

EMV is coming.
But it's ever changing.

March 26, 2013



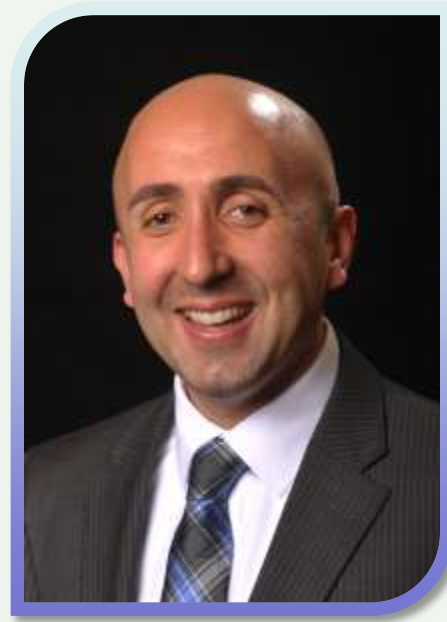
Be There Be More

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Today's Agenda

EMV Primer

Durbin and Debit

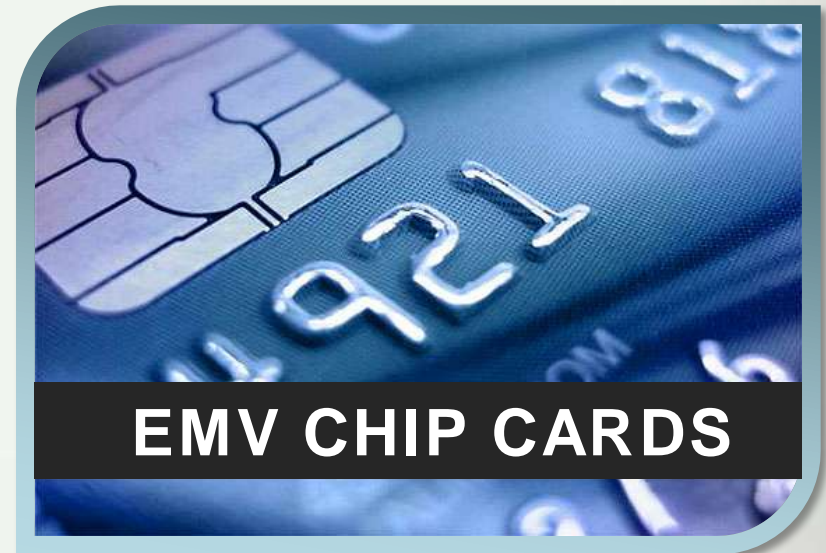
U.S. Financial Institutions Assessing EMV Deployment

Evaluating EMV For Your Credit Union

Review of EMV and how it works

What is EMV?

- The terms EMV and chip used interchangeably
 - EMV is the global specification which supports smart card/terminal/processing interoperability
 - It is an open, industry-wide specification, developed in 1994 by Europay, MasterCard, and Visa
 - Maintained by EMVCo LLC
- EMV provides strong security features not possible with traditional magnetic stripe cards



What is a chip card?

