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## General

1. Are you in general agreement with the payment system gaps and opportunities identified in the "Payment System Improvement Public Consultation Paper"? Please explain, if desired.

**Yes.**

1i. What other gaps or opportunities not mentioned in the paper could be addressed to make improvements to the U.S. payment system?

2. Are you in general agreement with the desired outcomes for payment system improvements over the next 10 years? Please explain, if desired.

**Yes.**

2i. What other outcomes should be pursued?

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

**I think the need to hold down transaction cost requires the Fed to be the operator.**

## Ubiquitous near-real-time payments

4. 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.

4i. Which of these perspectives is more accurate, and why?

**Something like Paypal may meet many of the criteria, but there are problems. First, it's expensive in comparison to paper checks. Second, having the core payment method operating outside the conventional regulatory framework is extremely risky.**

4ii. What other perspective(s) should be considered?

**If the provider is an entity other than the Fed, and entirely new regulatory regime would need to be devised for it.**

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

5i. Do you agree that these are important features of a U.S. near real-time system? Please explain, if desired.

**Yes.**

5ii. What other characteristics or features are important for a U.S. near real-time system?

**Prescheduled transactions.**

6. 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.

6i. 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?

**I prefer using ACH as the backbone solution. I'm not 100% convinced of real time, as opposed to overnight settlement.**

6ii. 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?

**Any real time settlement system would require expensive changes at all participating banks. There would need to be a regulation to compel participation. There need to be regulations regarding how fraud will be handled, and which limit customer liability     for errors.**

6iii. 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?

**If settlement is more frequent than daily, then it should be real time. Making multiple settlements doesn't really accomplish much.**

6iv. Which payment scenarios are most and least suitable for near real-time payments? (B2B, P2P, P2B, POS, etc.)

**For near real time, B2B, P2P, P2B are ok. But POS requires real time.**

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?

I think that changes to check processing have nothing to do with a real time payment system.

8. How will near-real-time payments affect fraud issues that exist with today's payment systems, if at all?

It will be much worse. A paper check provides some evidence of authenticity. An electronic transaction can be undetectable. To prevent fraud, the most effective technique may be transaction profiling...comparing the transaction to the customer's habits    and history. Where does this function go? It would almost certainly have to be performed by the customer's bank. The system should support use of dynamic keys and one time passcodes. Authentication should be at least an order of magnitude stronger than it    is with any current payment system.

8i. Will near-real-time payments create new fraud risks? If yes, please elaborate on those risks.

Yes.  The payment system would need to be entered from a computer. This exposes the system to viruses, keyloggers and trojans, none of which are a problem with paper checks. There's a not-inconsequential question of who will pay for computer fraud.

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

10. What would be the implication if the industry and/or the Federal Reserve Banks do not take any action to implement faster payments?

Eventually this will be done by private parties. What if Paypal became the primary payment mechanism? What would the cost be? What level of regulation would apply? Can they be compelled to provide services to all? What would happen if China's Union Pay    was the solution? I think that core payment mechanisms are so critical to the nation's economy that they have to be managed domestically, with the same care as currency.

10i. What is the cost, including the opportunity cost, of not implementing faster payments in the United States?

11. To what extent will the industry need to modernize core processing and other backend systems to support near-real-time payments?

11i. What is the likely timeframe for any such modernization?

12. 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.

12i. What are the merits and drawbacks of this suggestion?
Just imagine what would happen if that database was compromised.

12ii. What is the feasibility of this suggestion?
A compendium of all financial account numbers would be impossibly large and dynamic. And if foreign transactions are to be accommodated, it would be even larger.

## Electronification

13. 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.

13i. 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.) Please explain, if desired.

**No. Checks and electronic payments are distinct products, even if the backbone network is the same.**

13ii. 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." If Yes, what is the appropriate target lever and date?

**No**

14. 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.

14i. To what extent are these efforts resulting in migration from checks to other payment types?

14ii. What other barriers need to be addressed to accelerate migration of these payments?

14iii. What other tactics, including incentives, will effectively persuade businesses and consumers to migrate to electronic payments?

14iv. Which industry bodies should be responsible for developing and/or implementing these tactics?

## Cross-border Payments

15. 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?

16. 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?

## Safety

17. 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.

17i. Among the issues listed above, or others, what are the key threats to payment system security today and in the future?

17ii. Which of these threats are not adequately being addressed?

17iii. What operational or technology changes could be implemented to further mitigate cyber threats?

First of all, the assumption that cyber threats are purely technological is dangerous. Data theft can be efficiently accomplished with old fashioned methods, like compromising people. To defend, the first step is that settlement information needs to be    at least one degree removed from the actual account numbers. But more important, the customer's online settlement data should never be the same across transactions. The biggest flaw in our current transaction systems is that card numbers, expiration dates,    and CVV's are fixed numbers. Settlement instructions should be randomly generated for each transaction, and the matching systems which mate these instructions to actual accounts should never execute in a web-facing server.

18. What type of information on threat awareness and incident response activities would be useful for the industry?

18i. How should this information be made available?

19. What future payment standards would materially improve payment security?

19i. What are the obstacles to the adoption of security-related payment standards?

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

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