

**Meeting Between Federal Reserve Board Staff  
and Representatives of the Debit Network Alliance  
October 18, 2017**

**Participants:** Jeffery Marquardt, Stephanie Martin, Susan Foley, David Mills, Mark Manuszak, Krzysztof Wozniak, and Clinton Chen (Federal Reserve Board)

Jonathan Wegner (Baird Holm); Denise Grace (Culiance); Paul Tomasofsky (Debit Network Alliance); 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, tokenization services, and payments standards. The representatives expressed their views on how these developments affect merchant routing.

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

# Debit Network Alliance

## Debit Topics

## U.S. Update

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Federal Reserve Board of Governors Meeting  
October 18, 2017



DEBIT NETWORK ALLIANCE

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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: Token Routing
- Topic #3: Payments Standards
- Summary

# 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 networks of Debit Network Alliance are AFFN®, ATH®, CO-OP Financial Services®, Culiance®, Jeanie®, NYCE®, Presto!®, PULSE®, SHAZAM®, and STAR®.
- The DNA seeks a robust competitive environment that benefits Financial Institutions, Merchants and Consumers.



# 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:
  - Various mobile wallets leveraging different technologies are making steady progress in penetrating the market.
  - Many debit networks are now able to support a wider range of debit transactions, including signature and PINless transactions.
- Payments specification development continues to be controlled by just a few industry players, causing market accessibility issues for participants not involved with that closed body.

# Debit Competitive Landscape

- Debit Networks have developed product extensions that enable them to compete for all debit market segments including eCommerce.
- Global Brands have used market technology developments including EMV and Tokenization to inhibit routing of transactions to alternative networks.

# Topic #1: EMV

# Topic #1: EMV

- Debit networks are contractually prohibited from using CVM authentication specifications for:
  - mobile proximity transactions
  - in-app eCommerce transactions
- Debit networks' Common AID licenses are not future-proofed. Debit networks are locked out from using biometric authentication such as fingerprints, face recognition and other methods.

# Topic #1: EMV

- 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.

# Topic #2: Token Routing

# What is Tokenization

- Process of substituting a sensitive data element with a unique non-sensitive equivalent, referred to as a **token**, that has no extrinsic or exploitable meaning or value.
- Tokens are generated, stored, mapped/de-mapped within a secure centralized system called a **Token Vault**.
- Detokenization is the process of mapping the token back to its original value (Callout).
- An entity providing Tokenization/Detokenization is typically referred to as a **Token Service Provider (TSP)**.
- Tokens follow a lifecycle management process.

