EMV – What You Need to Know
Fred Csaky, CSCIP/P Product Manager
May 22, 2013
FIS – A GLOBAL TECHNOLOGY LEADER

FIS Clients
FIS Offices
FIS Data centers
FIS Offshore BPO delivery centers

North America
- Market leader
- Core and payment solutions
- 15,000 employees

Europe
- Established core and payment provider
- 2,000 employees

Latin America
- No. 1 card processor in Brazil
- 10,000 employees

Asia Pacific
- Growing core and payment presence
- 8,000 employees

Founded 1968
Public Company NYSE: “FIS”
Headquarters North America

Major Offices
- Asia
- Australia
- Europe
- Latin America

$5.8B Revenue
$1.2B Operating Cash Flow
35,000+ Employees
14,000+ Clients
100+ Countries

FIS Vision for EMV

To enable Financial Institutions to competitively position themselves for the enablement of EMV payment cards, and to set the foundation for EMV payment transactions and mobile payments while reducing losses due to fraud.
FIS US EMV INDUSTRY LEADERSHIP

• Smart Card Alliance
  – Payments Council
  – NFC and Mobile Council

• EMV Migration Forum
  – The EMV Migration Forum is an independent, cross-industry body that promotes the efficient, timely and effective migration to EMV-enabled cards, devices and terminals in the United States.

• MULTOS Consortium
  – The MULTOS Consortium is an open, membership body dedicated to the development and promotion of MULTOS as the highest security global standard for smart cards.

• ATMIA
  – ATM Industry Association U.S. EMV Committee

• SRPc
  – Secure Remote Payment Council – Cross network representation

• EMVCo
FIS EMV MIGRATION APPROACH

Controlled & Measured
- Multi-phase
- Initial functionality
- Online authorization

Evolve with Ecosystem
- Contact EMV
- Contactless EMV
- Mobile/NFC
- Card Not Present

Expert Resources
- Certified SmartCard Professionals
- SmartSoft training
- Deeply involved in EMV Migration and other industry forums
Content

- Why EMV?
- Key Dates
- Key Dates Defined
- Challenges
- What FIS is Doing
- What You Need to Do
- Considerations for Implementation
- Questions and Answers
WHY EMV?

• More secure against card fraud than magnetic stripe cards
• Enables cardholders to use secure EMV payment cards globally\(^1\)
• Prepares for NFC mobile contactless payments\(^2\)
• Brand announcements

\(^1\)Source: EMVCo http://www.emvco.com/about_emv.aspx
\(^2\)Source: Smart Card Alliance http://www.emv-connection.com
Much like the Mayan Calendar, when the brands’ roadmap dates arrive, the world will not end.
<table>
<thead>
<tr>
<th>Key Dates</th>
<th>Action</th>
<th>Visa</th>
<th>MasterCard</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2012</td>
<td>Merchants receive PCI Audit Relief for installing EMV contact and contactless POS terminals</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>April 2013</td>
<td>Acquirer/Acquirer Processor network must support EMV transactions</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>April 2013</td>
<td>ATM Counterfeit Liability Shift</td>
<td>No</td>
<td>Maestro Cross-border</td>
</tr>
<tr>
<td>April 2015</td>
<td>U.S. third-party ATM acquirer processors and sub-processors must support EMV transactions*</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>October 2013</td>
<td>PCI Account Data Compromise Relief – 75% - 50%</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>October 2015</td>
<td>PCI Account Data Compromise Relief – 95% - 100%</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>October 2015</td>
<td>Lost or Stolen Liability Shift</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>October 2015</td>
<td>Counterfeit Liability Shift, except Automated Fuel Dispenses (AFDs)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>October 2016</td>
<td>ATM Counterfeit Liability Shift</td>
<td>No</td>
<td>Credit, Debit</td>
</tr>
<tr>
<td>October 2017</td>
<td>ATM Counterfeit Liability Shift</td>
<td>Yes</td>
<td>In place</td>
</tr>
<tr>
<td>October 2017</td>
<td>AFD Counterfeit Liability Shift</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
KEY DATES DEFINED

October 2012 – PCI audit relief
• The date by which, if more than 75 percent of transactions originate from EMV-compliant contact and contactless POS terminals, the merchant may apply for relief on the audit requirement for PCI compliance (but is still mandated to be PCI compliant).

KEY DATES DEFINED

April 2013 – Acquirer/sub-processor compliance
• The date when acquirers and acquirer processors must be able to handle full-chip data in transactions for authorizations and, for some payment brands, clearing and settlement.
• This is a mandated action.

KEY DATES DEFINED

PCI account data compromise relief

• The MasterCard® milestones when merchants are relieved of all or a portion of penalties for account data compromise (aka “hacking”) if a certain percentage of transactions originate from EMV-compliant contact and contactless POS terminals.