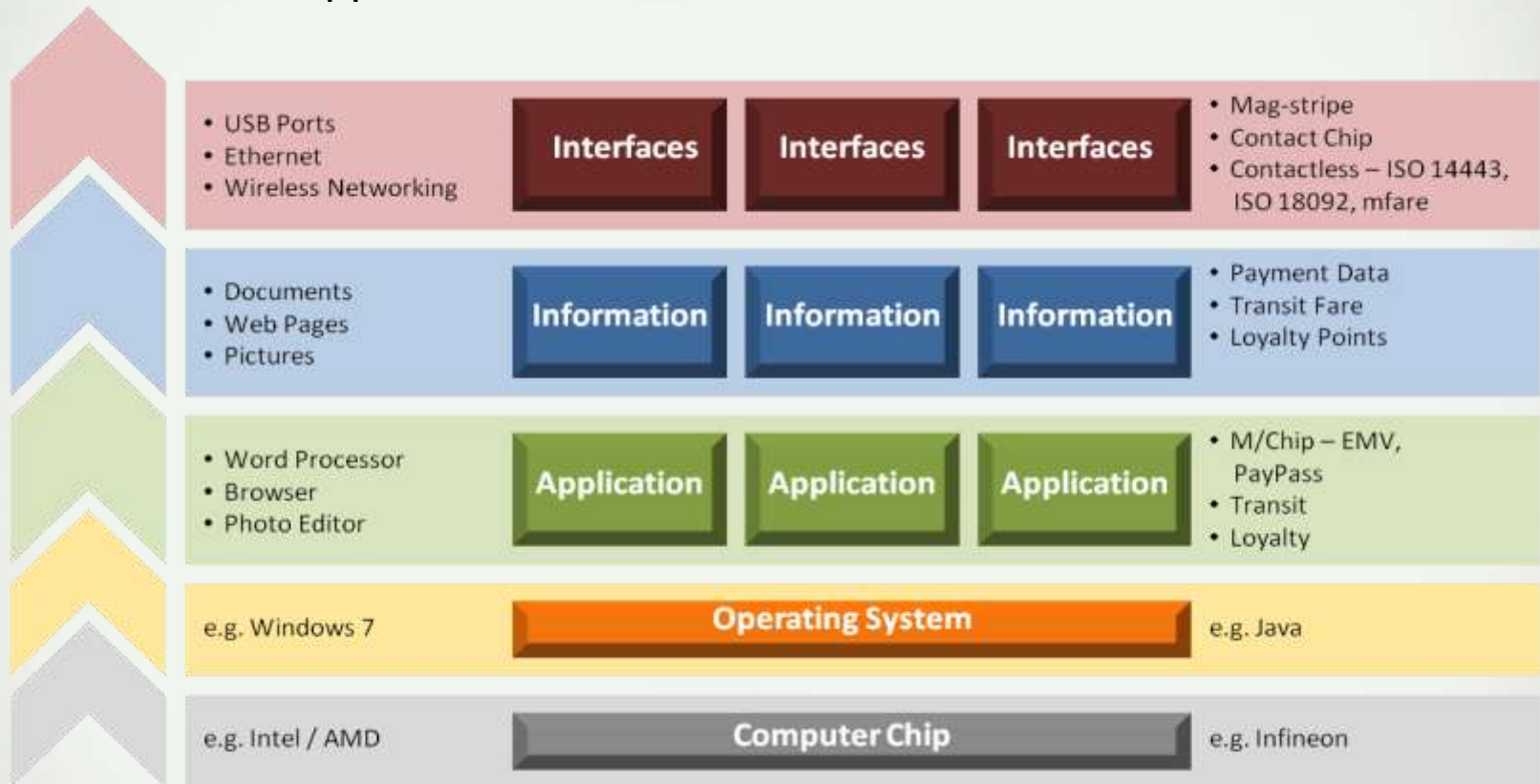
- A chip card has a magnetic stripe and a small microprocessor embedded into it
- The chip contains an operating system and one or more applications
- The microprocessor and contact plate are mounted on the front of the card



- The microchip is encrypted, which means that it is extremely difficult to copy or counterfeit

How does it work?

- Chip cards are miniature computers with an operating system and multiple interfaces and applications



In an EMV scenario, a cardholder inserts an EMV card into the reader

- The card and terminal enter into a dialog

Cardholder Verification Methods

Online PIN, where the PIN is encrypted and verified online by the issuer (host)

Offline PIN, where the PIN is verified offline by the chip on the card

CVM

Signature verification, where the cardholder signature is compared to the signature on the card

No CVM (typically for low value transactions)

Online versus Offline

Offline means the terminal communicates with the chip embedded in the card versus the host

Online PIN, online authorization

- The terminal transmits the encrypted PIN (if applicable) and payment information to the host for authorization similar to the magnetic stripe process today.

Offline PIN, online authorization

- PIN is validated offline, and the result is sent in the message with the payment data for online authorization

Offline PIN, offline authorization

- PIN and transaction are verified and authorized offline
- Card is synced with host the next time it goes online
- Typically only unattended terminals

Cardholder Verification Methods



Card CVM

- 1) Signature
- 2) Online PIN
- 3) No CVM



Terminal CVM

- ~~1) Online PIN~~
- ~~2) Offline PIN~~
- 3) Signature
- 4) No CVM



Debit and Durbin

Durbin Impact and Lack of Portability

- EMV payment applications are network specific
- EMV deployment in the U.S. has one application on the card
- Durbin compliance for merchant routing control and two unaffiliated networks is not supported
- Portability between networks without reissuance is not supported

HOW DO WE SOLVE FOR THIS?

