To: Federal Reserve Financial Services

From BNY Mellon

Subject: Response to Payment System Improvement Public Consultation Paper

Date: December 13th, 2013

The Bank of New York Mellon welcomes the efforts of the Federal Reserve Financial Services group to seek comments from the many participants in the USD payments market in order to create a view of the future USD payments landscape. There has been much discussion lately on the future direction of payments, from the perspective not just of financial institutions, but from that of all stakeholders, and much discussion lately as well on the role that new technologies and new markets will play in payments. We believe also that this Public Consultation Paper is a good step toward ensuring that all interests are reviewed and so the resulting strategic view will be that much richer for having included a diverse population of topics and potential responders.

The following is BNY Mellon's response to the Questions for the Public contained in the Public Consultation Paper.

General

Q1. Are you in general agreement with the payment system gaps and opportunities identified above? Please explain, if desired.

i. What other gaps or opportunities not mentioned in the paper could be addressed to make improvements to the U.S. payment system?

In general, we agree with the gaps/opportunities laid out in the Public Consultation Paper. It is our view that they are all appropriate statements for a strategic review of this magnitude. However, it may be that not every one of these may be attainable, nor may it be that every one of these may need to be directly addressed.

We intend to reply to each of these gaps/opportunities throughout our response. Nevertheless, one example of a gap that may not need to be addressed is that of checks. Checks continue to exist not because they are a vestigial payment mechanism, but because they serve a purpose and a need that other payment mechanisms do not. Although it is possible that in the future other mechanisms will supersede checks, this will happen not when other payment media attain the same functionality of checks, but rather when they attain the same advantages of checks: that is, those advantages of control, immediacy and universal acceptance. And even then, there are sure to be certain large groups of check users who will be very unlikely to do without checks voluntarily. It may simply not be worth the effort to eliminate their ability to use checks as payments.

Q2. Are you in general agreement with the desired outcomes for payment system improvements over the next 10 years? Please explain, if desired.
i. What other outcomes should be pursued?

In general, we applaud the aspirational nature of these desired outcomes. We believe it to be a critical first step in the formation of a long-term strategy. We intend to address these desired outcomes in our detailed responses throughout the document.

However, we have particular concerns with desired outcome 2:

> A ubiquitous electronic solution(s) for making retail payments exists that does not require the sender to know the bank account number of the recipient. Confirmation of good funds will be made at the initiation of the payment. The sender and receiver will receive timely notification that the payment has been made. Funds will be debited from the payer and made available in near real time to the payee.

It is difficult to envision this desired outcome becoming reality without it implying that there be a massive central repository or repositories of information that contain a "golden source" of all the parties in a payment chain. This could create coordination difficulties and administrative difficulties with both those tasked with maintaining and running this central repository (presumably the Federal Reserve Bank and also Interbank Payment System Providers) and those institutions who provide information to them (presumably the institutional parties to the payments). It may be that this potential solution, when all of the information gathering and maintenance responsibilities are totaled and assessed, is larger in scope than the situation it wishes to ameliorate.

Q3. In what ways should the Federal Reserve Banks help improve the payment system as an operator, leader, and/or catalyst?

It is our opinion that the Federal Reserve Bank, in partnership with the various Interbank Payment System Providers, provides an adequate and necessary role to both the maintenance and administration of the current USD payments environment and also the development of changes to that environment.

However, in recent years there has been a growing trend towards more involved regulations that add considerable cost both to the development of solutions and the day-to-day maintenance of those solutions. Although we agree with the need for necessary legislation, it would serve the Payments Industry as a whole if the Federal Reserve Bank (and its Interbank Payment System Providers) were to develop centralized solutions for future regulations, even to the point of ensuring that design of those systems are included during the public comment phase of the refinement of those regulations, if not even sooner in the process.

