Meeting Between Federal Reserve Board Staff and Representatives of JPMorgan Chase, Chase Paymentech and Morrison & Foerster LLP
August 4, 2010

Participants: Louise Roseman, David Mills, Jeffrey Yeganeh, Geoff Gerdes, Edith Collis, Jennifer Davidson, Elizabeth Kiser, Mark Manuszak, David Stein, Ky Tran-Trong, Vivian Wong, Stephanie Martin and Dena Milligan (Federal Reserve Board)

Daniel Cooney, Ryan McInerney and William Sheley (JPMC); Michael Duffy (Chase Paymentech); and Oliver Ireland (Morrison & Foerster LLP)

Summary: Staff of the Federal Reserve Board met with representatives of JPMC, Chase Paymentech and Morrison & Foerster LLP to discuss the interchange fee provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act (“the Act”). Using prepared materials, representatives of JPMC discussed the functional activities and services performed by JPMC in its role as merchant acquirer, debit card issuer, and prepaid card issuer; payment transaction models commonly used in the debit card industry; and debit card transactions costs. A copy of the handout provided by JPMC at the meeting is attached below.
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JPMorgan Chase Debit Business Is Extensive and Serves Many Customers

**CONSUMER AND BUSINESS DEBIT**
- One of the largest debit card issuers in the United States
- Support multiple products including consumer, business, and rewards
- Over 30 million debit cards in market
- Over $170 billion of annual sales volume
- Over 4.6 billion transactions annually

**PREPAID**
- A leading provider of prepaid card services to the public sector in the United States
- Programs include payroll, government benefits, insurance claims/pension benefits disbursements, and general disbursements
- Services over 50 different state agencies
- Supporting over 10 million prepaid cards actively in use
- Processes 1.75 billion transactions annually
- Distributes nearly $50 billion in government payments annually

**CHASE PAYMENTECH**
- Leading payment processor in the United States
- Processed more than $410 billion in dollar volume and 18 billion transactions in 2009
- A leader in card not present (CNP) payment processing
- Certified to over 700 POS providers
- Capable of authorizing transactions in over 130 currencies
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The Debit Payment System Is Complex . . .

Transaction Processing Life Cycle
- >25B in Transaction Volume
- >$2T in Sales Volume

Key Operational Constructs

**Networks**
- Transaction formats
- Card numbers / routing
- Stand-in capabilities
- Dispute rules and tools
- Settlement rules and tools
- Interchange rates and qualification

**Processors**
- Network interface management
- Transaction routing
- Customized POS
- Stand-In capabilities
- Dispute tools and routing
- Fraud detection systems
- 2X/yr network release compliance

**Issuers/Acquirers**
- Settlement operations
- Disputes handling
- Customer servicing
- Fraud detection management
- Stand-in rules definition
- 2X/yr network release compliance
... And Involves Multiple Participants

Key Operational Constructs

1. Number of players with/in category
2. Operational scale required to process

<table>
<thead>
<tr>
<th>Construct</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardholder</td>
<td>Makes a transaction at POS, Selects what payment method to use (debit, credit, cash, check)</td>
</tr>
<tr>
<td>Merchant</td>
<td>Payment acceptance decisions, Control POS environment</td>
</tr>
<tr>
<td>POS Processor and Other Suppliers</td>
<td>Connectivity to merchants, Transaction routing and processing (including some POS), Merchant technical support, exception item processing, dispute processing, back office services</td>
</tr>
<tr>
<td>Acquirer</td>
<td>Sign merchants up to accept payment cards, Manage merchant relationship, Underwrite merchant risk, Settle with merchant</td>
</tr>
<tr>
<td>Network</td>
<td>Route transactions, Payment standards, Network rule enforcement and member viability assessment, Manage risk, fraud and settlement flow, Facilitate chargeback and dispute processes, Develop new products and services</td>
</tr>
<tr>
<td>Issuer Processor</td>
<td>Issuer connectivity to the networks, Transaction processing, Issuer services (e.g. risk management, statementing, exception item processing, dispute processing)</td>
</tr>
<tr>
<td>Issuer</td>
<td>Issue and market cards, Manage cardholder pricing and relationships, Offer credit line or DDAs, Collect funds from cardholder, Manage/assume risk</td>
</tr>
</tbody>
</table>
Acquiring Overview

Debit products have characteristics that create increased complexity for Acquirers.

