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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. While First Data generally agrees with the gaps and opportunities identified in the consultation paper, we believe that some of the gaps have been overstated. For instance, with regard to #1, we have not seen a strong desire by most merchants to drive a lot of transactions away from check and ACH, largely because they represent a very low cost form of payment (even when allowing for returns and/or warranty services). We also disagree with the assertion that receivers cannot exercise control over how senders choose to pay. We have seen examples in the marketplace where this has been done successfully (and interestingly, very often this has been used to encourage payments by ACH, which further contradicts the assertion in #1). Real-world examples of this exist with the Starbucks prepaid cards and mobile app, Targets RedCard, and Shells Shell Saver Card. We believe that merchants also recognize that it is in their best interest to allow consumers the choice to pay however they want. For checks in particular, we know that there are a significant number of consumers who have a checking account but choose not to use debit cards. With regard to gap #2 (a real-time ubiquitous system), we believe the U.S. PIN debit networks have near real-time payment systems in place already. Furthermore, a ubiquitous system may be positive in some regards, but from a traditional lockbox payment processing perspective, a ubiquitous solution might not be the best course of action, as it would force all providers to support payment methods and retool systems that they may erode their current cash management fees and banking services. The features described in #4, such as the ability to make last minute payments, faster person-to-person payments and improve how consumers and businesses manage their finances are desirable aspirations provided that security and fraud costs can be adequately addressed.

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

While #8 touches on consumer fears about consumer security, we see the overall issue of security as a significant gap. Specifically, we would like to see enhanced security protection plus authentication of the consumer for more transactions external to the financial institution. Technology exists to raise the bar for 1) higher cryptography protecting transactions in transit, 2) stronger multi-factor authentication methods, and 3) tokenization methods to protect the financial credential from being ever being available to payees and vulnerable to compromise. We believe that establishing minimum transaction security measures is an area that's ripe for exploration by the Federal Reserve Banks / Federal Reserve Board.

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

Yes. While First Data doesn't support a government mandate to accomplish the outcomes in the consultation paper, we think the Federal Reserve Banks are well positioned to drive a faster payments framework including coordinating rules, standards and interoperability. We believe 10 years is too long of a timeframe. There is an opportunity now to capitalize on the ACH networks ubiquity advantage over other networks and payment systems to allow it to be the driving force for innovation.

2i. What other outcomes should be pursued?

Generally, while we agree that the desired outcomes make sense, we think they will occur without government intervention as a result of competition and naturally-occurring innovation in the payments industry. As we have already stated, ubiquity comes with a number of advantages, but mandated or forced ubiquity would like stifle innovation, competition and choice. Some of the features of the current payments system are a result of innovative solutions that were conceived in a non-ubiquitous environment. With that said, however, we would like to see basic standardization guidelines established to promote an open payments system and interoperability. Recent years have seen proprietary innovations and network operating rules that actually prevent some of the very innovation that this consultation paper espouses. We think minimum thresholds for security and authentication, as described in the response to Q1, would also benefit payments industry stakeholders.

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

We believe that the Federal Reserve Banks should act as a catalyst to help improve the payments system rather than advocate for mandatory changes. We take this viewpoint largely because we believe the private industry will be the most substantial driving force for improvements. In fact, many partnerships are already driving the changes and competition is helping to leverage technology and foster cooperation. Senders and receivers are best served by choice in selecting the products that best fit their needs. In a role as a catalyst, the Federal Reserve Banks can continue efforts such as the Boston Federal Reserve Banks engagement of the private sector to review and provide guidelines for mobile payments security, as well as the sponsorship of an X9 committee to review EMV-like solutions that will actually support the U.S. payments environment.

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?

Our response to this is a bit nuanced. On the one hand, we believe that while the market would value the features listed above, we do not believe a public authority is needed. Today's payment systems are evolving, and there are several proprietary applications used in conjunction with the U.S. debit networks that already meet the outlined features. To be clear, we do not believe that a mandate that forces all entities to support near-real-time payments is the right approach, especially considering the fact that consumers and corporations currently select the appropriate type of payment channel based upon their need and expense structure. On the other hand, we acknowledge that coordinated action by a public authority or industry group may be necessary to set appropriate standards and oversight.

