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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?

**The current list overlooks and potentially underestimates the magnitude of impact of three material gaps: (i) What it might take for all of the various end-points within the payments ecosystem to give up middle ground in an effort to foster a ubiquitous payment infrastructure. It will require all end-points within the payment eco-system to work together toward achieving the common goal for the Federal Reserve's vision to be realized. (ii)The cost of investment in systems changes, potential expenses associated with re-tooling end-points for payment acceptance, and additional overhead expenses that might be required at various end-points in the payment ecosystem to manage participation in an ubiquitous near-real-time payments system; ensuring there are benefits for all end-points in doing so. (iii)How an increased regulation of each individual component of the payments eco-system might currently appear to be working against realizing a ubiquitous near-real-time payments infrastructure for the United States.**

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

**Yes. Generally, yes as long as it's done in a manner that allows current and new payment methods and networks to participate, provides a return for all end-points in the payments eco-system, fairly distributes risk and cost across all end-points, and doesn't intentionally or unintentionally nationalize how payments move within the United States.**

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?

**As a leader and/or catalyst, it's important for the Federal Reserve to define their role after acknowledging a few important points: (i) There are already a large number of global, national, regional, and niche payment methods and network options available for all end-points within the payments ecosystem. (ii) These payment methods and network options by design look and feel**

different from one another, serve different speed, authentication and risk needs within the payments eco-system and collectively work together to provide choices for the consumer. (iii) Taking any combination of steps that might intentionally or unintentionally nationalize how payments move within the United States might stifle innovation and destroy an [payments] industry that is already challenged with continued regulation and restrictions. Having said that, however there's an opportunity for the Federal Reserve to play the role of a leader and/or catalyst by: (i) Serving as a trusted advisor and conduit for each end-point within the payments eco-system to work together to achieve the objective of an ubiquitous near-real-time payment system while finding middle ground when compromise is needed across end-points. (ii) Working with regulators and other governing bodies to ensure on-going efforts to regulate financial services aren't done in a silo from the plan to create ubiquitous near-real-time payments within the United States Also, as an operator of various payment and settlement functions within the banking system already, the Federal Reserve can best help improve the payments system by enabling the movement and management of payments through their respective systems already under management of the Federal Reserve in a more 24/7 environment rather than the current five (5) day banking model.

#### **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?

**It's possible that without coordinated action from a public authority or industry group that the payments ecosystem would naturally evolve to closely resemble an ubiquitous near-real-time payments infrastructure. Based on the amount of change, opportunity and innovation that is being attempted in the payments industry, as well as on-going differences between payments ecosystem end-points objectives, this approach might take a long to achieve, and there's a chance participation may not be consistent across all end-points. While intervention by others isn't always the preferred approach, coordinated action from a public authority, without creating unnecessary regulation or bureaucracy, or industry group that fairly represents the interests of all end-points within the payments ecosystem focused on establishing standards and initiatives that would eventually be deployed across the payments ecosystem might help realize an ubiquitous near-real-time experience in a more consistent and timely manner.**

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

**Directly coordinating with the existing card brands, debit and credit networks, ATM, ACH, other applicable payment networks and allow those entities to represent the various end-points of the payment system that plug into their component(s) of the payment ecosystem and allowing those entities to manage deployments of standards and initiatives to achieve an ubiquitous near-real-time payments infrastructure.**

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.

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

**Yes. Regarding item (b), the data used in lieu of a bank account number would need to be something universally available to the various payment networks and/or providers. It has to be secure enough to ensure verification of identity to ensure the risk of fraudulent transferring funds is mitigated, but not be so secure that were providing so much sensitive information to 3rd parties that don't already have access to the information (i.e., requiring a social security number instead of a bank account number, etc.). Fraud management and consumer dispute policies and processes that make sense for the end user and each participant in the eco-system that are aligned regardless of which network or transaction type a payment is processed. The fraud liability should be aligned with the party that allowed the fraudulent transaction to occur within the near-real-time system. Additionally, there needs to be a recognition that there are costs and investments involved with operating an efficient payments infrastructure and the parties involved do take on a level of risk in providing these services.**

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?

**Option b would give the consumer choice which is an important principle and it makes the most sense since the payments ecosystem is already made up of mature payment networks. While each may look and feel different from a cost, revenue, speed and processing perspective today, each serves a unique marketplace need that exists today that will continue to exist tomorrow, even with an emphasis on a near-real-time payment experience. The cost to duplicate various capabilities across each different type of network may not make sense when efforts can be focused on developing an interface that connects the participating networks and provides a more consistent and near-real-time payment experience across networks that already exists today.**

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?