Industry Collaboration

SRPc Chip and PIN Work Group formed April 2012

Founding Members

- AFFN[®]
- CO-OP Financial Services[®]
- NETS[®]
- PULSE[®]
- SHAZAM[®]
- ATH[®]
- Jeanie[®]
- NYCE[®]
- Presto![®]
- STAR[®]



Purpose

- Educate its members about the ramifications of EMV
- Search for solutions to the EMV payment application conundrum
- Determine operational functions used on a shared basis
 - Minimize implementation costs
 - Enable fair and level playing field



Progress and Expansion of Work Group



April 2012

Defined requirements

RFP and evaluation

Formation of EMV Migration Forum

Temporarily expanded group with addition of:

- ACCEL/Exchange, Credit Union 24, MoneyPass
- VISA, MasterCard

March 2013

Determined parameters of a Common US Debit AID

Agreement on Common U.S. AID Parameters

- At Least 3 CVMs Required: Signature; Online PIN; No CVM
- ATM support required; online PIN only
- Common testing and certification process
- Contact and Contactless
- Agreed to on December 20, 2012



**OVERRIDING PRINCIPLE:
FAIRNESS AND A VOICE**

Proposals Evaluated

“While it found some functionality missing, the biggest obstacle they presented was the governance of the technology. Visa and MasterCard set the terms of licensing and there is no guarantee there would not be a change in the future. With Discover, they are contributing their technology to a consortium of our members that will govern the use. No one member will have the ability to alter the terms of the agreement.”



Paul Tomasofsky
President, SRPc

March 19, 2013 SRPc Announcement

- Original ten debit networks agree to license Discover's D-PAS for common U.S. AID
- Evaluate STAR's dynamic PAN technology
- Agree to form consortium
- Both D-PAS and STAR technology contributed to consortium at \$0 licensing fee
- Parameters match up with December 20, 2012 requirements
- Governance: Ownership open to all U.S. debit networks



Benefits of Decision

- Debit networks collectively bring to market and manage deployment
- Individual networks still make decisions for their own networks
- D-PAS in market already...no anticipated changes for acquirer development and certification.
- Leverage current acquirer certification activities
- Issuers get portability
- Merchants get minimized routing complexity



Next Steps for Consortium

- Finalize governance structure
- Welcome additional debit networks
- Make technical decisions
- Obtain AID
- Work with industry on testing and certification, and commercialization



What Does This Mean For Credit Unions?