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

We are encouraged that the Federal Reserve Banks incorporated the views of other payments industry players besides financial institutions in creating this consultation paper because looking beyond interbank issues to meeting the needs and concerns of American business and consumers is important. Additionally, we would like to see more consideration given to leveraging the PIN debit networks.

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?

Response to 5i: Some of these features already exist and are being used in P2P applications that use the U.S. debit networks. For example, Square and Popmoney applications meet all of these features, so long as the consumer has a debit card in the participating networks. We recognize this is not

quite ubiquitous, but it's getting closer. On the particular issue of ubiquity, we do not think that the Federal Reserve Banks should necessarily pick winners and losers in the marketplace in an effort to force ubiquity. Moreover, forcing ubiquity could make market leaders reluctant to drive additional development if they have received no benefit for taking on the costs of pioneering the new payment path. As we explain later in the survey, near-real time funds debited from the payer and made available to the payee would require fraud controls, consumer preferences, blocks and alerts to be in place to control potential runs on accounts. Duplicate transaction detection and suspect processing would also be critical to any system like this. Ultimately, we feel that these features may or may not be valuable depending on the form of commerce taking place and the particular application of the payment. For example, consumer bill payment and consumer purchase of goods at the point of sale are two different events that may require different features. Furthermore, different types of purchase such as digital, grocery or electronics can impact the features that a receiver may want to exercise. The presence of some of these features in certain types of transactions may actually detract from value if they create extra complexity or extra costs for either the sender or receiver. Response to 5ii: We believe that safety, security, fraud detection tools/preventatives, administration and enforcement of rules, the ability to reverse erroneous or fraudulent transactions and cross-border capability are all important features.

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?

We believe that enhancing the US debit networks as described would be the easiest way to deliver ubiquitous, near-real time payments that would also result in the least economic impact. Building a

new payment system or even expanding the wire transfer or ACH systems would require significantly new infrastructure and expense by all participants in the payment chain - consumers, financial institutions, processors, merchants, billers and support vendors. Transactions today have settlement paths and known rules. Even the new payment enablers like mobile are riding the rails of known systems like wire, ach, debit or credit. While settlement for some systems (ACH, card) could occur more frequently to provide near-real-time authorization, settlement, and earlier notification of suspect transactions the existing rails don't need to be reinvented.

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?

In terms of overall improvements, we don't believe a one-size-fits-all approach works, nor do we support new regulatory mandates to achieve faster payments.

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?

Without end-user funds availability and/or interbank settlement occurring at near-real time, the value of near-real-time authorization and good funds confirmation is diminished, as the finality of the transaction may still remain in doubt. We believe that end-user funds availability can be speedier if better security and authentication solutions are in place (such as minimum security thresholds), which would significantly reduce fraud. The fraud risk is a primary reason that financial institutions do not make funds available immediately today. We caution that near-real time settlement may require payment networks to float funds, which can pose the very types of risks that networks try to minimize today.

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

Near-real time already exists with POS and P2B transactions made with any debit or credit card (except for expedited settlement). P2P and B2B are more difficult to support as near-real time transactions. The difficulty with P2P is due to the variety of banking options available today, and the difficulty with B2B is due to the amounts of data that need to flow with a payment to reduce fraud. With that said, P2P is the most suitable payment method to achieve near-real-time status because it would complement the needs of consumers that wants funds immediately and don't want to wait for the delayed batch process of the ACH.

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?

We tend to think that most participants would value knowing good funds are on the way over needing near-real time access to the funds. For instance, across our TeleCheck merchant base, there have been very, very few clients requesting faster settlement of funds into their account, and we think that this is because they know that we have guaranteed the funds and that they do not have a risk of loss. The additional value of funds for an incremental day or partial day is not material to most clients, particularly if it may alienate their customers in any way or require a heavy investment to achieve it. Moreover, the ICL processes that are in place today have dramatically streamlined check clearing and return processing. On the other hand, from a debit network perspective, we believe that the resources required to implement improvements to the check payment process would delay a shift to near-real time payments. Although the check system can accomplish same-day clearing, its acceptance is not ubiquitous, it often requires the production of identification at the point of sale, and it is easily susceptible to fraud.

