

# GET SMART

## 7

### things you need to know about EMV

By Jay Morris

While still largely unused — and unheard of — in the U.S., the so-called chip or smart card is poised for rapid adoption in the next few years. MasterCard, Visa and Discover are driving the EMV migration, and each has its own road map for implementation.

Their “carrot and stick” strategy is a liability shift scheduled to occur in October 2015, when counterfeit card liability will shift to the merchant or issuer who *doesn't* have an EMV-enabled terminal or card. EMV is coming, the networks warn, so don't be the last to convert.

Despite the many challenges to widespread implementation, credit unions are leading the way with early adoption and pilot programs. *TFCU* talked to analysts, vendors and some of these early adopters, including United Nations Federal Credit Union, the first U.S. financial institution to roll out an EMV credit card. Here is their collective wisdom, distilled into seven things you need to know about EMV:

#### 1. Understand why fraud is increasing and how it impacts your credit union.

Fraud costs are rising in the U.S., and Julie Conroy, a research director for Aite Group's retail banking practice, notes that large issuers “are getting killed on counterfeit card fraud. They have seen it go up 30–50 percent on a year-over-year basis for the last two years. That's a huge jump. Part of it is that we represent the weakest link in the chain from a card technology perspective.”

According to Conroy, there has been a “cascade effect” of fraud shifting from countries that have adopted EMV to those that still use magnetic stripe cards. “As continental Europe went to EMV,” she says, “fraud rose in the U.K. As the U.K. went to EMV, fraud went to Canada. There are now more than 80 countries on the EMV standard, and the U.S. is the last G-20 country to convert.”

Merrill Halpern, assistant vice president of card services at United Nations FCU in Long Island City, N.Y., says card fraud at the \$3.8 billion credit union has gone down 45 percent since it rolled out the first U.S.

EMV credit card in April 2010. “Reported fraud as a percentage of sales has decreased from 22 basis points to 12 basis points,” Halpern states, “and any fraud that remains is now tied to mag-stripe transactions.”

Halpern argues that institutions that are slow to convert to EMV may suffer: “It's not just that they won't be protected; they'll be exposed to even more fraud because the fraud that normally occurs outside the U.S. is migrating over here.”

Credit unions need to consider the impact of fraud on members' peace of mind as well, Halpern adds. “EMV creates a better sense of consumer well-being. People get very uncomfortable when their card has been compromised, and some of that bad feeling carries over to the institution. That could be disastrous for a credit union and is why, in addition to offering [members] greater acceptance with EMV, we have been proactive.”

Conroy advises credit unions to closely examine their fraud controls. “The makeup of fraud is going to radically change,” she explains. “Most controls today are designed around counterfeit fraud, but EMV very effectively addresses that. What we're going to see dramatically spike is card-not-present fraud, application fraud and account-takeover fraud.”

The biggest argument for adoption is the opportunity to remove card-present fraud beginning in October 2015. “The issuers who migrate to EMV have a significant ROI in the form of counterfeit fraud loss reduction,” says Patty Walters, senior vice president of corporate EMV strategy for Vantiv. “The fact that EMV also offers consumers a more secure shopping experience sweetens the overall value proposition. U.S. financial institutions can now enjoy the EMV benefits that other global markets have leveraged for years.”

#### 2. Consider how your EMV card will “talk” to terminals.

How you set up your card is important, says Don DiMatteo, managing director of member experience at State Department Federal Credit Union in Alexandria, Va. The \$1.5 billion-asset credit union rolled



out a Visa Platinum card with the EMV chip in July 2012.

“Do you want your card to ask for PIN first, then signature? Or signature, then PIN? That’s one of the biggest decisions you have to make for your membership base,” says DiMatteo. “Our card looks for signature, no requirement, then PIN,” he says, “so it will work everywhere. In Europe, they’re used to giving a PIN on credit card purchases, whereas in the U.S. we’re used to signing.”

DiMatteo says that even if the card has the EMV chip, if it is set for “signature-only,” it may not work in Europe because some terminals are set for PIN-only. “Offline terminals cannot validate the chip without the PIN,” notes Halpern, “but in stores that are online, they can generally be used with a signature.” “Where international travelers are having challenges,” says Conroy, “are in small towns or at unattended kiosks at airports where they only accept chip + PIN.”