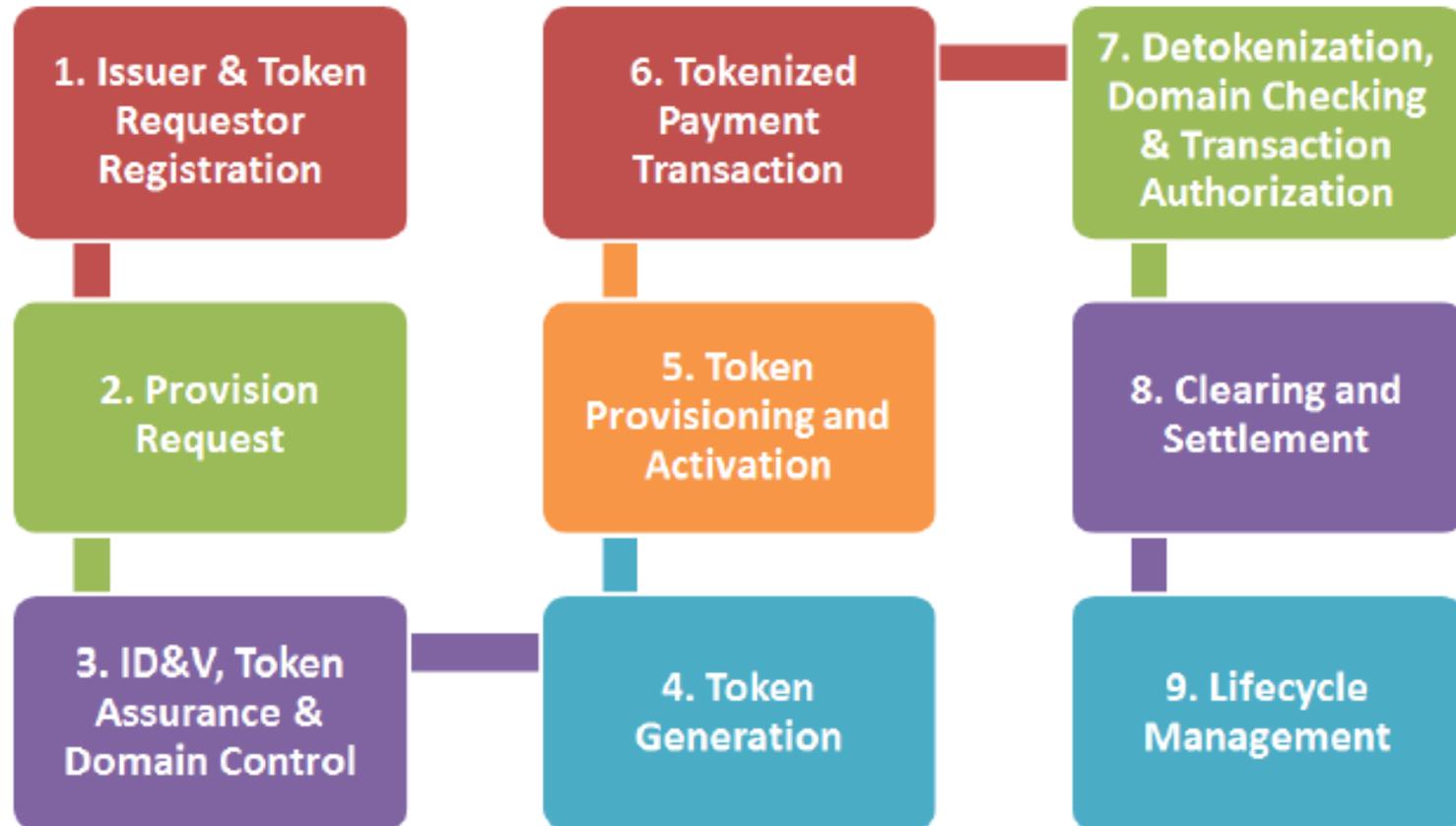
# Tokenization Role in Payments

- **Tokenization** is used to replace a consumer card's Primary Account Number (PAN) with an alternative value called a Token, in order to protect the consumers account information.
- **Token Features:**
  - A single PAN may be mapped to multiple tokens for different use cases.
  - Tokens may be merchant, channel or device specific and single or multi-use.
  - If compromised or stolen, tokens reduce the likelihood of subsequent fraud since they have no value outside a specific device, merchant or acceptance channel.

# Tokenization Roles

- **Issuers:** FIs that issue debit cards and/or credit cards to cardholders, validate cardholders during token provisioning, authorize transactions, manage tokens throughout lifecycle.
- **Token Requestors:** Authorized entities that may request and maintain tokens managed by a token service provider, e.g. wallet providers, card-on-file merchants, networks, etc.
- **Token Service Providers (TSPs):** Generate tokens and maintain a token vault containing actual PANs and each token associated with them on behalf of an issuer
- **Networks:** Payment networks that receive tokenized transactions from acquirers, interact with TSPs to detokenize and validate cryptogram and pass both actual card and token data to issuers for authorization