Why this is important

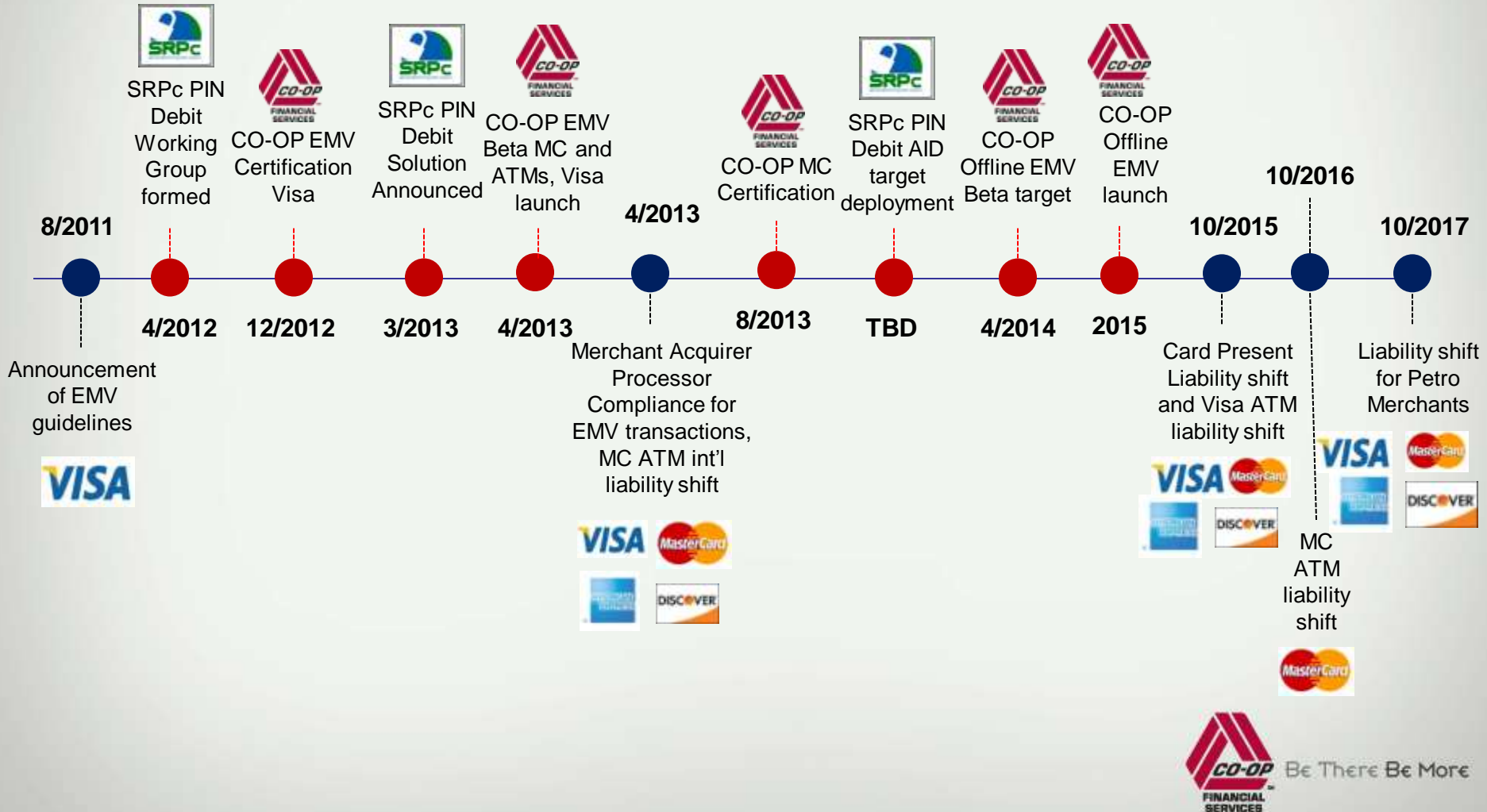
- Preserves credit union's routing choices
- Preserves network choice
- Simplifies complexity
- Once implemented, makes it more economically feasible to move forward with EMV

Timing

- Deployment of the Common U.S. AID will take time
- Issuing now will likely require reissue of all cards
- No mandates for issuers or acquirers
- But there is light at the end of the tunnel...



EMV Timeline



Fraud Savings

Driven by Network actions, but won't it reduce our fraud?

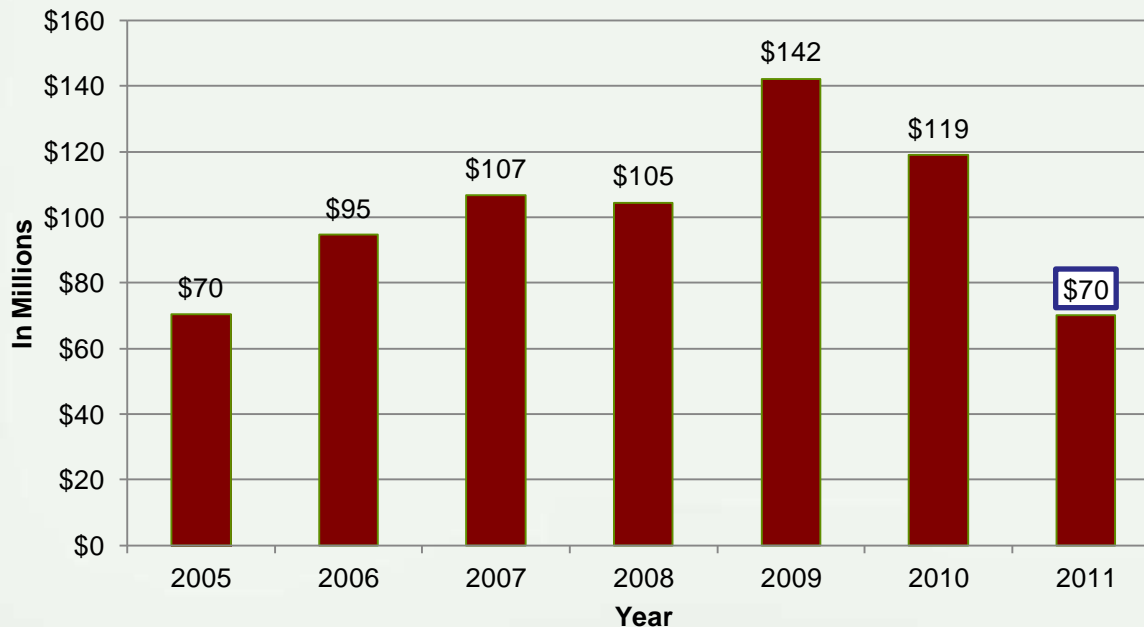
- Reduces fraud: but by how much?
- What will fraudsters do?
- Case studies have shown that most savings occur at end of 10 year period after start of EMV deployment



