

November 6, 2019

Ms. Ann E. Misback
Secretary, Board of Governors of the Federal Reserve System
20th Street and Constitution Avenue, N.W.
Washington, DC 20551

Re: Docket No. OP – 1670 Federal Reserve Actions to Support Interbank Settlement of Faster Payments
Via: Email to regs.comments@federalreserve.gov

Dear Madam:

We are pleased to submit this joint comment letter to the Federal Reserve Board (the “Board”) regarding its Notice and Request for Comment. The Commenters, Phyllis Meyerson and David Walker, support the Federal Reserve Banks providing Interbank Settlement of Faster Payments and developing a new, round-the-clock, real-time payment and settlement service, called the FedNowSM Service, to support Faster Payments in the United States. Ms. Meyerson and Mr. Walker¹ have combined banking, payments (ACH, check and Fedwire), and IT experience of more than 90 years.

The Board is to be applauded for its efforts to improve and enhance the various U.S. payments systems such as ACH, Check 21 and Faster Payments. The Commenters support the Board’s objectives to improve and enhance the payment systems to achieve greater efficiency and value for the U.S. economy and for all stakeholders.

The Federal Reserve has always acted as the “glue” for the U.S. payments system by offering the backbone payments systems, ACH, check and Fedwire, upon which many payments products and

¹ Most recently Ms. Meyerson was Executive Vice President of ECCHO and Mr. Walker was President and CEO of ECCHO. ECCHO, the Electronic Check Clearing House Organization, was the largest FI member organization in the U.S. based on total deposits held by its members. Additionally, ECCHO was the only trade association in the U.S. with members of every type of depository financial institution including credit unions, corporate credit unions, community banks, bankers’ banks, mid-tier banks and large banks. Both Ms. Meyerson and Mr. Walker were instrumental in the fastest transition in the history of payments in the U.S. In only six years, the check payment system transitioned from 100% paper-based interbank clearing to virtually 100% electronic. Mr. Walker participated as one of only four industry representatives in the Executive Signing Ceremony held in the Oval Office for the Check 21 Act. Ms. Meyerson holds MBA and MS degrees, is a permanent AAP (Accredited ACH Professional) a permanent CCM (Certified Cash Manager) and is an NCP (National Check Professional). Mr. Walker holds a BA in Economics and is an NCP. Mr. Walker is a Founding Member of the Faster Payments Council, was a member of the Faster Payments Task Force (FPTF), chaired the Legal Work Group of the FPTF, was a member of the Governance Framework Formation Team and a Director on the interim board of the Faster Payments Council.

services are based for both private sector and Federal Reserve Bank offerings. The Federal Reserve needs to continue in this role by supporting Faster Payments through real-time, interbank settlement and FedNow. While a private sector, Faster Payments option is now offered by the largest banks in the U.S., many smaller banks and credit unions have expressed their hesitation to use that service as their sole option which they feel would be to their competitive disadvantage. The Commenters are aware that the ICBA, NAFCU and CUNA strongly support the Federal Reserve Banks providing Faster Payments through FedNow and real-time settlement. We applaud the Federal Reserve's decision to move forward with FedNow. In recent testimony in the U.S. Senate, it was clear that there is concern about the large banks and its processors as the sole providers of Faster Payments and that there is support for the Federal Reserve to step in.

The Commenters are aware that some have been critical of the forecasted timeframe for when FedNow will be available, several years into the future. However, those critiques ignore the requirements for an end-user to end-user, real-time payment system with immediate availability of funds. Two key requirements for a ubiquitous, real-time, Faster Payments system are; 1) a real-time, interbank settlement system and 2) the posting of every customer account with every financial institution in real-time. A quasi-real-time payments system without both real-time interbank settlement and real-time posting of customer accounts creates new, unnecessary risks. The U.S. will never have a real-time, 24x7x365, payment system without real-time, interbank settlement and the Federal Reserve is the only entity in the U.S. that can provide that critical service. Additionally, the U.S. will never have a ubiquitous, real-time, 24x7x365, payment system until every financial institution has implemented a real-time posting system for transactions into and out of customer accounts. Both requirements will take years to implement and without both, unnecessary risks will be created. The implementation of both requirements will encourage success and create a solid foundation upon which to build the future.

The Federal Reserve demonstrated its ability and commitment to innovation through its investment in infrastructure improvements such as the successful implementation of Check 21 which lead the transformation from a total paper check system to a fully electronic, interbank, check image exchange system in only six years from 2005 to 2011. Without the commitment of the Federal Reserve, this could not have happened in record time. No other payments system transformation has occurred in the U.S. or elsewhere in the world in such an abbreviated time frame from zero payments to more than 20 billion payments per year in only six years. This achievement is even more important in that the impact on end-

users was minimal. The Federal Reserve also implemented a pilot, Same Day ACH service years before the NACHA rules were updated to accommodate this service.

The Federal Reserve can be more transparent and responsive in its processes than the private sector. One example of Federal Reserve transparency is its initiation of the Faster Payments Task Force that included more than 300 stakeholder entities representing financial institutions, consumer and business users, providers and governmental organizations, consultants, rules organization, etc. An example of its responsiveness is the Federal Reserve's timely update of the check legacy system for new adjustments as the result of recent Regulation CC changes. Given the urgency and global interest in Faster Payments, it can be assumed that the Federal Reserve will be similarly transparent and responsive for Faster Payments.

This Notice and Request for Comment contains only two short paragraphs about directories. The Commenters believe directories are critical in a ubiquitous, real-time credit push system that is open to all consumers and businesses. We also believe that directories create significant, new risks that are not well understood. Whether the Federal Reserve determines to provide a directory service or simply support others that provide directory options, the Federal Reserve needs to carefully examine these risks and either develop ways to minimize them or facilitate the industry's development of such. Exhibit I at the end of this document describes, in some detail, some of the potential risks created by; 1) the use of one or more directories and 2) the interplay between the initiation of payment instructions, directory maintenance instructions and the application of the payment to the appropriate beneficiary account. By describing these risks, the Commenters are not suggesting they cannot be solved, but that the Federal Reserve needs to recognize that credit push payments are not risk free and to ensure that the new risks created by using directories are addressed sooner rather than later.

The Commenters are aware that some will argue that there are many directories already in place and that they are not experiencing the risks described in Exhibit I. However, none of the existing directories are currently serving, directly or indirectly, every payments user in the U.S. and none have agreements with every user that uniformly address the handling of errors and omissions.

The Commenters are aware that some will argue that there is no need for private sector rules to govern Faster Payments and that this need is met by agreements between the providers and their customers. We assume that FedNow will be supported by a Federal Reserve Operating Circular once

implemented. However, today there is no uniform set of agreements (rules) that define Faster Payments or that allocate liability among the various parties engaged in Faster Payments and Federal Reserve Operating Circulars, in the absence of new Federal legislation, will not govern private sector exchanges. Assuming there will be more than one private sector, Faster Payments option and one or more private sector directory services, there is a need for uniform definitions and liability allocations across all providers. The purpose of these rules would not be to dictate or limit the services offered by those providers or to discourage innovation. Rather the purpose would be to ensure uniform treatment of the end-users and to minimize the need for expensive litigation to resolve disputes among the various parties involved in the payments. In 2012 the Federal Reserve announced its dramatic change in focus from an intrabank market to an end-to-end focus². To achieve this change in focus, the Federal Reserve must involve itself, to the extent legally possible, in all aspects of the end user experience including private sector agreements (rules) under which the end-user initiates and receives Faster Payments.

The Commenters support the use of credit push payments plus the use of fully electronic checks, now known as Electronically Created Items (ECIs), for those payment scenarios in which credit push payments may not be widely acceptable by the end-users. The Commenters strongly believe that ECIs are flowing through the payment system today and that the volume is growing regardless of the legal status of ECIs or the support of the Federal Reserve. The Commenters believe that many ECIs are currently supported by large banks to the competitive disadvantage of smaller financial institutions. ECIs and ECI-like payments are satisfying a need not addressed by credit push payments. A full explanation of the need for ECIs in addition to credit push payments is described in Exhibit II³. The new financial investment to support ECIs is minimal given that the interbank infrastructure is already in place and the return for businesses would be immediate. Additionally, once the two requirements to achieve a real-time payment and settlement system, as described above, are implemented, ECIs could also be real-time.

² Sandra Pianalto, President, Federal Reserve Cleveland – *Collaborating to Improve the US Payment System* Federal Reserve Bank of Chicago Payments Conference, Chicago, Illinois, October 22, 2012. She said, “Historically, the Federal Reserve’s focus has been on the interbank market, although changes in that market have had broader effects. The Federal Reserve’s strategy today is to place greater emphasis on the entire payments supply chain and end users. Said another way, our strategy is to focus on payments from end-to-end.”

³ Please see comments in Exhibit II pages 19–25 to “8. RFC Question, What other approaches, not explicitly considered in this notice, might help achieve the broader goals of ubiquitous, nationwide access to faster payments in the United States?”

The Commenters support the reversal of the 2018 changes to Regulation J that make ECIs ineligible for exchange through the Federal Reserve System. The Commenters believe that without ECIs, as one Faster Payments option, many business payments and especially business to business payments will continue to be initiated as paper transactions and significantly increase the likelihood that Faster Payments will never generate enough revenue for its providers to cover their costs in the foreseeable future. Exhibit III provides additional information about the need for the Federal Reserve to support ECIs.

The Commenters believe it is unlikely businesses will widely embrace a credit push system for their business to business payments, at least in the near term. A debit pull payment such as an ECI would easily bridge the gap for businesses until they are ready to embrace a new credit push, Faster Payments system. Had the Federal Reserve supported ECIs once electronic check image exchange was fully implemented in 2011, businesses could have already saved more than \$200 billion. Between now and when the Federal Reserve is estimating that FedNow with real-time settlement will be available, businesses could save, by using ECIs, another \$145 billion and approximately \$29 billion per year every year thereafter. Please see Exhibit IV for additional information about business to business payments.

The Commenters compliment the Board for its leadership and efforts to improve the U.S. payment system and appreciate this opportunity to provide our comments to the Notice and Request for Comment. Based on recent interest expressed by the U.S. Senate Committee on Banking, Housing, and Urban Affairs, we encourage the Federal Reserve to share this letter and all responses to this Notice and Request for Comment to that Senate Committee.

The Commenters know from experience that the Federal Reserve will be reaching out to all stakeholders in its design of this new system and would like very much to aid the Federal Reserve. If you have any questions regarding this letter, please contact one of the undersigned commenters.

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Exhibit I

The Hidden Risks of Faster Payments

July 2019

by Tiller Endeavors, LLC

The Hidden Risks of Faster Payments

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The Hidden Risks of Faster Payments

Introduction

The goals of faster payments¹, as currently envisioned in the U.S., are that they will be fast, secure, irrevocable, risk free and that they can be made anywhere by anyone to anyone at any time (24x7x365).² This goal of making payments by anyone to anyone at any time is the definition of ubiquitous payments. Some entities are already offering faster payment services and others are planning to in the future. Most are using or planning to use credit push payments³ as the backbone payment type to achieve these goals. This paper primarily examines the risks of one key requirement of ubiquitous, credit push payments; the use of directories⁴ in the payment process. The brevity of this paper negates the opportunity to address other risks associated with credit push or debit pull payments and how those risks might be mitigated.

Real-Time Payments

The future of payments in the U.S. is real-time payments⁵, sometimes called faster payments. Most faster payments initiatives in the U.S. in 2019 are not real-time. The future of payments is expected to evolve from the current offerings to a real-time environment once the Federal Reserve offers 24x7x365 real-time settlement⁶ and after financial institutions (FIs) have implemented real-time posting⁷ of customer accounts.

Many payments appear to consumers as if they are instantaneous (real-time) because the payments are between two accounts with the same provider, for example PayPal. Transfers of money between two PayPal accounts occur in real-time, but before that can happen the two accounts must be set up with PayPal and funded. Funding typically occurs through an ACH payment⁸ between the customers' bank accounts and that process normally takes one to two days⁹. Instantaneous payments are possible only if both parties have accounts with the same provider, in this example PayPal. If only one of them has an account with PayPal, payments will not be instantaneous because of setup and funding requirements. To achieve payment ubiquity across every entity in the U.S. requires that every entity have an account with

¹ Faster payments are defined in the Definition Section and elsewhere in this paper.

² These are the aspirational goals of the Federal Reserve's Faster Payments Task Force, Secure Payments Task Force, the Governance Framework Formation Team and the U.S. Faster Payments Council for payments in the U.S.

³ Credit push payments are defined in the Definition Section and elsewhere in the paper.

⁴ Directories are defined in the Definition Section and elsewhere in the paper.

⁵ Real-time payments are defined in the Definition Section and elsewhere in this paper.

⁶ Federal Register / Vol. 83, No. 221, Thursday, November 15, 2018 – *Potential Federal Reserve Actions to Support Interbank Settlement of Faster Payments, Request for Comments*. Tiller Endeavors' response to the request for comment can be found at <https://tillerendeavors.com/wp-content/uploads/2018/12/Meyerson-Walker-Comments-on-RFC-December-14.pdf>.

⁷ Real-time posting is defined in the Definition Section and elsewhere in this paper.

⁸ While funding can occur through other methods, such as credit card or debit card, ACH is probably the most representative.

⁹ With same day ACH, funding can sometimes occur the same day and be available for use the next day.

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every provider which could require billions of new accounts.¹⁰ This is not a practical solution.

These quasi real-time payments are the first steps in the evolution to an actual real-time system. The prerequisites to achieving ubiquitous, instantaneous payments are, 1) real-time posting of customer bank accounts throughout the day, 365 days a year, 2) real-time settlement¹¹ between FI accounts at the Federal Reserve and 3) one or more providers to network connect every party to every other party.

Today some financial institutions, most notably credit unions and community banks, post transactions to customer accounts as they occur throughout the day but only on days when those institutions are open. Most financial institutions, however, do not yet have this ability and most transactions that occur today may not be reflected in the customers' accounts until one or more days after initiation.

Additionally, even those FIs posting in real-time are limited to only those days when the Federal Reserve is open or approximately 252 out of 365 days each year ($252 / 365 = 69\%$) and of that only during the time of day when the Federal Reserve Fedwire is currently open 21.5 hours per day ($21.5 / 24 \text{ hours per day} = 89.5\%$). Combined these total only about 62% ($69\% \times 89.5\% = 62\%$) of the hours each year which may sound like a lot but that 62% applies only to those credit unions and community banks with real-time customer account posting. Many deposits in the U.S. are held by only a few large financial institutions most of which do not post in real-time. Therefore the 62% applies only to a small percentage of the total deposits/payments in the U.S.

Credit Push and Debit Pull Payments

Many entities believe that real-time payments should only be credit push payments under the belief that credit payments are risk free and more efficient than debit payments. Credit push payments and debit pull payments¹² differ in many aspects and one key difference is the sequence in which customer account balances are increased or decreased.¹³ See the graphic below. For example, for debit payments, the beneficiary's¹⁴ account balance is first increased followed by the paying party's account balance being decreased. While this creates some credit risk¹⁵, the amount of risk diminishes to near zero for real-time, instantaneous, debit payments. Additionally, the paying party's account and balance can be verified at the time of payment initiation and funds held.¹⁶

The sequence of credit push payments is the opposite of debit pull payments. This difference in sequence

¹⁰ Some providers do offer a version of an instantaneous payment to parties even when both parties do not have accounts with that provider but at the cost of creating new credit risk when the money is made available to the beneficiary before the money is actually drawn from the sender's account. This paper does not address that additional risk.

¹¹ Settlement is defined in the Definition Section and elsewhere in this paper.

¹² Debit pull payments are defined in the Definition Section and elsewhere in the paper.

¹³ The terms debit payments and credit payments, while related, are not the same as accounting debits and credits and should not be used interchangeably or confused.

¹⁴ Beneficiary is defined in the Definition Section and elsewhere in this paper.

