Meeting Between Federal Reserve Board Staff
and Representatives of Visa
July 23, 2010

Participants: William Sheedy, Elizabeth Buse, Stacey Pinkerd, Julie Rottenberg, Alex Miller (Visa); Oliver Ireland (Morrison & Foerster, LLP)

Louise Roseman, Jeffrey Marquardt, Jeffrey Yeganeh, Edith Collis, Geoffrey Gerdes, Joshua Hart, Robin Prager, Elizabeth Kiser, Mark Manuszak, Stephanie Martin, Chris Clubb, Dena Milligan, David Stein, and Ky Tran-Trong (Federal Reserve Board).

Summary: Staff of the Federal Reserve Board met with representatives of Visa to discuss the interchange fee provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act ("the Act"). Using prepared materials, representatives of Visa provided an overview of the debit card payment industry; transaction processing; interchange and network fees; risk and fraud management; and prepaid card products. A copy of the handout provided by Visa at the meeting is attached below.
Presentation to the Federal Reserve on Debit Card Regulation

July 23, 2010
Contents

• Payments Landscape
  • Debit Products
  • Interchange
  • Transaction Processing
  • Risk and Fraud Management
  • Network Fees
  • Government and Prepaid Products
# Debit Card Payment Participants

*Primary Network Customers*

<table>
<thead>
<tr>
<th>Participant Type</th>
<th>Services Offered</th>
<th>Customer Base</th>
</tr>
</thead>
</table>
| Merchant Outlets | • Make payment acceptance decisions  
                     • Decide point-of-sale environment, including cardholder options and experience | ~8M           |
| ISO (Independent Sales Organization) | • Sign merchants up to accept payment cards on behalf of acquirer clients  
                     • In some cases, manage merchant relationships and acceptance infrastructure needs | >1,000        |
| Acquirer (financial institution) | • Sign merchants up to accept Visa and manage merchant relationships  
                     • Underwrite merchant risk  
                     • Collect funds for card purchases on behalf of the merchant | >250          |
| Acquirer Processor | • Merchant connectivity and transaction processing  
                     • Merchant technical support, exception item processing, back-office services | <50           |
| Payment Network | • Switch transactions, including back up processing and in-flight risk/fraud monitoring  
                     • Manage payment standards, business requirements and compliance  
                     • Manage risk, fraud and settlement flow and risk  
                     • Facilitate chargeback and dispute processes, including liability shifts  
                     • Develop new products and services | >15           |
| Issuer Processor | • Provide issuer connectivity and transaction processing  
                     • Provide issuer back-office services, including risk management and statementing | <25           |
| Issuer (financial institution) | • Market and issue cards; manage cardholder pricing and relationships  
                     • Extend credit lines and offer Demand Deposit Accounts (DDAs)  
                     • Collect funds from cardholder | >14K          |
| Cardholder | • Use cards at merchant point-of-sale  
                     • Maintain an account with the issuer | >350M         |

Source: Nilson Report issue 938, Visa Analysis
Payment Industry Overview

Electronic methods of payment, specifically debit, have increased in share of payments during the past 4 years.

U.S. PCE by Payment Method, CY2005 – CY2009 ($B)

- Signature Debit: 5.6% (2005) vs. 7.9% (2009)
- PIN Debit: 3.5% (2005) vs. 6.3% (2009)
- Credit: 18.5% (2005) vs. 18.8% (2009)
- Preauthorized Payments: 3.9% (2005) vs. 4.8% (2009)
- Other: 8.5% (2005) vs. 7.4% (2009)
- Checks: 21.8% (2005) vs. 15.5% (2009)
- Cash: 15.9% (2005) vs. 16.2% (2009)
- Non Financial Transactions: 22.2% (2005) vs. 23.0% (2009)

Note: Signature debit includes all MasterCard debit volume; Preauthorized Payments includes ACH; Other includes GIROs, remote or preauthorized payments, money orders, travelers checks, food stamps and payments to WICs. Checks include POS, direct payment checks. Cash excludes GPC credit, offline debit, and online debit cash advances. Non financial transactions are exchanges of goods or services for which there was no financial payment. Excludes balance transfers, child support, alimony, and prepaid. PCE penetration figures based on The Nilson Report (October 2007) and its underlying methodology.

