



April 15, 2016

The Honorable Richard J. Durbin
United States Senate
SH-711 Hart Senate Office Building
Washington, D.C. 20510

Dear Senator Durbin:

Thank you for your March 17, 2016 letter regarding EMVCo, LLC ("EMVCo") and the deployment of EMV technology in the United States. We share your commitment to protecting businesses and consumers from fraud and welcome the opportunity to answer your questions about EMVCo and its operations. I am responding to your letter because, as Director of Operations, I represent EMVCo in its day-to-day business activity.

MasterCard and Visa formed EMVCo in 1999 as a member-owned technical body for the purpose of owning and enhancing the EMV Specifications, and expanding and promoting the EMV Specifications with the intent of facilitating their adoption as an inter-industry compatibility standard. EMV was designed to reduce fraud at retail store locations. EMV chip cards store payment information on an embedded microchip that is very difficult to counterfeit. Those chip cards – which have been issued to cardholders nationwide and have long been the industry standard outside the United States – offer transaction security that traditional magnetic stripe cards cannot provide. EMVCo currently has six members – American Express, Discover, JCB, MasterCard, UnionPay and Visa – all of whom share equal ownership. EMVCo's membership expanded most recently in 2013 when Discover and UnionPay joined.

Prior to 1999, companies in countries across the globe began to enhance card security by deploying microprocessor chip technology that was designed to meet domestic specifications. These domestic designs were not interoperable across geographic borders, however, and posed challenges to both businesses and consumers. As a result, although chip technology could be utilized to protect against fraud in domestic transactions, magnetic stripe technology was the only acceptance method when cardholders traveled outside their home countries. EMVCo's formation as a global technical body enabled the development and management of specifications to facilitate global interoperability and enhance payment security.

The EMV Specifications provide a comprehensive toolbox to help payment networks and other industry participants throughout the world develop and use secure and globally interoperable payment methods. The specifications are designed to be flexible and can be adapted regionally to meet national payment network requirements and accommodate local marketplace needs. EMVCo makes the EMV Specifications available on a royalty-free basis to all industry participants and to the public. In addition, EMVCo administers testing and approval processes,

enabling terminal and chip manufacturers to test the products and solutions they build for compliance with the EMV Specifications.

As an organization striving to facilitate a payments infrastructure that is standardized in terms of security and interoperability, EMVCo plays an important role in bringing together stakeholder interests among payments industry participants. However, EMVCo does not establish obligations, requirements, or otherwise for the *implementation* of its specifications. EMVCo does not mandate or enforce EMV compliance or the implementation policies for issuers, merchants and acquirers, which are handled by payment networks independently outside of EMVCo. For example, individual payment networks publish their own EMV compliance requirements, which may vary from country to country or among industries within a country. Likewise, business arrangements to help encourage the adoption of EMV, such as the recent U.S. “liability shift,” are independent decisions of individual payment networks and not EMVCo.

No individual EMVCo member can control EMVCo’s decision-making process because each member has an equal 1/6th ownership stake and decisions require the concurrence of at least a supermajority of the members. A Board of Managers directs the operations of EMVCo and an Executive Committee provides oversight and strategic direction as it relates to the evolution and management of the organization. As explained below in our answers to your questions, EMVCo also receives significant input from its Business and Technical Associates, which consist of industry participants including issuers, acquirers, payment networks, merchants, manufacturers, technology providers and testing laboratories from numerous countries. These programs enable EMVCo to engage with industry stakeholders from around the globe to develop, enhance and evolve the EMV Specifications through regular communication and engagement. In addition, any interested party is able to join EMVCo’s Subscriber Program, which provides access to advance information regarding new developments and draft documents, and the opportunity to provide feedback and input on the work of EMVCo.

As the global payments environment has evolved to incorporate new technologies and ways to pay, EMVCo has evolved as well, shifting from a sole focus on the original card-based EMV Specifications to include next generation technologies supporting solutions such as mobile payments and online authentication. For further information about EMVCo and its initiatives, please visit our website at www.emvco.com.

With this context in mind, we now provide responses to the questions raised in your letter, which are included below.