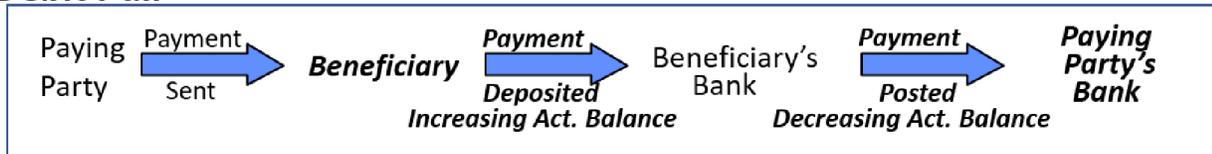
¹⁵ Credit risk is defined in the Definition Section and elsewhere in this paper.

¹⁶ There are other risk reduction actions that can be implemented for real-time debit payments that are not addressed in this paper.

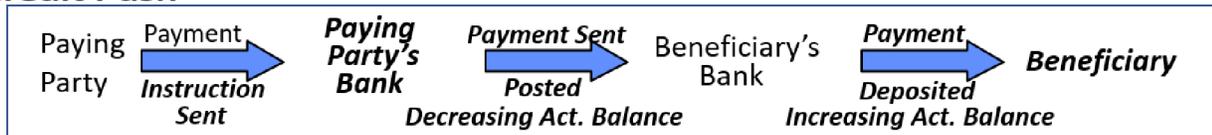
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is the source of the belief that credit push payments are risk free because the money is taken from the paying party's account prior to the money being paid to the beneficiary therefore avoiding the risk of non-payment.

Debit Pull



Credit Push



Examples of credit push payments are Fedwire and ACH credits. Credit push payments should not be confused with credit card charges which are not payments but rather extensions of credit that will later be satisfied through one or more payments. Examples of debit pull payments are checks, ACH debits and debit card payments. Debit card transactions, unlike credit card transactions, are payments since debit card transactions pull money out of paying parties' accounts at the time of the transactions. To consumers, debit card payments appear to be instantaneous since they decrement their account balances immediately. But the beneficiary of the debit card transactions will typically not receive its funds until later, such as after the completion of the next ACH processing cycle and settlement window at the Federal Reserve later that evening or the next banking day.

The Need for Directories

The difference in processing sequence described above between debit and credit payments, creates the need to know more information before initiating a credit push payment than for a debit payment. Many parties have expressed reluctance to provide their banking relationship to a universally accessible data base such as a directory¹⁷. Some have argued that everyone has been sharing their information through the check (debit payment) system for many years so the sharing of that same information for credit payments is no different. That position fails to recognize, 1) that consumers seldom write checks and 2) the vast difference in providing banking information to a single party for one or more specific payments and providing that same information to every entity in the world through a universally assessable data base, forever.

When an ACH debit or a check payment is made, the party making the payment knows how to deliver the payment to the beneficiary since the beneficiary provided its delivery information for that specific payment but **the beneficiary does not provide its banking information** to the payor. For checks, the payor knows the physical address of the beneficiary or hand delivers the check. For ACH debits, the

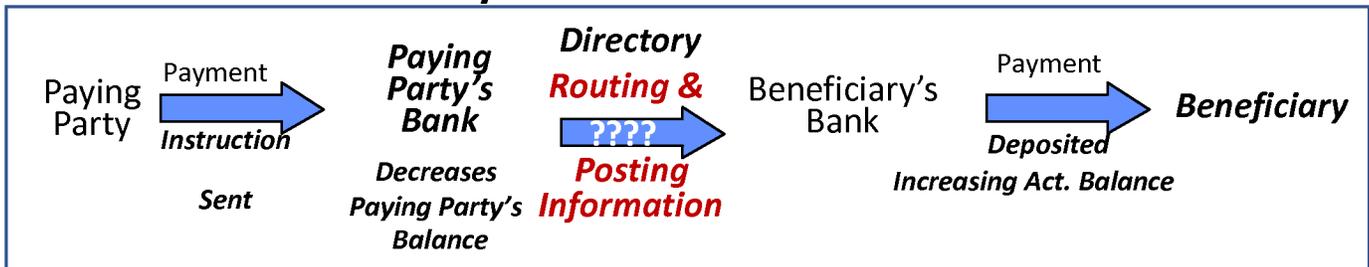
¹⁷ Directory is defined in the Definition Section and elsewhere in this paper.

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beneficiary provides its electronic address for delivery of the payment. For debit card payments, the paying customer physically provides the beneficiary with the plastic card or electronically provides the card number directly to the beneficiary.

For credit push payments which are primarily, if not exclusively electronic, the paying party **must know the specific banking information of the beneficiary** in order to affect the payment, including the institution's routing information and the beneficiary's account number.

Credit Push with Directory



For limited numbers of beneficiaries such as is typical of ACH credit payments, this information could be maintained by the paying party's financial institution such as for a bill payment service. Expanding this need for banking information to support ubiquitous payments from anyone to anyone at any time, a very large volume of banking information would need to be stored. The most efficient method to achieve this storage requirement is through one or more directories. Otherwise, every financial institution or its processor would need to obtain and maintain the banking information for every customer of every financial institution in the U.S. That duplication would be costly and fraught with risk. Some of the risks associated with directories are discussed below.

By contrast, directories are not needed for debit pull payments such as for checks, since the paying party never needs to know the beneficiary's banking information. The debit pull check system is already a ubiquitous payment system that supports payments from anyone to anyone at any time.¹⁸

Risks Associated with Credit Push Directories

Without routing information, a credit push payment cannot be delivered to the correct financial institution and posted to the correct customer's account. However, the use of directories raises some key questions including:

- Who is liable for the timely and accurate creation and maintenance of the directory(ies)? and
- What is the amount of that liability for fraud, errors, omissions, etc.?

Consider the scenario in which a new directory entry is made identifying the wrong financial institution and/or customer account number and a payment is routed to that wrong account, followed by the funds being withdrawn from the account and the subsequent closing of the account. Would the responsible party for the intended beneficiary's financial loss be:

¹⁸ This paper does not address the potential use of real-time debit pull payments in addition to credit push payments.

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- The party making the payment?
- The intended beneficiary of the payment?
- The directory(ies) provider(s)?
- The paying party's financial institution?
- The intended beneficiary's financial institution?
- The processor providing the payment service?
- One or more intermediaries in the payment processing stream? or
- The unintended receiver of the funds?

Is liability potentially shared among more than one of the parties based on comparative negligence? What guidance is available to courts when adjudicating disputes over misrouted/mis-posted payments due to erroneous directory entries? Some payments systems have a strong statutory, litigatory or regulatory base to guide the dispute adjudication process but none of these exists for credit push payment directories or for faster payments.

Also consider the scenario in which the owner of an insurance policy makes a premium payment that is dependent on a directory for routing and posting instructions. Should the payment fail to occur because of erroneous directory entries and the insurance lapses followed by the occurrence of the insured event, would the liable party(ies) be additionally liable for proximate¹⁹ (consequential) damages, such as for the value of the insured property or damage done to other property or life? The determination of the liable party and the amount of liability should not be left to expensive litigation through a court system without guidance in liability assignments. Such a process would lead to inconsistent judgements and create the additional risk of resolution uncertainty thus diminishing the interest of entities in becoming providers of faster payments.

Similar damages could result from maintenance that is performed correctly but not timely. For example, when a party, 1) changes its banking relationship or 2) replaces an account with an existing banking relationship or 3) opens an additional account with another financial institution while leaving its original account(s) open and the directory(ies) is not updated timely to reflect those changes, the intended beneficiary could suffer financial losses.

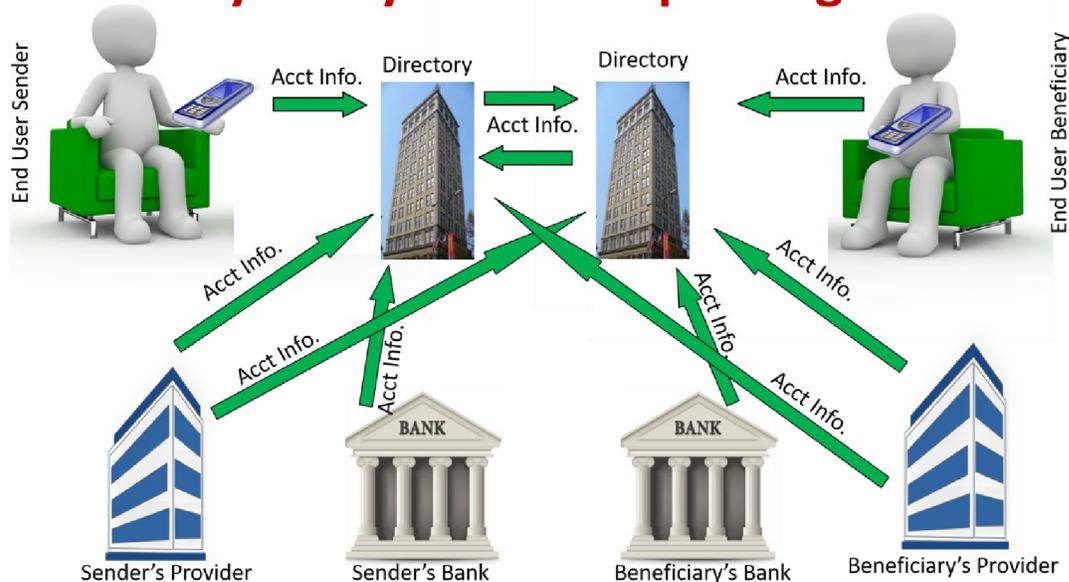
The risks that one or more directories might not be updated timely increases when multiple parties are providing updates to the directories. The graphic below depicts some of the potential sources of changes to directories. As the number and sophistication levels of the potential update sources increases, so does the probability that timing errors could occur.

These credit payment risks are exacerbated in the transitional state from a non-real-time environment to a real-time environment in which some but not all institutions are real-time enabled. Should the parties have the same level of liability when some functions of a payment occur in real-time and others are delayed for batch processing, posting and/or settlement cycles? Any party that has made the investment and transitioned to a real-time posting system would likely object to bearing any part of losses created by a party that has not made that same investment thus raising the risk of litigation.

¹⁹ Proximate (consequential) damages are defined in the Definition Section of this paper and elsewhere in the paper.

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Potentially Many Sources Updating Acct Info



Further, as time compression occurs between the time when a payment request is made and the time when the payment is expected to be received, the risk related to untimely directory maintenance increases. One way to address the time compression impact on maintenance is to automate the maintenance process; for example, by using sophisticated artificial intelligence such as neural networks to manage updates from multiple sources. If neural networks were used to update the directories in real-time, would liability for wrongly directed payments fall on the owner of the neural network, the users of the network or perhaps the party that accepts automated changes from a neural network?

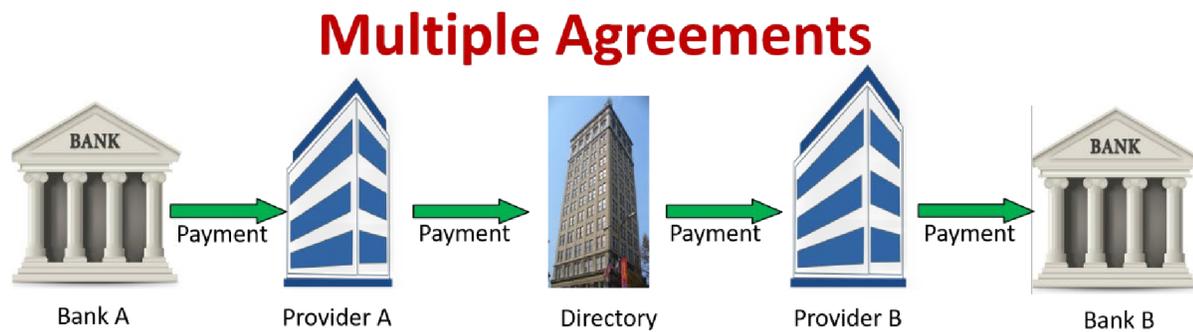
Another risk of credit push directories arises from the concentration of every banking relationship for every individual, business and government entity in the U.S. into a single or a small number of directories. Unfortunately, we have learned that every data base can be hacked and what more appealing target than the universally accessible location of where all the money is.

Addressing Risks Associated with Directories and Credit Push Payments

Traditionally the assignment of liability among the parties has been addressed for other payment types through multiparty agreements or rules. Today, no organization has yet to step up to the task of creating a uniform, multilateral agreement in which the allocation of these liabilities is addressed and to which all parties have agreed and that courts can use as guidance when adjudicating disputes. Without the development and adoption of such agreements, specific liability assignments are left to the courts that likely have little training in rapidly evolving faster payments and payments' directories. This litigation risk becomes even more uncertain for jury trials than for bench trials in which the public would determine which party is responsible.

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Alternatively, each provider of faster payments could have its own, unique agreement creating different and inconsistent liability assignments for the same party or for the same payment (see graphic below). When a single payment transaction is processed through two or more providers, the likelihood of disputes and therefore litigation would potentially increase. Given the dollar value of business payments and the potential for consequential damages, financial judgements could be indeterminately large.



- Bank A's agreement with its customer (not shown) could make the customer liable for everything!
- Provider A's agreement with Bank A could make Bank A liable for everything!
- Directory's agreement with Provider A could make Provider A liable for everything!
- Directory's agreement with Provider B could make Provider B liable for everything!
- Provider B's agreement with Bank B could make Bank B liable for everything!
- Bank B's agreement with its customer (not shown) could make the customer liable for everything!

The risks associated with directories are examples of just some of the unique risks created by credit push payments that need to be understood and addressed. Clearly these payments are not risk free!

How can these risks be addressed? One way would be a new federal law implemented through a new regulation to specify the allocation of liabilities. This is not generally thought to be a good idea and especially in a rapidly evolving environment. Regulation would be slow to implement and slow to change. In a Congressional environment in which new laws are being passed, the results could create undesirable requirements that would be difficult to change and that could stifle innovation and discourage the transition to a more efficient payment system. In a Congressional environment in which little action is occurring, the risks would continue indefinitely. Alternatively, all fifty states could individually implement their own unique, fifty versions.

Another option is for the private sector to create a uniform set of agreements (rules) that would be provider independent and with consistent allocation of liabilities and thus diminish the need for expensive litigation with uncertain outcomes. Examples of this approach are the NACHA rules that govern the exchange of ACH payments and the ECCHO rules for interbank exchange of check images. Both have been highly successful. Some would prefer for the Federal Reserve to provide the uniform rules for faster payments but the Federal Reserve is limited to binding only those parties that use its services. Federal Reserve service agreements (Operating Circulars) apply only to payments processed through the Federal Reserve and do not apply to payments processed outside of the Federal Reserve through private sector

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exchanges.

In the past, some entities have simply copied Federal Reserve Circulars and adopted them for their private sector payment services. There are at least two potential issues with this approach. One is that the Federal Reserve's objective is to provide agreements specific only to its product offerings which may not match private sector offerings and therefore be incomplete or in conflict with other private sector offers/agreements. Second, the Federal Reserve's focus is to protect itself from any liability. When multiple financial institutions agree to exchange payments, one or more must assume the liability for errors, system failures, etc. By simply adopting the Federal Reserve's agreements for private sector exchanges, it is possible that no party would be assigned liability or multiple parties could be assigned the same liability either of which could result in litigation to resolve disputes.

Currently, the logical entity to develop and implement provider independent multilateral agreements for the private sector faster payments is the U.S. Faster Payments Council (Council). As of the date of this writing, the Council has not publicly pronounced its intentions to develop any such rules or standards. Because of this, the only option is for some other organization to fill the gap and provide the uniform rules for faster payments. Should the Federal Reserve determine to become a provider of faster payments, both the Federal Reserve and the private sector would need to develop its own set of exchange rules and to coordinate among themselves to minimize conflicting provisions.

In the case of credit push payments, the new rules would need to include provisions for the exchange of the payments and provisions for the creation and maintenance of the directory(ies). Given the objectives of the Faster Payments Task Force and the U.S. Faster Payments Council to achieve ubiquity by 2020 this work needed to have been completed already.