**Option A: Pros: One new network could help ensure consistency in the product offering for the end user and each participating end-point in the payment ecosystem. Cons: Cost to develop, implement and make accessible to the general public could make adoption of ecosystem end-points a challenge and materially impact acceptance. This approach may be misinterpreted as nationalizing payments processing by requiring one Federal Reserve owned network to deliver near-real-time payments for the United States and negatively impact the health and viability of existing industries as well as stifle innovation from new providers. This option also disregards investments that have been made in the infrastructure. Option B: Pros: Utilizes existing payment network options and provides opportunities to engage mature payment networks/options to improve the payment experience. Not reinventing the wheel and reducing potential cost of providing a near-real-time solution for the United States. Since each network/payment type has a different flavor, this method could also be used to offer the consumer different payment options of varying cost and speed, but still delivering on the promise of near-real-time payments with each participant adjusting systems and processes. This approach could also ensure millions of acceptance points due to the use of existing networks (merchants/POS, ATMs, branches, remotely via online and mobile devices, etc.). The potential limited impact on back office processing if you're unlocking the potential of existing networks and processes that institutions already administer to deliver a near-real-time payments experience. Cons: The effort and cooperation needed by each participant to align its policies and processes for some**

level of consistency is unknown. Option C: Pros: One new network could help ensure consistency in the product offering for the end user and each participating end-point in the payment ecosystem. Cons: ACH is a batch processing network and works well, serves a purpose and has the capability of offering same day if not real time “ which in many instances is all that is necessary. The impact on payment ecosystem endpoints for increased frequency of back-end processing could be a barrier in this channel. This approach may be misinterpreted as nationalizing payments processing by requiring payments to be routed through one network option to deliver near-real-time payments for the United States and negatively impact health and viability of existing industries, networks, as well as prevent innovation from new providers. Option D: Pros: One new network could help ensure consistency in the product offering for the end user and each participating end-point in the payment ecosystem. Debit networks are already based on real-time authorization processes and offer robust fraud detection infrastructures. Cons: Would limit transaction routing over card base networks, and potentially reduce opportunities to provide access for consumers using non-card technologies. Current regulation might make this option prohibitive since it requires the presence of multiple, competing networks. Option E: Pros: One new network could help ensure consistency in the product offering for the end user and each participating end-point in the payment ecosystem. Cons: The cost to develop, implement and make accessible to the general public could make adoption of ecosystem end-points a challenge and materially impact acceptance. This approach may be misinterpreted as nationalizing payments processing by requiring one Federal Reserve owned network to deliver near-real-time payments for the United States and negatively impact health and viability of existing industries as well as prevent innovation from new providers.

6iia. What rule or regulation changes are needed to implement faster payments within existing payment processing channels?

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?

**Its sufficient for near-real-time authorization and confirmation of good funds with messages transmitted across networks to show near-real-time debiting and crediting of balances, with the actual settlement of funds occurring overnight (like card processing, ACH processing, etc.) on the condition that overnight settlement networks are available to settle funds seven (7) days a week.**

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

**POS is most suitable based on transaction volumes with consumers understanding that it is generally a real-time transaction since the infrastructure used for point of sale transactions are real-time authorization based already. For P2P, the experience is mixed depending on the network or payment rail used with some offerings riding POS or card payment rails, and all others processed over the current ACH rails with business day delays. A near-real-time payments experience would realize the most consumer benefit by focusing on POS, P2P, P2B, and then B2B.**

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?

**Checks haven't already disappeared for a reason. They still play a viable role; albeit at a shrinking rate of about 2% a year, in the mix of a diversified and mature payments ecosystem in the United States and globally. Offering consumers a variety of options under branding of a near-real-time payment offering is important. Checks could continue to be a network processing option under the Federal Reserve's plan if check 21 processes are improved and made faster (increased electrification of what was traditionally once a paper item), including real-time registration once a paper item has been converted into an electronic item (i.e., mobile deposit capture from a consumer, etc.).**

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

**Generally speaking the faster a payment, the more risk exists unless there is the ability to identify a payment that is fraudulent and prevent or stop the transaction from completing.**

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

**Yes. POS and card networks have managed this risk by deploying real-time risk scoring and neuro-networks that monitor fraudulent activity. This real-time monitoring capability has managed the risk of this real-time payment option and would need to be made available for any/all network participants in near-real-time payment infrastructure. ACH and/or checks converting from batch to near-real-time might see the greatest changes in fraud and risk. Wires are a smaller volume transaction type and due to risk require significant manual back-office processing and verification. Automation would be required for wires to be a viable network option under near-real-time payments but doing so will increase the risk of an already higher risk transaction type. All fraud loss and consumer dispute policies of participating networks would need to be aligned to ensure risk isn't solely left with any one end-point within the payment ecosystem. In most cases today, risk is aligned with the financial institution and not the network or always the end-point that accepted the transaction.**

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

**The only way a ubiquitous near-real-time system could bring pivotal change to mobile payments is if in the process of developing a near-real-time system, it helps the industry decide on a standard form of acceptance for a mobile payment at POS (either NFC/EMV, or iBeacon utilizing low energy Bluetooth frequencies, or more standard QR codes for accepting a payment, etc.) and is deployed enabling mass adoption of this acceptance standard. Otherwise, a near-real-time system may risk**

contributing to the continued fragmentation of the payments industry with another offering that will compete for critical mass.