Question 1:

- A. *“Please provide a current list of EMVCo Executive Committee members and members of the Board of Managers.”*

The current Executive Committee and Board of Managers consist of the following representatives:

Executive Committee

- Karen Czack, Mike Matan – appointed by American Express
- Ellie Smith, Soumya Chakrabarty – appointed by Discover
- Shinji Nishimura, Junya Tanaka, Tac Watanabe – appointed by JCB
- Esteban Martin, Dave Meadon – appointed by MasterCard
- Wei Li, Jack Pan, Yuemin Qi – appointed by UnionPay
- Christina Hulka, Dave Wilson, John Sheets – appointed by Visa

Board of Managers

- Sean Conroy (primary), Robert Burns (alternate) – appointed by American Express
- Cheryl Mish (primary), David Bibby (alternate) – appointed by Discover
- Junya Tanaka (primary) and Masao Noda (alternate) – appointed by JCB
- Jonathan Main (primary) and Dave Roberts (alternate) – appointed by MasterCard
- Jack Pan (primary) and Hongliang Xu (alternate) – appointed by UnionPay
- Christina Hulka (primary) and Christian Aabye (alternate) – appointed by Visa

This list is subject to periodic change as individual EMVCo members update their representation.

In addition, EMVCo has nine Working Groups and a number of Task Forces, which are responsible for developing and publishing the EMV Specifications, and evolving and managing EMVCo's testing and approval processes. These Working Groups and Task Forces consist of members' staff who are technical subject matter experts.

B. "Please explain how members of the Executive Committee and the Board of Managers are selected."

Each EMVCo member company appoints one individual to serve as its primary representative on the Board of Managers, as well as one individual to serve as its alternate representative. The member companies also appoint up to three individuals to serve on the Executive Committee, which performs an advisory role to the Board of Managers. How each member company appoints its representatives is determined by each such member company.

C. "Please explain the decisionmaking authority that JCB and UnionPay exert in determining how EMV technology is developed and implemented in the United States."

EMVCo's members participate in all decisions regarding the development of the EMV Specifications and EMVCo's related processes for approving products that independent laboratories have tested to be EMV-compliant. As noted above, no

individual EMVCo member controls that work or those processes. Although EMVCo develops globally interoperable specifications, EMVCo does not play any role in the implementation of these specifications into technology in the United States or elsewhere.

Question 2:

“What is the primary U.S. federal regulatory authority that exerts oversight over EMVCo’s operations as they affect the American electronic payment system? What, if any, non-public information does EMVCo share with that regulator as EMVCo develops or implements specifications and certification processes?”

Like other standard-setting organizations, EMVCo and its standard-setting activities are subject to federal laws, but are not subject to any federal licensing or similar direct regulatory oversight regime. EMVCo does not share non-public information with a specific regulatory authority as it develops specifications and certification processes.

Question 3:

“Does EMVCo, or do JCB or UnionPay, share non-public information about EMVCo’s specifications, certification processes, or other operations with government authorities in China or Japan? If so, what information is shared?”

EMVCo and its members have not shared non-public information about EMVCo’s specifications, certification processes or other operations with government authorities in China or Japan. EMVCo periodically engages in public educational outreach in various regions around the world, including with governmental authorities from time to time.

Question 4:

“EMVCo does not appear to provide other U.S. stakeholders in the electronic payment system with any meaningful decisionmaking authority in the development of its specifications or certification processes. Smaller payment networks and those who accept electronic payments (such as merchants) are relegated to ‘associate’ status in EMVCo which appears to be purely advisory in nature. Please explain why these stakeholders are unrepresented on EMVCo’s Executive Committee and Board of Managers.”

EMVCo’s governance by global payment networks allows EMVCo to support global interoperability while enabling regional differences in implementation. EMVCo values the participation of all industry stakeholders from around the

world, who contribute to the development and strategic direction of the EMV Specifications through several levels of participation. The forums for participation include the following: Business Associates, Technical Associates, a Board of Advisors, and a Subscriber Program. There are currently 53 Business Associates and 60 Technical Associates (with some parties choosing to be both), representing a diverse array of interests and industries including merchants, financial institutions, acquirers, payment networks and technology providers. The number of participants in these programs continues to grow. A list of the Business and Technical Associates is attached. EMVCo engages in extensive outreach efforts to continually expand and diversify participation.

Merchants, payment networks and other entities with a direct business responsibility for an EMV transaction are eligible to join as a Business Associate. Business Associates provide EMVCo with input on strategic business and implementation issues related to the use of the EMV Specifications in a forum that does not involve sharing or discussing competitively sensitive information or commercial strategies to increase the acceptance or use of EMV-compliant technologies. Each Business Associate receives a seat on the Board of Advisors. All interested stakeholders, including merchants and payment networks, are eligible to join as a Technical Associate. Technical Associates provide input and receive feedback on detailed technical and operational issues relating to the EMV Specifications and related processes. Six Technical Associates serve as representatives on the Board of Advisors. The Board of Advisors serves as an advisory forum that provides input to the Executive Committee, facilitating discussion about new initiatives and the future direction of the EMV Specifications and related processes. Furthermore, any interested person is eligible to join EMVCo's Subscriber Program. Subscribers receive access to advance information regarding new developments and draft documents, and enhanced opportunities to provide feedback on the work of EMVCo. All Business and Technical Associates automatically receive the benefits of Subscribers.