Losses from Credit Push Directories

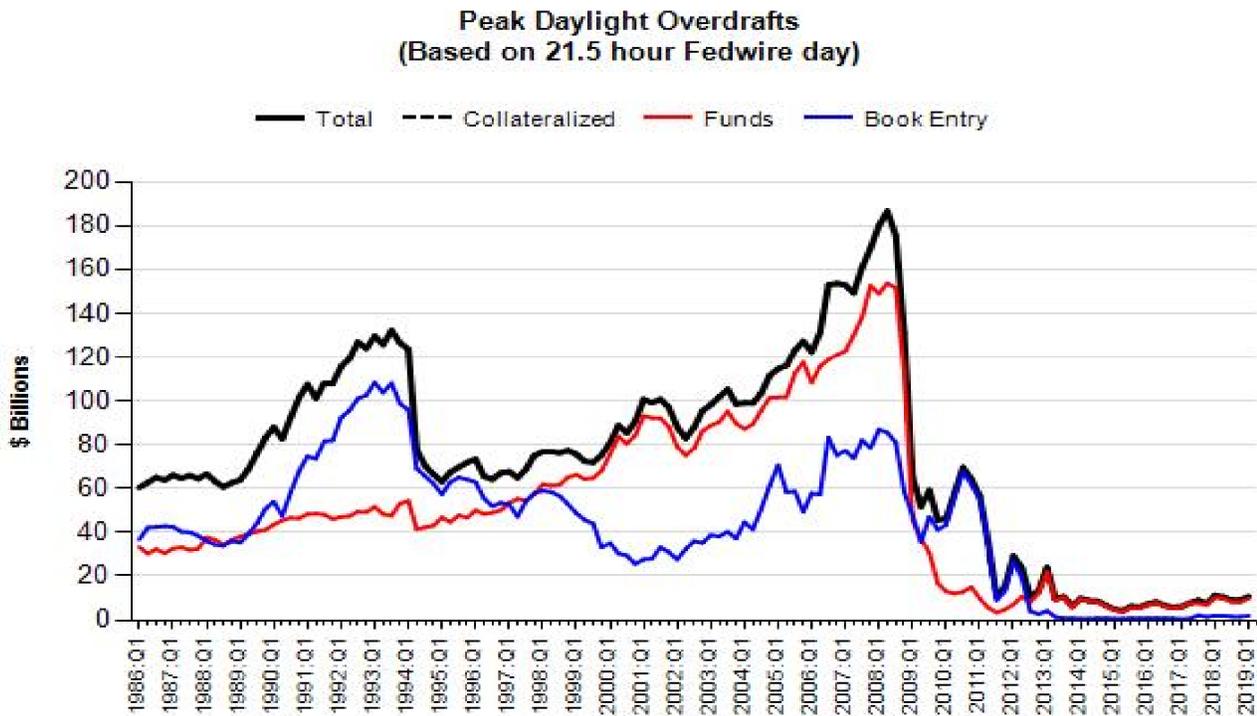
Risk and losses are not the same. During the 1980's there was much ado about daylight overdrafts in financial institution accounts held at the Federal Reserve. In 1985 the Federal Reserve implemented a new policy, Federal Reserve Payments System Risk Policy²⁰, intended to reduce the level of risk to the Federal Reserve and therefore the economy by reducing the amounts of overdrafts during the day. The risks were very large (see graphic below²¹), and sufficiently large to cause a cascade of bank failures should daylight overdrafts have become end-of-day overdrafts. Although there were no actual losses as the result of daylight overdrafts, the risks were real and it was prudent for the Federal Reserve to recognize the risks and take action to minimize the risk and protect the U.S. economy. The graphic below shows a peak risk of \$180+ billion of intraday credit risk while there were no actual losses.

The faster payments system in the U.S. is too young to have much data on losses and no data is available for losses specifically associated with credit push payment directories. Additionally, directories have not yet been used for every customer account with all 10,000 U.S. financial institutions which further limits any useful loss data.

²⁰ https://www.federalreserve.gov/paymentsystems/files/psr_overview.pdf

²¹ *ibid*

The Hidden Risks of Faster Payments



Conclusion

The future of payments in the U.S. is real-time (faster) payments. Most entities consider credit push payments as the only option for faster payments under the assumption that credit push payments are safer and more efficient than debits payments. However, credit push payments are not risk free and ubiquitous credit push payments are dependent on the use of directories to route and post payments to the correct parties. The risks associated with credit push directories are not well understood and could be indeterminately large, potentially including consequential damages. The industry can address these risks through multilateral, uniform agreements but has not yet accepted that mantle.

The Federal Reserve has yet to determine whether it will offer faster payment services but its decision will not negate the need for private sector agreements and therefore should not delay private sector action.

Key to the success of faster payments is the trust of the users that the system works and is safe. Dispute litigation among users and providers could create significant harm to the success of faster payments and delay the achievement of the objective of ubiquitous payments. Risks and losses are not the same and knowing the risks associated with directories, the industry should take action to mitigate these risks prior to broad acceptance and implementation of faster payments.

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About – Tiller Endeavors, LLC

Tiller Endeavors is a consulting firm created when ECCHO was dissolved. David Walker worked with ECCHO (Electronic Check Clearing House Organization) from 1990 when it was created until 2018 when it was dissolved as a legal entity and as ECCHO's President and CEO from 2001 through 2018. In 2017, the ECCHO Board of Directors determined to sell all ECCHO's assets to The Clearing House (TCH) creating the need to dissolve the organization.

Mr. Walker has more than 40 years in the banking industry, including electronic check exchange rules, industry advocacy, check certification program, ACH operations, wire operations, funds management trading operations, Federal Reserve and Due From balance management, customer balance and controlled disbursement reporting, ACH and wire product management, daylight overdraft management, IT systems for wire and balance reporting and IT operations for the then largest bank in Texas.

Mr. Walker participated in the Executive (Presidential) Signing Ceremony of the Check 21 Act in the Oval Office. He was a member of the Faster Payments Task Force, Chaired the Legal Work Group of the Faster Payments Task Force, was a member of the Governance Framework Formation Team, is a Founding Member of the U.S. Faster Payments Council and served as a Director on the U.S. Faster Payments Council Interim Board of Directors.

The Hidden Risks of Faster Payments

Definitions Used in This Paper

Beneficiary – A beneficiary is the party that receives funds from the party that is making a payment.

Credit push payments – A credit push payment occurs when the amount of the payment is first deducted from account of the paying party at its financial institution before the funds are deposited (pushed) into the beneficiary's account with its financial institution. For credit push payments, the paying party or its financial institution must either have or have access to the beneficiary's banking relationship and the beneficiary's account information in order to deliver the payment to the beneficiary.

Credit risk – Credit risk occurs when a beneficiary is provided funds prior to the funds being drawn from the paying party's account. The beneficiary's account may be at a financial institution or some other provider of payment services.

Daylight overdraft - A negative balance in a financial institution's Federal Reserve account at any time during the Fedwire operating day. Daylight overdrafts that are unresolved by the end-of-day become actual overdrafts. Also see the Federal Reserve Payments System Risk Policy.

Debit pull payments - A debit pull payment occurs when the amount of the payments is first deposited into the beneficiary's account with its financial institution before the funds are deducted (pulled) from the paying parties account with its financial institution.

Directory – Directories are needed to perform two tasks, 1) to route credit push payments from the paying party's financial institution to the beneficiary's financial institution and 2) to route the payment (deposit) to the beneficiary's account with the beneficiary's financial institution. While different directories could perform each of the functions separately, for the purposes of this paper, it is assumed that faster payments directories perform both functions.

Faster payments – The term “faster payments” is generally used to refer to payments that occur almost instantaneously from the perspective of the parties making and receiving payments. “Faster payments” are expected to be risk free or near risk free for those parties.

Proximate (consequential) damages – Proximate (consequential) damages are those financial damages that are awarded to the plaintiff in addition to the amount of the payment. Some examples of approximate damages include, 1) the replacement cost of insured property when an insured event occurs following a failed premium payment, 2) loss of business income during the adjudication process to resolve the dispute, 3) personal injury costs resulting from an insured event, 4) the legal costs to sue the party responsible for the financial loss, and 5) all other costs/losses associated directly or indirectly with the failure of the payment to successfully be available to the beneficiary and/or the failure for the payment to be available to the beneficiary timely.

Real-time payments – Real-time payments refers to payments that occur almost instantaneously for all parties, end-user to end-user, including initiation and receipt of payments and initiation and receipt of interbank settlement between financial institutions in their accounts held at the Federal Reserve. The combination of real-time posting and real-time settlement (24x7x365) creates real-time payments.

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Real-time postings – Real-time posting refers to the online posting of payments made from or to customers' accounts with their respective financial institutions throughout the day as payments are initiated. This contrasts with the more traditional batch posting of transactions at the end of the banking day. With real-time posting, the impacts on the accounts, whether to increase or decrease the account balances, occurs instantaneously throughout the day.

Settlement – Settlement refers to the movement of funds between the paying and receiving financial institutions via their accounts with the Federal Reserve. Settlement is associated with but independent of payments between customer accounts with their financial institutions. At the time of this writing, the Federal Reserve is only open for settlement transactions during selected hours of the day and only during selected days of the week. In the current environment, should financial institutions provide real-time payments to their customers 24X7X365, they would assume credit risk in the amounts of the payments executed outside of the Federal Reserve's settlement windows.

Exhibit II

December 14, 2018

Ms. Ann E. Misback
Secretary
Board of Governors of the
Federal Reserve System
Washington, DC 20551

Re: Docket No. OP - 1625:
Potential Federal Reserve Actions to Support Interbank Settlement of
Faster Payments, Request for Comments

Dear Madam:

We are pleased to submit this joint comment letter to the Federal Reserve Board (the “Board”) regarding its Request for Comments (RFC). Phyllis Meyerson and David Walker support the Federal Reserve Banks providing 24x7x365, online, real-time interbank settlement functions to support the next major level of enhancement to the U.S. payment system. This service is viewed as a prerequisite to a successful, effective real-time payment system and only the Federal Reserve is in the position to provide this service.

Ms. Meyerson and Mr. Walker have a combined banking, payments (ACH, check and Fedwire), and IT experience of more than 90 years. Most recently Ms. Meyerson was Executive Vice President of ECCHO and Mr. Walker was President and CEO of ECCHOⁱ. ECCHO, the Electronic Check Clearing House Organization, was the largest FI member organization in the U.S. based on total deposits held by its members. Additionally, ECCHO was the only trade association in the U.S. with members of every type of depository financial institution including credit unions, corporate credit unions, community banks, bankers’ banks, mid-tier banks and large banks. Both Ms. Meyerson and Mr. Walker were instrumental in the fastest transition in the history of payments in the U.S. In only six years, the check payment system transitioned from 100% paper-based interbank clearing to virtually 100% electronic. Mr. Walker participated as one of only four industry representatives in the Executive Signing Ceremony held in the Oval Office for the Check 21 Act. Ms. Meyerson holds MBA and MS degrees, is a permanent AAP (Accredited ACH Professional) a permanent CCM (Certified Cash Manager) and is an NCP (National Check Professional). Mr. Walker holds a BA in Economics and is an NCP. Mr. Walker was a member of the Faster Payments Task Force, the Governance Framework

Formation Team and is a Founding Member and Director on the interim board of the newly created Faster Payments Council.

Introductory Comments:

In our opinion, for a ubiquitous, new real-time payment system to be successful, there are at least four prerequisites; 1) real-time 24x7x365 settlement, 2) financial institution DDA posting in real-time, 3) 24x7x365 real-time payments clearing and 4) end-user broad acceptance. This joint response offers comments on each of these.

Given the Board's objective to support the development and implementation of a real-time payment system that includes end-user to end-user ubiquity (anyone to anyone, anytime, anyplace), it is critical that the Board focus on end-user acceptance criteria, and especially for business users. Today, consumers have a wide array of payment options and the introduction of additional choices, while desirable, will likely spread the volume across even more payment options, many of which have little to no direct costs to the consumer user. Because of this, it seems unlikely that consumers would be willing to support the cost of an expensive, new payment option and thus the need to focus on business payments as a potential way to finance the new payment system.

Few payment choices have been broadly acceptable to most businesses. The technology and infrastructure are available today to significantly enhance business payments using the payment type selected by businesses for more than sixty percentⁱⁱ of their payments; debit payments. Business end-users have consistently found credit push payments unacceptable for more than three decades so the road to business ubiquitous use of a new, credit push payment will be long and expensive, if it is ever successful. Therefore, the Board is urged to consider a new payment system that includes both credit push and debit pull payments to meet the end-user requirements of both consumers and businesses. While the volume of total consumer payments is greater than the volume of total business payments, it is more likely that businesses will be willing to pay more for an enhanced payment system than will consumers and therefore the gating factor for a successful, real-time payments system is the provision of a payment option that is readily acceptable to businesses. Credit push payment options for businesses have

consistently failed this market test and the decisioning economics for businesses are not significantly improved by yet another credit push option or at least in the next couple of decades. Perhaps it is time for the Board to consider an interim, transitional debit pull option for businesses to achieve the initial transition from paper payments to electronic payments with the potential for saving businesses tens of billions of dollars per year. Once businesses have successfully made the paper-to-electronic payment transition, the economics may have changed to allow businesses to then transition from electronic debit to electronic credit payments.

In the absence of a 24x7x365 settlement function, a real-time payment system as envisioned by the Faster Payments Task Forceⁱⁱⁱ is not possible, in our opinion. While some private sector providers offer “real-time” payment services, they can only provide those services when both the sending party and the receiving party have accounts with the same provider and have prefunded those accounts. Some providers might offer other “real-time” payment services in which both parties do not have prefunded accounts with a common provider but that requires traditional funding/settlement options that are not real-time. The timing differences for real-time payments with immediate availability of funds with traditional settlement create credit risk for one or more of the participants. This is an undesirable result given that with full implementation the amount of the short-term credit risk could total tens of billions of dollars of credit risk several times a day, every day.^{iv}

For the current private sector options to achieve end-to-end ubiquity there must be a single provider for all users or every user must establish and manage accounts with every provider in a multi-provider environment. In the U.S. market, a single provider is impracticable given 11,000 financial institutions, hundreds of millions of individuals and tens of millions of businesses. Additionally, a single provider would not provide the competitive environment needed to encourage the experimentation and rapid evolution of a nascent real-time payment system. And a multi-provider environment in which all users must maintain multiple accounts is likely to be unacceptable to most potential users.

By providing a backbone 24x7x365 settlement system, the Board would be providing the opportunity for many providers to offer real-time payments and increase the likelihood of a faster, more predictable implementation for all users.

Additionally, we support the Federal Reserve providing network and clearing services to banks^v for Faster Payments as envisioned by the Faster Payments Task Force. We do not support the Fed providing direct access to customers of banks. We also encourage the Board to continue to enhance all payment systems and to use its current authority to support the use of Electronically Created Items (ECIs). The Board is encouraged to support both credit and debit payment options for online, real-time payments.

We applaud the Board for its leadership and efforts to improve and enhance the various U.S. payments systems such as the Check Clearing for the 21st Century Act (Check 21), *Payment System Improvement – Public Consultation Paper, Strategies for Improving the U.S. Payment System* and The Faster Payments Task Force. We support the Board’s objectives to improve and enhance the payment systems to achieve greater efficiency and value for the U.S. economy and all stakeholders.^{vi}

The Request for Comment posed nine questions. Some of these included additional sub-questions. Following are our comments to those questions.

Questions & Comments

1. **RFC Question** - Is RTGS the appropriate strategic foundation for interbank settlement of faster payments? Why or why not?