Canadian Fraud Statistics (EMV deployment began in 2009)

Interac Association announced that Interac debit card fraud losses to financial institutions resulting from skimming declined again in 2011 "Our collective efforts and significant investments in the fight against debit card fraud, **particularly the transition to chip technology**, are producing tangible benefits," said Caroline Hubberstey, Head of External Affairs, Interac Association. Toronto 3/16/2012

Dollars Lost to Debit Card Fraud



CO-OP estimates that approximately 50% of fraud is due to counterfeit cards created from skimming.

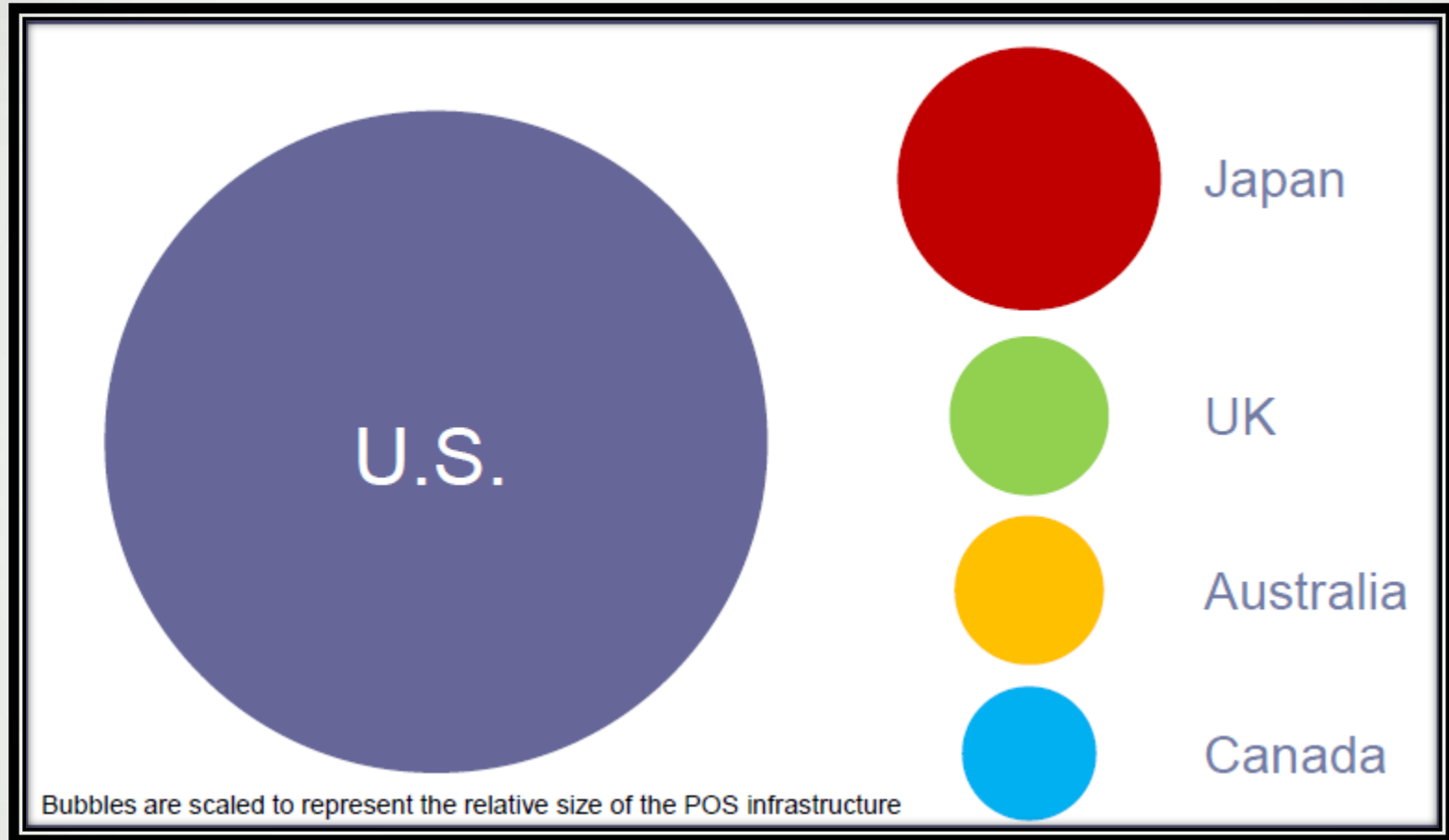
Interac is the PIN debit network in Canada