Ubiquitous near-real-time payments

Q4. In discussions with industry participants, some have stated that implementing a system for near-real-time payments with the features described in the second desired outcome (ubiquitous participation; sender doesn't need to know the bank account number of the recipient; confirmation of good funds is made at the initiation of the payment; sender and receiver receive timely notification that the payment has been made; funds debited from the payer and made available in near real time to the payee) will require coordinated action by a public authority or industry group. Others have stated that current payment services are evolving toward this outcome and no special action by a public authority or industry group is required.
i. Which of these perspectives is more accurate, and why?
ii. What other perspective(s) should be considered?
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In general, we do not believe that meeting all of the above should be a requirement of the future state of the USD payments space. However, should those requirements become part of the strategic vision of the Federal Reserve, then:

We do not think that the ability to have a publicly accessible (i.e., not closed) network where client balances are immediately queryable, where identifying information is masked, where end-to-end acknowledgement of the completion of a payment is immediately available in real time, where settlement is real-time and at the same time regulatory screening and review of payment patterns is still feasible, can be accomplished at the private level.

Instead, were it possible, we believe it would require a central repository. This central repository would contain highly personal data. The safeguarding of this personal data would have to be performed by a central party or parties. The logical central party for information of this sensitivity would be the Federal Reserve Bank, with a very secure means of sharing with the Interbank Payment System Providers.

However, even if this were feasible, it would put an entire industry's information in one place. Were a breach of that security to occur, however unlikely that may be, then the ramifications of that breach would be on a scale far outstripping that of a similar breach at any one participating institution.

5*. The second desired outcome articulates features that are desirable for a near-real-time payments system. They include:*

a. Ubiquitous participation
b. Sender doesn't need to know the bank account number of the recipient
c. Confirmation of good funds is made at the initiation of the payment
d. Sender and receiver receive timely notification that the payment has been made
e. Funds debited from the payer and made available in near-real time to the payee

i. Do you agree that these are important features of a U.S. near-real-time system? Please explain, if desired.
ii. What other characteristics or features are important for a U.S. near-real-time system?

For further information on the above please see our response to question 4. However, there are certain elements of these five features that may be both more desirable and realistic in light of both the regulatory landscape and a reasonable expectation of the ability of the current payments participants to invest in new technologies.

a. Ubiquitous participation—There should be no reason that an individual or other entity cannot make an electronic payment, provided that they first meet the regulatory requirements for doing so.
b. It is understandable how a person or entity may be reluctant to provide personal information to another person, even in order to receive a payment. If there is a large demand for such a service, then that demand could be met by an agreement between that individual and the institution that is receiving the payment on their behalf. Provided there are no regulatory reasons why an institution cannot offer a masking service, then the need could be met at that level. However, it is important to point out that payments are being made successfully, now, with disclosure of account numbers.
c. Given the distributed nature of the system architecture of many USD payments participants (including upstream and downstream applications), we do not think that this is a fully realizable requirement, and may actually create a negative effect by creating an entry barrier to smaller participants .
d. We consider this feature to be realizable. We have this view because it is easier, and safer, to increase the speed of information associated with payments once they are settled than it is to increase the speed of settlement of these same payments.
e. As with c., above, given the distributed nature of the system architecture of many USD payments participants, we do not think that this is a fully realizable requirement, and may actually create a negative effect by creating an entry barrier to smaller participants.

Q6. Near-real-time payments with the features described in the second desired outcome could be provided several different ways, including but not limited to:
a. Creating a separate wire transfer-like system for near-real-time payments that leverages the relevant processes, features, and infrastructure already established for existing wire transfer systems. This option may require a new front-end mechanism or new rules that would provide near-real-time confirmation of good funds and timely notification of payments to end users and their financial institutions.
b. Linking together existing limited-participation networks so that a sender in one network could make a payment to a receiver in another network seamlessly. This option may require common standards and rules and a centralized directory for routing payments across networks.

c. Modifying the ACH to speed up settlement. This option may require a new front-end mechanism or new network rules that would provide near-real-time confirmation of good funds and timely notification of payments to end users and their financial institutions. Payments would be settled periodically during the day.
d. Enhancing the debit card networks to enable ubiquitous near-real-time payments.
e. Implementing an entirely new payment system with the features described in the second desired outcome above.

