Meeting Summary and Next Steps

Attachment to Press Release of January 28, 2014

Background and Objectives

The Federal Reserve Bank of Philadelphia hosted a cross-industry meeting on December 9 and 10, 2013, in order to engage stakeholders in a structured discussion about the benefits and costs of open, consensus standards to complement the implementation underway in the U.S. of EMV/ integrated chip (IC) cards. The conference was co-sponsored by Accredited Standards Committee X9, Inc. – Financial Industry Standards and the Federal Reserve Bank of Minneapolis.

Severe weather resulted in cancellations of flights which affected the travel plans of some of the invitees, so a telephone conference bridge was added to allow remote participation. The Planning Committee recruited attendees in order to ensure as much as possible representation of a wide variety of stakeholders, including card brands, card issuers, merchants, acquirers, debit networks, processors, equipment and card manufacturers, security solution providers, mobile payments experts, government, standards development experts, associations, merchant representatives, ATM industry representatives, and others.

The objectives of the structured discussion included: identification of standards development actions to address gaps in the EMV/ IC implementation; determination if open, consensus standards can improve global interoperability of EMV/ IC technology; discussion of how the industry can best determine future technology and standards needed to strengthen IC standards for payments; and discussion of next steps based on the consensus of meeting attendees.

The convenor of this meeting was Blake Prichard, First Vice President and Chief Operating Officer of the Federal Reserve Bank of Philadelphia. Plenary working discussions were facilitated by Claudia Swendseid, Senior Vice President of the Federal Reserve Bank of Minneapolis and Vice Chair of X9. The discussion was broad, diverse, and complex. Thus, to the extent the summary that follows may miss some points made or perspectives expressed, this is inadvertent.

Day One

The meeting began with a welcome, introductory remarks and a review of the day's agenda by the convenor, Blake Prichard. Then, the Executive Director of X9, Cindy Fuller, informed the group of the X9 antitrust policy and asked participants to sign the official sign-in sheet that was circulated to

acknowledge that they understood and would abide by the X9 antitrust policy. (A copy of the X9 antitrust policy was included in the packet of printed materials provided to all meeting participants.)

Value of Open, Consensus Based Standards

The opening panel, *Value of Open, Consensus Based Standards*, featured three standards experts who described the value of open, consensus standards, including panel moderator Roy DeCicco of JPMorgan Chase and Board Chairman of X9, and panelists Gary Kushnier of the American National Standards Institute and James Wills of SWIFT and Chair of X9's Corporate Banking Subcommittee.

Mr. Kushnier explained that the U.S. standards system is designed to be transparent, open, impartial, and balanced. He outlined the guiding principles of the U.S. standards system, noting that standards are intended to meet societal and market needs. Adoption of open, consensus standards is voluntary.

Mr. DeCicco noted the X9 has a "large tent" and is open to any organization joining X9 who is interested in developing a standard using the open, consensus process used by X9 as an accredited ANSI standards developer. Mr. DeCicco described this process by walking through a flow chart that described the main steps involved. X9 allows participation at various levels, for instance, at the Board of Directors level; in technical subcommittees including payments and data security, both of which cover card standards; corporate banking; and securities trading. Participation can also occur on just a specific work item or work group. Work is accomplished collectively among the member organizations participating on the work group, subcommittee, or Board.

To illustrate the process for developing and modifying SWIFT standards, Mr. Wills described how the SWIFT message type (MT) 2013 maintenance release moved through its various phases, beginning in June 2012 and completing in November 2013.

The panel acknowledged that it can be a lengthy process to develop open, consensus standards, but there are also instances where speedy development can occur. The most notable recent (and international) example is the Legal Entity Identifier (LEI) standard that was fast-tracked (ISO 17442): it was completed and ready for adoption in just one year.

Following the presentation, some audience members commented that they do not define as "fast" completing a standard in one year.

State of Play of EMV and Integrated Chip Payment Standards in the U.S.