DiMatteo also notes that members need to remember their PIN when traveling. “If a member forgets his PIN, a new PIN would have to be mailed to him. It is not something that can be reset by team members.”

### 3. Start small and target your membership.

American Airlines Federal Credit Union in Fort Worth, Texas, has nearly 243,000 members, but only 350 of them carry the credit union’s EMV prepaid travel card. And that’s by design, according to Gail Enda, senior vice president of lending and product management for the \$5.6 billion credit union. “We have a core group of members who travel a lot,” she says, “and their jobs require them to be overseas. So it made sense for us to offer an EMV product for this targeted group.”

“At some point we will introduce EMV functionality across our debit and credit card portfolios, but the prepaid card is a good first step, an easy way for us to gain experience with EMV,” she explains. “It’s been easier for us to keep it as a separate card versus having to manage it as part of our portfolio since adoption of EMV is still maturing in the U.S., where the majority of our cardholders make their transactions.”

Card experts also suggest keeping things simple at first. The chip is capable of generating a cryptogram, and it creates a unique CVV called an iCVV. It makes sense, they say, to have your network perform the “on behalf of” services for the cryptography and iCVV validation and then pass the transaction back to your credit union, similarly to a mag-stripe transaction.

### 4. Recognize that EMV costs are higher and rollouts take longer.

Conroy says the cost of plastic for EMV, including mailing the cards, can range from \$4 per card for high-volume issuers to as much as \$8 a card for low-volume issuers. The very biggest issuers, she says, will probably be able to get their costs down to \$1–\$2 per card (not including mailing).

DiMatteo estimates that State Department FCU spent about \$5 per card for EMV migration, and Halpern says because of high volume he got United Nations FCU’s costs lower.

Enda says the cost of plastic for American Airlines FCU’s EMV card was “about four times that of a magnetic stripe card.”

“Expect to pay at least double the production costs to roll out these cards,” DiMatteo adds. He also warns that EMV implementation may take longer than for regular credit card programs. Conroy says smaller institutions should plan on a minimum of nine months to roll out their first EMV card. For State Department FCU, it took about eight months, and for American Airlines FCU nearly a year (theirs was a pilot that included getting certified by Visa to have a unique BIN).

### 5. Take into account more than fraud when calculating ROI.

Many have argued that there isn’t a solid business case to be made for broad deployment of EMV in the U.S. In the best of circumstances, the payback could be 10 years or more, depending on how you calculate fraud losses.

But Halpern has seen some compelling numbers that go beyond measuring just fraud mitigation. For the three-year

## The ABCs of EMV

**AID (Application Identifier)** — A data label indicating the application(s) to be used for processing a smart card transaction.

**EMV (Europay, MasterCard, Visa)** — Developed by the major card networks, EMV is the global standard for smart card transactions and is used in 80 countries.

**IACs (Issuer Action Codes)** — Instructions placed on a card to indicate the issuer’s preferences for approving on- and offline transactions.

**ICC (Integrated Circuit Card)** — Also known as an EMV, chip, IC or smart card. Integrated circuits embedded in an ICC can hold data, run multiple applications and provide enhanced security features such as cryptography and holograms.

period of April 2010 to April 2013, United Nations FCU saw a 112 percent increase in purchase transactions and a 67 percent increase in balances for its EMV card portfolio.

“For us, it was portfolio growth and member service that led us to do it,” he says. “Understand, though, that we’re reflective of a largely international contingent.”

Linda Garboczi, vice president of marketing for \$943 million-asset Andrews Federal Credit Union in Suitland, Md., reports a 5 percent growth in membership overseas after it rolled out an EMV credit card in Europe in 2011.

Transactions are up about 12 percent compared to mag-stripe cards, she says. In addition, travel blogs have mentioned the Andrews GlobeTrek card, which in turn has led to new members.

Walters suggests that the ROI is already there for issuers in certain markets. “Any U.S. issuer who experiences counterfeit fraud loss, has cardholders who travel abroad or to high-risk local markets is a prime candidate for EMV, and the ROI is nearly immediate.”

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## 6. Realize that for debit cards, the Durbin Amendment will be a challenge.

While there is no regulatory requirement to migrate to EMV, compliance with the Durbin Amendment does dictate the path forward in one key area: debit cards.