Comment - If the objectives are to match or exceed the payments systems being implemented in other countries and to meet the “very effective” criteria of the Faster Payments Task Force (FPTF) and to implement end-to-end, real-time payments, that are immediately final, safe and secure, a 24x7x365 real-time settlement system is a requirement and the Federal Reserve is the only organization in a position to offer a comprehensive settlement solution to all banks in the U.S. The RFC discusses two settlement options; Real Time Gross Settlement (RTGS) and Delayed Net Settlement (DNS). Of these, the Real Time Gross Settlement option may be more expensive to implement but avoids the inherent, undesirable credit risk created by the Deferred Net Settlement option. Additionally, the DNS option, if considered, should be considered only as an interim, transitional step to achieve the goal of RTGS.

If a new real-time payment system is implemented with immediate user access to funds, a DNS settlement option would place the service provider at risk for the time period between when the funds are available to the user and when the provider receives actual settlement. This is essentially the same credit risk addressed above for providers of “real-time” payments without user accounts with common providers.

2. **RFC Question** - Should the Reserve Banks develop a 24x7x365 RTGS settlement service? Why or why not?

Comment – Please see Comment to Question #1.

3. **RFC Question** - If the Reserve Banks develops a 24x7x365 RTGS settlement service,
- a. Will there be enough demand for faster payments in the United States in the next ten years to support the development of a 24x7x365 RTGS settlement service? What will be the sources of demand? What types of transactions are most likely to generate demand for faster payments?

Comment - The U.S. payment systems are already very fast. Most payments in the U.S. clear and settle either the same day or next day rather than in 3 or more days as is typical in most of the world today. Therefore, the inherent benefits of faster payments can be expected to be less pronounced in the current U.S. environment than was the case for other countries when they implemented or planned to implement their new, real-time payment systems. Potential demand could come from three primary sources, 1) consumers, 2) businesses and 3) governmental organizations. One example of the influence of governmental demand was the early adoption of ACH by the U.S. Treasury which led the way for the initial growth in ACH transaction volume.

Today, U.S. consumers have an array of payment options that satisfy most of their needs. While these options can be enhanced, the improvements from a real-time payment system are anticipated to be only incremental and not substantial for most payments. In our opinion, because most consumers’ needs are currently being met by existing payment options, a new, additional option would not, in the near term,

replace any of the current consumer options, such as debit card, ACH or check. Therefore, the volume of consumer transactions that would shift from existing payment types to a new Faster Payments system in the next ten years is likely to be relatively small.

Consider the experience of the United Kingdom (UK). The first Faster Payments in the UK were initiated in May 2008. Ten years after initiation of the first Faster Payments^{vii}, the total volume of all Faster Payments (consumer, business & government) equals only about 9% of the total volume of non-cash payments in the UK and the volume of Single Item Immediate Faster Payments in May 2018 was only about 6% of total non-cash payments volume.^{viii} Single Item Immediate Faster Payments in the UK most closely resemble the anticipated real-time payments in the U.S. It is noteworthy that the UK experience included a mandate for Standing Order payments to transition from the BAC system (the US equivalent of the ACH system) to Faster Payments. Standing Order payments are fixed amount, recurring payments such as mortgage payments, membership payments, etc. for which the timing of the payments does not change. Therefore, Standing Order Faster Payments do not provide the user with new or enhanced benefits.^{ix}

Today, U.S. businesses select paper checks as their payment choice more often than any other payment option.^x One of the activities of the Faster Payments Task Force was to encourage potential providers to describe how they would support Faster Payments as envisioned by the Faster Payments Task Force. Almost all the potential providers that participated described credit push payments as the only option. In our opinion, this is problematic for business payments.

Businesses have had credit push options available for more than three decades^{xi} and have not widely replaced paper checks with credit push payments. There are many reasons why businesses select the payment types they use. Some reasons include issues with remittance data, availability of beneficiary bank account information, lack of a standard remittance format, and a predictable return on the investment needed to change from a debit pull to a credit push payment.

The cost of writing and receiving a paper check is greater than the cost of initiating and receiving an electronic payment such as an ACH debit.^{xii} According to the Association of Financial Professionals, the difference in the cost of writing and receiving a paper check versus initiating and receiving an ACH debit is about \$4.32.^{xiii} This would suggest that there is plenty of financial incentive for businesses to have already transitioned away from paper checks so their reluctance to accept credit push payments must be based on factors other than the cost differential between paper and electronic payments.

It is our opinion that when these factors and others are aggregated, the result is that businesses would readily replace paper checks with credit push payments if they could anticipate a predictable return on the investment required to achieve the transition between payment types including the elimination of paper checks. However, even if Business A is willing to make the investment but Business B, Business A's supplier or customer, is unable or unwilling to do so in the business cycle, Business A would not be able to anticipate a return on its investment.

In our opinion, the Board should not anticipate covering its costs in the first ten years of service but should pursue real-time settlement as a strategic prerequisite to the successful achievement of a viable Faster Payments system. The Federal Reserve is the only organization in a position to provide this foundational service. The Board should also consider how the economics and therefore the volume of payments can be altered to accelerate the achievement of the real-time goals. For example, if businesses are not expected to widely accept credit push payments, then the Board should consider Faster Payments options that include both credit push and debit pull payments to maximize the volume as rapidly as possible.

Also see Comment to Question #8.

- b. **RFC Question** - What adjustments would the financial services industry and its customers be required to make to operate in a 24x7x365 settlement environment? Are these adjustments incremental or substantial? What would be

the time frame required to make these adjustments? Are the costs of adjustment and potential disruption outweighed by the benefits of creating a 24x7x365 RTGS settlement service? Why or why not?

Comment – See Comments on Questions #s 3.a., 3.e.i. and 8. Additionally, disruption of business payments would include, in part, changes in all business payments processing and control procedures from debit payments to credit payments. Businesses would need to also provide and maintain their banking information with one or more directories, change their remittance processing procedures and develop and implement a whole new set of fraud controls. These would create a substantial disruption to business as normal and would exacerbate the uncertainty of return for those businesses.

RFC Question - What is the ideal timeline for implementing a 24x7x365 RTGS settlement service?

Comment – The Board should approve moving ahead aggressively with the implementation of a 24x7x365 RTGS settlement service. The industry will take its lead from the Board's position and with positive, aggressive support by the Board, the industry will likely follow and follow more quickly than without that support.

- c. **RFC Question** - Would any potential timeline be too late from an industry adoption perspective? Would Federal Reserve action in faster payment settlement hasten or inhibit financial services industry adoption of faster payment services? Please explain. What adjustments (for example, accounting, operations, and agreements) would banks and bank customers be required to make under a seven-day accounting regime where Reserve Banks record and report end-of-day balances for each calendar day during which payment activity occurs, including weekends and holidays? What time frame would be required to these changes? Would banks want the option to defer receipt of such information for nonbusiness days to the next business day? If necessary, changes by banks represent a significant constraint to timely adoption of seven-day

accounting for a 24x7x365 RTGS settlement service, are there alternative accounting or operational solutions that banks could implement?

Comment – Please see Introductory Comments and Comment to Question 3.b. Delaying the implementation date would delay the achievement of the benefits anticipated from Faster Payments and would increase the complexity, cost and risk of quasi-real-time payments in the interim. To achieve ubiquity of real-time payments among every end-user in the U.S., every end-user would need to participate with every provider offering a service, create accounts with every provider, prefund every account with every provider and manage the balances among all the various accounts and providers. The number of potential new accounts could total in the billions.^{xiv}

In our opinion, it is not likely that many consumers or small businesses would agree to that level of new accounts and resulting complexities and costs. Given the expected reluctance of users to establish multiple new accounts, a delay in offering a 24x7x365 settlement system would delay achieving the goal of ubiquitous real-time payments.

Additionally, a DNS settlement system would add DNS risk on top of the multiple account managements issues between DNS settlement cycles which could be hours or days depending on the frequency of the settlement cycles. These complexities and risks can be expected to elongate adoption and implementation of even a quasi-real-time payment system.

- d. **RFC Question** - What incremental operational burden would banks face if a 24x7x365 RTGS settlement service were designed using accounts separate from banks' master accounts? How would the treatment of balances in separate accounts (for example, ability to earn interest and satisfy reserve balance requirements) affect demand for faster payment settlement?

Comment – At a minimum, banks would need to establish which of its officers would have the authority to transfer funds between its accounts and how they

would gain access to the transfer system. Should a bank officer have the authority to transfer funds between the bank's account, that officer could directly or indirectly facilitate fraudulent payments and transfer the funds to cover what have been an overdraft and especially after normal banking hours. To manage this, the bank would need a transferal system that requires more than a single individual to affect transfers and a tracking system of who transferred what and when, much as is currently used for wire transfer security.

- e. **RFC Question** - Regarding auxiliary services or other service options,
- i. Is a proxy database or directory that allows faster payment services to route end-user payments using the recipient's alias, such as e-mail address or phone number, rather than their bank routing and account information, needed for a 24x7x365 RTGS settlement service? How should such a database be provided to best facilitate nationwide adoption? Who should provide this service?

Comment – In our opinion, a proxy database or directory is not a requirement for a 24x7x365 settlement system but is a requirement for ubiquitous, real-time, end-user to end-user credit push payments. A proxy database or directory is not a requirement for ubiquitous debit pull payments.

For a ubiquitous, credit push payment system to function, every payment initiator needs to know or have access to the bank and bank account information for every entity it wishes to pay. One way to accomplish this is through one or more comprehensive data bases/directories. This is no easy task to create, maintain and achieve a comprehensive data base including banking information for every entity in the U.S. Evidence of this is the multi-year process in which the Federal Reserve, NACHA and others have already engaged but has not yet been completed or has not achieved universal acceptance.

Key issues for a ubiquitous, credit push directory are who is liable for timely and accurate maintenance of the directory and what is the amount of that

liability for fraud, errors, omissions, etc. Consider the scenario in which a new entry is made into the directory with the wrong bank and/or bank account number followed by a payment routed to that wrong account, followed by the funds being removed from the account and the subsequent closing of the account. Would the responsible party to the misdirected payment be the initiator of the payment, the intended beneficiary of the payment, the directory manager, the initiator's bank, the intended beneficiary's bank, the processor of the payment or one or more intermediaries in the payment processing stream? Is liability shared among more than one of the parties based on comparative negligence, for example? Consider the scenario in which the owner of an insurance policy schedules a recurring insurance premium payment to occur on a date, such as the first day of the month, and is dependent on the directory for routing and posting information to cover the amount of the premium. Should the payment fail to occur and the insurance lapses followed by the occurrence of the insured event, would the liable party(ies) be liable for proximate damages? It would seem reasonable that the party in the best position to avoid these damages should bear the liability for its action or inaction that precipitated the events that created the loss to the policy holder's beneficiary. The determination of the liable party and the amount of liability should not be left to the court system without some guidance. Resolution of these liability issues may determine the answer to the question as to whom should provide the directory service.

Similar damages could result from maintenance that is performed correctly but not timely. Either entry errors or untimely maintenance could result from changes in either party's banking relationship or when replacing an account with an existing bank relationship. Additionally, should a party determine to open an additional account with another bank while leaving its other account(s) open and the directory not be updated correctly or timely to reflect the new account, the party could suffer the same kind of damages.

Another key question is whether the requirement of a credit push payments directory would cause current bank customers to join the ranks of the unbanked. If all banked parties were required to provide their banking information to a directory for use by all other parties, worldwide, some of those parties may determine that their only option to protect their assets and privacy is to extract themselves from the process and the banking system. This would be an undesirable result. Without some requirement to provide everyone's banking information to the directory(ies), it is unclear how ubiquity could be achieved.

Also, please see Comment on Question #8.

- ii. **RFC Question** - Are fraud prevention services that provide tools to detect fraudulent transfers needed for a 24x7x365 RTGS settlement service? How should such tools be provided? Who should provide them?

Comment – Fraud goes to intent and is a subset of losses whether intended or not. Perhaps the focus should be on the larger issue of preventing and early detection of losses and the sources of losses. These are needed in all payment scenarios including Faster Payments and 24x7x365 RTGS settlement services. We realize that there is a common opinion that credit push payments are risk free and therefore extensive fraud controls are not needed. Also, please see Comment on Question # 3.e.i.

Additionally, the risks associated with debit pull payments is perhaps better understood than are the risks associated with credit push payments. For example, the risks associated with account take over from credit push payments was not generally recognized until a few years ago and the risks describe in Comment on Question # 3.e.i. are not well understood yet. As more credit push payments are implemented

and especially in real-time, there could be new risks that present themselves that we have, to date, not considered.

For credit push payments at least two services/controls are needed beyond the payment process and directory services. One is for the bank that is initiating a credit payment, by debiting its customer's account, to notify its customer of the debit when the payment is issued. This offers the earliest possible detection of unauthorized debits since the customer is in the best position to recognize the unauthorized payment. The second service is for the payment initiator or its payment provider to notify the initiator's intended beneficiary of the issuance of the payment. This service offers the earliest possible detection of a misdirected payment and the beneficiary is frequently in the best position to recognize that he/she/it did not get paid. The effectiveness of these may ultimately depend on the quality and timeliness of directory maintenance.

- iii. **RFC Question** - How important are these auxiliary services for adoption of faster payment settlement services by the financial services industry? How important are other service options such as transaction limits for risk management and offsetting mechanisms to conserve liquidity? Are there other auxiliary services or service options that are needed for the settlement service to be adopted?

Comment – The services described in 3.g.ii are not dependent on settlement services but would be enhanced by 24x7x365 settlement services. Faster Payments are also not dependent on those services but use of those services could diminish existing payment system risk as well as new risk created by Faster Payments. Without such additional services and in the presence of user losses, diminished trust in the new system could diminish acceptance and usage of the system. We recommend the Board encourage the use of these services/controls now and not wait for a

new payment system.

- f. **RFC Question** - How critical is interoperability between RTGS services for faster payments to achieving ubiquity?

Comment – If it is anticipated or supported that there should be only one provider of Faster Payments in the U.S., then interoperability is unimportant. In our opinion, it is highly undesirable to support or encourage a single provider of Faster Payments. The number of service providers should be determined by market forces. Consider that there are about 11,000 banks in the U.S., ranging in sizes of less than ten million dollars in total deposits to more than a trillion dollars. It is unlikely that any one service provider would reach every customer of every bank and meet the various requirements of institutions of such diverse sizes. Therefore, it is our opinion that interoperability is a requirement to achieve ubiquity.

Interoperability should not, however, be required but rather should evolve through the demands of competitive market forces. Banks will want to develop products/services to offer to their customers and one of the characteristics of a successful payment product is that bank customers are assured that any payment they issue will reach the intended beneficiary. Without interoperability, this is problematic. Today, without Faster Payments, customers of banks are confident that they can issue or receive any payment to or from any other entity through a check or an ACH payment. For faster payment services to compete effectively with these two established, ubiquitous payment systems, interoperability is a necessity for payments clearing services and for proxy database/directory services.

In the transition from a paper-based interbank clearing of checks to an electronic image-based interbank clearing of checks, the Federal Reserve

supported interoperability by providing a bridge service between those banks that could send and/or receive electronic check images and those that could not. That bridge service supported interoperability among banks and allowed banks to transition at a pace that matched their individual, internal priorities. Instead of waiting for the slowest banks to be ready for electronic check image exchange, those banks that were prepared to move quickly had a vehicle to do so which greatly accelerated the transition.

In our opinion, a successful, real-time payments system in a voluntary, U.S. market economy, requires interoperability.

Also, please see Introductory Comments and Comment on Question #1.

- g. **RFC Question** - Could a 24x7x365 RTGS settlement service be used for purposes other than interbank settlement of retail faster payments? If so, for what other purposes could the service be used? Should its use be restricted and, if so, how?

Comment – It is unclear for what other purposes 24x7x365 might be used. Without some concept of what those purposes might be it is impossible to determine what restrictions if any should be implemented. However, implementation of a new 24x7x365 settlement service should be undertaken carefully and in incremental steps before determining to expand its usage.

- h. **RFC Question** - Are there specific areas, such as liquidity management, interoperability, accounting processes, or payment routing, for which stakeholders believe the Board should establish joint Federal Reserve and industry teams to identify approaches for implementation of a 24x7x365 RTGS settlement service?