The second panel addressed the *State of Play of EMV and Integrated Chip Payment Standards in the U.S.* This panel was moderated by Paul Tomasofsky, Executive Director of the Secure Remote Payments Council and the Debit Network Alliance. Patty Walters of Vantiv and EMV Migration Forum Steering Committee member substituted as a panelist for John Drechny of Walmart and EMV Migration Forum Steering Committee Chair, who was unable to travel due to weather. The other panelist was Alan

Thiemann of the Petroleum Convenience Alliance of Technology Standards (PCATS) and chair of the X9AB Retail Payments Work Group.

Ms. Walters described how the EMV Migration Forum, part of the Smart Card Alliance, brings together merchants, issuers, card brands, debit networks, chip manufacturers, processors, and other stakeholders to help facilitate the highly complicated EMV implementation in the U.S. Membership is fee-based, with the amount of the annual fee varying by stakeholder type. Ms. Walters said the EMV Migration Forum has been effective in identifying and outlining issues, creating a platform for implementation, and providing a place for the various stakeholders to talk through differences. It has also produced useful educational materials and is planning to lead a demonstration pilot in Orlando, Florida next year to show that EMV works. It was noted that there are still unresolved business issues impeding implementation and the EMV Migration Forum has not reached agreement on how to coordinate future requirements. This may present an opportunity for a standards development organization (e.g., ASC X9) to assist with the necessary coordination. She pointed out that completing all the required testing and certifications prior to the October 2015 liability shift will be extremely challenging.

Mr. Tomasofsky described the give-and-take among various stakeholders in the card industry regarding how to route debit transactions using a common debit solution. For example, merchants want a single application identifier (AID) and application for domestic debit card payments that can be transacted on any of the 18 debit networks of their choice plus supports all cardholder verification methods (CVMs). On the other hand, issuers want the debit solution to be Reg II-compliant, plus they want flexibility when switching networks, that is, portability. Mr. Tomasofsky outlined the proposed debit routing solutions on the table and shared some of the unresolved issues that need to be addressed to facilitate EMV implementation.

Mr. Thiemann provided a brief tutorial on the anatomy of a payment card, listing the many open, consensus national and international standards that apply to integrated chip cards, many of which are X9 and/or ISO standards. Security is the most critical concern and thus receives much attention in these standards. Gaps between the security that is provided today vs. the security which the industry believes is required should be addressed. Minimizing losses due to payment card fraud is a vexing problem, especially in the realms of online commerce and mobile payments. Mr. Thiemann also pointed out the various individual and card authentication types available in the IC arena.

Identification of Key Standards Gaps, Pain Points, and Opportunities

Attendees were divided into five groups, generally organized by stakeholder type. Led by a moderator, each group was tasked with identifying gaps, pain points, and opportunities related to integrated chip standards and EMV implementation in the U.S. Following their discussions, the five groups reconvened and shared their lists with each other. Some of the key gaps, pain points and opportunities shared in the plenary session are recapped below:

- There may be opportunities for open, consensus standards in areas such as tokenization and encryption.

