Meeting Between Federal Reserve Board Staff and Representatives of the Debit Network Alliance October 18, 2016

Participants: Susan Foley, David Mills, Mark Manuszak, Jessica Stahl, Krzysztof Wozniak, Aaron Rosenbaum, and Emily Massaro (Federal Reserve Board)

Jonathan Wegner (Baird Holm LLP); Paul Tomasofsky (Debit Network Alliance); Cathy Morrissey (Nebraska Electronic Transfer System); Robert Woodbury (NYCE Payments Network); Judith McGuire (PULSE); Terry Dooley and Dan Kramer (Shazam); and Brian DuCharme (STAR Network)

Summary: Representatives of the Debit Network Alliance met with Federal Reserve Board staff to discuss their observations of market developments related to EMV implementation, mobile wallets, and tokenization services. The representatives expressed their views on how these market developments relate to the Regulation II network routing provisions.

A copy of the presentation the network representatives provided to facilitate the meeting discussion is attached.

Debit Network Alliance

Debit Topics
U.S. Update

Federal Reserve Board of Governors Meeting
October 18, 2016

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The opinions expressed by the presenters during this presentation are exclusively their own.

Agenda

- Debit Market Update
- Topic #1: EMV
- Topic #2: Mobile Wallets & Tokens
- Summary

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About Debit Network Alliance

- Debit Network Alliance LLC (DNA) is a Delaware limited liability company owned by ten U.S. debit networks, and open to all U.S. Debit Networks, founded in December 2013. The goal of this collaborative effort is to provide interoperable adoption of chip technology for debit payments, while supporting security, innovation, and optimal technology choice. Further, DNA has worked to bring about perpetual access to the technology deployed to accomplish EMV® in the US, and support for all transactions types supported by the debit networks both existing and future.
- The US debit networks have a long history of working collaboratively - especially with regard to improving security - to define standards that maintain the integrity and quality of the U.S. payment industry.
- The founding networks of Debit Network Alliance are AFFN®, ATH®, CO-OP Financial Services®, Jeanie®, NETS®, NYCE®, Presto!®, PULSE®, SHAZAM®, and STAR®.
- The DNA seeks a robust competitive environment that benefits Financial Institutions, Merchants and Consumers.

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Executive Overview

- The purpose of this meeting is to provide an update to changes in the debit industry and to provide additional detail regarding the potential challenge of maintaining choice as emerging payments evolve.

- The payment industry in the U.S. is seeing an unprecedented pace of change primarily through the use of proprietary standards:
  - One year after the liability shift dates while EMV support by issuers has increased substantially, debit chip on chip transaction penetration lags.
  - Various mobile wallets leveraging different technologies have started to penetrate the market.
  - Many debit networks are now able to support a wider range of debit transactions, including signature and PINless transactions.

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Executive Overview

- These innovations create both the potential for additional routing options and the risk that routing choices can be limited.
  - Some networks are able to leverage market scale and short timeframes for product deployment to drive solutions that give them significant control over their utility
  - The DNA-member networks seek to provide additional choice for the industry to increase competition and drive efficiencies

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Debit Competitive Landscape

Global Brands process 60% of pin debit market and nearly 100% of signature debit. Debit networks compete for the rest.

E-Commerce	Global Brands have overwhelming majority of segment
Hotel / Motel	Global Brands have virtually 100% of segment
Restaurants	Global Brands have overwhelming majority of segment
Global Brands	Are targeting the remaining 40% by use of mandates, tokenization and EMV
EMV Restrictions and Routing influences	Global Brands have restricted the use of the Signature CVM and are restricting the use of biometrics or other innovative consumer authentication technologies
Tokenization	The current implementation restricts who can provide vault services (or the token itself) and is not based on standards. Therefore for other networks to provide vault services would require mobile wallet providers to store up to 18 tokens to represent a single card number.

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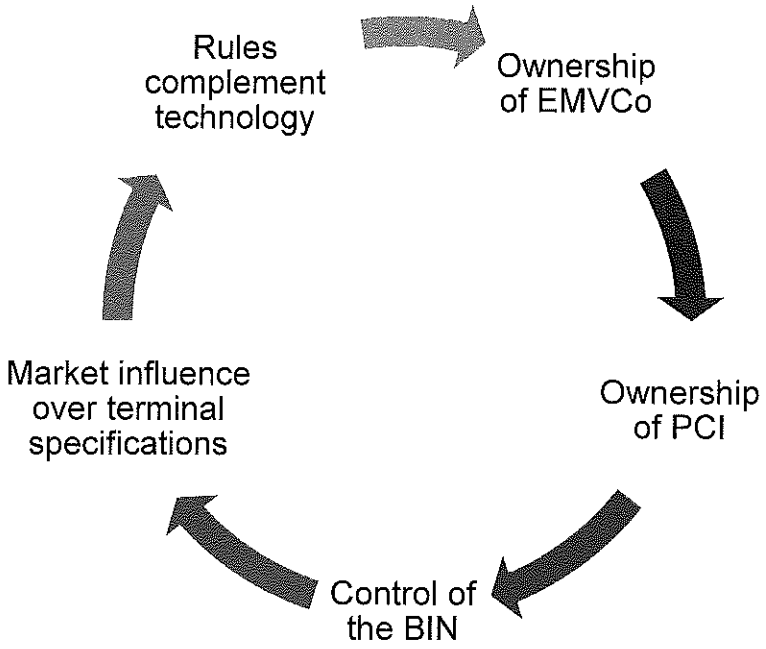
Market Influence