i. What would be the most effective way for the U.S. payment system to deliver ubiquitous near-real-time payments, including options that are not listed above?
ii. What are the likely pros and cons or costs and benefits of each option? What rule or regulation changes are needed to implement faster payments within existing payment processing channels?
iii. Is it sufficient for a solution to be limited to near-real-time authorization and confirmation that good funds are on their way, or must end-user funds availability and/or interbank settlement take place in near-real time as well?
iv. Which payment scenarios are most and least suitable for near real-time payments? (B2B, P2P, P2B, POS, etc.)
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Of the many different scenarios, described above, "B *Linking together existing limited-participation networks..."* seems to be the most viable. There is an element of this already in the USD payment industry, in the linkages between checks and ACH. We believe that more of this would benefit the payment industry. For instance, we think there may be a need for this in contingency-style situations, such as failed payroll payments, where the smooth transition from ACH to funds transfer would greatly aid a corporation's ability to make their payroll in a timely manner.

Further, this proposed linking together of existing payment networks would be greatly facilitated by a common format. (Our answer to question 15 explores this further.).

However, we feel that it is important to keep in mind that, when discussing the topic of near-real time payments, the primary responsibility of a participant in USD payments is to ensure that a payment is made correctly, safely and in accordance with regulations. Because this is the primary responsibility, all other considerations must, by definition, be secondary to this. In this respect, speed of settlement, and also speed of acknowledgment of the completion of a payment to each entity in a particular payment can only be increased in a completely safe environment.

Increasing the speed of settlement carries with it certain risks which ought to be addressed in any future strategic view of payments. For instance, the speed of a payment cannot outpace an institution's ability to review the payment for anti-fraud purposes if that review is performed in order to intercept the payment before either settlement or availability. The same holds true for regulatory screening.

However, once a payment is settled and available, then it is safe to assume that the participant in USD payments that was responsible for the payment is satisfied with those fraud and regulatory checks. At this point, the delivery of notice to a client or consumer becomes a question of information distribution. That is, it has been proven in other industries—and it is translatable to this one, provided that safeguards for identity and other protections are in place—that information can be delivered very rapidly indeed. We would expect that participants in the payments space would compete for the business of those clients to whom that was a priority by providing faster and faster means of notification of activity on their accounts.

7. Some industry participants have said that efforts to make check payments easier to use, such as by enabling fully electronic payment orders and/or by speeding up electronic check return information, will incrementally benefit the payment system. Others argue the resources needed to implement these efforts will delay a shift to near-real-time payments, which will ultimately be more beneficial to the payment system. Which of these perspectives do you agree with, and why?

Although BNY Mellon does not have a very large personal checking franchise, we do have a significant presence in checks in general. It has been our experience that checks exist on paper only until such time as that piece of paper reaches a payment aggregator. At this point, the payment is made electronic and therefore subject to information flows of an electronic nature.

As we stated before, there are several aspects to checks that users consider beneficial and would like to retain. Further, there are certain clients that prefer checks to the point of exclusion. Accordingly, it may not be worth the time and cost of a sustained effort to eliminate checks.

Q8. How will near-real-time payments affect fraud issues that exist with today's payment systems, if at all?
i. Will near-real-time payments create new fraud risks? If yes, please elaborate on those risks.

As stated above, many, if not most, institutions have pre-settlement and pre-availability anti-fraud systems in place, at least for some of the payment media they service. Quite often, these systems require the judgment of an individual or individuals for certain transactions. When at the point of individual review, these systems are no longer automated for those payments in question. Should the settlement and availability of payments outpace these anti-fraud systems, then it is possible that more fraudulent payments could slip through than currently do. This could lead to an increase in fraud.

Currently, the emphasis in the payments systems is on security and accuracy. Should a change take place and the priority be given to timing rather than security, then there could be a negative impact to entities and individual people's confidence in the banking and payments

industry. Were this to happen, the ramifications would be greater than that of slower payments.

Q9. To what extent would a ubiquitous near-real-time system bring about pivotal change to mobile payments?

Not answered.

Q10. What would be the implication if the industry and/or the Federal Reserve Banks do not take any action to implement faster payments?
i. What is the cost, including the opportunity cost, of not implementing faster payments in the United States?

BNY Mellon believes that the USD payment industry should take steps towards improvement in the context of an over-arching strategy. However, should steps for a coordinated strategy not be taken by the Federal Reserve Bank and Interbank Payment System Providers, then we would expect that private payment providers and networks would step in to fill this role.

