

**Meeting Between Federal Reserve Board Staff and Representatives of Visa
May 15, 2015**

Participants: Louise Roseman, Jeffrey Marquardt, Stephanie Martin, David Mills, Samantha Pelosi, Mark Manuszak, Krzysztof Wozniak, Clinton Chen, and Aaron Rosenbaum (Federal Reserve Board)

William Sheedy, Alex Miller, Kimberly Lawrence, and Ky Tran-Trong (Visa);
Oliver Ireland (Morrison & Foerster, LLP)

Summary: Representatives of Visa met with Federal Reserve Board staff to discuss their observations of recent market developments related to the deployment of EMV (i.e., chip-based) credit and debit cards in the United States. Representatives of Visa also provided an update on payment tokenization and Visa's role as a token service provider. Finally, Visa discussed the role of consumer choice in the routing of card transactions to payment card networks.

Attachment

EMV and Tokenization Updates, and Consumer Choice

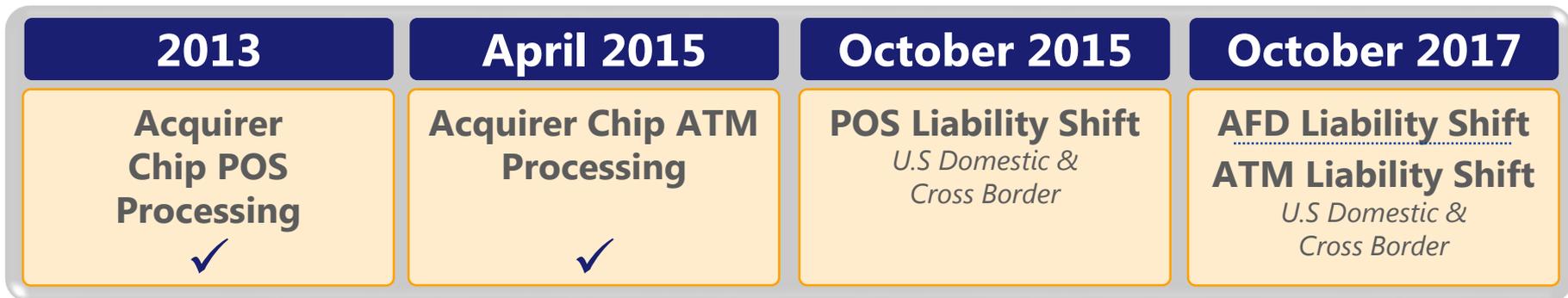
**Discussion with the Federal
Reserve**

May 2015



VISA

EMV Migration Momentum



Progress

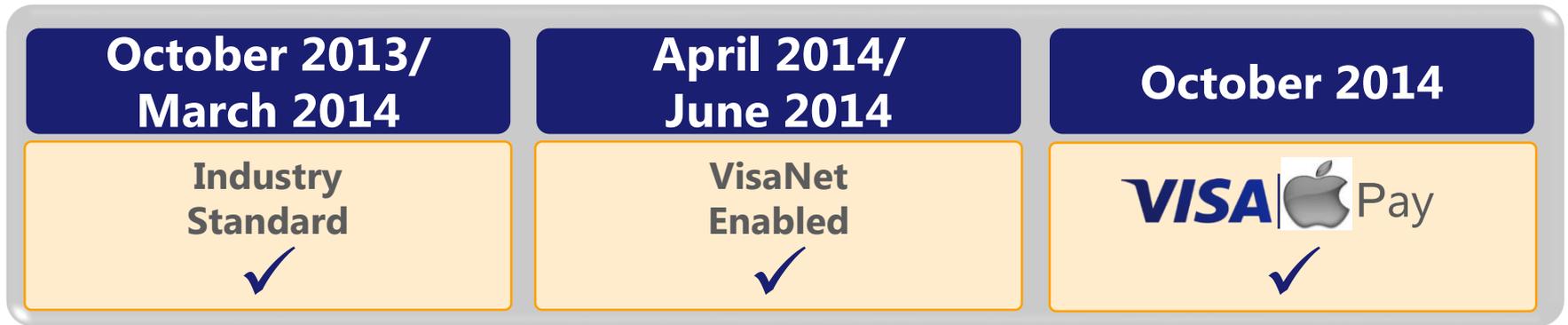
- Together the EMF and PST have launched gochipcard.com, a website developed to assist consumers, merchants and issuers with migration to chip
- Visa believes a number of acquirers will have the common debit solution available for their merchants to deploy in June 2015, ahead of the liability shift
- Approximately 38% of POS terminals have EMV chip hardware and ~153,000 merchant locations have activated EMV chip software
- While most merchants are focused on contact chip card enablement for October 2015, many are incorporating contactless terminals into their plans given the introduction of EMV tokens and mobile payments
- Visa EMV chip cards increased to 66.7M as of the end of March 2015, a 40% increase since December 2014
- The 20 city Small Business Chip Education Tour kicked off in March to educate small businesses and consumers on EMV