U.S. Adoption

- Limited adoption to date
 - Few issuers, primarily to international travelers
 - Few to no ATMs ready
 - POS terminals deployed, but software to enable an EMV payment rare
- Industry experts expect conversion to EMV to take 10 + years



Relative Number of POS Terminals



The Poultry Conundrum

- Business case is built on theoretical future cost savings



Roadmap

Financial Impact of Moving Forward

The critical question for credit unions is “what is my reason to implement now?”

- The answer to this question should lead to detailed analysis
- If moving forward now, must build in cost for reissuance of all cards once the U.S. debit AID and application is ready

When to deploy based on fraud reduction

- EMV will definitely reduce fraud losses—eventually
- But how do you know when?
- Gather data points for your credit union
 - Analyze your fraud today
 - EMV will reduce fraud from counterfeit cards
 - EMV does not impact card-not-present fraud or lost/stolen fraud
 - Evaluate fraud impact in the near term
 - Equation will change once terminals are deployed in U.S.

When to deploy for international travelers

- International travelers are experiencing some issues with magnetic stripe cards
- Gather data points
 - Measure international transactions
 - What percent is that of your membership
 - Compare to your metrics for new product development
- Consider an EMV travel card or converting your credit card to EMV



When to deploy ATMs

- Evaluate ATMs and transactions
 - How many ATM transactions from international cards
 - How many foreign (not on-us) transactions
 - Fraud loss
 - ATM readiness
- Partial or full fleet deployment



Building the Business Case

- Accurately assessing costs is critical to determine timing
- CO-OP will provide tools to help you build your business case and roadmap
- Helping you calculate the economics of switching to EMV

Patience is a Virtue

- The common U.S. AID simplifies efforts for the industry, but commercialization will take time
- Use the next year to gather your data points and plan your roadmap
- Once the market is ready, you'll be ready
- Don't rush to issue EMV cards

CO-OP Roadmap

- Q1-Q2 Roadmap:
 - Piloting EMV with a Visa issuer, live in December 2012
 - Beta testing EMV with a MasterCard issuer/acquirer early 2013
 - Beta testing EMV at the ATM with the MasterCard application Q1 2013
- Q2 2013 and Beyond Roadmap
 - Implementation of Common U.S. AID and application
 - Continued certification of various ATMs
 - Beta testing Credit
 - EMV Prepaid Travel
- Leadership
 - Active participation in EMV industry groups, such as the SRPc
 - EMV Resource Center: www.co-opfs.org/emv

Summary

- EMV is a complex technology
- Deployment in the U.S. complicated, but great progress has been made to simplify
- Most credit unions waiting until the market is ready, which CO-OP recommends as well
- Become and stay informed

More resources at www.co-opfs.org/emv

Visit the CO-OP EMV Resource Center (www.co-opfs.org/emv) for up-to-date information

- ✓ **White Papers**
- ✓ **Blogs**
- ✓ **Ask the Expert**
- ✓ **Links to other resources**
- ✓ **Webinars** – download the slides or listen to the recording from the first in our series of EMV webinars. Today's webinar will be made available in the same location.



Slides



EMV Webinar Recording

Questions?

More resources available at the
CO-OP EMV Resource Center:
www.co-opfs.org/EMV