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• Payments Landscape

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• Risk and Fraud Management

• Network Fees

• Government and Prepaid Products
Debit Product Benefits
Debit products improve payment process efficiency

Consumers
- Convenience of electronic access to DDA with reliability and protection of the network brand
- Visa’s Zero Liability policy
- Chargeback rights and dispute resolution
- MOTO/Internet access
- Participation in promotions and rewards programs
- Avoid ATM fees

Merchants
- More efficient than paper based payments
- Guaranteed receipt of funds
- Chargeback rights and dispute resolution
- Access to global, national and regional networks of consumers
- Incremental sales not limited to cash on hand

Banks
- Alternative channel to provide customers access to deposit account
- Greater efficiency than paper forms
- Access to fraud/risk management systems
- Value add service to build stronger relationships
Debit Network Options
Many issuers enable debit cards to access one signature network and multiple online PIN and ATM networks

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Payment Networks</strong></td>
<td><strong>Network</strong></td>
</tr>
<tr>
<td><strong>Signature</strong></td>
<td>Visa</td>
</tr>
<tr>
<td></td>
<td>MasterCard</td>
</tr>
<tr>
<td></td>
<td>Interlink</td>
</tr>
<tr>
<td></td>
<td>STAR</td>
</tr>
<tr>
<td></td>
<td>Pulse</td>
</tr>
<tr>
<td></td>
<td>NYCE</td>
</tr>
<tr>
<td></td>
<td>ACCEL</td>
</tr>
<tr>
<td></td>
<td>Shazam</td>
</tr>
<tr>
<td></td>
<td>Jeanie</td>
</tr>
</tbody>
</table>

1Payment Network table is not exhaustive
Source: Nilson Report #879 and #902, ATM & Debit News 2008 EFT Data Book
Assumption: For PIN-Based POS Debit Network Payment Volume, Payment Volume = reported monthly transactions multiplied by 12 months multiplied by $36 average ticket size
**Product Features**

Visa Debit and Interlink are two separate brands with similar security features offering unique transaction processing and consumer benefits.

<table>
<thead>
<tr>
<th>Basic features and use</th>
<th>Visa Debit</th>
<th>Interlink</th>
<th>Other PIN Networks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Most frequent authentication method</strong></td>
<td>Signature</td>
<td>PIN</td>
<td>PIN</td>
</tr>
<tr>
<td><strong>Processing type</strong></td>
<td>Dual message(^1)</td>
<td>Single message</td>
<td>Single message</td>
</tr>
<tr>
<td><strong>Transaction processing</strong></td>
<td>2 Transactions(^1) - Authorization - Settlement</td>
<td>1 Transaction - Authorization &amp; Settlement</td>
<td>1 Transaction - Authorization &amp; Settlement</td>
</tr>
<tr>
<td><strong>Funds Settlement</strong></td>
<td>Average 1-2(^2) Days</td>
<td>1 Day</td>
<td>1 Day</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Security features</th>
<th>Visa Debit</th>
<th>Interlink</th>
<th>Other PIN Networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero liability</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Merchant payment guarantee</td>
<td>✓</td>
<td>✓</td>
<td>?</td>
</tr>
<tr>
<td><strong>Chargeback protection</strong></td>
<td>✓</td>
<td>✓</td>
<td>Errors only</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consumer benefits</th>
<th>Visa Debit</th>
<th>Interlink</th>
<th>Other PIN Networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash back functionality enabled by stakeholders</td>
<td>No</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Accepted internationally</td>
<td>✓</td>
<td>No</td>
<td>No(^3)</td>
</tr>
<tr>
<td>Debit rewards programs</td>
<td>Issuer Decision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accepted over the internet/phone</td>
<td>✓</td>
<td>No</td>
<td>Limited</td>
</tr>
</tbody>
</table>

\(^1\)Most frequent processing type; \(^2\)57% settled in 1 day, 96% of transactions are settled within 2 days. \(^3\)Maestro only
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• Transaction Processing
• Risk and Fraud Management
• Network Fees
• Government and Prepaid Products
Payment System Dynamics

Interchange is designed to create balance across all stakeholders while enabling industry-wide efficiency, security, reliability, innovation and growth.