- Several groups mentioned that open, consensus standards could potentially benefit card-not-present transactions in the online commerce and mobile areas.
- Uncertainty was a common theme.
    - Gaps in EMV standards are complicated by regulatory uncertainty.
    - Some issuers and merchants are waiting to see what the final ruling is in the current court case before they proceed with adopting EMV technology.
    - Debit routing rules are hard for industry participants to figure out, and they contribute to business uncertainty as well.
- The U.S. is recognized as a large and complex payments environment. Particular stakeholders have varying business interests from one another. There is a wide variety of merchants in the U.S. in terms of size and sophistication, and some merchants will wait to act until the liability shift date is closer.
- Another difficulty mentioned is the logistical problem of completing the thousands of testing and certifications of point of sale terminals before the October 2015 liability shift deadline. One group expressed the desire to test across brands in a single certification, rather than having to repeat tests for each brand. They do not understand why there is not one "standard." Testing is very expensive and complex, and there is a fear that quality may be sacrificed to meet roadmap deadlines.
- Differences among the card brands' roadmaps in certain areas, such as liability shift dates, were identified as pain points which make it hard to implement EMV easily and smoothly. In addition, some feel the liability shift dates are unrealistic and unattainable.
    - ATM representatives felt strongly about this pain point. The ATM liability shift date is October 2017.
- EMV cards may offer a solution to reducing fraud from counterfeit cards at the point of sale, but industry participants worry about the future impact of mobile payments, and don't want to replace terminals frequently. Uncertainty about what the future will bring in terms of leapfrogging payment types may make some merchants delay adoption of EMV-compatible terminals. Should they invest in EMV when it appears that mobile payments will be the next big thing? Will mobile payments leverage EMV technology/investments?
- Another question raised was whether government fiat could offer a way to resolve some of these issues, or whether such an action would create other problems and issues.
- The proprietary nature of and lack of access to the EMVCo standard was cited as a concern, especially to smaller organizations. There was a general sentiment that it was hard to have an influence or decision-making "voice" in EMVCo standards progression or changes in the closed environment. And while participation in EMVCo may offer some access on the technical side, it is harder to contribute to business strategy. Those involved in EMVCo point out that they actively seek to engage U.S. stakeholders and are trying to build up diverse U.S. representation and participation in the EMVCo organization. They acknowledged that participation is not equivalent to having decision making rights. They also noted that much of the EMVCo standard is, in part, built on open, consensus ISO standards.
- Concern was expressed about whether the U.S. can agree to a single AID and related application that is acceptable to merchants and issuers. Consistency would be welcome, but appears elusive, given the 18 months of industry debate so far without full resolution of differences. This

makes it particularly difficult for issuers who have to decide what content to put on chip cards they are ordering for their cardholders. Can open, consensus standards help to develop a common AID and application solution? Or, at least, open up governance of it going forward?

- A merchant expressed concern that the retail industry moves at light speed and that consensus standards often take too long from the perspective of merchants. Even the one-year "fast track" timeframe followed to complete LEI standards was perceived as too slow. It was pointed out that speedy development does not always lead to broadest participation and greatest acceptance.
- Pain points in the point-of-sale terminal selection process include a fear that the current approach has resulted in using the lowest common denominator: it is simple, but not forward-thinking enough. Merchants are concerned with the slower lane speed and longer checkout times they expect will be caused by EMV transactions, and suggest that it would be worthwhile to explore parallel processing opportunities to speed things up. Another group mentioned that it is important that EMV implementation not stifle innovation at the point of sale.
- The lack of education of merchants and consumers was viewed as a big gap. EMV implementations may vary, with the result that consumer cardholders will be confused by these different methods: CHIP, signature, etc.
- It was offered that even if open, consensus standards do not currently play a large role, perhaps they can be helpful when "next generation" EMV is introduced (it was suggested that the "next generation" standard may not be expected until 2015). Stakeholders would be happier if they had ownership and could contribute to standards development in an open forum.
- One group suggested that it would be helpful to have a common definition of how EMV is to be implemented in the U.S. That is, EMVCo standards offer a set of requirements or a tool kit, but not specific, common guidance on how to make it work in the U.S. smoothly, cheaply, and well. Perhaps open, consensus standards, developed within an effective governance model, can play a role here, i.e., a U.S. implementation guide.
- Another opportunity for open, consensus standards may be in closing gaps in card security protocol, such as defining when a PIN is required.

All in all, the five breakout groups offered useful and diverse perspectives on gaps, pain points, and opportunities related to integrated chip cards standards and U.S. implementation of the card brands' EMV roadmaps.

Day Two

The second day began with Mr. Prichard summarizing key points from the first day's discussion. He also reviewed the agenda for the second day, which would focus on identifying solutions to the gaps, pain points, and opportunities raised on day one and agreeing on next steps.