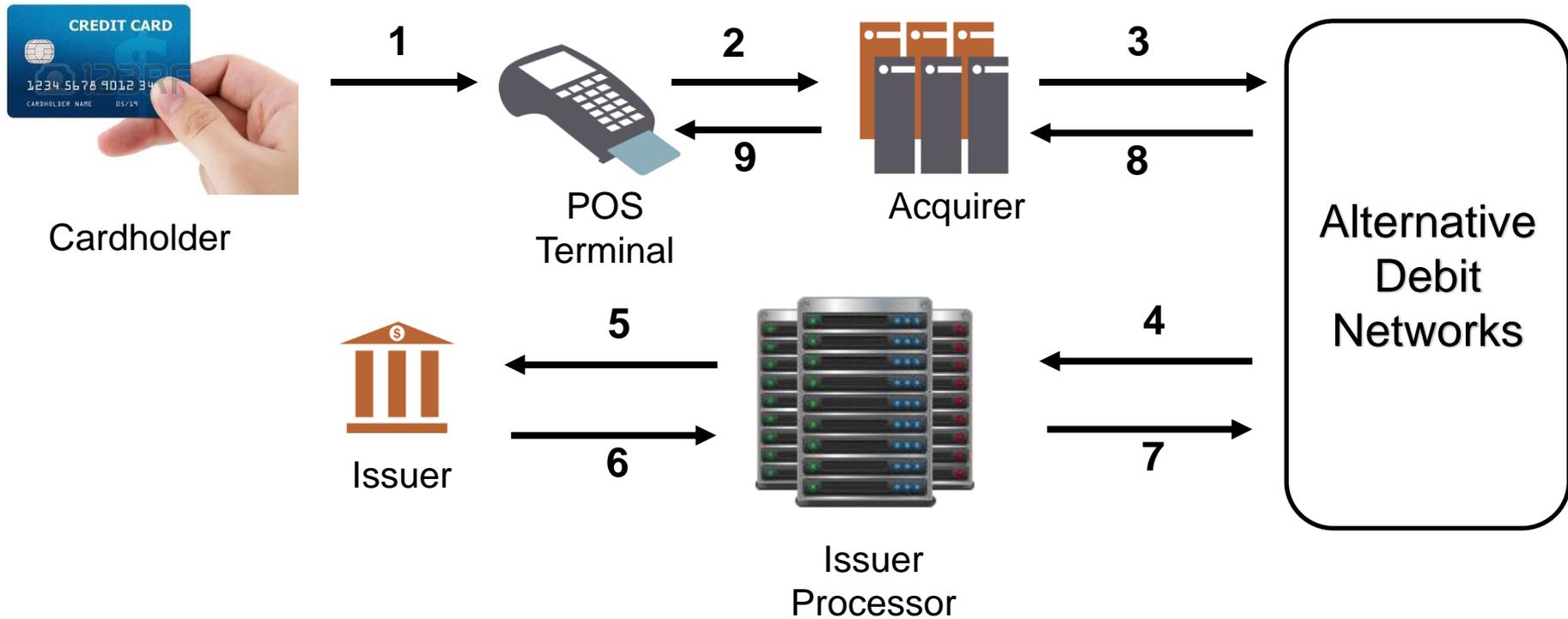
# The Life of a Payment Token



# Provisioning – Physical Card Magstripe/EMV Traditional