1. Numerous Point of Sale Solutions
   - Merchant determines Point of Sale hardware and software.
   - 700 software solutions certified by Chase Paymentech
   - Solutions are industry specific
   - Hardware has no routing logic
   - Hardware providers drive Point of Sale strategy
   - Many communication infrastructures required

2. Transaction Routing
   - Issuer designated routing
   - Merchant directed routing
   - Complex interchange calculations and recovery capabilities

3. Debit Network Participation
   - Technical and operational compliance with 11 different debit networks
   - Multiple types of interchange management methodologies
   - Multiple networks to settle funds and reconcile to merchant accounts
   - BIN File Management for multiple networks and Issuers participating in multiple networks
   - Communications infrastructure for connectivity to multiple debit networks
## Industry Is Built Around Two Distinct Transaction Models

<table>
<thead>
<tr>
<th>TWO STEP / SIGNATURE</th>
<th>ONE STEP / PIN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transaction Processing</strong></td>
<td><strong>Transaction Processing</strong></td>
</tr>
<tr>
<td>- Routed through credit network</td>
<td>- Routed through an EFT network</td>
</tr>
<tr>
<td>- 2 transactions - authorization then settlement</td>
<td>- Requires a PIN pad terminal</td>
</tr>
<tr>
<td>- 95% of transactions settle within 2 days</td>
<td>- 1 transaction - authorization and settlement information in same transaction</td>
</tr>
<tr>
<td>- Support “card not present” (CNP) transactions (e-commerce, phone order, etc..)</td>
<td>- 95% of transactions settle within 1 day</td>
</tr>
<tr>
<td>- Supports “card present” transactions where authorization amount does not equal final settlement amount (hotel, fuel, rental car, etc...)</td>
<td>- Largely does not support “card not present” (CNP) transactions (e-commerce, phone order, etc..)</td>
</tr>
<tr>
<td>- Accepted by more than 7MM merchants</td>
<td>- Largely does not support “card present” transactions where authorization amount does not equal final settlement amount</td>
</tr>
</tbody>
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<thead>
<tr>
<th><strong>Key Benefits</strong></th>
<th><strong>Key Benefits</strong></th>
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<tr>
<td>- Facilitates “cardholder not present” sales</td>
<td>- Zero liability for cardholder</td>
</tr>
<tr>
<td>- International acceptance</td>
<td>- Merchant payment guarantee</td>
</tr>
<tr>
<td>- Zero liability for cardholder</td>
<td>- “Cash back” transactions at the merchant point of sale</td>
</tr>
<tr>
<td>- Merchant payment guarantee</td>
<td></td>
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<tr>
<th><strong>Fraud Characteristics</strong></th>
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<tr>
<td>- Fraud costs typically higher due to broader acceptance/higher number of transactions</td>
<td>- Fraud costs typically lower due to limited acceptance in key merchant categories (e.g. CNP)</td>
</tr>
<tr>
<td>- Card not present categories (e.g. internet purchases)</td>
<td>- Also need to consider PIN skimming as it leads to DDA fraud at ATM and account takeover</td>
</tr>
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</table>
Having Robust Network Options Remains Important In The Payment System

**FACTORS INFLUENCING NETWORK SELECTION**

- Transaction Security / PCI Compliance
- Institutional Risk Management
- Financial Stability
- Scale
- Reach/Ubiquity
- Systems Stability / Up Time

**NETWORK VALUE ADD**

- Authorization and Clearing
- Industry Standards
- Back Up / Stand-In Services
- Institutional Liquidity
- Product Innovation

<table>
<thead>
<tr>
<th>Debit Network Choice</th>
<th>Top Networks</th>
<th>Network Acceptance Locations (M)</th>
<th>Share of Transactions</th>
<th>Number of Cards in the Network (M)</th>
<th>Payment Volume ($B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature</td>
<td>1. Visa</td>
<td>7</td>
<td>72%</td>
<td>208</td>
<td>515</td>
</tr>
<tr>
<td></td>
<td>2. MasterCard</td>
<td>7</td>
<td>28%</td>
<td>104</td>
<td>267</td>
</tr>
<tr>
<td>PIN</td>
<td>1. Interlink (Visa)</td>
<td>2</td>
<td>39%</td>
<td>Not Reported</td>
<td>123</td>
</tr>
<tr>
<td></td>
<td>2. Star</td>
<td>2</td>
<td>30%</td>
<td>Not Reported</td>
<td>158</td>
</tr>
<tr>
<td></td>
<td>3. Maestro (MasterCard)</td>
<td>1.8</td>
<td>Not Reported</td>
<td>Not Reported</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>4. Pulse (Discover)</td>
<td>1</td>
<td>11%</td>
<td>10%</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>5. NYCE (FIS)</td>
<td>1</td>
<td>5%</td>
<td>5%</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>6. ACCEL/Exchange (Fiserv)</td>
<td>1</td>
<td>5%</td>
<td>Low Share</td>
<td>Low Share</td>
</tr>
<tr>
<td></td>
<td>7. AFN</td>
<td>1-2</td>
<td>5%</td>
<td>Low Share</td>
<td>Low Share</td>
</tr>
<tr>
<td></td>
<td>8. Jeanie</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. Shazam</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
<td>10. Alaska Option</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11. Credit Union 24</td>
<td></td>
<td></td>
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</table>