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

**The United States may face challenges participating in cross-border payments if faster and different payment standards are adopted by other countries as standards.**

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?

**The extent of core processing and other backend system modernization would truly be dependent on which option(s) are pursued to achieve a near-real-time payment system. The creation of a completely new network requiring endpoints within the payments ecosystem might require the greatest level of modernization, as new systems, processes and controls would have to be adopted; whereas an interface that connects to all the current payment methods (with improvements to each of them to provide different flavors of near-real-time payments) may have the least modernization effort for a financial institution as each of the payment rails are already connected to a certain extent. The magnitude of improvements to each individual payment rail would require some modernization of existing processes and functions.**

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?

**We believe the drawbacks outweigh the merits. Drawbacks would include maintaining data integrity, speed of which records are updated, security requirements behind data transmission to ensure consumer data remains secured, the risk of compromise and unauthorized access and subsequent use of data associated with the majority of account-based consumer data being stored centrally in one location beyond the control of the institution which generates the account number and is generally liable for losses associated with unauthorized use.**

12ii. What is the feasibility of this suggestion?

**It's more feasible to find a way for individual data sources to verify information across existing payment rails or network connections with a central application/user interface serving up to the**

**consumer various options and costs for near-real-time payment methods available for their particular transaction.**

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.

**Yes. Moving check-based transactions to a debit card transactions at POS instead of writing a check for a retail purchase is a desirable outcome. However, most checks presented for retail POS transactions are converted to ACH transactions anyway, and other paper check transactions are settled electronically through Check 21 standards. Just like cash, checks will be around for an extended period of time and serve a purpose in a diversified payment ecosystem that offers a variety of payment processing options, speeds, consumer benefit, cost, and in some cases revenue opportunities. A case in point is the line in the sand the United Kingdom drew for use of paper checks throughout their national payment ecosystem. This lasted for just a year or two, but was later retracted indicating checks albeit paper in origination with electronic processing still serve a relevant payment function in an electronic payments world. Outside of checks presented for retail POS transactions, perhaps the focus should be finding a near-real-time method of presenting the electronic version of a check once processed for payment through speeding up and/or reengineering current Check 21 processes and reducing the duplicate transmission of the same item.**

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?

**Each year check volumes continue to decrease at a rate of 2%. We have seen many of our members move to electronic payments. Not as familiar with business to business remittances.**

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?

**Any combination of current payment networks and their payment associations that represent the best interests of each stakeholder within the payments ecosystem**

### **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 electrification 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?

**The security of payment databases and storage of payment credentials that can be used in a variety of payment mediums for unauthorized transactions, and the security of software and devices that facilitate any component of accepting or processing a transaction. If a central depository of payment information is considered, ID theft might be of a higher risk due to the central location and ease of access of data networks, hardware and software.**

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

**The security of payment databases and storage of payment credentials that can be used in a variety of payment mediums for unauthorized transactions, and the security of software and devices that facilitate any component of accepting or processing a transaction.**

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

**We are not sure you can completely eliminate the risk of cyber attacks, but limiting access to sensitive data and not storing sensitive data centrally that could be used to identify a person or used for ID theft purposes would be a good start. When sensitive information does need to be shared, tokenization of data used to authorize or authenticate a person or transaction instead of sending an account or card number (i.e., send a data token instead of the real account number) that is dynamic and only good for one authorization/authentication would limit the value of data if acquired in an unauthorized fashion. A combination of a lack of personally identifiable information (i.e., SSN, name,**

**address, etc.) and a data token that is dynamic and only good for one authentication or transaction might be the safest approach.**

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?

Data security and payment authentication methods that devalue payments data that has been accessed and acquired in an unauthorized manner. Specifically, focusing on security standards for POS terminal and any endpoint where a transaction is originated (i.e., mobile, etc.).

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

**Cost of scope of effort needed to achieve initial compliance and maintain compliance as the security landscape continues to evolve. Ensuring close to 100% adoption of whichever standards by all endpoints within the payments ecosystem.**

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.