Interchange Management Objectives

- Expand Merchant Acceptance
- Promote new products and cardholder usage
- Strengthen system security and integrity
- Incent technology improvements

Merchants’ benefits and demand

INTERCHANGE

Consumers’ benefits and demand
Interchange Processing

Visa’s systems act on a variety of characteristics to accurately assign an appropriate interchange rate to each transaction

- **Interchange rates and qualification criteria** are embedded in VisaNet and in globally published technical requirements, updated twice per year, which apply to issuers, acquirers and processors
  - Acquirers embed the rates to communicate efficiently with merchants
  - Issuers embed the rates to communicate efficiently with partners (e.g., co-brands)
- **VisaNet** looks at several message fields to determine appropriate interchange – including product type, merchant type, jurisdiction and additional data

**Merchant Environment Continuum**

<table>
<thead>
<tr>
<th>Face to Face</th>
<th>Final Amount</th>
<th>Unattended Terminal</th>
<th>Information on File</th>
<th>eCommerce</th>
</tr>
</thead>
<tbody>
<tr>
<td>QSR</td>
<td>Unknown</td>
<td>AFD</td>
<td>(Recurring)</td>
<td>Bill Pay</td>
</tr>
<tr>
<td>Retail</td>
<td>Restaurants</td>
<td>Kiosk</td>
<td></td>
<td>Retail</td>
</tr>
<tr>
<td></td>
<td>Hotel</td>
<td>Transit</td>
<td></td>
<td>Travel &amp; Entertainment</td>
</tr>
</tbody>
</table>
Online vs. Brick and Mortar Retail
The processing environment differs within merchant segment by channel (e.g., bookstore vs. online bookstore)

<table>
<thead>
<tr>
<th>Category</th>
<th>Merchant / Processor</th>
<th>Issuer</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Authorizations</td>
<td>Card / Cardholder Verification</td>
<td>Clearing and Data Requirements</td>
</tr>
<tr>
<td>Face to Face</td>
<td>1</td>
<td>Physical Card, Hologram, Magnetic Stripe Data, Signature</td>
<td>2 days, Transaction amount = auth amount, Merchant Name, Merchant Location</td>
</tr>
<tr>
<td>eCommerce</td>
<td>1 Authorization and 1 Reversal Adjustment (for each partial shipment)</td>
<td>Cardholder supplied account number, VbV, AVS, CVV2</td>
<td>2 days, Transaction and ship dates, Merchant Name, Merchant Location, Merchant Order Number, Merchant 800 number, URL or Email Address</td>
</tr>
</tbody>
</table>
# Interchange Rate Structure

Interchange fees differ by transaction characteristics, due to the resulting exchange of value from the acquirer to issuer.

<table>
<thead>
<tr>
<th>Rate Category</th>
<th>Electronic Authorization</th>
<th>Clearing Days</th>
<th>Additional Clearing Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard or Default rate</td>
<td>No</td>
<td>30 days</td>
<td>None</td>
</tr>
<tr>
<td>Electronic</td>
<td>Yes¹</td>
<td>3 days</td>
<td>Passenger Transport must include itinerary data &amp; ticket #</td>
</tr>
</tbody>
</table>
| CPS Rates | Yes | 2 days (except Passenger Transport) | • Authorization amount  
• Authorization response  
• Transaction ID  
• Validation Code  
• Other |

¹Authorizations that receive referral response must receive a positive response from Issuer or stand-in authorization response.
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VisaNet
Visa’s global network connects acquirers and issuers to facilitate transactions worldwide

VisaNet Scope

- One global image with real-time synchronization
- Transactions cleared in 173 currencies and settled in 17 currencies

