

BENEFITS AT A GLANCE

- Help minimize fraud and chargeback losses related to the use of counterfeit and lost and stolen¹ cards
- Help prevent skimming of card data with dynamic encryption
- Help prevent liability for point-of-sale fraudulent transactions by complying with card brand deadlines
- Help reduce PCI compliance requirements by accepting payments through contact and contactless chip-certified devices

EMV: COMING SOON IN THE UNITED STATES

“Visa and MasterCard estimate 575M U.S. payment cards will include EMV chips by the end of 2015.”²

– MASTERCARD



INFORMATION PAPER | EUROPAY, MASTERCARD® AND VISA® (EMV) CARDS

PREPARING FOR THE TRANSITION TO EMV PAYMENTS

EMV: AN ESTABLISHED SOLUTION WORLDWIDE

EMV cards were introduced in Europe nearly 30 years ago to help combat the use of counterfeit and lost and stolen cards. Prior to EMV, also known as Chip and PIN, European merchants were required to obtain telephone authorizations for each transaction, which was extremely expensive. So, card issuers formed EMVCo, to address both the telecommunications costs and increasing rates of counterfeit fraud.

WHAT IS EMV?

EMV technology uses a chip, or micro-processor, that's embedded in a card to make payments at the point of sale (POS). The chip:

- Uses encryption to protect, secure and store sensitive data
- Validates the card during each interaction with the (POS) device

In a POS payment environment, EMV offers several security features that magnetic striped cards do not, such as:

- A sophisticated form of authentication for each transaction, making it difficult to use skimmed or copied card data
- Insertion into chip-reading devices rather than swiping, which, in many cases, means the card does not leave the customer's possession
- The ability to require a customer's personal identification number (PIN), to verify his or her identity

Initially, your employees will have questions about these changes, and so will cardholders. Chase Paymentech can assist you with implementation and provide training.

EMV is an established technology that is used around the world. First launched in France in 1986,³ there are approximately 2.4 billion EMV payment cards in circulation in 130 countries, and 36.9 million EMV terminals active worldwide.⁴

HOW IT WORKS

During an EMV transaction, the chip card and the terminal work together to authenticate the card and complete the payment. The POS terminal helps to enforce any "rules" that are set by the card issuer, which are stored on the chip. (Rules are the characteristics that are examined for each transaction). For example, one rule could be the number of PIN attempts that are allowed before the transaction is declined. The chip and the terminal also work jointly to determine whether the customer needs to enter a PIN or provide a signature to confirm his or her identity and accept the transaction.



CARDHOLDER VERIFICATION METHODS

Chip card payments provide new ways to validate a cardholder's identity and to confirm acceptance of a transaction by entering a PIN or signing the receipt.

The three verification methods are:

- **Chip and signature** – Customers sign to validate their identity, which helps prevent counterfeit card fraud
- **Chip and offline PIN** – The chip card and the terminal validate the PIN with each other offline, before continuing for authorization, which helps prevent counterfeit, stolen and never-received or -issued card fraud
- **Chip and online PIN** – The customer's PIN is entered and sent to the host for validation in real time, which helps to prevent counterfeit, stolen and never-received or -issued card fraud

COUNTRY/ AREA	YEAR EMV FIRST IMPLEMENTED	FRAUD DECREASE
AUSTRALIA	2008	38% decline in counterfeit fraud from 2008 to 2010 ⁵
CANADA	2008	54% decline in counterfeit and lost or stolen fraud from 2008 to 2013 ⁶
FRANCE	1986	50% decline in fraud in domestic, face-to-face transactions from 2004 to 2009 ⁷
UNITED KINGDOM	2004	55% decline in counterfeit fraud and 33% decline in lost or stolen card fraud from 2005 to 2013 ⁸

EXPERIENCED IN EMV PAYMENT PROCESSING

Chase Paymentech was among the first payment processors to implement EMV in the United States. We have been processing EMV transactions in Canada since 2007 and in the United States since 2012. We are fully prepared to support your EMV credit card acceptance in both the United States and Canada, providing you with the ability to use one regional processing partner.