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Topic #1: EMV Implementation

- Global Debit brands have complicated Merchant Debit Routing rights (e.g. complicated POS processes)
- These processes are negatively impacting debit network volumes
- Most debit networks provide consumers with substantial benefits

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"Consumer Choice Rule" Violates Durbin

- Cardholders are unknowingly interceding on behalf of Global Brands
- Section 235.7 on network exclusivity and routing is being violated
- When PIN is bypassed during Credit/Debit prompting, Visa restricts routing

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Complicated POS Processes

- In the past several months, many consumers have encountered confusing screens when using debit cards at EMV-enabled point-of-sale terminals
- These screens require the cardholder to choose, for example, between "Visa Debit" and "US Debit" before the transaction may proceed
- The cardholder is being required to choose whether the merchant must route the transaction via the Global AID (by choosing "Visa Debit") or the Common AID (by choosing "US Debit"). The consumer has no reference point of knowledge of the implications of the choice
- If the Global AID is selected, Visa's rules require that the transaction must be processed solely over the Visa network. Only if the Common AID is selected are all of the networks on the card (including Visa) and all forms of cardholder authentication (PIN, signature, and no-CVM) available to the merchant
- These consumer AID selection screens eliminate the merchant's ability to select their preferred network routing option and cause cardholder confusion and delay during the check-out process

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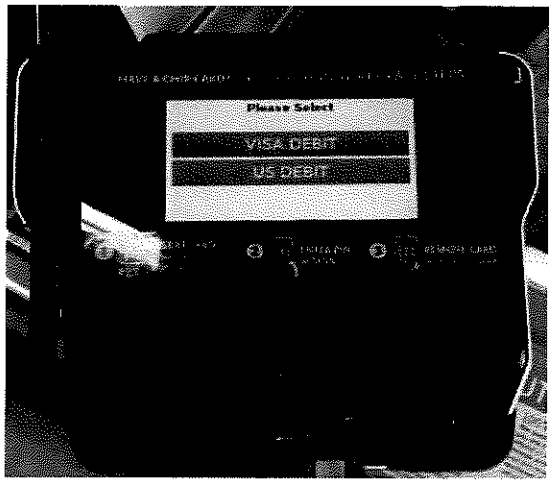
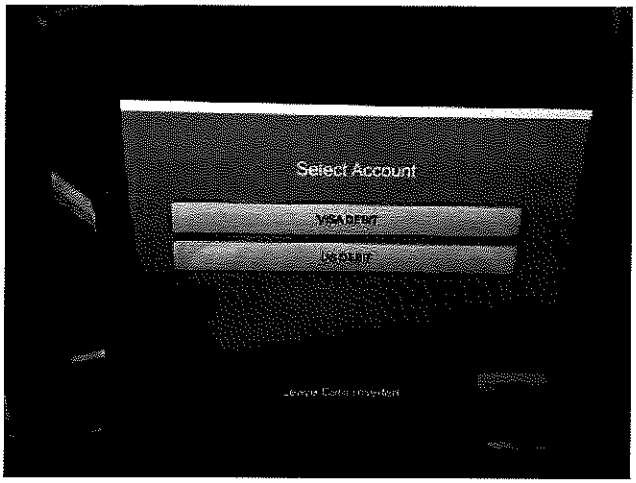
EMV POS Terminal Prompts