Network and Processing

- 1.2 M miles of fiber
- More than 110 M transactions/day
- ~5,000 transactions per sec during 2009 peak day
- Transaction round trip = 1.4 sec

Systems Applications

- 60 M lines of code
- 50,000 systems changes/year

VisaNet Protects Stakeholders

- Near real-time access to risk management and fraud prevention programs for card issuers, including in-flight scoring
- Every transaction on the Visa network is considered in fraud and risk detection
- Data security efforts prevent fraudulent activity on the network safeguarding consumer accounts while protecting merchants and issuers from financial exposure
- Enhanced Visa chargeback rights and efficient, electronic dispute resolution processes tie to Visa processing and downstream systems
- Back up processing for other networks to ensure transaction continuity
Merchant Acceptance
Merchants enable multiple consumer payment options and often influence consumer choice among those options

Options: Multiple forms, merchant-selected
- ACH
- Paper (cash, check)
- Merchant proprietary and private label (credit, debit, prepaid)
- Alternative networks (PayPal, Google Checkout, Tempo, Obopay, BillMeLater, etc.)
- Branded Credit, Charge, Debit, Prepaid, and Commercial; PIN-based Debit

Acceptance and Steering
- Merchants may choose not to accept payment methods, including major branded networks (e.g., Costco, ARCO)
- With respect to Visa and MasterCard, in the United States merchants may choose to accept cards in either the debit or credit category, or both
- Merchants steer customers to merchants’ preferred network through POS/terminal protocols
Consumer Choice

Consumer Expectations

• Consumers expect that merchants will honor their choice of processing method
• Consumers making a network choice expect to receive the benefits of that selection
  – Fraud and risk protections on transactions, such as zero liability
  – Robust chargeback and dispute rights
  – Avoidance of fees charged by issuers or surcharges by the merchant, for PIN network transactions
  – Rewards from issuers and promotions
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Data Security and Fraud Management

Proactive data security matched with fraud prevention are critical in maintaining system integrity

**PREVENT**

Minimize fraud in the payment system

- Advanced Authorization
- Visa Risk Manager
- EMV Chip Cards
- Authentication and Data Devaluation
- Verified by Visa/3-D Secure

**PROTECT**

Protecting vulnerable account data

- Data Field Encryption
- Data Elimination initiative
- PCI Data Security Standards / Payment Application Data Security Standards
- PIN Security / PIN Entry Device Standard (PED) / Triple Data Encryption Standard (TDES)
- Card Manufacturer / Personalizer Security

**RESPOND**

Monitor and manage events that occur

- Rapid Compromise Response and Investigations
- Compromised Account Management System (CAMS)
- Compromise Recovery – Account Data Compromise Recovery (ADCR), Data Compromise Recovery Solution (DCRS)
- Merchant Fraud/Chargeback Monitoring Programs
- Transaction Alerts

Bold = Unique to Visa

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1 Applicable to contactless standards within USA
Controlling Fraud Through Innovation
Industry wide innovation has effectively managed fraud

Global Visa Fraud to Sales Ratio

Source: Visa Fraud Reporting (as of March 2010)
Network Settlement Process Overview
Networks manage settlement risk across all system participants

Settlement Process

• Issuers pay network for cardholder transactions submitted through network
• Acquirers pay network for exception items, including chargebacks and credits
• Payments are facilitated through net settlement

Settlement Risk Management

• Visa guarantees payment to issuers and acquirers
  – Liquidity risk is the short-term risk of non-payment on a daily basis
  – Credit risk is the longer-term risk of non-payment due to their financial condition
• Visa global aggregate pipeline settlement exposure is ~$44 billion\(^1\), managed with formal credit standards and rigorous oversight processes
  – Formal client exposure calculations, credit evaluations and ratings standards
  – Required collateral from higher risk / non-investment grade clients
  – Credit facility

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\(^1\)Based on average daily volumes multiplied by average elapsed clearing days by country plus a 2 days safety margin
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## Stakeholder Economics