Comment – In our opinion, the collective analysis of all the parties will inform and benefit the design of the new system. The collective experiences of the users

of the nascent system will provide early indications of needed modifications and enhancements to meet the needs of the market place.

4. **RFC Question** - Should the Federal Reserve develop a liquidity management tool that would enable transfers between Federal Reserve accounts on a 24x7x365 basis to support services for real-time interbank settlement of faster payments, whether those services are provided by the private sector or the Reserve Banks? Why or why not?

Comment - The concept of a dual account system within the Fed including a Master account and an RTGS account is an interesting concept. While this would increase the overhead for banks and especially for smaller institutions with very limited resources, a specialized, RTGS account without the right of offset by the Federal Reserve between the two accounts would isolate some of the risks to the RTGS account and protect the Master account, at least in the early years. The RTGS account could become the primary account for bank customer transactions, except possibly for high dollar Fedwire payments. The RTGS account could allow better monitoring of the risks created by banks' Faster Payments services and support better account liquidity monitoring. The Master account could continue to support high dollar Fedwire payments, Fed Funds trading activities, security trades, correspondent settlements, and daylight overdraft monitoring for non-RTGS payments, etc.

If the RTGS account were to include the right of offset by the Federal Reserve from the Master account, in the unexpected event of an overdraft in the RTGS account at the end of the day, the Federal Reserve could offset the overdraft by moving funds between the accounts. This would provide additional assurances that the new real-time payment system would function smoothly and create user confidence and avoid disruptions to the payment system.

With the implementation of a 24x7x365 liquidity management tool, daylight overdrafts should not be allowed in the RTGS settlement account. Under the Faster Payments Task Force's Effectiveness Criteria, funds should be immediately available to the beneficiary. Providing immediate funds to users while allowing daylight overdrafts in the RTGS

account would create new, potentially very large risk in the payment system. If a liquidity management tool is not implemented but a separate RTGS settlement account is added, an automatic transfer from the Master Account to the RTGS settlement might be needed to avoid daylight overdrafts in the RTGS account.

If daylight overdrafts were to be allowed in the RTGS account, which would be an undesirable result, some form of daylight overdraft monitoring and management would need to be implemented.

5. **RFC Question** - If the Reserve Banks develop a liquidity management tool,

- a. What type of tool would be preferable and why?
 - i. A tool that requires a bank to originate a transfer from one account to another

Comment –It is unclear why a bank would be “required” to originate a transfer but the ability for a bank to originate a transfer between accounts would be a key benefit of such a tool.

- ii. A tool that allows an agent to originate a transfer on behalf of one or more banks.

Comment - Perhaps but limited to official agents of banks and not directly by non-banks that are not acting as agents of banks.

- iii. A tool that allows an automatic transfer of balances (or “sweep”) based on pre-established thresholds and limits

Comment - Yes and with immediate notification to the banks whose accounts are impacted.

- iv. A combination of the above

Comment – Both. See Comments to Question #s 5.a.i., 5.a.ii and 5.a.iii.

- v. An alternative approach

Comment – Perhaps but until such time as an alternative is proposed, it is not clear what that alternative approach might be.

- b. Would a liquidity management tool need to be available 24x7x365, or alternatively, during certain defined hours on weekends and holidays? During what hours should a liquidity management tool be available?

Comment – See Comment on Question #4 concerning daylight overdraft management. In our opinion, the liquidity tool as described would need to be available 24x7x365 so the interbank settlement would be in sync with the end-user settlement. This could avoid the creation of a new daylight overdraft risk or the unintended rejection of otherwise valid payments with the resulting negative impact to end-users.

- c. Could a liquidity management tool be used for purposes other than to support real-time settlement of retail faster payments? If so, for what other purposes could the tool be used? Should its use be restricted and, if so, how?

Comment – Perhaps but until those other purposes are clearly defined, the use of the RTGS settlement account should be restricted to the settlement of payments other than Fedwire.

6. **RFC Question** - Should a 24x7x365 RTGS settlement service and liquidity management tool be developed in tandem or should the Federal Reserve pursue only one, or neither, of these initiatives? Why?

Comment - If a dual accounts approach is pursued (Master and RTGS Settlement), then they should be developed in tandem. If the Board's decision is to not create separate accounts, then why would a management liquidity tool be needed?

Also, please see Comments to Question #s 4. And 5.b.

7. **RFC Question** - If the Federal Reserve pursues one or both actions, do they help achieve ubiquitous, nationwide access to safe and efficient faster payments in the long run? If so, which of the potential actions, or both, and in what ways?

Comment – Yes. See discussion above.

8. **RFC Question** - What other approaches, not explicitly considered in this notice, might help achieve the broader goals of ubiquitous, nationwide access to faster payments in the United States?

Comment – It is our opinion that the success of Faster Payments in the next couple of decades depends on features in the system that will be widely and quickly adopted by businesses as replacement for paper check payments. The current proposals that are only credit push-based do not address the key business needs to provide a predictable financial return that exceeds the return that businesses can expect to achieve from their normal goods and services.

For most businesses, payments are not their primary products or services but rather represent an overhead expense to support their normal business. Economics dictate that businesses will invest in overhead activities when either, 1) the overhead function is preventing normal business activities or 2) the return on the investment in the overhead activity will yield a greater return on investment than will the return from the businesses' normal goods and services or 3) there is a legal requirement for them to do so. With an unpredictable return on investment (please Comment on Question # 3.a.), it is easy to understand why businesses have not made the transition from paper debit payments to electronic credit payments. Given that the cost of Faster Payments is anticipated to be greater than ACH payments, the economic case is even more difficult to make. Publicly traded companies have a fiduciary obligation to return a profit and investing in unnecessary overhead expenses runs counter to that obligation.

The only electronic debit options currently available for business payments are debit card payments and ACH debits. Debit card payments are not designed to accommodate large remittance volumes needed by some businesses, such as for medical payments. ACH debits are an option for some business payments but the predominate use of ACH debit blocks would require very lengthy reorientation and implementation of a new, different set of fraud controls. It is likely that this would require many years to un-sell the use of and

replace this very effective fraud control tool.

One approach is to add a debit pull payment option at least as an interim, transitional vehicle. Consider that the payment type of choice for businesses is a debit; a check. Also consider that the check system has transitioned from an entirely paper-based payment system to an electronic payment system, at least for inter-bank processes. The entire process from the time a check is deposited with a bank until it is posted at the paying bank is now electronic and on average takes less than one day.^{xv} The transition from clearing paper checks to clearing electronic check images following the implementation of the Check 21 Act, created the electronic infrastructure across all banks and the Federal Reserve to support electronic debit payments. The only part of the current check system that continues to be paper-based is the writing of the check by the payor and delivery of the check to the payee. Once the payee receives the paper check, it is deposited with its bank. Today, many banks offer electronic deposit options such as remote deposit of checks and the number of banks offering such services is growing rapidly.

Given the existing infrastructure, the transition to a fully electronic payment system that uses the Check 21 infrastructure would be quick and inexpensive. The primary requirements for business payors would be to read their existing, digital account payable files, reformat the payment information and transmit the payment directly to the payees. The payees would need to receive the digital files and electronically deposit them with their banks. Minimal expense and minimal calendar would be required to implement this enhanced payment process. Please see Exhibit A that compares the key requirements to implement a new, real-time credit push payment system with the requirements to implement a new, real-time debit pull system.

Once electronic payments such as ECIs are supported by the Board, businesses could achieve significant financial savings without significant new cost or business disruption and with a much greater certainty of financial return. That value could

potentially then be used by businesses to fund the next transition to an online, real-time credit push payment system should that become acceptable to businesses. Otherwise, the value could be used to fund the transition to an online, real-time debit pull payment system.

We should also note that businesses that primarily process medical payments have suggested that the savings that they could experience from the full implementation of ECIs is so significant that it could lower the cost of health care in the U.S.

The Federal Reserve estimated that in 2013 there were approximately 6.7 billion business to business (B2B) checks paid totaling \$17.2 trillion^{xvi}. The Association of Financial Professionals (AFP) determined the cost savings between paper check and ACH debits to be approximately \$4.32 per payment^{xvii}. This totals a potential savings for businesses for only B2B payments of \$28.9 billion per year ($\$4.32 \times 6.7 \text{ billion} = \$28.9 \text{ billion/year}$). During the next decade, that would total more than a quarter trillion-dollar savings to the U.S. economy.

We are aware that the Board is of the opinion that authorization of debit payments is riskier than the authorization of credit push payments, but this is a spurious argument that ignores the fact that electronic debits would be designed to replace paper checks (debits) and not credit payments. Authorization for electronic debits would be same as the authorization currently used for paper debits but with the potential for the added controls described below. Given that losses from checks declined between 2012 and 2015 by 35.5% (from \$1.1 billion to \$.71 billion) while losses from other non-cash payments increased by a whopping 51.8% (from \$5.0 billion to \$7.59 billion)^{xviii}, the anticipated impact of from electronic check debits, such as ECIs, would be a decrease in risk.

In Comment to Question # 3.e.ii, we described some potential services/controls that could be implemented to reduce fraud for credit push payments. For debit pull payments, similar services could be provided. For example, when an initiator of a debit payment issues a payment directly to the beneficiary, a notice could be sent to

the initiator's bank notifying the bank that a payment had been issued. The initiator's bank could elect to place a hold on the funds for the issued payment and thus prevent the funds being used for any other purpose. For Faster Payments under the "very effective" criteria established by the FPTF, the time would be almost instantaneous between when a hold is placed on the funds and the arrival of the debit payment at the paying party's bank. With arrival of the debit at the paying party's bank, the debit could be matched against the "issue" notice and the account holder could be notified of all unmatched debits. The account holder could then have the option of approving the unmatched debit or rejecting it. If the account holder determines to approve the debit and the posting of the debit would overdraw the account, the account holder could be provided the option of paying the account into overdraft or allowing the bank to reject the payment. It should be noted positive pay services already exist and therefore minimal modification would need to be made to achieve this added fraud protection for all electronic debits.

An account validation service could also be offered to the intended beneficiary from the paying party or the paying party's bank to notify the beneficiary that a payment had been issued from a valid account with available funds, perhaps qualified with "at that time". If the service includes placing a hold on the funds at the paying party's bank, the payment could be guaranteed by the paying party's bank. The beneficiary or some other provider could then compare the payment notifications received with the payments received thus creating an early identification of a misdirected or misapplied payment.

According to the Federal Reserve^{xix}, check fraud has declined significantly in recent years and is less than fraud experienced in the ACH and card payment systems. Given this trend and with the additions of other existing security processes, fraud could be reduced even further for these electronic debits by applying, for example, encryption of the data, use of token or blockchain technology and other techniques that could render the electronic data unreadable just as is anticipated in a new credit push payment system.

The combination of the services provided by the paying party's bank and/or the beneficiary's bank and/or other service providers offer the best options for preventing fraud or for the earliest possible detection of erroneous or misdirected payments and allow corrective/recovery actions to be initiated almost immediately. The costs to implement these security procedures could perhaps be funded by reduced bank losses or by offering for-fee services to the account holder.

We are aware that the Board is of the opinion that there are questions about the legal standing of ECIs but this too is a spurious argument for not supporting ECIs. The onset of check image exchanges included new interbank transactions that were not defined in the Uniform Commercial Code (UCC) or Regulation CC. The legal standing of these electronic images of paper checks was unclear in January 2005 when banks began exchanging check images instead of paper checks. The Federal Reserve used its authority to clarify, in its Operation Circular 3, the legal standing of check images and to not only allow them to be cleared through the Federal Reserve's check clearing facilities but aggressively encouraged the use of check images to clear payments through the existing check payment system and discouraged the clearing of paper checks. It took twelve more years (2017) before the Board defined check images in Regulation CC even in the absence of similar provisions in UCC. The Federal Reserve's use of its authority to create new payments (check images) helped to create billions of dollars of savings for banks, the Federal Reserve and the U.S. economy. The Board is encouraged to use its existing authority and take similar action to define and support ECIs.

By contrast to the Board's concern about the legal standing of ECIs, the legal standing of real-time, credit push payments has not yet been determined. There are no provisions in the UCC or in Board regulations that define what a real-time payment is or how liabilities are to be allocated among the various interested parties. This is perhaps the greatest risk to the development of trust in the system needed to achieve ubiquitous adoption.

We are aware that the Board is of the opinion that it should not support ECIs

because there are no standards for ECIs but this ignores the fact that ECIs are currently being cleared through the existing check payment system and through the Federal Reserve's check processing facility as if they are check images. This would suggest that the existing check image standards satisfy most of the requirements for ECIs for depositing, exchanging and posting.

Consider that the investment by banks and the Federal Reserve to support electronic check images has already been made and likely fully amortized by most if not all banks. Both a credit push and a debit pull real-time payment system would require that banks implement a real-time DDA posting system and a 24x7x365 settlement system. With these in place, the incremental cost to implement a real-time, debit payment system would be less than the incremental cost to implement a real-time credit push payment system.

With a debit payment option, a system of new directories would not be needed nor would a standard format for remittances.^{xx} The avoidance of these requirements would significantly reduce the expense and calendar to develop, implement and adopt an online, real-time debit system and accelerate significant savings for business users.

For example, the initiator of the debit payment would not need to know the bank and bank account information of the beneficiary only the electronic address to which to deliver the payment and the associated payment information, e.g. remittance information. Additionally, existing technology could mask the paying party's bank information so any party that intercepts the payment would not know either party's bank information. We are aware of the argument that in the check system users already share their bank information. But that argument fails to recognize the difference in a user determining to provide its bank information to a single, specific, known party and sharing its bank information with every entity in the world, known and unknown. For debit pull payment options, there is no need for the expense, risk, liability or delay in creating, loading and maintaining the directory(ies).

While the key issues with directories are being resolved, the industry could be moving

forward with a debit pull payment option and the credit push option could be made available as soon as the directory issues were resolved. In the meantime, the users would have the benefits of a Faster Payments system without the transitional expense, risk and calendar delay and legal uncertainty of a real-time credit push payment system.

We are aware that the Board feels that the private sector could determine to use ECIs in lieu of any action on the Board's part. This ignores that most unpaid check images are returned through the Federal Reserve's system. For a viable alternative to this existing Federal Reserve Service, the private sector would need to replicate a new return service. This would be redundant, prohibitively expensive and unnecessary. Without a viable return option, banks have been resistant to create new products such as ECIs. The Board's prohibition of ECIs under Regulation J through the Reserve Bank's check image system effectively creates a prohibitive barrier to this valuable enhancement and denies business end-users tens of billions of dollars of reduced costs each year.

9. **RFC Question** - Beyond the provision of payment and settlement services, are there other actions, under its existing authority, the Federal Reserve should consider that might help its broader goals with respect to the U.S. payment system?

Comment – See Comment 8. Additionally, the Board should avoid the active creation of barriers to enhancements to the payment systems including the check payment system. Such barriers as those created by its Operating Circular 3 and as strengthened by federal regulation in Regulation J that prohibit Electronically Created Items (ECIs) as eligible for exchange through the Reserve Banks' image clearing system. The Board should also begin to support and encourage the use of ECIs and the creation of tens of billions of dollars of savings per year for businesses.^{xxi}

Concluding comments:

We support the transition to a real-time payment system which we believe is a critical next step in the enhancement of the payment system in the U.S. to the benefit of all users. We support the Federal Reserve as the provider of 24x7x365, real-time settlement as a strategic investment in the U.S. payment's infrastructure and we support the Federal Reserve as the

provider of 24x7x365 real-time clearing services. We support enhancement to all payment systems including to the check payment system. We support the creation of a real-time credit push payment system and a real-time debit pull payment system. Without a debit pull payment option, businesses are likely to continue their current selection of paper payments over electronic payments and it is our belief that without broad acceptance by businesses, a new, real-time credit push payments system will not be cost/benefit effective during the next couple of decades.