Under Durbin, there must be at least two unaffiliated debit networks available for merchants to choose from at the terminal. As a result, U.S. implementation will need to be different than in other countries so that merchants can choose how to process the transaction.

Merchants usually make their routing decisions on centralized host systems, not at the terminal. These host systems have become quite sophisticated, processing transactions

based on business rules and allowing merchants to maximize their P&L. So there is the added challenge of developing new routing logic for the terminals.

On the issuer side, compliance with the Durbin Amendment may mean putting more than one debit brand on an EMV debit card. Visa and MasterCard have their proprietary applications, and a consortium of 10 networks uses Discover's D-PAS. Altogether, according to the Aite Group, there are 18 different debit networks in the U.S.

Most debit issuers are waiting to see if the EMV Migration Forum (EMF), an industry working group, can agree on a single solution. That would not only simplify implementation, but it would also reduce the likelihood of having to

reissue cards if an institution wanted to change networks.

Walters, who serves as secretary of the EMF, is optimistic. "We're very actively engaged in bringing all of the critical stakeholders to the table to negotiate a fair solution in the quickest time possible," she says. "We realize for debit issuers, Durbin is a hurdle that has to be overcome before significant issuing experience can occur. The good news is that progress is being made."

## 7. Talk to vendors, but remember, the clock is ticking.

"Everyone wants to balance being too early with being too late," Conroy observes. "Yet, we're marching toward this 2015 deadline." She says the majority of financial institutions she's talked to plan to issue an EMV card in 2014.

Those who have already rolled out an EMV card say their processor has been a key ally. "They can provide knowledge and expertise and scalability, best practices and lessons learned," Conroy relates.

"We have many credit unions on board that are scheduling their rollouts," says Walters. "We want to be a trusted partner on this, educating credit unions, helping them segment their portfolios, plan, train, pilot and integrate."

The networks can help smaller institutions, too, when it comes to implementation. "If a credit union went to one of the major networks and said, 'We're ready for EMV,' they are not going to turn you away," says Halpern. "No one is going to turn away business."

A lot can happen in two years, of course, but it appears that by the 20th anniversary of EMV's introduction, smart cards will have found a place in America's wallets and stores. Credit unions that are mindful of EMV's challenges and opportunities will be at the forefront, shaping its implementation, paving the way for its use and reaping the rewards. ▲

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## EMV, NFC and Mobile Wallets

Credit unions may be taking the lead on EMV card conversions, but many are concerned about mobile and its impact on the future of plastic. The good news is that EMV has mobile capabilities, making it a versatile platform for processing both card transactions and contactless payments.

"Credit unions are being bombarded with new technologies, and there's a lot of confusion," notes Merrill Halpern, assistant vice president of card services at United Nations Federal Credit Union in Long Island City, N.Y. "Mobile wallets and apps look a little more exciting perhaps, and credit unions may be tempted to hold off on EMV cards; but I'm not sure that's a good idea. The chip + PIN cards are here now, and they've been proven to reduce fraud."

EMV and mobile aren't mutually exclusive, though. Indeed, the EMV standards will support contactless payments, giving credit unions some options.

"If and when mobile takes off," says Julie Conroy, a research director for Aite Group's retail banking practice, "MasterCard and Visa want to be ready. They are making sure there is a robust NFC infrastructure in place to maintain the relevance of the systems they've built over the last 30 to 40 years."

Near field communication (NFC) is the technology that enables contactless cards and

smartphones to exchange information with a reader by either touching or coming within very close proximity of each other. A number of financial companies and mobile manufacturers have already introduced NFC-enabled cards or devices.

Dual-interface and hybrid smart cards also offer the flexibility of combining contact and contactless capabilities into a single card. With dual interface, two separate chips are embedded in the card — one for swiping and one for NFC. Hybrid cards have a single chip that can perform both of these functions.

"The EMV-enabled terminals will also be NFC-enabled," explains Conroy, so issuers will be able to process contactless transactions. "Even if the market shifts to a cloud-based wallet structure where cards are very easily disintermediated, we'll still have NFC capability built into the terminals."

In other words, consumers can continue to use credit cards or switch to a smartphone wallet that is NFC-enabled. Either way, transactions will still be processed through the major payments networks.

It remains to be seen which form of payments will dominate in the future, but for now, most financial institutions are betting plastic won't be disappearing anytime soon.



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