Source: ATM and Debit News 2010 EFT Data Book, Company Research, as of March 2008
Consumer Preference Drives Debit Card Growth and Provides Merchant Benefits

**TOP REASONS CONSUMERS PREFER DEBIT**

1. **Convenience** - Consumers do not have to carry cash or a check book. They can use the card for payment or get cash from the ATM.

2. **Faster Service** - The introduction of the no signature required program for items below $25 helps facilitate quick payment.

3. **Security** - It is safer to carry cards than cash or checks. In case of a lost or stolen card, it’s easier to cancel the card.

4. **Fraud Protections** - The card industry has invested heavily in sophisticated technology to detect and prevent fraud. Customers have “zero liability” in case of fraud.

5. **Rewards** - Most issuers offer loyalty programs that offer cash back or points-based rewards.

6. **International Usage** - Cards can be used internationally which enables customers to avoid having to buy foreign currency in advance.

7. **Control** - Debit card is linked to customer’s DDA rather than a line of credit. It makes customers feel more in control of their finances.

**KEY MERCHANT BENEFITS**

1. Lower Costs vs. Checks and Cash
2. Faster Throughput
3. Guaranteed Payment
4. Higher Ticket Sales
5. Disputes Resolution
6. Facilitates Online and Telephone Orders

**TRANSACTION GROWTH PROJECTIONS**

Source: Nilson Report

**DEBIT REPLACING CASH AND CHECKS**

Source: MasterCard
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Supporting robust and high quality transaction management is an extensive end to end business process.
The Total Cost Of Acceptance Can Be Categorized Functionally Across Each Business Process

**Key Functional Categories For Issuers**

1. **Card Issuance**
   - Cost Of Issuing And Mailing (e.g., Plastics, Carrier, Postage)
   - Fraud Features (e.g., Hologram, Chip)
   - Fraud Reissue Of Card
   - Pre And Post Mailers
   - Pin Maller

2. **Transaction Processing**
   - Network Switching And Processing
   - Network Assessment
   - Third-party Processing (e.g., FDR, DPS)
   - Internal Data Processing
   - Voice Authorization
   - Settlement And Exception Item Processing
   - Authorization Policy
   - Operating Losses
   - DDA processing expenses
   - Innovation

3. **Risk Management**
   - Fraud Detection System (3rd Party and In-house)
   - Fraud Monitoring Personnel
   - Data Compromise Response
   - Fraud Investigation Personnel
   - Lost/Stolen Inquiry And Resolution Personnel
   - Card Activation
   - Fraud Policy

4. **Claims**
   - Fraud Dispute And Chargeback Personnel
   - Non-fraud Dispute And Chargeback Personnel
   - Dispute Processing System - (3rd Party And In-house)
   - Fraud and Operating Losses
   - Network Switching Fees (e.g., Base II, Draft Fee)

5. **Customer Service**
   - Other Card Specific Inquiry Personnel
   - Suspicious Transaction Inquiry Personnel
   - Customer Service Systems
   - After Hour Inquiry Vendors
   - DDA Statementing and service
   - Branches and ATM infrastructure & Staffing

**Key Functional Categories For Acquirers**

1. **Transaction Processing**
   - Processing Merchant Authorizations
   - Merchant Funding
   - Innovation
   - POS device configuration certifications
   - ISO/VAR management

2. **Merchant Acquisition**
   - Merchant Underwriting
   - Fraud Screening
   - Terminal /Software Delivery

3. **Merchant Servicing**
   - Call Center
   - Technical Help Desk
   - Assigned Accounts