Businesses need an alternative other than credit push payments and ECIs offer a viable alternative with de minimis new investment dollars and the potential for tens of billions of dollars savings each year, ongoing. These savings can likely be achieved before real-time credit push payments are a viable option for businesses. Banks and the Federal Reserve have already achieved significant savings from the interbank exchange of electronic checks. The Board is encouraged to support the extension of the positive economic impact of electronic checks to businesses by supporting ECIs. This supports the Board's goal of moving to a real-time payment system and addresses its goal of bringing significant benefits to all end-users.

We compliment the Board for its leadership and efforts to improve the U.S. payment system and appreciate this opportunity to provide our comments regarding the topics included in the RFC. If you have any questions regarding this letter, please do not hesitate to contact one of the undersigned commenters.

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Exhibit A

This chart compares the requirements to achieve ubiquity with Real-Time, Credit Push Payments with requirements to achieve ubiquity with Real-Time, Debit Payments (ECIs). Please note that significant savings can be achieved for business end-users through ECIs even in advance of real-time posting and settlement systems. ECIs are viewed primarily, but not exclusively, as replacements for paper checks.

Real-Time Credit Payments	Real-Time Debit Payments (ECIs)
System Overall Needs:	System Overall Needs:
<ul style="list-style-type: none"> To implement alternate routing approach for remittance data 	<ul style="list-style-type: none"> N/A – Routing for electronic check images already implemented
<ul style="list-style-type: none"> To develop, create, load and implement one or more directories to include the bank account information for every person, business, government and entity in the U.S. 	<ul style="list-style-type: none"> N/A – Directories not needed for electronic debits
<ul style="list-style-type: none"> To implement real-time 24x7x365 DDA posting system at every FI in the US 	<ul style="list-style-type: none"> Not a requirement for ECIs but for real-time ECIs must implement real-time 24x7x365 DDA posting system at every FI in the US
<ul style="list-style-type: none"> To create the legal environment to define each type of real-time payment and allocate the liabilities and amount(s) among the interested parties 	<ul style="list-style-type: none"> To create the legal environment to define each type of real-time payment and allocate the liabilities and amount(s) among the interested parties
<ul style="list-style-type: none"> To create and implement a real-time 24X7X365 settlement system 	<ul style="list-style-type: none"> To create and implement a real-time 24X7X365 settlement system
Every Financial Institution Must:	Every Financial Institution Must:
<ul style="list-style-type: none"> Contract with one or more providers of real-time payment services 	<ul style="list-style-type: none"> N/A – Clearing of electronic checks already implemented
<ul style="list-style-type: none"> Coordinate among various providers to minimize legal liability differences when more than one provider. 	<ul style="list-style-type: none"> N/A – Clearing of electronic checks already implemented
<ul style="list-style-type: none"> Create account(s) with one or more providers of real-time services 	<ul style="list-style-type: none"> N/A – End-users only need their current accounts with their banks
<ul style="list-style-type: none"> Fund and manage the liquidity of every account with every provider 	<ul style="list-style-type: none"> N/A – End-users only need their current accounts with their banks
Every Business User Initiator Must:	Every Business User Initiator Must:
<ul style="list-style-type: none"> Re-engineer its payment process from a debit payment to a credit payment including initiation software, tracking 	<ul style="list-style-type: none"> N/A -Business end-users only need to reformat digital data that already exists and transmit to receiving party

and reconciliation of payment status, format, internal approval process, etc.	
<ul style="list-style-type: none"> • Create, maintain and monitor directory profile(s) for every directory 	<ul style="list-style-type: none"> • N/A – Directories are not needed for electronic debit payments
<ul style="list-style-type: none"> • Implement network connection with its FI for payments and/or remittance data 	<ul style="list-style-type: none"> • Not necessary but may be desirable to achieve new, enhanced positive pay services
<ul style="list-style-type: none"> • Implement network and software to access directory for beneficiary bank account info 	<ul style="list-style-type: none"> • N/A – Directories are not needed for electronic debit payments
<ul style="list-style-type: none"> • Implement application software to create payment 	<ul style="list-style-type: none"> • Reformat data in its existing accounts payable system to create electronic debit payment and modify its payment approval process
<ul style="list-style-type: none"> • Implement function to separate payment from remittance information 	<ul style="list-style-type: none"> • N/A – Payment and remittance information travel together for electronic images
<ul style="list-style-type: none"> • Implement network and transmittal for remittance information directly or indirectly to the payment beneficiary 	<ul style="list-style-type: none"> • Implement network connection to transmit payment and remittance data directly or indirectly to payee
<ul style="list-style-type: none"> • Implement function to track any holdover payments not processed for any reason 	<ul style="list-style-type: none"> • N/A – Processes already implemented for electronic image processing
<ul style="list-style-type: none"> • Implement function to verify bank/provider account balances in advance of initiating payment and resulting decisioning 	<ul style="list-style-type: none"> • N/A – Processes already implemented for electronic image processing
<ul style="list-style-type: none"> • Requirements may vary when more than one provider is used 	<ul style="list-style-type: none"> • Requirements may vary when more than one provider is used
Every Business User Receiver Must:	Every Business User Receiver Must:
<ul style="list-style-type: none"> • Implement receipt software to receive payment receipt notification from bank/provider 	<ul style="list-style-type: none"> • N/A – Processes already implemented for electronic image processing
<ul style="list-style-type: none"> • Implement receipt software to receive remittance directly or indirectly from payment party 	<ul style="list-style-type: none"> • Not needed as a separate function since payment and remittance move together
<ul style="list-style-type: none"> • Implement new function to reconcile receipt of payment and receipt of remittance information 	<ul style="list-style-type: none"> • N/A – Processes already implemented for electronic image processing
<ul style="list-style-type: none"> • Implement function to reject any payments received intended for other parties or payments not matching remittance information 	<ul style="list-style-type: none"> • N/A – Processes already implemented for electronic image processing

<ul style="list-style-type: none"> • Implement function to verify bank account balances in advance of initiating a rejected payment to avoid overdrafting beneficiary's account 	<ul style="list-style-type: none"> • N/A – Processes already implemented for electronic image processing
<ul style="list-style-type: none"> • Requirements may vary when more than one provider is used for receiving payments and for rejecting misdirected payments 	<ul style="list-style-type: none"> • N/A – Processes already implemented for electronic images processing
Every Consumer User:	Every Consumer User:
<ul style="list-style-type: none"> • Contract with one or more real-time payment processors 	<ul style="list-style-type: none"> • N/A – Consumers already have the needed accounts with their banks
<ul style="list-style-type: none"> • Create accounts with one or more real-time payment processors 	<ul style="list-style-type: none"> • N/A – Consumers already have the needed accounts with their banks
<ul style="list-style-type: none"> • Fund each of the accounts with each processor 	<ul style="list-style-type: none"> • N/A – Consumers already have the needed accounts with their banks
<ul style="list-style-type: none"> • Obtain and implement software from provider(s) to: 	<ul style="list-style-type: none"> • Obtain and implement software from provider(s) to:
<ul style="list-style-type: none"> • To initiate and receive payments 	<ul style="list-style-type: none"> • To initiate and receive payments
<ul style="list-style-type: none"> • To verify initiation of payments 	<ul style="list-style-type: none"> • To verify initiation of payments
<ul style="list-style-type: none"> • To verify receipt of payments initiated 	<ul style="list-style-type: none"> • To verify receipt of payments initiated
<ul style="list-style-type: none"> • To receive notification of funds received 	<ul style="list-style-type: none"> • To receive notification of funds received

ⁱ The assets of ECCHO were sold to The Clearing House as on December 31, 2017 and ECCHO as a legal entity was closed in the first half of 2018.

ⁱⁱ 2017 Phoenix-Hecht Treasury Management Monitor.

ⁱⁱⁱ <https://fasterpaymentstaskforce.org/meet-the-task-force/mission-and-objectives/>. “As stated in the [Faster Payments Task Force Charter](#), the mission of the task force is to “identify and evaluate alternative approaches for implementing safe, ubiquitous, faster payments capabilities in the United States.” “This mission supports a key desired outcome identified in the Federal Reserve’s strategies paper, to achieve: A ubiquitous, safe, faster electronic solution(s) for making a broad variety of business and personal payments, supported by a flexible and cost-effective means for payment clearing and settlement groups to settle their positions rapidly and with finality.”

Faster Payments Task Force Faster Payments Effectiveness Criteria U.2.3, “The Solution should be accessible to End Users on a 24x7x365 basis, including to initiate the payment, have visibility into payment status, and receive final availability of Good Funds.”

^{iv} The combined daily value of check, ACH and debit card payments total approximately \$260 billion. With full implementation of real-time payments to the exclusion of check, ACH and debit card, the potential credit risk could total as much as \$260 billion each day. Depending on the frequency of DNS settlement, credit risk between settlements could range from as little as \$43 billion for 6 settlement cycles per day to \$130 billion for 2 settlement cycles per day.

^v For the purposes of this documents the term “banks” is used to include depository financial institutions of all types including, but not limited to credit unions, corporate credit unions, community banks, bankers’ banks, mid-tier banks and large banks.

^{vi} Payments System Policy Advisory Committee, “The Committee’s purview includes...Strategies and policies to foster the long-term safety, efficiency, and accessibility of the U.S. dollar payments system...”

Policies: The Federal Reserve in Payment Systems, issued 1984 and revised 1990, “It is recognized that the most significant further gains in payment efficiency are likely to come from the application of advances in electronic technology...The Federal Reserve will continue to promote the use of electronics in providing payment services where it can demonstrate that this technology will enhance the efficiency or effectiveness of its services.”

^{vii} The first Faster Payments in the UK were initiated in May 2008 . May of 2018 was ten years later.

^{viii} In the UK there are three types of Faster Payments; Standing Orders, Future Dated Payments and Single Item Immediate Payments. The latter is the best equivalent of what is anticipated in the U.S. and as described by the Faster Payments Task Force. Volume sources are the UK Payments Council and the UK Cards Association.

^{ix} There was risk reduction benefits for financial institutions as the result of accelerated clearing and settlement.

^x Phoenix-Hecht Treasury Management Monitor.

^{xi} Examples of credit push options are Fedwire and ACH credits. NACHA has offered multiple ACH credit options to businesses over the past three decades with little acceptance by businesses as paper check replacements.

^{xii} Association of Financial Professionals, 2015 AFP Payments Cost Benchmarking Survey reported the estimated mean cost to issue and receive a paper check was \$4.57 and the estimated cost to initiate and receive an ACH debit was \$.11 to \$.25 per transaction for a difference of approximately \$4.32 per transaction.

^{xiii} Association of Financial Professionals, 2015 AFP Payments Cost Benchmarking Survey reported the estimated mean cost to issue and receive a paper check was \$4.57 and the estimated cost to initiate and receive an ACH debit was \$.11 to \$.25 per transaction for a difference of approximately \$4.32 per transaction.

^{xiv} The number of adults in the U.S. is estimated at approximately 250 million and the number of businesses in the U.S. is estimated in the tens of millions. If there were twenty providers of “real-time” payments and every adult and business were to create accounts with all twenty providers, there could be more than 5 billion new accounts to be funded and managed.

^{xv} This comment is based on anecdotal comments provided by banks across the U.S. over a period of several years.

^{xvi} Federal 2013 Payment Study

^{xvii} 2015 AFP Cost Benchmarking Survey Report

^{xviii} Press Release, October 16, 2018. Federal Reserve Payments Study.

^{xix} Press Release, October 16, 2018. Federal Reserve Payments Study.

^{xx} While there may be business benefits associated with a standard format for remittance data, a standard format is not needed today for businesses to make payments and need not be a requirement for electronic debit payments. In the absence of a standard format, businesses could transmit the remittance data directly to the payee and the payee could follow the same processes they use today. This might mean printing out the information and working with it as if it had been received in paper format via mail. Should any business currently use a standard format it could continue to use that same format. Should a nationwide standard format be widely adopted in the future, that standard could be implemented at that time. But there is no need to wait for a standard to be developed to start receiving significant cost saving. Having said that, there is a standard format available today, electronic data interchange (EDI). EDI has been available for decades and has not been widely adopted. It is envisioned that the same limitation that impact the adoption of EDI would also impact the adoption rate of any other comprehensive standard format.

^{xxi} Group comment letter filed on May 13, 2018 and a revised letter filed on May 15, 2018 on proposed changes to Regulation J electronically filed for the group by David Walker via email from the address David.walker@tillerendeavors.com.

Exhibit III

May 13, 2018

Ann E. Misback, Secretary
Board of Governors of the
Federal Reserve System
Washington, DC 20551

Via: Email to regs.comments@federalreserve.gov

Re: Docket No. R-1599 / RIN No. 7100 AE 98:
Regulation J – Collection of Checks and Other Items by Federal Reserve Banks
and Funds Transfers Through Fedwire – Proposed Amendments

Dear Madam:

The undersigned parties (the “Commenters”) respectfully submit this joint comment letter to the Federal Reserve Board (the “Board”) regarding its proposed revisions to Regulation J (the “Proposed Rule”). The Commentersⁱ support the replacement of paper payments with electronic payments and oppose the creation of artificial barriers that stifle innovation in the evolution and enhancement of the check payment system. The Commenters favor allowing free market forces to determine which payment types and payment features are most valuable to users of the system. The Federal Reserve has previously espoused allowing the market to decide in lieu of premature regulation.ⁱⁱ

We applaud the Board’s efforts to improve and enhance the various U.S. payments systems, such as with the Check Clearing for the 21st Century Act (“Check 21”), *Payment System Improvement – Public Consultation Paper, Strategies for Improving the U.S. Payment System* and The Faster Payments Task Force. The Commenters wholeheartedly subscribe to the Board’s objectives for the payment systems’ achievement of greater efficiency and value for the U.S. economy and all stakeholders.ⁱⁱⁱ

In its *Payment System Improvement – Public Consultation Paper*, the Federal Reserve illuminated its updated vision as including improvements in efficiency from end-to-end, stating, “End-to-end means from the point of payment origination to the point of receipt...”^{iv} The Commenters endorse this re-envisioning, but believe that the proposed prohibition in Regulation J of Electronically Created Items (“ECIs”) undermines the Board’s salutary purpose.

Check 21 encouraged electronification to improve the check system.^v As a result, the system transitioned in record time from an all paper-based system to one that is almost entirely electronic.^{vi} The U.S. check system is highly efficient and continues to be invaluable to the U.S. economy as evidenced by: (1) the value of check payments in 2016 equaled approximately 147% of the 2016 U.S. Gross Domestic Product,^{vii} and (2) U.S. businesses make more payments via check than any other payment type.^{viii}

The Commenters project that businesses would readily adopt electronic payments if they could foresee sufficient savings to justify their front-loaded, transitional investment. Payment options other than paper checks have been available over the past several decades, but none have yet gained the broad acceptance of businesses.^{ix} The transition from paper checks to electronic check images has been largely limited to inter-bank exchanges, whereas ECIs offer the opportunity to complete the transition end-to-end.

The Federal Reserve's joint efforts with the private sector following the passage of Check 21 was an unprecedented success, eliminating each year many billions of dollars of expense from the system and accelerating check clearing times.^x The Proposed Rule follows a different tack, and would discourage the continued evolution of the check system to an end-to-end, all-electronic payment system, effectively depriving users of the significant savings^{xi} that would become available with a complete transition from paper payments to electronic payments. The Commenters believe that the Proposed Rule to restrict ECIs by regulation is antagonistic to the Board's objective of creating a better payment system and works against evolving market interests.^{xii} The Commenters support the approach taken in Regulation CC that defines ECIs and creates a new indemnification but does not restrict the market's use of ECIs.

Many checks are cleared through the services of the Federal Reserve's Retail Product Office, and most unpaid, return checks are cleared through the Federal Reserve. As there is currently no private sector alternative and replication of the existing return system by the private sector would be impractical, a prohibition on ECIs through the Federal Reserve would effectively discourage ECIs for both the forward collection side and the return side. For this reason, a regulatory prohibition on ECIs through the Federal Reserve would depress free market forces and thwart the Federal Reserve's objective of improving the payment system.