  — **October 2013** (75% – 50%): If at least 75 percent of transactions originate from EMV-compliant POS terminals, the merchant is relieved of 50 percent of account data compromise penalties

  — **October 2015** (95% – 100%): If at least 95 percent of transactions originate from EMV-compliant POS terminals, the merchant is relieved of 100 percent of account data compromise penalties

KEY DATES DEFINED

April 2015 – Acquirer/sub-processor compliance
- The date when U.S. third-party ATM acquirer processors and sub-processors must support EMV transactions
- This is a mandated action.

KEY DATES DEFINED

October 2015 – Counterfeit liability shift
• The date when the party that has made investment in EMV deployment is protected from financial liability for card-present counterfeit fraud losses. If neither, or both parties are EMV compliant, the fraud liability remains the same as it is today.

KEY DATES DEFINED

October 2015 – Lost or stolen liability shift
- The date when the MasterCard liability hierarchy takes effect for lost/stolen cards. The party that has made the investment in the most secure EMV options is protected from financial liability for card-present fraud losses for lost, stolen and non-receipt fraud.

KEY DATES DEFINED

ATM counterfeit liability shift

• April 2013
  – The date that MasterCard’s counterfeit liability shift will take effect for all Maestro cross-border ATM transactions.

• October 2016
  – The date that the counterfeit liability shift will take effect for all MasterCard ATM transactions.

• October 2017
  – The date that the counterfeit liability shift will take effect for all Visa ATM transactions.

**TIMELINE**

**SCENARIOS FOR EMV TECHNOLOGY DEPLOYMENT IN THE U.S.**

- **2011**
  - Visa TIP program to incent Merchant installation of EMV terminals

- **2012**
  - *U.S. issuers begin launching EMV card programs targetted to travelers.
  - *NFC-based payment product trials begin with select programs like Google Wallet.

- **2013**
  - Visa mandates acquirer support of EMV transactions.
  - MasterCard shifts liability for cross-border Maestro transactions at ATM
  - *Anticipate start of mass adoption of NFC-enabled mobile payment applications.

- **2014**
  - U.S. liability shift goes into effect.

- **2015**
  - Liability shift for credit and debit transactions at ATM

- **2016**
  - *As 2015 liability shift mandated by Visa looms, EMV support at POS accelerates.
  - *Next Gen NFC devices enabling more data interaction - loyalty, healthcare, etc.

- **2017**
  - *5 – 7 year re-terminalization cycle completes

*Source: Mercator Advisory Group*
<table>
<thead>
<tr>
<th></th>
<th>Pass-Thru Credit &amp; Debit</th>
<th>B2K Credit</th>
<th>TBS Credit</th>
<th>New Berlin/efunds</th>
<th>Brown Deer/Legacy Metavante</th>
<th>Intercept</th>
<th>Prepaid North</th>
<th>Prepaid South</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EMV Authorization - Contact</strong></td>
<td>Q3 2013 OBS</td>
<td>Q1 2013</td>
<td>Q1 2014</td>
<td>Q1 2013</td>
<td>Q2 2013 MC Q3 2013 Visa</td>
<td>1Q 2013 MC OBS 4Q 2013 MC full; Visa TBD</td>
<td>Q2 2013</td>
<td>Available since 2006</td>
</tr>
<tr>
<td><strong>EMV Card Production - Contact</strong></td>
<td>Q3 2013</td>
<td>Q1 2013</td>
<td>Q1 2014</td>
<td>Q1 2013</td>
<td>Q1 2013</td>
<td>4Q 2012 MC; Visa TBD</td>
<td>Q2 2013</td>
<td>Currently available</td>
</tr>
</tbody>
</table>
CHALLENGES

• Business case
  – ROI
  – U.S. experience

• Debit issuance
  – Durbin
  – 16 regional debit networks
  – Common AID

• ATM liability shift
  – Common AID
  – 425K terminals
  – Brand alignment
**TIMELINE**

**SAMPLE EMV PROJECT TIMELINE**

**Initiation and Planning**
- Understanding all the options
- Select profile
- Develop card issuance strategy
- Organize cross departmental project team
- Document requirements

**Month 1 - 3**

**Development**
- Finalize agreements
  - Card personalization vendor
  - Internal areas
  - Processor
- Open network project requests
- Work on marketing strategy

**Month 4 - 6**

**Execution**
- Order chip cards
- Train internal resources
- Begin consumer education

**Month 7 - 8**

**Implementation**
Testing and certification with:
- Networks
- Card personalization vendors
- Processor
- Pilot launch

**Month 9 - 11**

**Monitor program**
- Customer experience
- Card performance
- Fraud trends

**LAUNCH**

**Month 10 - 12**

**Monitor program**
- Customer experience
- Card performance
- Fraud trends
WHAT FIS IS DOING

• **Strategy**
  – Build out card payment and network infrastructure (credit, debit, prepaid, card production, and NYCE) to mass produce EMV cards.
  – Enhance all card platforms to support EMV cards to lower the losses from fraud while improving the retention of affluent customers.
  – Educate and train all financial institution customers on EMV standards, requirements, and support them through migration planning.
  – Educate and train all FIS internal stake holders on EMV standards and FIS’ strategy.