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

We would expect little change in the fraud issues that exist today; however, it is likely that near-real time payments will attract those fraudsters that previously focused on existing payment systems with delayed settlement. We think it's important to note that the U.S. debit networks have long been able to minimize fraud with PIN "know your customer" authentication and real-time approvals or denials based on funds availability. In recent years, neural network fraud scoring has reduced fraud to an even greater degree by identifying white plastic frauds. For instance, fraud systems can perform basic geography checks that indicate a consumer at an ATM in California cannot be the same consumer at the point of sale in Florida if the transaction is within a certain time window.

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

Yes. Potentially they would create new fraud risks, because near-real time payments decrease the time to detect fraud. So not only does a delay to access funds make fraud less desirable, but it allows the appropriate fraud and risk processes to run and actually detect the illicit activity. Faster settlement times may also increase non-fraud returns in some instances, since today some consumers initiate transactions knowing that they still have a limited period of float during which they can make a deposit, transfer funds, wait for a direct deposit to occur, etc. A ubiquitous system that is designed to work even without the sender knowing the recipient's bank account number will undoubtedly attract fraudsters who will test the safeguards, security and fraud detection tools. We also think that some credit transactions could result in higher fraud if the real-time systems do not have "know your customer" authentication methods. Ultimately, the key to any near-real time system will be to have great neural network intelligence tied to the payment behaviors of the payer along with some method for pending validation. For instance, a system could be established whereby a

transaction could be accepted based upon a risk score or placed into a pending category if the score is outside of the normal behavior.

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

We don't necessarily believe that a ubiquitous, near-real time system would bring pivotal change to mobile payments. For one thing, mobile payments are no different from ACH, debit or credit card transactions. Mobile payments simply take advantage of a different access device. Additionally, real-time authorizations generally already occur for card payments that are tied to mobile purchases. This is due to the fact that using a delayed payment solution adds more risk and back-office complexity to merchants and other payers who actually allow their merchandise to leave the store based on the payment authorization. If the payment is not real-time to the consumer's demand deposit account or the payment processor's card files, neither the merchant nor the financial institution has the assuredness that the funds are available to be used.

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

We believe that innovation is already occurring in the payments space and will continue to do so. Without the support of the payments industry and financial institutions, free market competition and pressure as well as new technologies would dictate the path forward. However, we acknowledge that without a central entity to consolidate and coordinate the application of these technologies, the likelihood of achieving a single ubiquitous system in the near-term is greatly diminished.

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

As stated above, we do not believe there would be a significant cost impact because payment methods will continue to evolve. Market leaders will enjoy a first-to-market edge, and others will follow as their budgets and systems allow. Partnerships will continue to grow. While there would certainly be benefits for the Federal Reserve Banks to lead the way, we believe it is the private sector that has the means, resources, necessary understanding of the system and the motivation to improve and speed up the payment system to the extent for which there is demand.

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

We feel this would be a huge undertaking and anything short of adoption by a vast majority of the banks will undermine any adoption. For the merchant business, a total revamping of payment instruction file creation, processing and transmission would likely be required, at significant cost.

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

It is difficult to provide a timeframe without knowing specific requirements. Given the significant compliance and regulatory costs borne by the financial services sector in recent years due to massive legislative initiatives such as the Credit CARD Act of 2009 and the Dodd-Frank Act as well as industry initiatives such as EMV, finding the resources to devote to a faster payments system is a daunting challenge.

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?

A centralized directory containing account numbers and routing information for businesses and consumers to which service providers are linked can be an open invitation to fraudsters without the proper safeguards. Distinguishing companies and individuals with similar names, locations and addresses could produce erroneous routing of near-real-time payments. We do not believe a solution like this is necessary, given the advanced cryptography solutions in the market today that provide for cryptography key sharing.