Canadian EMV Migration Experience

Kirkland Morris of Interac (Canada's national debit network) and Allen Wright of Payments Advisors co-presented on the *Canadian EMV Migration Experience.* Both were integrally involved in the deployment of EMV cards in Canada. They provided an historical retrospective of how Canadian stakeholders accomplished the conversion to EMV card technology, which they characterized as "an intensely and genuinely collaborative effort." The effort began in 2005 and achieved critical mass in 2011.

The major impetus for migrating from magnetic stripe to EMV cards was the recognition of payments fraud as a growing menace and the belief that fraud was not going to be manageable in the future with existing tools. The migration was not driven by a desire to achieve short-term, positive ROI. It took Canada about a decade to begin to recoup the investment in EMV. They viewed the transition to EMV as a preemptive strike to prevent fraud from migrating to Canada. The greatest motivator was the large number of Canadians that fraud had touched, rather than the dollar amount of losses. They wanted to eradicate fraud at an industry level, rather than transfer it to or impose it on other players. Other reasons for migrating included a desire to keep pace with the global movement to EMV, and the view that EMV was a potential platform to enable contactless payments.

An overarching governance body was established that was uniquely tasked with EMV migration. This body was populated with senior managers from the industry, who developed consensus positions and provided leadership in order to implement EMV technology in a fair and balanced way for all stakeholders. Canada's government and central bank did not play a supervisory role; however, the government expressed keen interest in seeing the industry move forward and implement EMV. They noted that, unlike Canada, the U.S. does not have a similar governing body that can make decisions and hold industry stakeholders accountable for following these decisions. Also, U.S. stakeholders do not even agree on the shared goal of adopting EMV.

Magnetic stripe technology has not been accepted at Canadian ATMs since December 31, 2012, and will not be accepted at Canadian retail point-of-sale terminals after December 31, 2015.

They observed that the merchant point-of-sale is the single point of convergence for EMV implementation. Much time has been devoted to improving speed in the checkout lines.

They offered the following lessons learned:

- There must be a collective commitment to get the job done.
- Different stakeholders have very different (and often opposing) drivers, objectives, and expectations.

- Broad business drivers should dictate outcomes rather than a focus on the financial business case only.
- Learn from other markets that have migrated to EMV, but tailor it to your realities.
- Transparency and inclusiveness are important but need to be practically managed. Working groups of all comers are nice in theory but can be challenging in practice.
- Establishment of a guiding body to play a trusted facilitator role and to resolve differences (make decisions) was a key to success.

Next, in a plenary session moderated by Claudia Swendseid, participants worked together to *Prioritize Standards Gaps, Pain Points, and Opportunities* related to IC standards and implementation, as identified in day one breakout sessions. Posted on the wall were large sheets of paper capturing all the issues raised in the small group sessions. Armed with yellow dots, participants were asked to select their top five gaps, pain points, and opportunities.

Highest Priority Gaps, Pain Points and Opportunities

Through debate and discussion, the following pain points, barriers, and opportunities were ranked highest in priority in terms of areas in which open, consensus standards can help facilitate the U.S. migration to EMV:

1. Define a common AID solution that all can agree on, along with an acceptable oversight/governance process for it.
2. Identify new security standards efforts that address card not present (CNP) payments fraud in a way that complements fraud mitigation efforts at the point-of-sale. It was recognized that, without preventative actions, the CNP sales environment will likely see a rise in payments fraud when EMV is widely implemented at the point-of-sale.
3. Determine if open, consensus standards (like the current work underway in X9 now) can bring together the tokenization work of various organizations (such as Visa, MasterCard, American Express, X9, The Clearing House, and PCI).
4. In general, determine if there is a set of "best practice" security tools and practices, leveraging the EMVCo tool kit that X9F can develop and share, including how to implement them.
5. Determine how U.S. stakeholders can have more of a voice in terms of influence and decision making within EMVCo and its ongoing development of the EMVCo standards in order to address more effectively diverse U.S. market business requirements, issues, drivers, and circumstances. It was acknowledged that EMVCo is seeking more diverse U.S. stakeholder participation in their work, but this is not the same as decision making.
6. Encourage the EMV Migration Forum to continue to expand its communications and outreach to non-members, especially smaller stakeholders impacted by the U.S. EMV migration and who seem to be least knowledgeable about EMV.
7. Define a common implementation guide (including business requirements, specifications, and agreements) for EMV in the U.S., along the same lines as the Canadian experience. Leverage this to enhance global interoperability of EMV card transactions. Can a standards body such as X9 help develop this implementation guide?