The Commenters recommend: (1) removing the restrictions on ECIs from the final revisions to Regulation J,^{xiii} and (2) beginning active discussions with the Commenters^{xiv} as to how the Board might assist stakeholders in enhancing the payment system used by businesses more than twice as often as any other.^{xv}

Thank you for this opportunity to comment on the proposed revisions to Regulation J. The undersigned representatives of the Commenters are at your disposal to answer any questions there may be concerning this letter.

Commenters

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About Commenters

About All My Papers

All My Papers, Inc. (All My Papers) develops and distributes software for Check Image Cash Letter (X9/ICL) files used in Check Image Exchange based on the X9-100.187 ANSI standard and the FRB Reg. CC Rules. All My Papers is a Texas Corporation, and is now part of the 3Core Software family of companies.

All My Papers' software is used by most of the large and mid-size financial institutions (over 500 FIs and greater than 50% of the top 50 banks) in the United States as well as many foreign institutions, along with software development shops around the world supporting the financial industry.

About Bankers' Bank of the West

The second independent bankers' bank formed in the United States, Bankers' Bank of the West provides high-quality products and services as well as deep industry expertise to more than 300 community bank clients in the western states and Great Plains region. Our primary service area includes Arizona, Colorado, Idaho, Iowa, Montana, Nebraska, New Mexico, Nevada, South Dakota, Utah, Washington and Wyoming.

About Bridge Community Bank

Bridge Community Bank is an employee-owned community bank located in east central Iowa. The Bank was chartered in 1903. Bridge was an early adopter of check imaging technology in 1995, adopted remote check deposits in 2001, and sent the first Check 21 FedForward file in December 2004. The bank was early to recognize the efficiencies of less paper and the advantages for its customers of digitizing paper checks.

About Kalypton

Kalypton is a UK-based technology provider in the process of establishing a US subsidiary. Our Tereon real-time transaction processing software was the subject of a proposal to the Federal Reserve's Faster Payments Task Force in partnership with ECCHO. That proposal was highly regarded for its ability to deliver services of multiple types and within existing regulation. We strongly believe that the market should evolve as dictated by the customer base and to the benefit of all stakeholders. We strongly believe that regulation should ensure that technology can support that objective where possible.

About Midwest Independent Bank

MIB is a “bankers’ bank” which provides a wide array of correspondent banking services to close to 525 financial institutions throughout the Midwest. Based in Jefferson City, Missouri, MIB’s banking services are provided exclusively to financial institutions. The website for MIB is www.mibanc.com.

About RemoteDepositCapture.com

RemoteDepositCapture.com is the de facto trade association for the Remote Deposit Capture Industry. Over 250,000 unique visitors from thousands of financial institutions, solution providers and businesses visit the website every year. From educational webinars, topical research and original news and analysis, to solution directories, business tools and access to knowledge experts, RemoteDepositCapture.com is the only information and services portal devoted to RDC and Payments. Visit RemoteDepositCapture.com to learn more.

About RWC Consulting Group

The RWC Consulting Group was created by bankers for bankers. We provide business support, financial services support and risk management services by supplying expert resources on demand to Financial Institutions, FinTechs, Corporate Treasury, AR and AP Departments and Federal Government agencies.

About The Bankers Bank

The Bankers Bank exists for one reason: to provide the highest quality of correspondent services to community banks. The bank directly serves Oklahoma and Texas with over 300 financial institutions, and indirectly provides correspondent banking systems to over 3,000 banks across the U.S.

About Third Party Payments Processors Association

The Third Party Payment Processors Association (TPPPA) is a not-for-profit membership association. TPPPA members are payment processors and banks that sponsor payment processors into the various payments systems. The Association supports all manner of payment processing and has created industry best practices for both payment processors and banks that address holistic risk and compliance management with emphasis on BSA/AML compliance and compliance with Consumer Protection laws and regulations applicable to the industries for which our members process payments. The TPPPA was formed in 2013 and currently has 29 payment processor members and 19 bank members. 10 of our bank members are community banks and nine are regional banks. Seven of our bank members are on NACHA’s top 50 Originators in 2017. The TPPPA advocates on behalf of payment processors, their banks, and the businesses and consumers who benefit from responsible payment processing. Our moto is *Payments Excellence and Integrity Through Compliance*.

About Tiller Endeavors, LLC – To steer the course, you need a Tiller!

Tiller Endeavors is committed to creating value for businesses through the transition of business payments from paper payments to electronic payments. Now that the check system is virtually 100% electronic between banks, it is time to allow businesses to finally achieve significant savings by electronifying the last paper processes, those between the end users.

Ann E. Misback

May 13, 2018

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David Walker has more than 40 years in the banking industry, including electronic check exchange rules, industry advocacy, check certification program, ACH operations, wire operations, funds management trading operations, Federal Reserve and Due From balance management, customer balance and controlled disbursement reporting, ACH and wire product management, daylight overdraft management and IT systems for wire and balance reporting.

Phyllis Meyerson has almost 45 years in the banking industry, including electronic check exchange rules and standards, industry advocacy, check certification program, ACH operations, ACH programming, product management for ACH, Wire Transfer and Balance Reporting.

About United Bankers Bank

United Bankers' Bank was founded in 1975 with the vision to level the competitive playing field by providing community banks with a full range of innovative correspondent services.

United Bankers' Bank is proud to be the nation's first and the upper Midwest's largest Bankers' Bank, serving over 1,000 community banks from the Pacific Northwest to the Great Lakes.

Endnotes

ⁱ The Commenters' organizations serve more than 5,000 financial institutions across the United States. For additional information please see the About descriptions.

ⁱⁱ Federal Reserve Bank of Atlanta, August 8, 2013, Re: *Telemarketing Sales Rule, 16 CFR Part 310, Project No. R411001*, "A Premature ban on their [RCPOs, remotely created payment orders; e.g. ECIs] use in the telemarketing context may limit their use elsewhere as they would be stigmatized as a "risky" form of payment."

ⁱⁱⁱ Payments System Policy Advisory Committee, "The Committee's purview includes...Strategies and policies to foster the long-term safety, efficiency, and accessibility of the U.S. dollar payments system..."

Policies: The Federal Reserve in Payment Systems, issued 1984 and revised 1990, "It is recognized that the most significant further gains in payment efficiency are likely to come from the application of advances in electronic technology...The Federal Reserve will continue to promote the use of electronics in providing payment services where it can demonstrate that this technology will enhance the efficiency or effectiveness of its services."

^{iv} *Payment System Improvement – Public Consultation Paper*, September 10, 2013 "Federal Reserve Bank Strategic Direction in Payments - The Federal Reserve Banks updated their strategic direction in payments in 2012. At the heart is a vision to improve the speed and efficiency of the U.S. payment system from end-to-end over the next decade while maintaining a high level of safety and accessibility. End-to-end means from the point of payment origination to the point of receipt, including payment notification and reconciliation. This vision was crafted based on both Federal Reserve Bank internal analysis of payment evolution and external consultation with stakeholders."

^v *Congressional record – H9084*, "...(b) Purposes [of the Check 21 Act]. – (3) [is] to improve the overall efficiency of the Nation's payment system..."

^{vi} Press Release, May 31, 2017, Federal Reserve Board announces final amendments to Regulation CC and requests public comment on an additional proposed amendment, "The final amendments update Regulation CC to reflect the evolution of the nation's check collection system from one that is largely paper-based to one that is virtually all electronic."

^{vii} Bureau of Economic Analysis, Department of Commerce. Check Image Collaborative.

^{viii} *Treasury Management Monitor 2016*, Phoenix-Hecht. Phoenix-Hecht reported that of the almost 1,500 businesses that responded to its 2016 survey, midsize businesses used check payments 3.3 times more often than the next largest payment type and large businesses used check payments 1.4 times more often than the next largest payment option.

Payment System Improvement – Public Consultation Paper, September 10, 2013, "The following are the key gaps and opportunities identified: Check writing persists because checks have important attributes, including ubiquity and convenience, which are not well replicated by electronic alternatives for some transactions..."

Payment System Improvement – Public Consultation Paper, September 10, 2013, "The challenge for the industry is to provide a payment system for the future that combines the valued attributes of legacy payment methods – convenience, safety, and universal reach at low cost to the end user – with new

technology that enables faster processing, enhanced convenience, and the extraction and use of valuable information that accompanies payments.”

^{ix} 2016 Electronic Payments – Association of Financial Professionals. Reported that the almost 500 businesses that responded to its triennial survey of businesses use of payments that the percent of business payments made using paper checks increased from 50% to 51% from 2013 to 2016.

Phoenix-Hecht 2016 Treasury Management Monitor reported that check was the payment of choice more than twice as often as the next most used payment type.

^x Anecdotal information from bankers across the nation suggest that the most checks now clear the same day that they are deposited. Estimates for most checks range from a low of about 65% to a high of about 85% of checks clear the same day.

^{xi} 2016 Federal Reserve Payments Study – Estimated the number of B2B payments at 5.3 billion during 2016. The Association of Financial Professionals’ 2016 *Electronic Payments* reported that the median cost of a business to issue and receive a paper check was \$4.57 and the median cost of initiating and receiving an ACH was \$.11 to \$.25 per payment. Assuming that the cost of an ECI would approximate the cost of an ACH, the savings for businesses would be approximately \$4.32 ($\$4.57 - \$.25 = \4.32) per payment. Assuming 5.3 billion B2B payments, the potential business savings with full implementation of ECIs for just B2B payments would be approximately \$23 billion per year.

Payment System Improvement – *Public Consultation Paper, September 10, 2013*, “Desired Outcomes...Desired outcome 3: Over the long run, greater electronification and process improvements have reduced the average end-to-end (societal) costs of payment transactions and resulted in innovative payment services that deliver improve value to consumers, businesses, and governments.”

Federal Reserve Retail Payment Risk Forum. *A Summary of the Electronic Payment Order Forum*, March 2013, “Participants cited lower costs of EPOs [ECIs] compared to checks, resulting from eliminating the paper in the origination of the payment order, eliminating payment processing and mail float, and eliminating postage and mail-related supplies. Participants also noted lower costs that result from reducing fraud through positive authorization by the payer, eliminating mail interception, and enabling quicker fraud detection through a faster deposit scenario. In addition, participants noted the advantage of ubiquity with EPOs that arises from mass use of checking accounts, especially by the business sector, and the ability to reach a large population by not requiring the account information of the intended recipient.”

^{xii} *Policies: The Federal Reserve in Payment Systems, issued 1984 and revised 1990*, “The Federal Reserve will continue to promote the use of electronics in providing payment services where it can demonstrate that this technology will enhance the efficiency or effectiveness of its services.”

Federal Reserve Retail Payment Risk Forum. *A Summary of the Electronic Payment Order Forum*. “On March 28, 2013, the Federal Reserve Bank of Atlanta hosted an Electronic Payment Order (EPO) [ECI] Forum with payments industry participants, including banks, nonbank payment service providers, retailers, and regulators.”

“The payment industry participants recognize that a ubiquitous and fast credit push payment system is needed. However, implementing such a system would be a long-term effort and would add another payment system to a market that already has a plethora of payment systems. In the meantime, proponents of the EPO [ECI] see the opportunity to use existing technology to wring out efficiencies in an already-existing check process system.”

^{xiii} *Federal Reserve System 12 CFR Part 210, Regulation J: Docket No. R-1599, RIN 7100 AE 98, Collection of Checks and Other Items by Federal Reserve Banks and Funds Transfer Through Fedwire – “Currently, neither Regulation CC nor Regulation J explicitly address the sending of ECIs to the Reserve Banks. However, the definition of item in Regulation J as currently drafted does not encompass ECIs and therefore does not allow for the handling of ECIs by the Reserve Banks. Regulation J defines an item, in part, as “an instrument or a promise or order to pay money, whether negotiable or not” that meets several other requirements. The terms “instrument,” “promise,” and “order” are defined under the U.C.C. as requiring a writing. Because they never existed in tangible form and therefore do not qualify as writings, ECIs are not “items” as currently defined in Regulation J. To provide greater clarity, the Board proposed to amend the definition of “item” in subpart A of Regulation J to explicitly state that the term does not include an ECI as defined [in] Regulation CC.”*

^{xiv} The Commenters recognize the Federal Reserve held limited discussions beginning in 2013 with a small number of organizations to discuss fully electronic checks (EPOs/ECIs). Those discussions ended abruptly in 2014. None of the Commenters serving more than 5,000 institutions were included in those discussions.

^{xv} Phoenix-Hecht, *Treasury Management Monitor 2016*.

Payments System Policy Advisory Committee, “The Committee’s purview includes...Collaboration with private-sector payments system providers and users to reduce risk and improve efficiency in retail and wholesale payment, clearing, and settlement systems...”

Payment System Improvement – *Public Consultation Paper, September 10, 2013*, “The Federal Reserve Banks see one of their roles as bringing the industry together to foster coordination and, where appropriate, to drive payment system improvement.”

Payment System Improvement – *Public Consultation Paper, September 10, 2013*, “The U.S. payment system is undergoing a remarkable period of change driven by rapid adoption of technology and evolving end-user expectations. Going forward, opportunity exists to improve speed and efficiency of payments and to maintain payment system safety in the face of escalating threats. The Federal Reserve Banks believe that collaboration and engagement with the industry is the foundation of any enduring strategic improvements to the U.S. payment system.”

Governor Jerome H. Powell, October 18, 2017 - *Financial Innovation: A World in Transition*. “I believe a collaborative approach ensures that change is designed by those whose commitment and expertise are needed to improve the payment system.”

Exhibit IV

B2B Faster Payments - Obstacles to Overcome to Achieve Business Support

October 2019

by Tiller Endeavors, LLC

B2B Faster Payments - Obstacles to Overcome to Achieve Business Support

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B2B Faster Payments - Obstacles to Overcome to Achieve Business Support

Introduction^{1,2}

The topic of why businesses continue to use paper checks as their primary method of business to business (B2B) payments invariably initiates conversations about the many obstacles to adoption of electronic alternatives. Solutions for each of these obstacles have been proposed for more than 30 years with limited success as evidenced by the lack of adoption by businesses.³ By focusing on each of the obstacles individually, the big picture has been missed. Given the failure of this approach to solve the individual obstacles and achieve broad adoption of electronic payments for B2B payments, perhaps it is time to consider the forest rather than the trees.

This paper addresses the overriding factors, the forest, that dictate business decisions about investments in payments and specifically in B2B payments. Unless these factors are successfully addressed, none of the solutions addressing the individual obstacles, the trees, merit business investment and therefore faster payments and FedNow⁴ will fail to gain broad adoption for B2B payments.⁵

Background

Other than not-for-profit businesses, the reason businesses exist is to make profits and that motivation controls every aspect of business decision making including decisions about payments. Therefore, when forecasting the future use of new payment types by businesses, one needs to first consider the economic impact of the transition from the

1 David Walker formerly the CEO of the Electronic Check Clearing House Organization founded Tiller Endeavors, LLC in 2017 with a focus on payments systems. For additional information about Tiller Endeavors, please visit www.tillerendeavors.com.

2 Faster Payments is a generic term for improved payments in the U.S. that are intended to be almost instantaneous, secure, initiated by anyone to anyone at any time with immediate availability.

3 Nacha has created multiple options for business to business payments since the 1980s with limited business adoption.

4 The Federal Reserve has announced it intends to offer a version of faster payments called FedNow.

5 Businesses are likely to adopt receipt of consumer to business (C2B) credit push payments, such as FedNow, to reduce interchange fees. C2B payments are not addressed in this paper.

B2B Faster Payments - Obstacles to Overcome to Achieve Business Support

existing payment type to the replacement payment type. This includes the potential cost savings once implemented but also the implementation costs and the likelihood that other business trading partners will implement compatible functions in a similar timeframe. Without suppliers to make payments to or businesses customers to receive payments from, little cost savings can be anticipated.

While the costs for businesses to transition from paper payments to faster payments are not quantified in this paper, they are significant. Examples of actions required for every business to initiate and/or receive faster payments are listed in the Exhibit at the end of this paper.