These private networks, though innovative, are currently not subject to the same privacy and other regulations that financial institutions are. They may also be lacking the regulatory oversight and experience that financial institutions have and are subject to. Therefore, consumers may be provided with an experience different from, and potentially worse than, that provided by financial institutions.

Q11. To what extent will the industry need to modernize core processing and other backend systems to support near-real-time payments?
i. What is the likely timeframe for any such modernization?

The need to modernize depends on the IT capabilities of each individual participant in the USD payment industry. Also, in addition to changes to the participants' systems many systems upstream and downstream would also need to be modernized. As such, it is difficult to deal in specifics for this question.

However, it is safe to say that most participating institutions will require changes of some kind, with many needing major changes. These changes require a very high level of accuracy, dependability, security and robustness not found in many other industries. Therefore, seemingly small changes may take a significant amount of time, and larger changes more so. So too, seemingly small changes may be quite costly, and significant changes costlier still. It is prudent business practice that an organization which makes an investment of this scale, over this period of time, has an expectation of a subsequent return on investment.

Q12. Some industry participants suggest that a new, centralized directory containing account numbers and routing information for businesses and/or consumers, to which every bank and

other service providers are linked, will enable more electronic payments. A sender using this directory would not need to know the account or routing information of the receiver.
i. What are the merits and drawbacks of this suggestion?
ii. What is the feasibility of this suggestion?

As stated in our previous responses, BNY Mellon does not believe that a directory of such magnitude is necessary, nor desirable, to the future of USD payments. Further, the risks, however remote, of a breach to security would have ramifications that could potentially impact every financial institution, and their clients, in the United States.

Additionally, the administrative efforts necessary to provide upkeep for this directory could become very burdensome to its participants.

Electronification

Q13. Some industry participants say that check use is an enduring part of the U.S. payment system and that moving away from checks more aggressively would be too disruptive for certain end users.
i. Is accelerated migration from checks to electronic payment methods a high-priority desired outcome for the U.S. payment system? (Accelerated means faster than the current trend of gradual migration.)
ii. Please explain, if desired.
iii. If yes, should the Federal Reserve Banks establish a target for the percent of noncash payments to be initiated via electronic means, by a specific date? For example: "By the year 2018, 95% of all noncash payments will be made via electronic means."
iv. What is the appropriate target level and date?
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It is unlikely that paper checks will be eliminated over the next ten years. As indicated in the question above, moving away from checks would be disruptive for certain end users. Additionally, many corporate clients enjoy the use of checks, and the perceived greater control they have in managing their liquidity.

However, the recent efforts to truncate checks has been successful and has, on balance, led to an overall benefit in the check payments industry. Image reconcilement is an established practice; checks are now only paper until such time as a check aggregating entity receives them—at which time they are made electronic. This in turn, leads to a more seamless outsourcing of these services by businesses that do not see check processing as a core business, but rather as merely one step among many in their business model.

Q14. Business-to-business payments have remained largely paper-based due to difficulties with handling remittance information. Consumer bill payments also are heavily paper-based due to

the lack of comfort some consumers have with electronic alternatives. In addition, many small businesses have not adopted ACH for recurring payments due to technical challenges and/or cost constraints. The payment industry has multiple efforts underway to address these issues.
i. To what extent are these efforts resulting in migration from checks to other payment types?
ii. What other barriers need to be addressed to accelerate migration of these payments?
iii. What other tactics, including incentives, will effectively persuade businesses and consumers to migrate to electronic payments?
iv. Which industry bodies should be responsible for developing and/or implementing these tactics?

As stated above, we would suggest that the Federal Reserve Bank continue its efforts to make checks electronic. We believe it is an overall benefit to the USD Payment industry. However, we do not believe that, given the perceived advantages of checks by its users, that checks can be eliminated in the time frame of this document.
There are two items of continuing interest to us on this point. The first is the ongoing support of the EPO (Electronic Payment Order) process. The second is the electronification of check returns. Currently many businesses have reported to us that it can be difficult to reconcile a check that has been settled via check systems but returned via ACH. The FRB may wish to continue to focus on this matter.