# Transaction Processing (EMV / Magstripe )



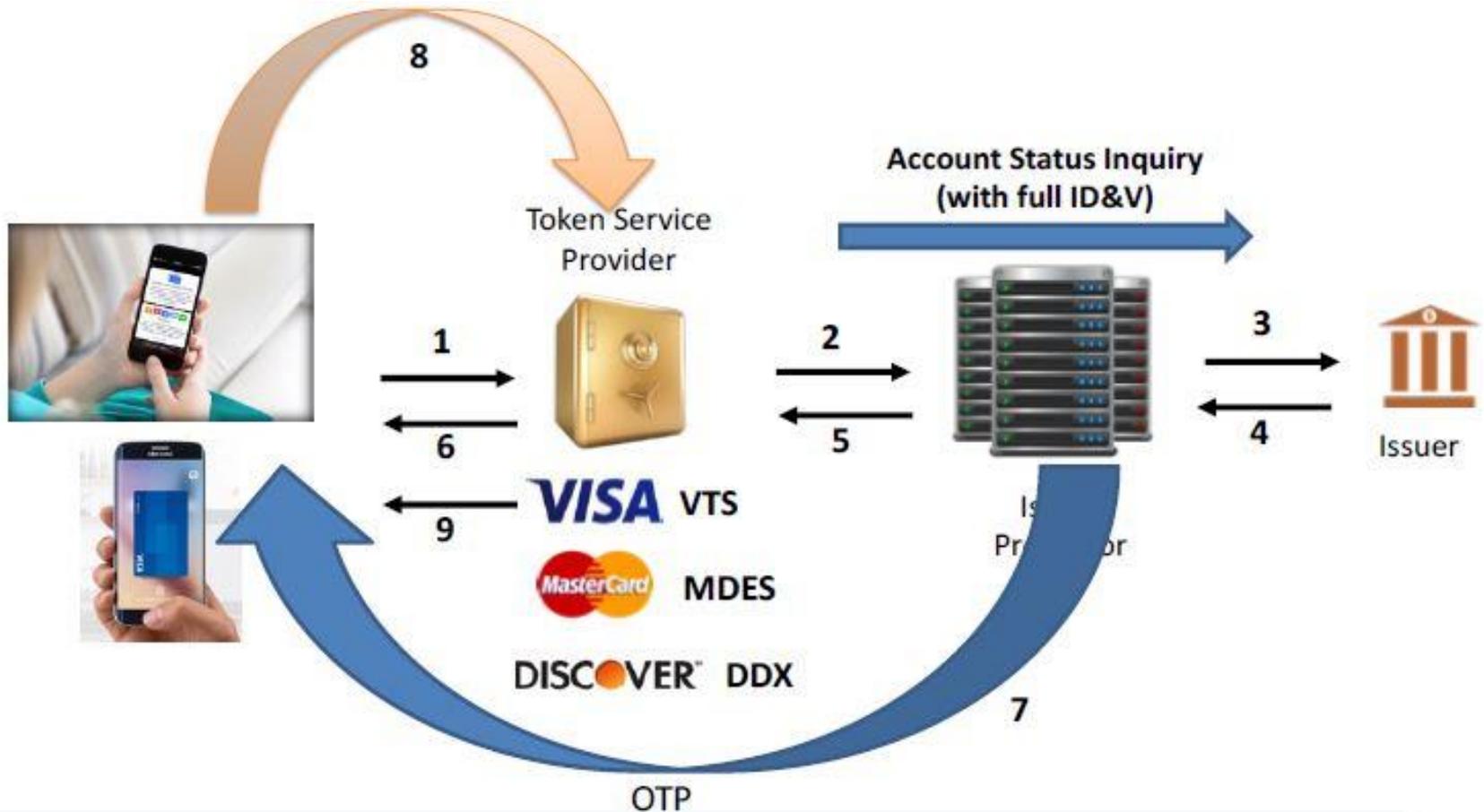
# Token Provisioning (Digital Wallet - On Device)