MEET DEADLINES FOR CHARGEBACK LIABILITY SHIFTS

Visa®, MasterCard®, American Express® and Discover® will shift liability for credit, card-present chargebacks to U.S. merchants beginning in October 2015. This shift will occur whether or not merchants implement EMV acceptance. Chase Paymentech is fully equipped to process EMV credit card transactions, and we are committed to helping you implement EMV payment acceptance.

EMV Debit

The debit networks have begun to announce deadlines for liability shifts, beginning in October 2015.⁹ When the EMV debit rollout occurs in the United States, Chase Paymentech will support EMV debit payments and associated regulatory requirements.

WHAT THE LIABILITY SHIFT MEANS TO YOU

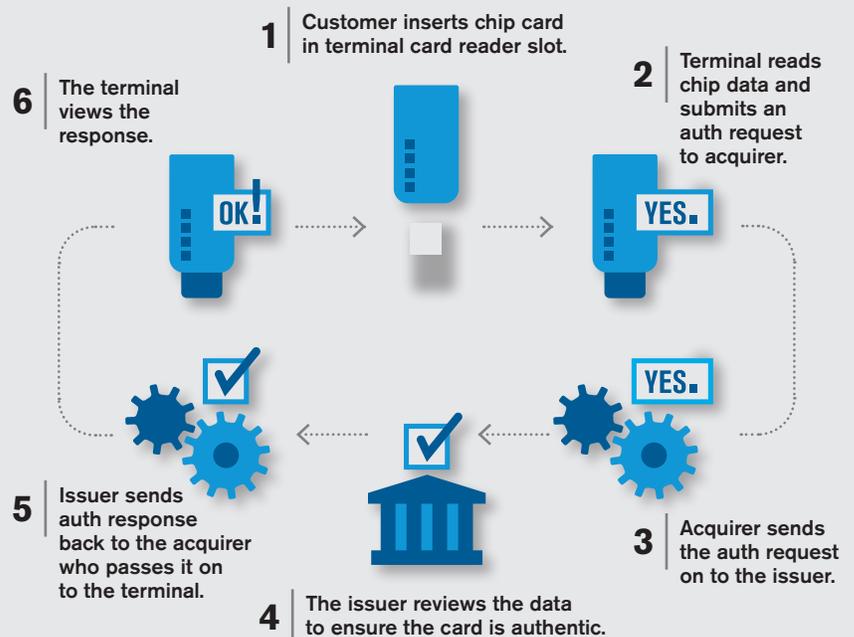
After October 2015, you may be liable for the cost of a fraudulent transaction if you are not using a chip card acceptance device that could have prevented fraud. This liability will apply whether or not the card was swiped, a signature was captured and an issuer authorization was obtained. Specifically, the liability for a fraudulent transaction will pass to the party that is not EMV-compliant (merchant or issuer). If both the card and terminal have been EMV-certified, these types of fraudulent transactions should not occur.

EMV MIGRATION INCENTIVES

As an incentive for EMV adoption, Visa, MasterCard, American Express and Discover have announced annual PCI "validation relief" for merchants that accept 75 percent of their card-present, payment brand-specific transactions through fully contact and contactless chip-certified devices. This means that you may be eligible to have your annual PCI assessment waived by the respective payment brands. You will still be required to maintain PCI compliance, but you will be able to avoid the process of validating compliance with each of those payment brands if you meet the required 75 percent minimum.

Global EMV standards are governed by an organization called EMVCo.¹⁰ A committee called the EMV Migration Forum, composed of numerous payment industry participants, including Chase Paymentech, is working to address technical issues around the EMV rollout. EMV standards enable global interoperability of chip cards and terminals and ensure a consistent customer experience.

EMV OVERVIEW



WHAT YOU WILL NEED TO TRANSITION TO EMV

During the early stages of EMV migration, terminals will be able to accept both magnetic stripe and chip cards. This will ensure your customers can continue to use their existing magnetic stripe cards until the United States has fully migrated to chip technology.

It is inevitable that the migration to EMV chip card acceptance is going to require additional investments. To help you minimize costs, we recommend that, if you are already planning to upgrade your POS hardware or software (e.g. to achieve connectivity updates or support a loyalty program), you should consider including support for both EMV and contactless technology at that time. The technology requirements will include:

Hardware

If you do not currently use a PIN pad, you may want to consider purchasing hardware with an integrated PIN pad or a solution that allows a PIN pad to be attached externally. With EMV, at the card issuer's discretion, cardholders may be required to enter a PIN for both debit and credit transactions.