Cross-border payments

From a strategic point of view, given the specific challenges of cross-border payments, we would encourage the Federal Reserve Payment Services group to create a subcommittee specifically dedicated to reviewing a strategy for cross-border payments. The two questions stated below, although important, can be broadened into many different sub-topics. For instance, we think that the Federal Reserve Payment Services group ought to consider what effect, if any, convergence of payment types will have on the future state of cross border payments.

Q15. To what extent would the broader adoption of the XML-based ISO 20022 payment message standards in the United States facilitate electronification of business payments and/or cross-border payments? 12 For information on ISO 20022, see, for example, http://www.iso20022.org/faq.page.

BNY Mellon believes that the future adoption of a near-universal format would be of unquestionable benefit to cross border payments. The format would need to contain sufficient information, versatility and expandability, and most importantly, be very widely embraced.

The current format that most fits the above criteria, in our opinion, is ISO 20022. Given its embrace by the EU, Japan, Canada, Switzerland, Australia, etc., ISO 20022 seems to be the

format that should be reviewed first by the Federal Reserve Bank and also the Inter-Bank Payment system providers. We would suggest that the Federal Reserve Payment Services group ensure that they review this payment format when considering future formats.

Q16. What strategies and tactics do you think will help move the industry toward desired outcome four - consumers and businesses have greater choice in making convenient, cost-effective, and timely cross-border payments?

Lacking jurisdiction over payment systems managed by other countries, the Federal Reserve Bank will not be able to mandate requirements for those other payment systems. However, many forums and venues exist for the airing of views on payment concerns and strategies. The Federal Reserve Bank knows this well, and does a very good job of representing these views, and of eliciting the views of US-based participants in those venues and forums.

Safety
Q17. Payment security encompasses a broad range of issues including authentication of the parties involved in the transaction, the security of payment databases, the security of software and devices used by end users to access payment systems, and security of the infrastructure carrying payment messages.
i. Among the issues listed above, or others, what are the key threats to payment system security today and in the future?
ii. Which of these threats are not adequately being addressed?
iii. What operational or technology changes could be implemented to further mitigate cyber threats?

The threats that impact the payments industry include fraud, cyber and natural disaster. Each of these has a negative impact to the payment system. Fraud can be managed through an effective system of controls. Natural disaster impacts can be mitigated with well tested disaster recovery and business continuity processes and procedures. Cyber threats are continuously evolving and therefore should be addressed through ongoing review and monitoring, including through the implementation of system patches, perimeter and other threat mitigating controls such as Cyber Table Top exercises as well as consideration stronger newly-developed encryption methodologies

Q18. What type of information on threat awareness and incident response activities would be useful for the industry?
i. How should this information be made available?

There is an organization that currently provides information to its members which is the FS-ISAC or Financial Services Information Sharing and Analysis Center. This organization provides detailed analysis of cyber threats made against other institutions and businesses. What can be

improved is information from law enforcement partners such as the Secret Service and FBI. Both of these government organizations investigate cyber threats, however, the dissemination of this information in a timely fashion to the businesses at risk from these threats may not always be conducted in the most efficient or expedient manner. Information regarding cyber threats should be securely communicated to the institutions so that proper controls can be developed and to allow for assessments of systems to ensure potentially.

Q19. What future payment standards would materially improve payment security?
i. What are the obstacles to the adoption of security-related payment standards?
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Standardization typically improves a process. The obstacle that stands in the way of standardization is adoption across the globe. Regardless of the standard that is going to be used, it needs to be thoroughly security tested prior to implementation. This can include, but is not limited to, infrastructure reviews, source code review, ethical hacks, vulnerability scans, strong encryption and multi-factor authentication.

Q20. What collaborative actions should the Federal Reserve Banks take with the industry to promote the security of the payment system from end to end?

The Federal Reserve may wish to consider collaboration with industry security experts to discuss thoughts and ideas in improving end-to-end security. There are very effective security resources working across the industry that have ideas and improvements that can be shared. For example, the FS-ISAC has a Payments Risk Council and information can be shared in these forums.

Q21. Please share any additional perspectives on U.S. payment system improvements.