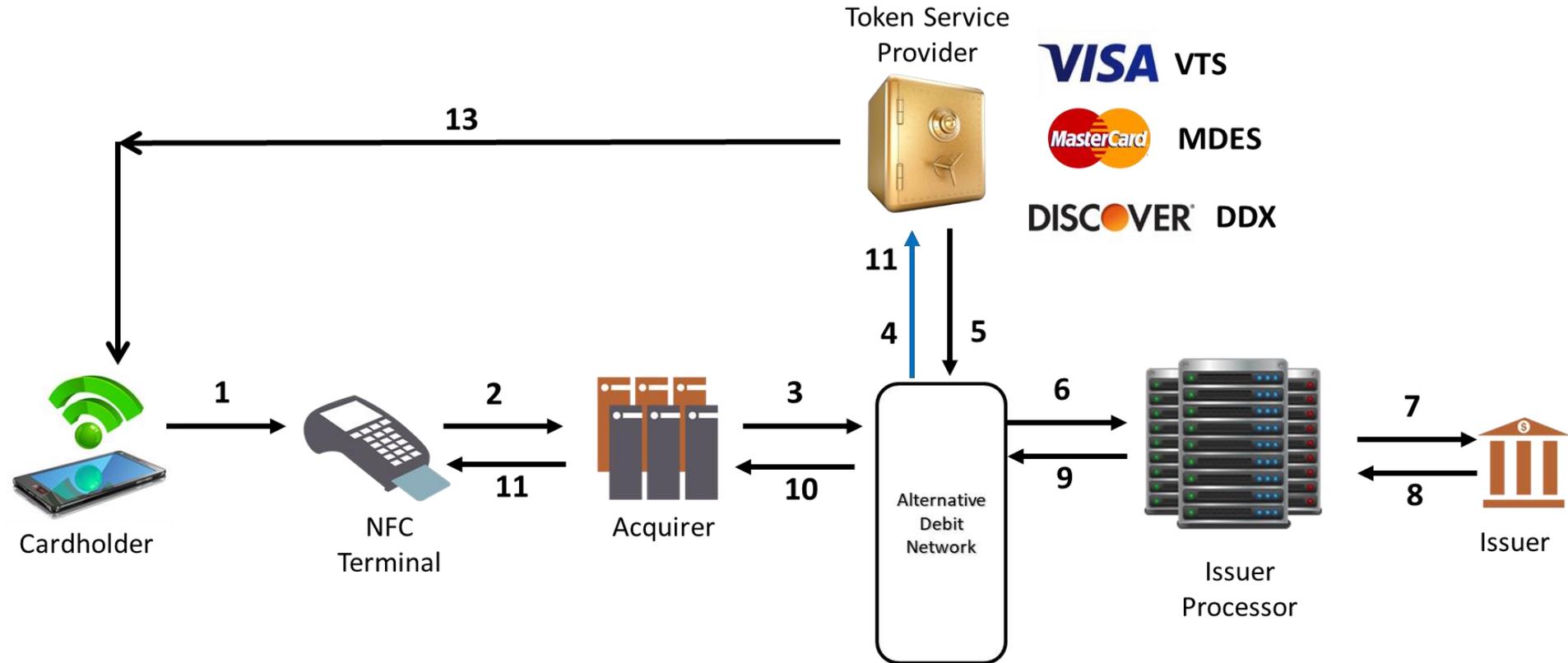
Wallet



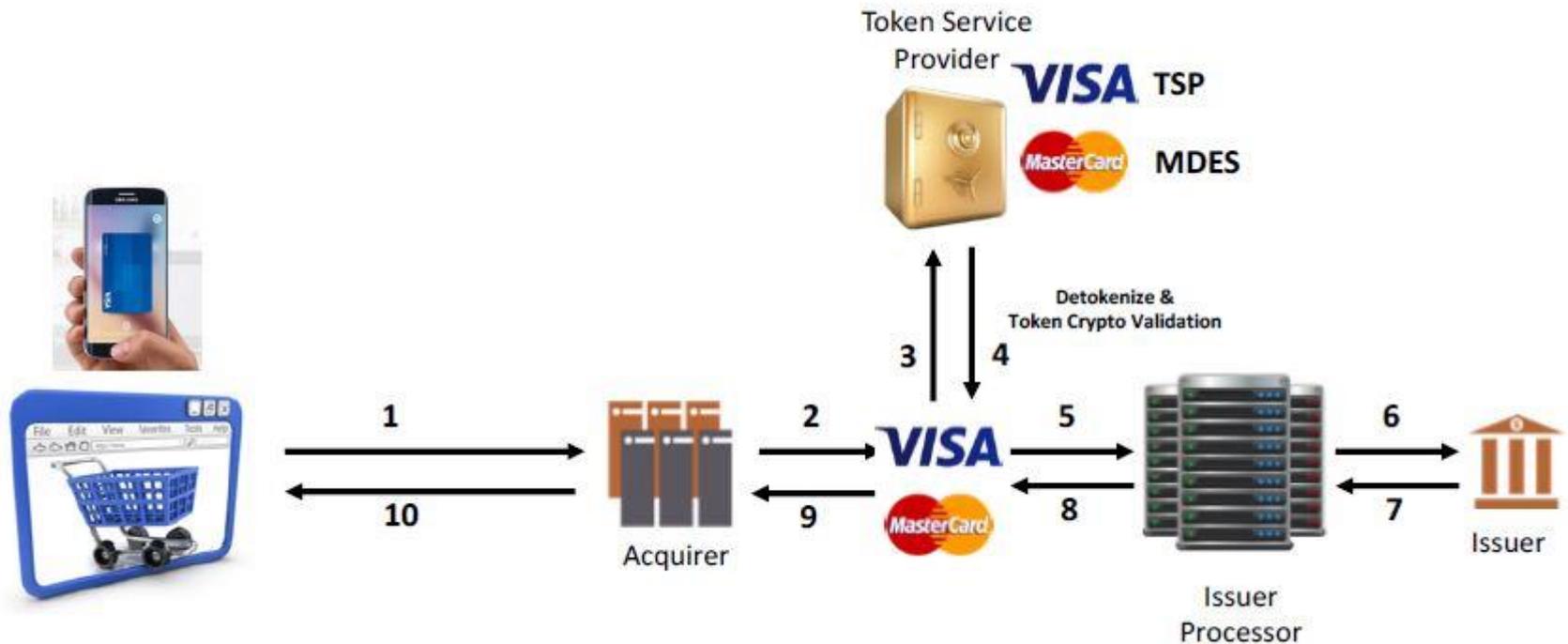
# Token Provisioning (Digital Wallet – On Device, In-App)



