a

92. U.C.C. § 3–401 (2002) (defining a person entitled to enforce the instrument as the "holder" of an instrument).

93. U.C.C. § 1–201(b)(21) (2002).

94. U.C.C. § 3–309 (2002).

95. *See* 12 C.F.R. § 229.51 (2002).

substitute check (the paper equivalent of the electronic information) for enforcement purposes, the argument can be made that when it did become a holder, it did so with knowledge that the check had been dishonored, thereby depriving it of holder in due course status.[96]

7. Domestic payments reform

Some payments law reform may be on the horizon, at least in the area of checks. Those revisions, which will undoubtedly be quite modest in scope, will take a step along the convergence path by making the law applicable to similar items in a given system if the items are not identical. For example, within the checking system, paper and electronic items would be treated equally. These small steps towards convergence within a given system or the checking system specifically are a far cry from broad-based legal reform that would remove unnecessary distinctions between payment systems. The larger picture remains unchanged.

B. Payments Reform: Preparing for the European Union's Payment Systems Directive

Payments systems are not and cannot be limited by artificial jurisdictional borders. The European Union's SEPA plan recognizes this truism, as does the Payment Systems Directive, an initiative with the goal of a common payments-related legal framework within the European Union. How do countries outside the EU which will nonetheless be involved in cross-border payments with the EU adapt to the Directive? Will the law of other countries begin to converge with that of the EU, or will there continue to be discrete silos of national law?

The reaction in the United States to the EU Payment Systems Directive has not come from government. Nor has it come from changes to positive law. Rather, it has come from an industry-based effort, embodied in the International Payments Framework (IPF), to develop system-based rules that will ac-

96. U.C.C. § 3–302 (2002) (requiring, as a condition to holder-in-due-course status, that the holder take without notice that the item is overdue or has been dishonored, that there is an unauthorized signature, that the check has been altered, or that there are any claims to the instrument or defenses to payment).

commodate, incorporate, and integrate with the European Directive.[97]

The IPF is a limited liability company with corporate members from a number of countries. Members include providers of some of the most important payments systems in the world as well as some of the world's largest banks: ABN Amro, the Canadian Payments Association, Camara Interbancaria de Pagamentos (CIP), the Clearing House Payments Company, Equens, Eurogiro, the Federal Reserve Bank, Fifth Third Bank, J.P. Morgan, NACHA, PNC, SECB Swiss Euro Clearing Bank, Standard Bank of South Africa, Standard Chartered Bank, SWIFT, U.S. Bank, Wells Fargo/Wachovia Bank, World Savings Bank Institute, and Zions Bancorporation.

The purpose of IPF is to define rules-based standards and an operating framework for simplifying non-urgent cross-border credit transfers. The IPF is not intended to replace SWIFT (the Society for Worldwide Interbank Financial Telecommunication, which deals with large, wholesale transfers),[98] but to deal with low value ACH-type payments and remittances. The framework is intended to build upon existing payments networks (ACH in the United States, SEPA in Europe) and international standards (e.g., ISO 20022), and to facilitate interoperability between domestic and regional non-urgent payment systems and banks.

The goal of the IPF is the provision of simple cost-effective payment systems serving the world-wide market. By December 31, 2009, the IPF intends to establish a network of non-urgent cross-border credit transfers through the promulgation of a service agreement that binds the IPF members to the development of operating rules. The initial focus is on credit transfers, in particular, Euro/U.S. dollar credit transfers. In essence, the IPF will operate as an intermediating network between domestic systems such as the automated clearing houses in the United States and the Single Electronic Payments Area in the EU.

A key document being developed is the IPF Credit Transfer Scheme Rulebook, which will define the rights and obligations of IPC members sending and receiving IPF credit transfers.

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97. *See* International Payments Framework Home Page, http://www.internationalpaymentsframework.org (last visited Dec. 3, 2009).

98. *See* SWIFT Home Page, http://www.swift.com (last visited Dec. 3, 2009).

The IPF scheme contemplates three parts to a credit transfer. On the sending side are the originator, the originator's bank, and the sending IPF participant. Local laws and procedures will apply to the rights and obligations of the parties within the sending side. There will then be an IPF "bridge" where the sending IPC member sends the credit transfer to the receiving IPF member. The IPF rules and the agreement of the parties will control. The third part of the transaction is on the receiving side, involving the receiving IPF member, the beneficiary bank, and the beneficiary. Here, again, local laws, regulations and procedures will define the rights and obligations of the parties. The local legal scheme governing the sending or receiving segments of the transfer would, in the United States, be NACHA's IAT format[99] (NACHA rules and legal structure), and, in the European Union, SEPA's credit transfer scheme under the European Union Payments Services Directive.[100]

Is international convergence occurring? Not really. Not yet. What is occurring is the building of bridges between discrete payment systems. Although payment systems presently operate largely on their own, these bridges will allow for the international flow of payments. The pioneers in the field are industry leaders, not governments. On the international level, independent domestic legal regimes remain. Query what this means for the future possibility of convergence of international payment systems.

V. CONCLUSION

Convergence is a powerful force. Over the years, despite the emergence of new and challenging payment systems, there has been a notable junction as paper converges with electronic, systems become more and more interchangeable, and transac-

99. The IAT is a new NACHA standard code for ACH payments to identify international transactions that was implemented September 18, 2009. *See* IAT Industry Information, http://www.nacha.org/IAT_Industry_Information (last visited Dec. 3, 2009).

100. The SEPA credit transfer is limited to payment instruments for the execution of payment transfers between customer payment accounts located within SEPA and would not apply to the bridge. One potential problem is if SEPA does not allow for "leg-in" or "leg-out" transactions, that is, transactions that originate or terminate outside the SEPA. In such instances, to deal with the law governing the euro side of the transaction, IPF members will agree that the euro scheme will be outside the SEPA credit transfer scheme, but will agree to abide by the SEPA rulebook. There are ongoing discussions with the European Payments Council (EPC) to amend its rules to cover such leg-in and leg-out transactions.

tions begin to look more and more like one another. The result in the United States is that two of the more mature payments systems (checking and electronic funds) are uniting on some levels. While there has been convergence between the types of technology used and the payment systems themselves, the legal frameworks governing these systems remain starkly separate. The lack of legal convergence is compounded by the existence in the United States of both state and federal legislation and regulation, as well as regulation by multiple entities. These multiple legal schemes and regulations have great impact on innovation in the payments area. This disconnect is clear in the United States where emerging payment systems are subject to myriad systems of regulation. Whether we will ever see convergence in the legal systems remain an open question. It may be years before we see the last legal issues of electronic banking successfully resolved.