12ii. What is the feasibility of this suggestion?

We don't believe this suggestion is feasible, largely due to concerns around fraud and liability. For example, who would be responsible for maintaining the directory, providing updates, correction of errors, access, security, etc.?

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.

We think that current check migration trends will be affected by the availability of alternative payment systems. As faster, widely acceptable, less expensive, more convenient, more secure, ubiquitous, cross-border payment systems become available, it is highly likely that check migration will accelerate. It should be noted that we strongly believe that senders and receivers should have choice when making payments. Checks are a choice today for many American consumers and should continue to be one in the future. Market demand in the payments industry rather than government intervention should be the driver of change.

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. We strongly believe that technology and innovation should drive the use of payment systems, not a government mandate.

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?

Other barriers include security, fraud prevention, handling erroneous debits or credits, cross-border payments, payment system education, cost, development, compliance and cross-border regulatory standards.

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

We believe that issues of reduced cost, increased security, consumer-friendly error resolution policies, and consumer incentives such as loyalty rewards, discounts, etc. will be driving factors.

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

We believe that the Federal Reserve Board, NACHA, the PIN debit networks and credit card networks should all play a role. However, as we said throughout the document, we feel private industry will provide market winning solutions based off of demand rather than as a result of mandatory policies. We think that some of the faster payments vision can be accomplished through a modernization and update of NACHA rules that currently restrict conversion of certain business checks.

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?

Standardizing to the ISO 20022 payment message standards would be helpful in making payments across borders easier. However, there are many other aspects of the payment process that hinder adoption, such as different rules, regulations and restrictions across the various countries.

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?

We strongly believe that the private sector must have the ability to freely develop safeguards and solutions that are flexible and commensurate with the size and scope of the systems they operate and the personal data that they use, collect, share, etc. Any type of government mandate that advocates a specific technology or overly narrow security process can impede the industry's ability to properly deter, detect and stop potential or actual fraud, unauthorized transactions, system or data breaches or other types of illicit activity. Moreover, collaboration with various industry participants, such as law enforcement, payment processors, FS-ISAC, software vendors, financial institutions, and others is imperative to mitigating the risk in payments.

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

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

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?

We think the Federal Reserve Banks should sponsor and facilitate an industry committee for the purpose of developing an interoperable standardization of a federated identity infrastructure for the payments community. (See <http://www.nist.gov/nstic/> for more on this idea.)

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

We think that the lack of interoperability, patent infringements, risk of lawsuits, cost, lack of standard-setting central authority and the ability to certify compliance are the biggest obstacles.

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?

We would encourage the Federal Reserve Banks to work with all payments industry participants to establish best-in-class security practices and create a voluntary adoption program to incorporate them.

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

We hope from the responses we have provided that some common themes representing First Data's viewpoint on this issue are clear, such as 1. We support an improved, faster payments system, but we do not necessarily agree that the identified gaps are actually problematic for consumers and businesses today. 2. Innovation in the payments industry is alive and well today, and many of the features of an improved payments system outlined in the consultation paper already exist in some payment segments or will be achieved naturally through free market activities, consumer demand and competition. 3. We believe the best role for the Federal Reserve Banks to play is that of a facilitator and collaborator to bring the payments industry together to coordinate around standards, best practices, etc. 4. Given the significant regulatory headwinds facing the financial services sector in recent years that show no signs of abating in the near future, we would not support a government mandate in order for the Federal Reserve Banks vision to be realized. As a significant player in the payments industry, First Data believes that all consumers and businesses benefit from a continuously improving payments system. To that end, we appreciate the thoughtful and measured approach that the Federal Reserve Banks have adopted as they have outlined this vision for the future of payments. While we are not supportive of a government mandate to fulfill some of the opportunities detailed in the consultation paper, we think it is absolutely appropriate that the Federal Reserve Banks foster open and constructive dialogue with the industry on this and other payments-related topics, and we look forward to even more robust discussions in the future.