# Transaction Processing (Digital Wallet - On Device)

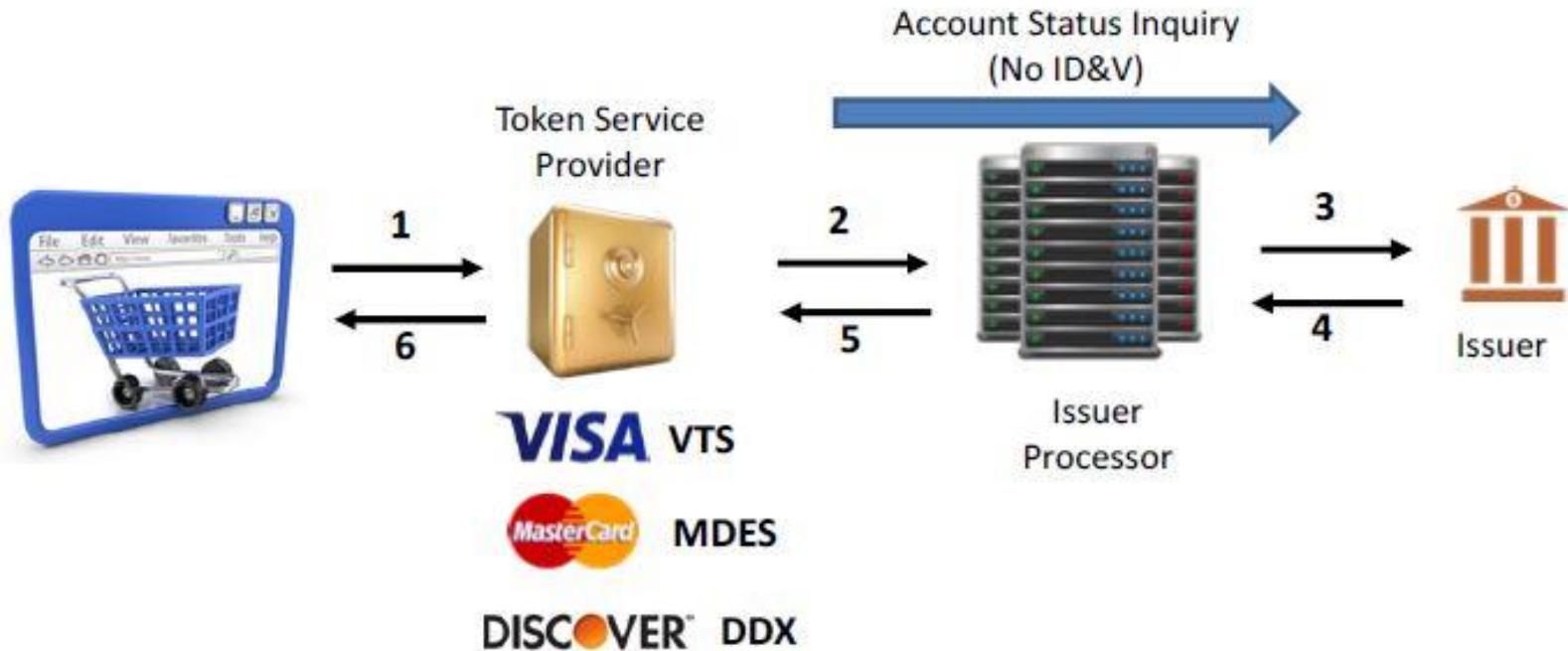


# Transaction Processing (Mobile In-App)



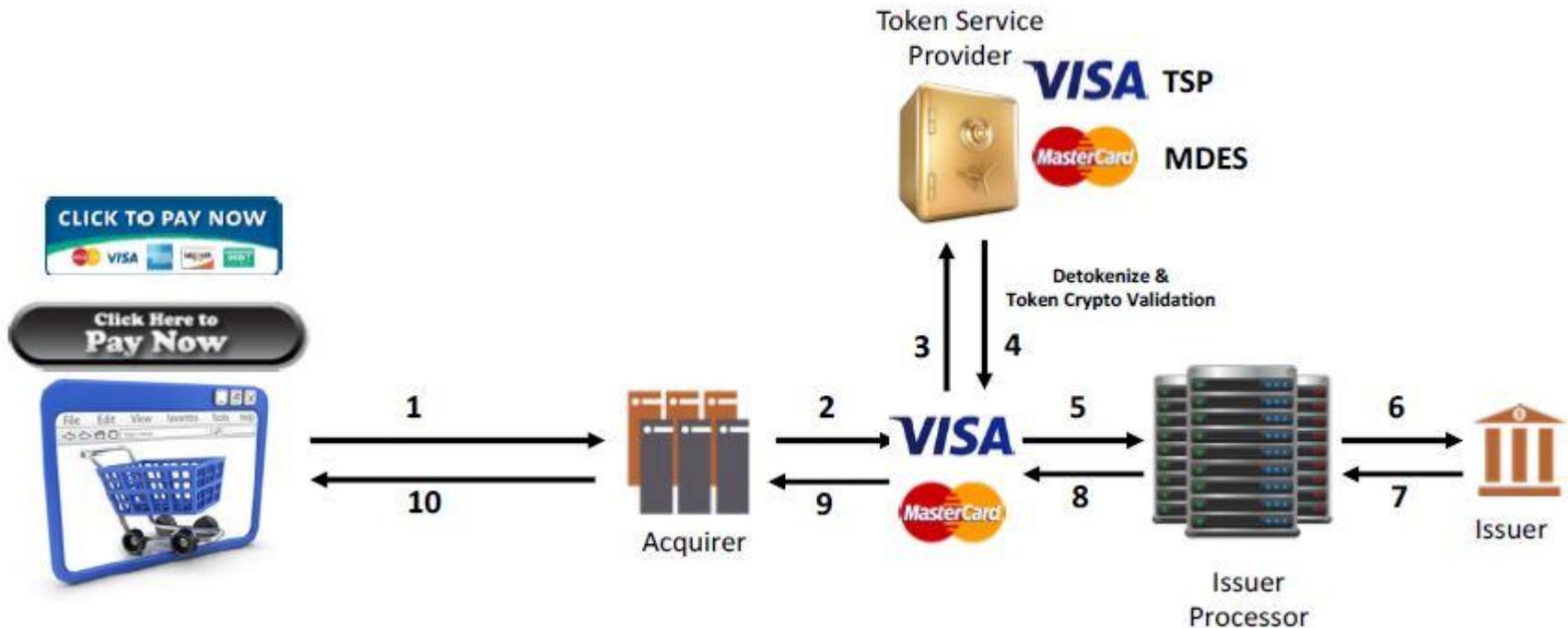
Loss of merchant routing choice for tokenized credentials; Application requires integration with digital wallet and certification with global brand .