• **Approach**
  – Dedicate resources to drive growth in EMV payment cards and contactless payment transactions.
  – Multiyear infrastructure build-out and expansion
  – Seamless migration of financial institutions to EMV cards to lower losses from fraud.
  – Leverage advancements of EMV and mobile to guide future development and go-to-market capabilities in mobile payments.
WHAT FIS IS DOING

BRAND ENGAGEMENT

• FIS has been actively working with Visa and MasterCard to establish a Standardized Processor Implementation Process to reduce client cost and time-to-market:
  – Standard profiles
  – Reduce implementation timeframes
  – Reduce cost
WHAT FIS IS DOING

PROCESS OPTIMIZATION

• Chip selection
  – Multos
• Plastic options
  – Bulk
  – Print-on-demand (VHD)
• In-house test tools
  – Ensure quality
  – Reduce time
• Group implementations
  – Reduce time to market
  – Reduce costs
WHAT FIS IS DOING

IMMEDIATE NEED – FIS EMV PREPAID TRAVEL PROGRAM

• Safe, easy, low-cost payment option for travelers
• No worries about acceptance in countries where chip-card technology adopted
• Also accepted at magnetic stripe terminals
• Can be customized with FI logo
• Available to any participating NYCE institution
• Processed and maintained by FIS
• Issued through experienced, registered and prepaid sponsor
• Contact your SAM for more information
WHAT YOU NEED TO DO

Educate

Communicate

Plan
EDUCATE

• Educate yourself and your team:
  – Processors
  – Brands
  – Consultants

• Stay informed:
  – Internet research
  – Industry journals
  – Google alerts

• Assign a resident expert:
  – Functional EMV knowledge
  – Industry knowledge
  – Lead the effort
COMMUNICATE

• Socialize EMV at your institution
  – Start the conversation
  – Exchange thoughts, ideas and knowledge

• Reach across the organization
  – Product
  – Operations
  – Customer Service
  – IT
  – Marketing

• Establish a team
  – All inclusive
  – Let the expert lead
PLAN

• **Issuance:**
  — Capability
  — Pilot
  — On-going
  — Fees

• **Business case:**
  — Competitive analysis
  — Cost/benefit study
  — Organizational impact

• **Budget:**
  — Expense
  — Revenue
  — ROI
CONSIDERATIONS

• **Acquirers**
  - Merchants with high counterfeit fraud
  - Merchants located in tourist destinations
  - Terminal installation starting in highest volume locations

• **Issuers**
  - Debit EMV/Durbin resolution
  - Accounts with frequent foreign transactions
  - Geographical location
    • High counterfeit fraud
    • Border states
    • Tourist destinations

• **ATM**
  - High counterfeit fraud
  - Tourist destinations/cards issued in foreign countries
EMV – What all Financial Institutions Need to Know

QUESTIONS AND ANSWERS
Thank you
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EMV RESOURCES

FIS information

- fisglobal.com EMV page
  https://fisglobalinfo.webex.com/ec0606l/eventcenter/enroll/register.do?siteurl=fisglobalinfo&formId=6377357&confld=6377357&BU=&formType=1&loadFlag=1&eventType=1&accessType=downloadRecording

- FIS EMV 101: What You Need to Know – Webinar Replay
  https://fisglobalinfo.webex.com/ec0606l/eventcenter/enroll/register.do?siteurl=fisglobalinfo&formId=6377357&confld=6377357&BU=&formType=1&loadFlag=1&eventType=1&accessType=viewRecording

- FIS EMV 101: What You Need to Know – Presentation
  https://fisglobalinfo.webex.com/ec0606l/eventcenter/enroll/register.do?siteurl=fisglobalinfo&formId=6377357&confld=6377357&BU=&formType=1&loadFlag=1&eventType=1&accessType=downloadRecording

- FIS Lessons From the Canadian Experience – Webinar Replay
  https://fisglobalinfo.webex.com/ec0606l/eventcenter/enroll/register.do?siteurl=fisglobalinfo&formId=8779282&confld=8779282&BU=&formType=1&loadFlag=1&eventType=1&accessType=viewRecording

- FIS Lessons Learned From the Canadian Experience – Presentation
  https://fisglobalinfo.webex.com/ec0606l/eventcenter/enroll/register.do?siteurl=fisglobalinfo&formId=8779282&confld=8779282&BU=&formType=1&loadFlag=1&eventType=1&accessType=downloadRecording

- FIS Travel EMV Prepaid Card: www.fisglobal.com/prepaid or moreinfo@fisglobal.com
EMV RESOURCES (cont.)

• General EMV chip card information
  – EMVCo – http://www.emvco.com/
  – Smart Card Alliance EMV Connection – http://www.emv-connection.com

• Visa and MasterCard information
  – u-s-roadmap-to-enable-next-generation-of-electronic-payment/
  – MasterCard Timeline – http://www.mastercard.us/_assets/docs/MasterCard_EMV_Timeline.pdf