Software

You should also consider software application upgrades that require certification by the payment brands for chip card acceptance. These certifications are far more involved than typical magnetic stripe technology certifications, and they require involvement and review with all of the relevant payment brands. Chase Paymentech can assist you and your technology integrators with the review and coordination of these certifications for any non-proprietary Chase Paymentech POS solutions.



CHASE PAYMENTECH CAN HELP WITH YOUR EMV TRANSITION

[Chase Paymentech](#) can provide your business with [EMV-compliant terminals](#) as well as mobile payment solutions. In addition, we have relationships with many third-party vendors in the United States, and are actively working with them to EMV-enable their solutions. For information on our EMV technical specifications, please visit the [Chase Paymentech Developer Center](#).

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“The EMV transition will help fix an important loophole in card fraud: counterfeiting. However, based on experiences in other markets, card fraud is expected to migrate to the point of least resistance: the card-not-present environment. The card payment industry will need to provide a cohesive and coordinated response to this likely shift in card fraud through implementing fraud mitigation technologies such as card encryption, tokenization, and online authentication tools such as 3D Secure in parallel with the U.S. EMV migration.”

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– JAVELIN STRATEGY & RESEARCH, 2014 REPORT¹¹

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REINFORCE SECURITY FOR CARD-NOT-PRESENT TRANSACTIONS

While overall fraud losses in every region drop – sometimes significantly – immediately after EMV rollout, industry reports have noted a trend that fraud losses tend to increase in less secure environments, especially card-not-present (CNP), which includes online and phone-initiated payments. In the United Kingdom, CNP fraud losses rose by 64 percent between 2005 and 2013.¹² In France, CNP fraud losses increased from 25 percent to 54 percent of all card fraud after EMV's

rollout¹³ In Canada, CNP fraud rose 78 percent between 2008 and 2013;¹⁴ and in Australia, cross-border fraud rose 44 percent from 2008 to 2011.¹⁵

For this reason, we strongly encourage you to consider strengthening the security of your CNP payment environment. Safetech Fraud Tools provide an array of fraud detection and prevention technologies that can help you reduce your fraud risk. **Learn more about Safetech Fraud Tools.**

LINK TO MORE INFORMATION

You may also find the following websites helpful: the **Chase Paymenttech EMV** site, **EMVCo.com**, and **SmartCardAlliance.org**.

Click here to read the white paper on the **US Debit EMV Technical Proposal**.

MAKE THE RIGHT CALL

For more information about EMV payments and specifications and how EMV adoption may affect you, contact your Chase Paymenttech representative or visit us at **chasepaymenttech.com**.

¹ When a PIN is prompted

² MasterCard announcement, “More Than 575 Million U.S. Payment Cards to Feature Chip Security in 2015,” Aug. 13, 2014.

³ “Chip and PIN, Successes and Failures in Reducing Fraud.” Retail Payments Risk Forum, Jan. 2012

⁴ Ibid

⁵ “EMV Lessons Learned and the US Outlook,” Aite Group, June 2014. (Via the Australian Payments Clearing Association).

⁶ Ibid.(Via Canadian Bankers Association)

⁷ “Chip and PIN, Successes and Failures in Reducing Fraud

⁸ “EMV Lessons Learned and the US Outlook.” (Via Financial Fraud Action UK).

⁹ Consult with your Chase Paymenttech representative for information specific to each debit network.

¹⁰ EMVCo, http://www.emvco.com/about_emvco.aspx?id=202

¹¹ “EMV IN USA: Assessment of Merchant and Card Issuer Readiness,” Javelin Strategy & Research, April 2014

¹² “EMV Lessons Learned and the US Outlook.”

¹³ “Chip and PIN, Successes and Failures in Reducing Fraud.” Retail Payments Risk Forum, Jan. 2012. Percentage change is from 2006 to 2009.

¹⁴ “EMV Lessons Learned and the US Outlook.”

¹⁵ Ibid.