# Token Provisioning (Merchant COF & Pay Button)



Loss of merchant routing choice for tokenized credentials; questionable cardholder verification thoroughness; Liability shift to issuers on tokenized transactions.

# Transaction Processing (Merchant COF, Pay Button)



Loss of merchant routing choice for tokenized credentials; questionable cardholder verification thoroughness; Liability shift to issuers on tokenized transactions.

# Global Brands Confirm Existing Policies

- The DNA sent formal letters to both Visa and Mastercard asking them to extend the current Common Debit AID license agreements to include biometric authentication CVMs to the debit networks.
- In addition, the letters asked Visa and Mastercard to engage in developing a technical framework to create a tokenization process that would eliminate the routing restrictions and allow all networks to compete more fully.
- The letters resulted in telephonic discussions between each global brand and DNA members. In both instances, both global brands refused to initiate either request.
  - One global brand even stated that it specifically requires merchants desiring to use its tokenization service to execute contractual verbiage stating that the merchants understand they will give up routing choice for debit.

# Topic #3: Payments Standards

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Over the past decade, the development of card payments specifications have moved from an open, consensus framework to a closed body, primarily controlled by two of the global brands. These specifications fall short of U.S. payments systems interoperability and implementation prescriptions under Regulation II, hampering routing choice and competition.

# Topic #3: Payments Standards

- EMV and Tokenization are defacto global brand controlled.
- The manner in which the EMV and Tokenization specifications have been put forth into the market have inhibited routing of transactions to alternative networks.
- Recently, Quick Response Code and Biometrics specifications also became controlled by the global brands.
- “Pin on Glass” concept is an example of how EMVCo and PCI Council attempt to bypass existing open, consensus standards process.



# Topic #3: Payments Standards

There is a clear role for the Federal Reserve. Much as it has done for the Faster Payments Initiative, the Fed can serve as a catalyst to bring the industry together to create a “Specifications Rules Framework” for card payments. The framework would focus on making sure that card payments specifications ensure interoperability among networks and maintain debit routing choice in all market segments, including Faster Payments Initiative criteria of Ubiquity, Efficiency, Safety and Security, Speed, Legal and Governance.

# Summary

- Consumers are free to choose what card is “top of wallet.”
- Regulation II non-exclusivity and routing provisions should be observed.
- Stringent, proprietary specifications are inhibiting merchant routing choice.
- Technical or business obstacles can inhibit merchant routing choices for certain CVMs and for some transactions in violation of Regulation II.
- Regulators should clarify that debit routing choice applies to emerging payment channels, including eCommerce.
- The current payments standards setting structure is not an open, consensus structure and is controlled by two of the global brands. This causes problems in interoperability and routing choice implementation and creates an unbalanced playing field. The Federal Reserve should consider serving as a catalyst to bring the industry together to create a “Specifications Rules Framework” for card payments. The framework would focus on making sure that card payments specifications ensure interoperability among networks and maintain debit routing choice in all market segments.

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# Thank you