8. Standards are needed in the mobile payments area. This could cover topics such as management, anticipating and/or reacting to likely fraud shifts following EMV implementation, future proofing, and so on.

Next, breakout groups reconvened to *Develop Strategies/ Work Plan to Address Priorities.*

Suggested Standards, Strategies, and Solutions: Next Steps Determined by Consensus

Following lunch, small group facilitators shared their groups' output with the plenary body in the session *Prioritize Identified Solutions*. Facilitators presented standards, strategies, and other solutions that were suggested in the breakout meetings.

Through debate and discussion, these next steps emerged as the group consensus:

1. Determine if an open, consensus standards organization like X9 can be effective in defining a common AID solution and/or application that all stakeholders can agree on for EMV debit transactions. Furthermore, determine if there is a role for a standards body to provide oversight/ governance of this common solution. It was suggested that X9 could create technical specifications of application selection requirements.
    ➢ A volunteer agreed to draft a statement fleshing out this action step.
2. Identify new security standards efforts that address card not present (CNP) payments fraud in a way that complements fraud mitigation efforts at the point-of-sale. Build on the work of the CNP Work Group of the EMV Migration Forum that is writing a white paper detailing and prioritizing the effectiveness of various CNP tools. Produce an open, consensus best practices document describing and evaluating CNP fraud mitigation tools and applicable use cases.
    ➢ The X9F Data and Information Security Subcommittee chair or designee will draft a new work item capturing this action step.
3. Determine if open, consensus standards can bring together the tokenization work of various organizations (such as Visa, MasterCard, American Express, X9, PCI, and The Clearing House). Move forward more quickly with X9's effort to develop tokenization standards. Understand how tokenization affects PCI standards and compliance with PCI DSS.
    ➢ Share X9's tokenization work item description with attendees so scope of X9's work effort is clear.
    ➢ Share information about X9 webinar on tokenization scheduled for January 22.
    ➢ X9 Executive Committee will determine how best to reach out to the various organizations working on tokenization.
4. X9 should create one or more new work items that identify how to define EMV security options and produce effective solutions. The deliverable of this effort would be a document describing best practices and mapping risks associated with the various choices within the EMVCo tool kit relative to security.
    ➢ A group of attendees volunteered to draft this and submit it as a new work item to X9.
5. To project the U.S. voice, define a common implementation (including business requirements, specifications and agreements) for EMV in the U.S. that maintains global interoperability of EMV

cards issued in the U.S. Bring this common implementation to EMVCo on behalf of the U.S. community.

  ➢ Determine how to follow-up on this suggestion.

6. Consider standards needed in the mobile payments area, potentially covering such topics as management, anticipating and/or reacting to likely fraud shifts, future proofing, and so on. Leverage work of X9 on mobile standards and communicate it more broadly to position U.S. stakeholders for a future decision on whether to pursue U.S.-only mobile standards if ISO 12812 fails to be approved by the international community.

  ➢ Share current status of ISO 12812 work effort and timing of ballots.

7. X9 should speed up its open, consensus standards development process so standards can be developed, balloted, and ready for adoption more quickly.

  ➢ The Executive Committee of the X9 Board of Directors will address this.

8. Representatives of X9 will debrief Randy Vanderhoof of the Smart Card Alliance regarding this meeting's accomplishments and next steps. In addition, a representative of X9 may present at a future EMV migration Forum meeting or other Smart Card Alliance function to inform members about X9's integrated chip standards initiatives.

  ➢ Claudia Swendseid, Federal Reserve Bank of Minneapolis, will follow-up on this action step.

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