Ongoing Challenges

- EMV deployment is challenging given the scale and complexity of the U.S. market, the number of competing debit networks, and the variety of merchant, processing and terminal solutions
- Appropriate testing and certification is required to ensure interoperability. The industry is taking a number of steps to address this issue, including through the Value Added Reseller (VAR) precertification program launched by the PST in partnership with PCI Co.
- Consumer and merchant education around how to use EMV chip cards

Sources: Cards per Operating Certificates as of Dec 2014. EMV Terminals per EMF estimate as of Oct 2014. EMV merchant locations based on VisaNet data for unique locations with chip transactions as of Dec 2014.

Tokenization Roadmap



2015 Progress

- Five debit networks are certified for the Visa Token Service (VTS) call-out service (Accel, Maestro, NYCE, Pulse, Star) and an additional two networks are in progress to be certified (Jeanie and Shazam)
- Industry discussions underway for a new non-payment identifier value called a Payment Account Identifier (PAID) that can be associated to Primary Account Numbers (PAN) and Tokens

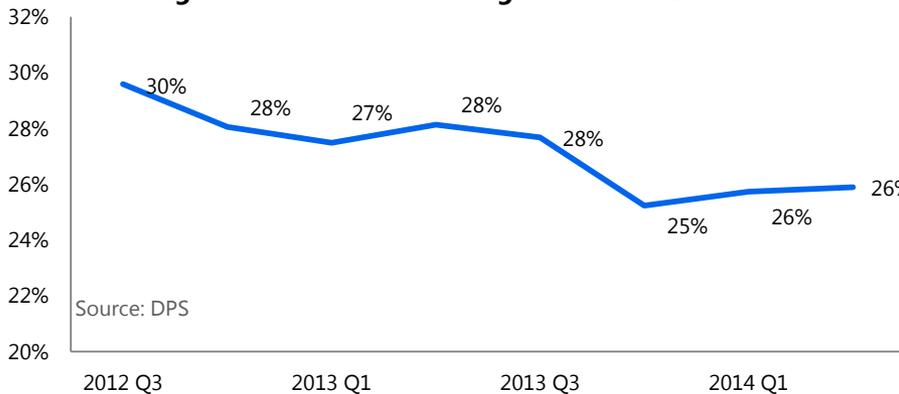
New VTS Deployment Announcements

- Visa will be extending tokenization technology through several smartphone devices and operating systems in the coming months, in addition to Apple Pay. Additional token requestors, including Samsung Pay, are expected to go live later in 2015
- Middle of this year, financial institutions globally will be able to take advantage of VTS for their own mobile banking apps so that tokens are used when consumers make purchases online or with mobile devices
- In Fall 2015, Visa plans to tokenize eligible transactions initiated with Visa Checkout, Visa's online payment service for ecommerce purchases
- Visa will work with several large ecommerce merchants this year, to help them use VTS to replace card accounts on file with tokens