Visa fees are divided into four major categories with hundreds of sub-category price points primarily assessed on volume and transactions.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Interchange</th>
<th>Network Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Economic alignment between Issuers and Acquirers</td>
<td>Compensation for use of brand, transaction processing, and other services</td>
</tr>
<tr>
<td></td>
<td>~125 bps</td>
<td>Issuer: ~12 bps¹ Acquirer: ~12 bps¹</td>
</tr>
<tr>
<td>Payer</td>
<td>Acquirer</td>
<td>Issuer Acquirer</td>
</tr>
<tr>
<td>Payee</td>
<td>Issuer</td>
<td></td>
</tr>
<tr>
<td>Types</td>
<td>- Rates by merchant segment - Rates by processing technology - Rates by Product type (credit, debit, commercial, prepaid)</td>
<td>- Card Service Fees - Processing Fees - International Fees - Other Fees</td>
</tr>
<tr>
<td>Client Customization</td>
<td>Customized individual merchant rates</td>
<td>Discounts and Incentives</td>
</tr>
</tbody>
</table>

Note 1: Calculated as Visa Inc. net revenue divided by payment volume, FY 2009 basis. Source: Visa Inc. Finance
## Volume and Support Incentives

Incentives secure long term client commitments and foster business growth

### Incentives

- Customized price discounts used to
  - Secure multi-year contracts
  - Promote volume growth
- Classified as contra revenue, with various accounting treatments

### Incentive Types

<table>
<thead>
<tr>
<th>Incentive Types</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basis points (bps) on payment volume</td>
<td>• bps on all payment volume</td>
</tr>
<tr>
<td>Pay for growth</td>
<td>• bps on year-over-year growth</td>
</tr>
<tr>
<td>Conversion</td>
<td>• amount per card converted; and/or milestone payments</td>
</tr>
<tr>
<td>Fixed</td>
<td>• signing bonus</td>
</tr>
<tr>
<td>Fixed with hurdle</td>
<td>• amount when payment volume exceeds threshold</td>
</tr>
</tbody>
</table>
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Government Programs
Governments are increasingly turning to prepaid for funds disbursement

Governments are increasingly turning to prepaid
• Reduces physical check processing, printing and distribution costs
• Eliminates lost or stolen check costs

Prepaid is a convenient solution for program enrollees
• Provides immediate access to funds
• Eliminates need to visit check cashier or bank
• Protects funds through Visa Zero Liability protection

Current government prepaid programs by state

Offering can be expanded to other programs, such as wages, tax refunds, social security, temporary assistance and worker compensation

Source: Various state agency websites
## Prepaid at the Point of Sale

Visa prepaid solutions also address unique POS requirements

### Prepaid Products

#### Examples
- Employee Benefits / Healthcare:
  - Flexible Spending Accounts
  - Health Savings Accounts
  - Transit
  - Insurance Proceeds
- Underserved Segments:
  - Payroll Cards
  - General Purpose
  - Government Disbursements
  - Disaster Relief
- Branch & Retail:
  - Gift
  - General Purpose
  - Incentive/Rebate Cards
  - Visa TravelMoney
- Category Infrastructure:
  - VisaNet Enhancements
  - Visa ReadyLink
  - Legal/Regulatory
  - Risk Management
  - Operations Management

### Challenge

#### Unknown Card Balance
- **VisaNet Solution**
  - Visa balance inquiry
  - Provides cardholder and merchants with balance information at POS
  - Mandatory for all gift card issuers and acquirers

#### Insufficient Funds
- **VisaNet Solution**
  - Partial authorization with balance return
  - Merchant is able to complete sale with multiple payment mechanisms
  - Mandatory for all gift card issuers and acquirers

#### Transaction Qualification
- **VisaNet Solution**
  - Auto-Substantiation
  - Purchases are substantiated against IRS-approved list at POS
  - Supports IRS guidelines

#### Reloading Card Funds
- **VisaNet Solution**
  - Visa ReadyLink
  - Uses merchant POS equipment to load additional value to card
  - Currently load transactions accepted at over 10 major retailers (e.g. 7-11, Safeway)