4. **Claims**
   - Chargeback Processing
   - Request For Sales Drafts

5. **Risk Management**
   - Ongoing Merchant Fraud And Risk Monitoring
Current Business Model Funds Fraud Prevention and Losses

- Industry approval rates exceed 97%
- Support over $2T of sales per year
- Provide zero liability and guaranteed payments

Issuer absorbs costs of fraud prevention and recovery process
Issuer absorbs costs of actual losses, including zero liability and guaranteed payment

ZERO LIABILITY
- Customer pays for no unauthorized transaction
- Un-authorized transaction amount credited back to customer within 2 business days

GUARANTEED PAYMENT
- Merchant is guaranteed payment (unlike a check) following proper authorization of purchase transaction

REGULATION E
- Issuer notified within 2 days, customer limited to $50 loss
- If > 2 days, customer could be liable for up to $500
- EFT transactions have 60 day notification window, customer may have unlimited liability
Questions and Follow Up

- Ryan McInerney  
  CEO, Consumer Banking

- Bill Sheley  
  Head of Consumer Debit

- Mike Duffy  
  President, Chase Paymentech

- Dan Cooney  
  General Counsel
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Sample Business Function Map

CARD ISSUANCE

Key Entities Involved
1. Bankers (branch, telephone)
2. Systems (front-end DDA, card management system)
3. External card & collateral vendors
4. Internal card production facilities
5. Mailing facilities

Key Functional Cost Considerations
1. Cost of raw materials (plastics, chips, collaterals) - 3rd party vendor
2. Cost of embossing, personalization and encoding – systems and personnel
3. Packaging and mailing costs
Sample Business Function Map

**RISK MANAGEMENT**

1. **Transaction is made**
   - Cardholder may have made the transaction or it may be fraud
   - 3rd Party system (Falcon)
   - In-house system (Taeser)

2. **Fraud Detection System**
   - 3rd Party system (Falcon)
   - In-house system (Taeser)
   - Analyst reviews the transaction
   - Contact the cardholder

3. **Debit Card Fraud Protection Dept. (DCFP)**
   - Analyst reviews the transaction
   - Contact the cardholder
   - Determines if this is a fraud.

4. **Fraud Communication**
   - Walks through the transaction with cardholder
   - Determines if this is a fraud.

5. **Claims**
   - Investigate the situation
   - Settle with the customer
   - Report the fraud to the network (V/MC)
   - Submit chargeback

6. **Chase Recovery**
   - The network (V/MC) approves the chargeback
   - Send the chargeback $ to Chase

---

**Key Entities Involved**

1. Fraud detection systems
   1. 3rd party
   2. In-house
2. DCFP and risk management analysts
3. Claims
4. Networks (V/MC/EFT networks)

**Key Functional Cost Considerations**

1. Fraud detection system cost
2. Proprietary fraud prevention report cost
3. DCFP, risk management, claims personnel and facilities
4. Data compromise response cost
Sample Business Function Map

CLAIMS

Claim is initiated by customer → Claims interviews customer → Claims settle with the customer

• Telephone
• Branch

• Collects information on fraud transactions

Claims report the dispute to the network (V/MC)

• Submits the chargeback $ with the “cardholder letter”

The network (V/MC) approves the chargeback

• Send the chargeback $ to Chase

Chase recovery

Key Entities Involved
1. Telephone and branch bankers
2. Chase claims department
3. Claims system
4. Card management and maintenance system
5. The network (V/MC/EFT)

Key Functional Cost Considerations
1. Telephone and branch banker cost
2. Claims personnel and facilities cost
3. Systems cost
4. Irreconcilable claims
Sample Business Function Map

CUSTOMER SERVICE

Cardholder initiates a call → IVR → Telephone Banker

Top Reasons to call:
• Lost/Stolen
• Activation
• New Card/Expired
• Close Card
• Damaged Card
• Pin Reminder
• Card not working at ATM

• Authentication
• Activation

• Identifies the problem
• Resolves issue

OR

• Escalates for further review
  • Transfers the problem to Claims if it’s needed (fraud inquiries, disputes, lost/stolen)

• Updates customer information

Key Entities Involved
1. Card Management System
2. IVR
3. IT Team
4. Telephone Banking
5. Claims – depending on the situation

Key Functional Cost Considerations
1. Cost of telephone banking personnel and facilities
2. Operational Cost
3. Telecommunications Cost
4. IVR and Customer Management System Cost