Question 5:

"What safeguards are built into EMV technology and specifications to ensure that smaller U.S. payment networks are able to fairly compete for consumer business against the six giant networks that control EMVCo? For example, what assurance does a small network have that EMVCo's specifications will not have the effect of steering consumers or card acceptors away from small networks and toward EMVCo's six member organizations?"

EMVCo has always made the EMV Specifications available to the public royalty-free worldwide. Any network, including smaller payment networks, or other

interested party can obtain the specifications by downloading them for free from the EMVCo website and can participate in the development of the specifications through the programs described above. The flexibility of EMV Specifications enables third party implementers to design EMV-compliant solutions that address local needs and legal and regulatory requirements. For example, in the United States, the EMV Specifications enable financial institutions to issue debit products on any network, including smaller payment networks, that uses the U.S. Common Application Identifier (AID) in an EMV-compliant manner to satisfy U.S. debit routing regulations.

Question 6:

“Are all U.S. payment networks given access to EMVCo technical specifications at the same time that EMVCo’s six member organizations are given access to those specifications? If not, why not?”

The final EMV Specifications are published on the EMVCo website, making them available to all interested parties, including U.S. payment networks, at the same time. Payment networks and other companies that are involved in the process of developing the EMV Specifications have access to specification work product under development, depending on their level of participation and willingness to agree to contractual provisions that ensure the specifications, including those under development, can be made available on a royalty-free basis, this being one of the core principles of EMVCo. However, such work product cannot be utilized until finalized.

Question 7:

“On October 1, 2015, the major card networks in the United States implemented a liability shift to encourage use of EMV technology.”

A. *“Does EMVCo monitor market data regarding the number of card transactions handled by each U.S. card network before October 1, 2015 and after that date? If so, please provide this information.”*

EMVCo engages an independent contractor to collect global data from EMVCo’s members regarding the EMV card transactions they process in their respective regions. On a regular basis, EMVCo publishes the aggregate percentage of all card-present transactions processed by EMVCo members that are EMV transactions on a rolling twelve-month basis. Except for this aggregate percentage concerning EMVCo’s members, EMVCo does not monitor or publish market data regarding the number of card transactions in the U.S. The following figures reflect the most recent rolling twelve-month periods for the U.S.:

- July 2014 – June 2015: 0.26%
- October 2014 – September 2015: 0.61%
- January 2015 – December 2015: 1.90%

B. *“Is EMVCo aware of any shift in market share after October 1, 2015 away from the small networks that are not among EMVCo’s six member organizations? If so, please provide this market share information.”*

No. EMVCo does not collect or monitor market share data.

Question 8:

“What percentage of EMV cards worldwide are enabled for PIN authentication on every transaction, and what percentage of EMV cards in the United States are enabled for PIN authentication on every transaction?”

EMVCo does not collect or monitor the percentage of EMV cards worldwide or in the United States that are enabled for PIN authentication on every transaction, and is not aware of any published source for this information.

Question 9:

“Several of EMVCo’s member organizations have advocated against the use of EMV chip-and-PIN authentication in the United States. Does EMVCo believe that EMV chip-and-PIN authentication should be discontinued in Europe, Asia, or in other non-U.S. markets?”

EMVCo does not have a position on chip-and-PIN. A variety of cardholder verification methods, including PIN, are supported by the EMV Specifications. EMVCo’s activities are focused on the development and maintenance of technical specifications. The decision of which cardholder verification method to use is not EMVCo’s and is instead based on the issuer configuration of the card and the capabilities of the card accepting terminal.


Question 10:

“Is EMVCo working on standards for biometric cardholder authentication? If so, will those standards be open so that all American payment networks can use them?”

EMVCo is currently considering a draft specification related to the use of biometric authentication for acceptance devices. Any resulting standards published by EMVCo in this area would be made available to the public royalty-free worldwide, just as is the case for any other EMV Specification.

Thank you for the opportunity to address your questions and provide additional context about the work of EMVCo. If you have questions about any of our responses, please feel free to contact me directly.

