

Name: Gregory Berkholtz
Organization: TOCICI LLC
Industry Segment: Technology Solution Provider/Processor

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. Check writing persists because checks have attributes not otherwise widely adopted, and that are not conducive to rapid payment goals.

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

Decentralize payment systems - the U.S. is not the only nation on this planet.

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

Yes. One method for accomplishing these outcomes, would be analyzing existing services, in particular the services offered by Dwolla, at www.dwolla.com They provide merchants like us with low-cost ACH-like payments, while maintaining privacy of account information.

2i. What other outcomes should be pursued?

Chargeback fraud cuts significantly into profit margins - implement a process granting electronic transactions the same security as cash.

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

Security and encryption tools such as PGP, SSL, and TOR are leveraged every moment, by government agencies, businesses, and private individuals worldwide. Many of these tools were developed by hobbyist or had started from limited-scope government sponsored projects (much like the internet protocol itself). These tools were often, at one time, considered disruptive technologies, that are now ubiquitously embraced and leveraged everywhere from within enterprise business processes, high confidentiality government communications, and consumer devices sized far smaller than a deck of cards. With the past in mind, please consider what very positive outcomes are possible by continuing to leverage a natural evolution of cryptographic technologies: consider how strong digital currency implementations, such as bitcoin, solves many of the concerns expressed within this "Payment System Improvement" paper. If you help support growth of digital currencies, by clarifying the regulatory positions of such value exchange and storage technologies, the primary points of this paper will have been largely answered.

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?

At this moment, a cryptographically secured means of decentralized yet ubiquitous participation is already in active use, and possesses a market cap in excess of \$1.4 Billion. Existing payment services are already evolving, and the supportive actions of public authorities or industry groups isn't necessarily required.

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

Having been burned from one social, political, or financial scandal after another over the past few decades, the general public will inherently distrust anything which gives the illusion of a centralized power or control structure. From a practical technology implementation perspective, decentralized tools have proven far more scalable, more secure, and are often fraud-immune - which in stark contrast to frequently failed attempts at centralized coordination or control.

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?

What's missing here are protections against chargeback fraud - implement a true electronic currency, that has the same effects as a cash transaction. Existing means of storage value exchange, such as Bitcoin (with its \$1.4 Billion market cap), already delivers this.

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?

Consider cryptographically-backed digital currencies, such as Bitcoin.

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?

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?

Fraud is a primary concern, therefore interbank settlement needs to occur at the same speed as an in-person cash transaction.

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

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?

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

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

No I don't see how it creates new risks, although it does elevate existing risks.

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

Could be abandon cash, and the higher costs of merchant transactions due to excessive credit card fees?

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

Grassroots efforts are already circumventing an existing lack of secured rapid value exchange.

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

The outcome would be less "faster payments" and hopefully the implementation of more fraud resistant means of value exchange.

11. To what extent will the industry need to modernize core processing and other backend systems to support near-real-time payments?
Regulatory policies need to be further matured, before this one could be answered.

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

Small scale implementations have gone online with only a day's effort. For larger systems, a reasonable estimate would be to analyze foreign currency support/implementation timelines.

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?

Centralization of such data would be a prime attack, compromise, and/or abuse target.

12ii. What is the feasibility of this suggestion?

Infeasible.

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.

Yes.

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 level and date?

Yes. 50% 2015, 95% 2018, 100% 2020

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?

None

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

Security, implementation costs

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

Provide low-cost commercial options, such as the services provided by www.dwolla.com

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 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?

Provide the same security as a cash transaction.

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?

A key threat is attempting to centralize such processes and data.

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

All

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

Decentralized - analyze bitcoin and similar digital currency technologies.

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

This would simply introduce more noise. Provide the same security as cash.

18i. How should this information be made available?

Standardized data formats - XML or similar.

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

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

Regulatory clarity.

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?

Communicate regulatory positions.

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