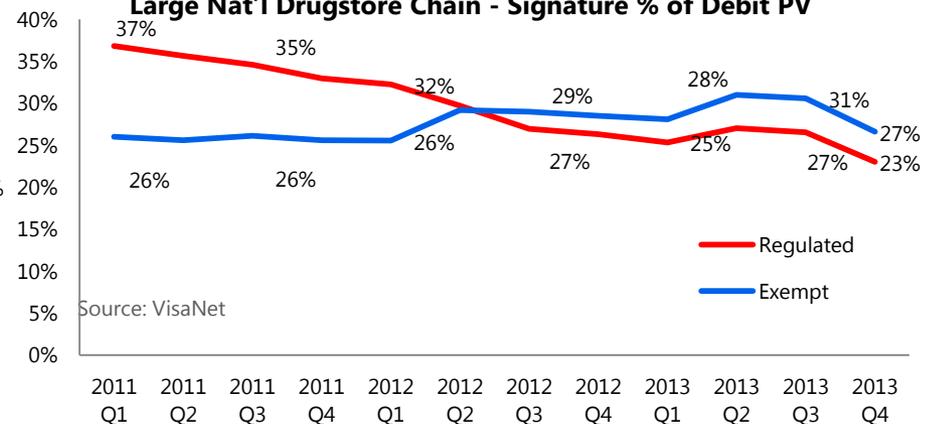
Consumer Choice

- Currently cardholders have a variety of options in how they select a payment brand and many continue to choose based on preference and brand-specific benefits
 - Card Present: Cardholders have traditionally been taught by issuers to push the “credit” button or cancel PIN where the consumer prefers to sign for a transaction, which may earn additional benefits
 - Card not Present: Card not present merchants currently provide choice to cardholders through various approaches, including pre-purchase disclosures and opt-in/opt-out options during the checkout process
- Changes in the payments industry will likely accelerate the replacement of POS terminals, and some terminals are reducing or eliminating cardholder choice
- Visa Rules and Guidelines provide standards for both card present (CP) and card not present (CNP) merchants to **offer, honor, and confirm** cardholder choice of payment type
- Data shows that a significant percentage of cardholders of exempt issuers that offer benefits post-regulation continue to prefer signature over PIN
- Some cardholders have complained about transactions routing as “PIN” even after selecting “credit” at POS

Drugstores & Pharmacies - Signature % of Debit PV



Large Nat'l Drugstore Chain - Signature % of Debit PV



Source: Visa data



Cardholder Experience

Why it matters to consumers

- Cardholders paying with a debit card may have expectations regarding rewards and benefits, chargebacks, and alerts that may be affected by merchant routing
- Choice improves the cardholder experience by providing transparency and enabling cardholders to be in control of their transaction routing and to realize the full benefits associated with their debit cards

Benefits of Cardholder Choice

Rewards	<ul style="list-style-type: none">• To compete with large banks, some small issuers offer debit rewards (cashback, points, or miles) that may be dependent on cardholder use of a specific network
Card Usage Fees	<ul style="list-style-type: none">• Some issuers may have fees on certain types of transactions and cardholders can pick network to avoid fees
Dispute Process	<ul style="list-style-type: none">• Visa offers additional protections on its debit transactions:<ul style="list-style-type: none">– Extensive chargeback rights– Zero liability – full protection from unauthorized Visa charges and extensive chargeback rights vs. up to \$500 liability under federal law (Regulation E)– Accelerated timing of provisional credits on disputed transactions – 5 business days vs. 10 business days under federal law (Regulation E)
Alerts and Marketing Offers	<ul style="list-style-type: none">• Receipt of transaction alerts and participation in marketing offers, such as sweepstakes, may be dependent on cardholder use of a specific network

Implementations of Consumer Choice

Although Visa provides guidelines around cardholder choice, Visa has been flexible with actual implementation



Credit / Debit Selection

Network Selection
Pre Card Entry

PIN Entry / Cancel

Network Selection
Post Card Entry

Payment Brand Selection

Credit

Debit

Debit card transactions may be processed using the STAR, Pulse, NYCE, or ACCEL networks. Uncheck this box if you DO NOT want your transactions processed through these networks.

Unchecking will route your transaction through the Visa or MasterCard network, as appropriate.

Please Enter Your PIN:

1	2	3
4	5	6
7	8	9
*	0	#

Debit card transactions may be processed using the STAR, Pulse, NYCE, or ACCEL networks. Uncheck this box if you DO NOT want your transactions processed through these networks.

Unchecking will route your transaction through Visa.

Please select the network through which your debit transaction will be processed:

VISA STAR

INTERLINK pulse

- Implemented in CNP Today
- Implemented in CP Today
- Additional Options