Return on Investment

For the purpose of this paper “return on investment” (ROI) will be used as the net aggregate metric of all economic components (the forest). With an adequate, positive ROI, businesses will invest in transitioning to new, improved payment types. Without both a positive ROI and a predictable ROI, there is little-to-no incentive for businesses to make the requisite investments. In the absence of either, businesses will be slow to transition or worse, will never do so. Application of this economic axiom has been demonstrated many times over more than thirty years for credit push payments.⁶ At the time of this writing, FedNow and other faster payments implementations in the U.S. are based exclusively on credit push payments.⁷

For every business, except those in the payments business, payments are overhead expenses and serve only to support the actual goods and services of those companies. When businesses make decisions about changing

⁶ See footnote #3.

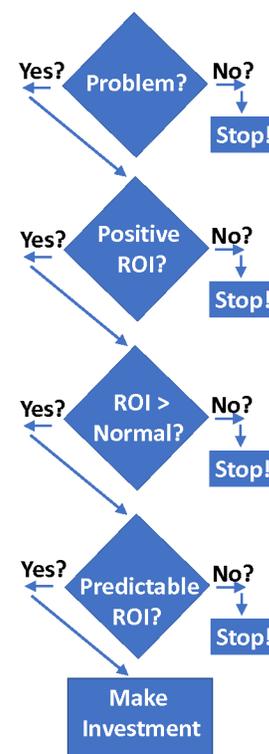
⁷ The notable exception is the use of a payment request. A payment request can be used to request a credit push payment. This exception requiring both a request for payment and a credit push payment adds to the overall costs to implement and maintain credit push payments.

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payment types, there are some key questions to be considered including:

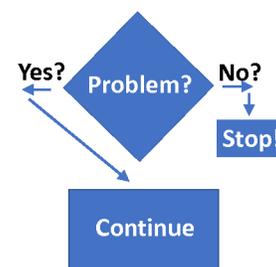
- 1) Is the investment necessary to fix a problem with an overhead function that otherwise prevents the business from conducting its normal profit producing functions?
- 2) Can an investment in an overhead function produce a positive ROI?⁸
 - a) If so, will the ROI equal or exceed the ROI from the business' normal profit producing goods and services? and
 - b) If so, can the ROI be predictably achieved?

This paper examines the likelihood of businesses transitioning most B2B, paper-based payments to faster payments. Specifically, examined are faster payments as envisioned by the Federal Reserve for its new real-time, FedNow payments and for other quasi-real-time faster payments offerings.



Is the Investment Necessary to Fix an Overhead Problem?

It should be clear that businesses will spend money in order to support profit producing functions (e.g. goods and services). In the event of a failure of an overhead function that disrupts the performance of normal business activities, business will spend money to fix the problem. This raises the question of whether there is a problem with paper check payments that prevent businesses from conducting normal activities. The answer is self-evident given that businesses continue to use checks as their primary payment of choice.⁹



⁸ For the purposes of this paper, ROI includes direct and indirect costs such as personnel time to perform the functions. For smaller businesses, staff time requirements may be a surrogate for a more formal ROI calculation.

⁹ Phoenix-Hecht 2016 Treasury Management Monitor reported that of the almost 1,500 businesses that responded to its 2016 survey, midsize businesses used check payments 3.3 times more often than the next largest payment type and large businesses used check payments 1.4 times more often than the next largest payment option. The survey did not include small businesses whose use of check payments is thought to be even larger than midsize businesses.

B2B Faster Payments - Obstacles to Overcome to Achieve Business Support

Additionally, check payments are now almost all electronic and are safer and more efficient than they have ever been. Since the full implementation of electronic check image exchange in 2011, a high percentage of checks clear the same day in which they are deposited¹⁰. Additional improvements are also available once the check payment is freed from its dependence on paper at its point of origination by using electronic debit originations. This transition from originating paper to originating electronic payments is anticipated to create significant value for business users.¹¹

Potential Savings for Businesses

The Federal Reserve estimated that in 2013 there were approximately 6.7 billion business to business (B2B) checks paid totaling \$17.2 trillion.¹² The Association of Financial Professionals (AFP) determined the cost savings between paper checks and ACH debits to be approximately \$4.32 per payment.¹³ This difference totals a potential savings for businesses for B2B payments of \$28.9 billion per year ($\$4.32 \times 6.7 \text{ billion} = \$28.9 \text{ billion/year}$). During the next decade, that would total more than a quarter trillion-dollar savings.

Therefore, the potential savings from the transition of all B2B payments from paper to electronic payments is significant and well worth the cost but only if a positive, predictable

¹⁰ Anecdotal information from various financial institutions after full implementation of check image exchange in 2011. Estimates range from a low of about 65% to a high of about 85% cleared same day as deposited when cleared through private sector providers.

¹¹ One option to consider is the use of Electronically Created Items (ECIs). For additional information about ECIs please visit <https://tillerendeavors.com/endeavors/>.

¹² Federal Reserve 2013 Payment Study.

¹³ Association of Financial Professionals, 2015 AFP Payments Cost Benchmarking Survey reported the estimated mean cost to issue and receive a paper check was \$4.57 and the estimated cost to initiate and receive an ACH debit was \$.11 to \$.25 per transaction for a difference of approximately \$4.32 per transaction. The costs of an ACH debit is assumed to approximate the cost of other electronic payments.

B2B Faster Payments - Obstacles to Overcome to Achieve Business Support

ROI per company can be achieved from the investment.

Options for Replacing Paper Payments with Electronic Payments

The electronic options available today for B2B payments include ACH debits, ACH credits, Fedwire, debit card, credit card and variations of faster payments.

ACH debits are impractical for B2B payments primarily for two reasons. First the banking industry has been very successful in selling the use of debit blocks for ACH debits.¹⁴ Currently, debit blocks are a key part of fraud prevention controls and if debit blocks were eliminated, new methods of limiting fraud would need to be created and implemented. To do otherwise would open businesses to substantial new risks. Second, ACH debits have a limited number of addenda records and cannot accommodate very large remittance data requirements such as required for medical payments. The maximum number of addenda records for ACH payments is 9,999 which is significant but insufficient for many medical payments. This limitation is important since more than 50% of medical payments in the U.S. are processed by one provider who reports that ACH has insufficient capacity to meet its remittance data requirements.¹⁵ Thus, even if some businesses were to adopt ACH debt payments, the paper check would continue for many other payments, e.g. medical payments which would require the continued support of the paper check payment system well into the future.

ACH credits have been available for B2B payments for more than 30 years¹⁶ and yet ACH

¹⁴ Debit blocks are used by businesses to prevent unauthorized, electronic charges against their bank accounts. Typically, businesses provide specific approval for selected electronic debits such as standing permission to post ACH debits to fund payroll. All other pre-authorized electronic debits are blocked from posting.

¹⁵ Tom Dean, SVP GM B to B Payments Solutions, Change Healthcare was a panelist at the Federal Reserve's 2013 Electronic Payment Forum in Atlanta, Georgia. Mr. Dean reported that Change Healthcare's mail volume is 5% of the total U.S. mail volume to accommodate the large volume of remittance data. Mr. Dean reported that his company supported improvements to the check system that would allow the initiation and receipt of fully electronic payments through the existing electronic check payment system. At that time these were referred to as Electronic Payment Orders (EPOs). Since then, the Federal Reserve has renamed them Electronically Created Items (ECIs).

¹⁶ See footnote #3.

B2B Faster Payments - Obstacles to Overcome to Achieve Business Support

credits have enjoyed limited success as replacements for B2B paper checks. Stated more strongly, ACH credits have consistently failed the market adoption test for B2B payments. Numerous obstacles created this market failure and this paper does not delve into the individual obstacles¹⁷ (the trees) but addresses those reasons in the aggregate, the forest, from the perspective of the ability to produce a positive, predictable ROI.

Fedwire is not designed to carry the immense amount of remittance data required for some B2B payments¹⁸ and it is the most expensive of all payment options. Given that the volume of remittance data can be many multiples of the data volume required for payments, the volume capacity of Fedwire would likely need to be greatly expanded. Otherwise, capacity constraints could delay the delivery of other time sensitive, large value payments and adversely impact bank balances with the Federal Reserve. Given the value of Fedwire payments, this could potentially impact the entire U.S. economy. Thus, Fedwire is not suitable for most B2B payments.

Debit card payments are primarily used for consumer payments. While they are suitable for some business payments, debit card payments are designed to carry only a limited amount of data and do not adequately accommodate the larger data requirements of many B2B payments. Thus, debit card payments are not suitable for many B2B payments.

Credit card transactions are not payments but rather extensions of credit. Payments against credit card balances are not made at the time of the purchase of goods and services and are not generally made to pay for a specific purchase. Like debit card payments, credit card transactions are not designed to carry the amount of data required for B2B payments. Thus, credit card transactions are not suitable for many B2B payments.

Faster payments, as envisioned by most potential providers in the U.S. and across the

¹⁷ See Exhibit at the end of this paper.

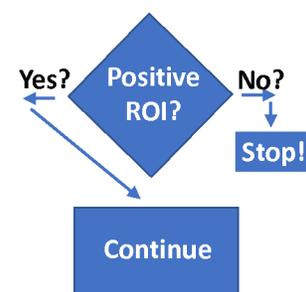
¹⁸ <https://www.onrr.gov/ReportPay/PDFDocs/fedwire.pdf>. United States Department of Interior Office of Natural Resources, Instructions and Examples of Fedwire Payments.

B2B Faster Payments - Obstacles to Overcome to Achieve Business Support

globe, are credit push payments. Examples of other credit push payments are ACH credits and Fedwire, as described above. Additionally, real-time payments as envisioned by the Federal Reserve's newly announced FedNow will be only credit push payments.¹⁹ For the purposes of this paper, faster payments and real-time payments are considered essentially the same as it relates to potential acceptance as replacements for paper check B2B payments. As credit push payments, real-time payments face the same obstacles as other existing credit push options and as described above for ACH credits and Fedwire and in the Exhibit at the end of this paper.

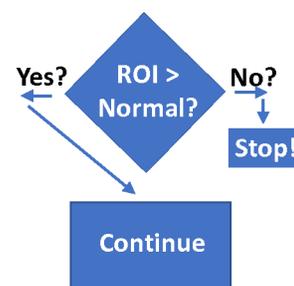
Will an Investment in Overhead Functions Produce a Positive ROI?

If B2B paper payments were replaced with electronic payments, there is a multi-billion-dollar potential, aggregate, annual savings for businesses. Therefore, it would appear the aggregate financial savings for businesses is enough to justify the transition. However, the potential savings for each individual business would need to offset the cost of the transition²⁰ for that business and the ensuing business disruption in order to create a positive ROI for each business.



Will the ROI Exceed the ROI from Normal Goods and Services?

This determination is simple once three elements are known: 1) the amount of the initial and ongoing investment that is required to make the transition, 2) the amount of expected savings from the transition and 3) the time it will take to fully implement with all trading partners for making and receiving payments. If the analysis using these elements results in a positive ROI, the investment is likely to be made.



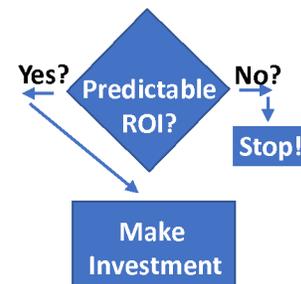
¹⁹ Docket No. OP-1670, Federal Reserve Actions to Support Interbank Settlement of Faster Payments.

²⁰ See Exhibit at the end of this paper.

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Can an ROI be Predictably Achieved?

If predictable, then businesses are likely to and should proceed with the investment. For publicly traded companies, if the ROI is expected to exceed the ROI from its normal goods and services, the business will likely make the investment. If achieving the ROI is unpredictable, it is less likely that businesses will proceed with the investment and especially in the presence of other investment alternatives with positive, predictable ROIs.



For a business to produce a positive ROI, it must make the investment and its trading partners must make similar investments in a similar time frame to eliminate all paper checks. The amount of the front-end investment will dictate the number of trading partners that are needed to create a positive return. The larger the investment, the larger the number of trading partners and the longer time requirement to break even.

The history of market acceptance failure may offer some insight into the likelihood that broad acceptance by businesses can be expected²¹. However, should limited acceptance be achieved, businesses that make the investment will do so with the expectation that only some of the potential savings will be achieved and that the new payments system will run in parallel with the traditional paper-based system. This is less than optimal.

In the choice between making an investment with an uncertain predictability of return and investing in normal goods and services with a predictable return, businesses are likely to stay the course and continue to primarily use checks for B2B payments. This is especially true in the absence of a requirement, such as a government mandate, to make the transition.

In the normal environment in which every business has its own, individual priorities and ROIs, it may be likely that the history of market failure of credit push payments for B2B

²¹ See footnote #3

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payments would be repeated and that a predictable ROI would not materialize for B2B payments. The uncertainty of a predictable return applies to all types of credit push payments; faster/real-time payments and FedNow payments.

If a predictable return cannot be achieved for B2B payments, and market adoption failure of credit push payments continues, another option is needed to replace the current paper-based originations.

Concluding Comments

Businesses will embrace faster payments for B2B payments if the major obstacles (the forest) can be overcome. Economics dictate that businesses will invest in overhead activities, such as payments, when either, 1) failure of the overhead function is preventing normal business activities or 2) there is a legal requirement for them to do so, or 3) the return on the investment in the overhead activity will yield a greater, predictable return than is expected from normal goods and services. In the current environment:

- The electronic check image system works well for businesses and supports normal business activities that create profits from goods and services therefore there is no problem to be fixed, and
- There is no legal requirement for businesses to transition from check payments to faster/ real-time payments.

Broad acceptance of faster payments and FedNow for B2B payments can be achieved if:

- Businesses can expect to achieve a ***predictable*** financial return from an investment in the transition from paper checks to electronic, credit push payments that equals or exceeds the return from the business' normal goods and services, and
- Credit push payments can overcome its history of market failure and gain acceptance by businesses.

The industry is working hard to find solutions for each of the many, individual obstacles

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(the trees) and even if those obstacles can be overcome, without a ***predictable*** return (the forest) faster payments may not replace the use of paper checks for B2B payments and especially those payments with large remittance data requirements.

Failure to overcome these obstacles will likely result in, 1) the continued use of the paper check as the payment of choice for B2B payments and/or 2) the partial adoption of faster payments for B2B payments which will require the maintenance of two parallel payment systems; the new faster payments system and the existing check system. For either of these results, businesses will continue to need a practical solution such as Electronically Created Items (ECIs)²² for B2B payments as a supplement to faster payments for other use cases.

²² For additional information about ECIs please visit <https://tillerendeavors.com/endeavors/>.

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Exhibit

Examples of actions required for every business to initiate faster payments are:

- Re-engineer its accounts payable system to initiate credit payments instead of/in addition to checks (debits)
- Modify its internal payment approval processes
- Re-engineer its payment tracking and reconciliation processes
- Re-engineer its fraud prevention, detection and resolution controls
- Reformat payment and related data into new standard formats, for example ISO 20022
- Create, maintain and monitor company directory profiles for every directory
- Implement network connection(s) with its financial institutions for payments and remittance data
- Implement network and software to support access to directories for beneficiary bank account information
- Implement application software to create real-time credit push payments
- Implement function to separate payment from remittance information
- Implement network interface and transmittal for remittance information directly through the payment system to the payment beneficiary
- Implement function to track any holdover payments not processed for any reason and design accounting entries to properly recognize the liability
- Implement function to verify bank/provider account balances in advance of initiating payment
- Requirements may vary when more than one provider is used

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Examples of actions required for every business to receive faster payments are:

- Implement software to receive payment receipt notification from bank/provider
- Implement software to receive remittance indirectly from payment party through the payment system
- Implement new functions to reconcile payments received with remittance information received
- Implement function to reject any payments received intended for other parties or payments not matching remittance information
- Implement function to verify bank account balances in advance of initiating a rejected payment to avoid overdrafting beneficiary's account
- Requirements may vary when more than one provider is used for receiving payments and for rejecting misdirected payments