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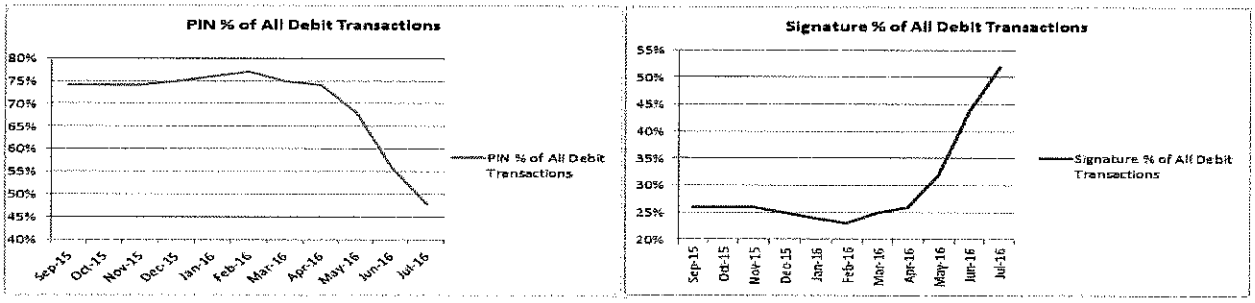
Debit Network Volume Impacts

Merchant Example

- Varied merchant rollouts of confusing EMV screen prompts have contributed to PIN debit declines in 2016
- "Visa Debit" screen prompts were installed at a national retailer between March and July this year. Following the rollout at all locations, PIN debit volume fell from 75% of the merchant's overall debit transactions to 48%. Meanwhile, signature debit transactions grew from 25% to 52%. We have confirmed that there were no changes to this merchant's routing tables during this period, meaning this entire diversion of traffic from PIN debit to signature debit is a result of the "Visa Debit" screen prompt.

36% reduction in PIN volume 108% increase in Signature



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Consumer Benefits

Post Durbin a vast majority of Issuers harmonized cardholder benefits across all debit networks	
Issuer Rewards	Most debit issuers have eliminated reward programs, those that remain apply benefits uniformly
Network Dispute Benefits	Issuer have uniform policies on liability across networks + Expanded set of dispute rights + Zero liability on debit transactions + Expedited dispute resolution
Network Based Security Benefits	Issuer fraud mitigation is provided by both processors & networks + Real-time fraud mitigation, network safety & soundness + Branded products and services that deliver clear value (e.g. transaction alerts, geolocation services, card control features)
Network Based Marketing and Offers	Debit networks can tailor promotions and offers to cardholders
Merchant Debit Card Acceptance	Debit networks maintain comparable debit acceptance across the country

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Topic #2: Mobile Wallets & Tokens

Mobile wallets are another example where routing choice is being limited

- Debit networks are restricted by the Global Brands from using CVM authentication specifications for:
  - mobile proximity transactions
  - in-app eCommerce transactions
- Token routing and processing allow tokenization services to "see" competing network volumes and provide access to proprietary data

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Mobile Proximity Transactions

- Under the manner in which the Common U.S. Debit AID was granted by the Global Brands, usage was limited to PIN and NO CVMs. Use of the Common U.S. Debit AID for mobile transactions would eliminate the fact that biometric authentication was performed by the consumer.

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In-App eCommerce Transactions

- There are two use cases to consider:
  - For a mobile application leveraging a Mobile Wallet for an in-app purchase
  - For a card-on-file transaction using the Global Brand's token service
- Once the token has been received by one of the Global Brands in either of the two use cases above, future transactions are restricted to that Global Brand
- In other words, in-app transactions bind tokenization with authentication; once the binding is complete, it obligates all future transactions to the one global brand for routing
- Is this a violation of Section 235.7 on network exclusivity and routing?

Token Routing and Network Data

- Token implementations are providing competitive and usage data to Global Brands and could be used to build programs and incentives to alter how a transaction is routed
- This data could be used to charge fees to issuers

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Standards = Competition

Competition among debit networks has created substantial benefits to consumers	
Magnetic Stripe	The issuance of the card and the magnetic stripe today is based on ANSI and ISO standards
PIN	The pin used today throughout the world is driven by ANSI and ISO standards
Network Competition	Debit networks have competed on valued services for the FI, merchant, and consumer and do it by laying on top of "open standards" products and services that add value
EMV is proprietary software implemented on a set of open standards	The chip technology is a integration of many standards which EMVCo then developed a framework of "software" which is loaded onto the chip. EMVCo did not invent or create chip technology. EMVCo created a proprietary standard when it allowed the individual brands to customize a "minimum standard" which created uniqueness to each brand. It is this unique implementation in the U.S. which is proprietary to them and is restricting competition.

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Summary

- Consumers are free to choose what card is "top of wallet"
- Regulation II exclusivity and routing provisions should be observed
- Stringent, proprietary specifications are impeding routing choices
- Technical or business obstacles can hamper merchant routing choices for certain CVMs and for some transactions and should be avoided
- Networks should not be subject to technical and business dependencies with a competing network in order to detokenize and process their own token transactions
- The current payments standards setting structure is not an open, consensus structure. This causes problems in implementation and creates an unbalanced playing field. Influence by regulators to create an open, consensus standards structure would be beneficial to enhancing competition.

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Thank you

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