Sincerely,

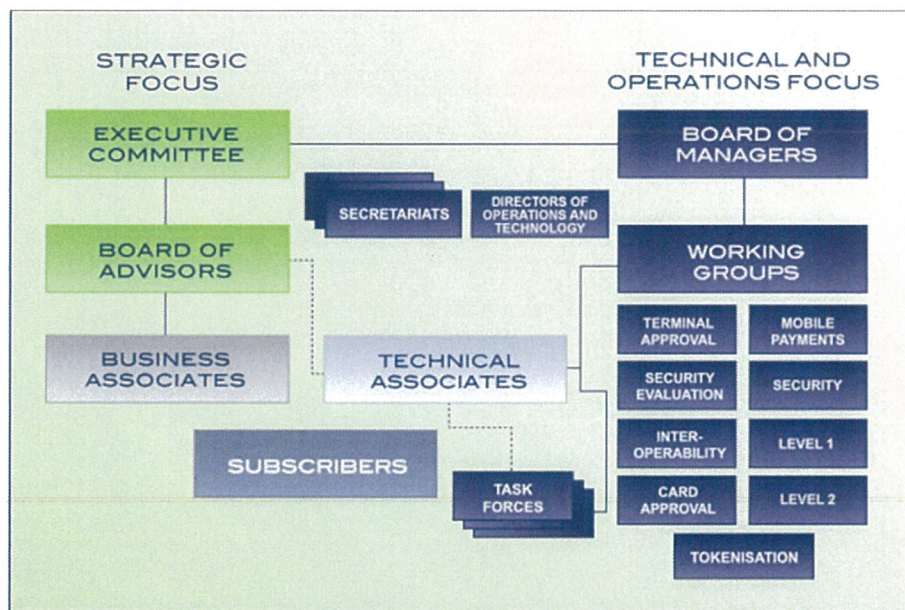


Brian Byrne
Director of Operations
EMVCo, LLC

Attachments:

1. EMVCo Structure – 2016
2. Current EMVCo Business Associates
3. Current EMVCo Technical Associates

Attachment 1



Attachment 2



Current EMVCo Business Associates

Business Associates (53)				
ANZ	APCA	Bancomat	Bank of America Merchant Services	BKM A.S.
BoC Credit Card*	BPCE	Bundesverband deutscher Banken	CardinalCommerce*	Carrefour Banque*
Cartes Bancaires*	Clydestone	Creditcall Ltd.*	Credit Mutuel	Dutch Banking Association (NVB)
EFTPOS Australia*	Equens SE	EPC	EURO 6000, S.A.	First Data*
Global Payments, Inc.*	Interac*	JP Morgan Chase*	McDonald's*	Merchant e-Solutions
Microsoft*	Moneris Solutions*	National Credit Card Center of R.O.C.*	National Payments Corporation of India*	Netflix
NSPK*	PAN-Nordic Card Association*	PASA	Poste Italiane*	Redsys
Shazam*	SIA-SSB	Soft Space*	Square*	SRC Research*
Swedbank	Target	The Clearing House*	UK Cards Association*	TSYS*
United Nations Federal Credit Union	U.S. Bank*	Vantiv	Verizon*	Verve International*
Walmart*	Worldline	Worldpay*		

^ Participation as of 12 April 2016 | * Denotes dual Associates: registered as TA and BA

Attachment 3



Current EMVCo Technical Associates

Technical Associates (60)				
Bell Identification B.V.	BoC Credit Card*	CA Technologies	CardinalCommerce*	Carrefour Banque*
Cartes Bancaires*	China Financial Certification Authority	China Information Technology Security Evaluation Center	Comprion GmbH	Comtech TCS
Consult Hyperion	CPI Card Group	Creditcall Ltd.*	Cubic	EFTPOS Australia*
Felitan Technologies	FIME	First Data*	FIS OTS	FiTeq
Global Payments, Inc.*	Hewlett Packard Enterprise	Hitachi-Omron Terminal Solutions	Ingenico	Intel
Interac*	JP Morgan Chase*	McDonald's Corporation*	Microsoft*	Modirum MDpay OU
Moneris Solutions*	mSIGNIA	National Credit Card Center of R.O.C.*	National Payments Corporation of India*	Nationz
NCR Financial Solutions Group	Nets DK	NSPK*	PAAY	PAN-Nordic Card Association*
PAX Computer Technology	Poste Italiane*	RSA	Shazam*	Soft Space*
Square*	SRC Research*	Thales	The Clearing House*	ThreatMetrix
TSYS*	TTA	UK Cards Association*	UL	U.S. Bank*
Verifone	Verizon*	Verve International*	Walmart*	Worldpay*

^ Participation as of 12 April 2016 | * Denotes dual Associates: registered as TA and BA