



# A Brand New Checkout Experience

**EMV Transformation**



EMV technology is **transforming** the U.S. **payment industry**, bringing a whole new experience to the checkout counter.

## Introduction

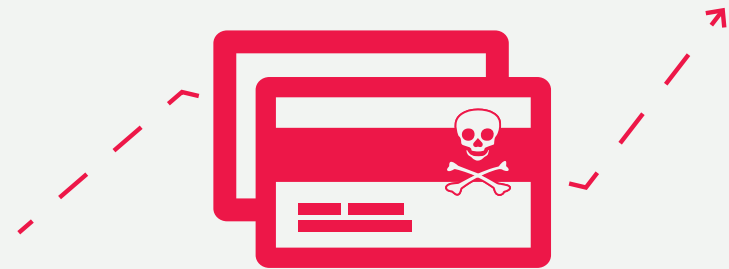
What is EMV? It's 3 small letters that represent powerful security enhancements for payments. And though it's the global standard for secure payments and has been deployed in more than 80 countries, many in the U.S. are just beginning to learn about it. It's easy to become overwhelmed by the changes that EMV is bringing. New payment card and processing standards all need to be met. In this eBook, experts from Gemalto and VeriFone explain EMV payments and shed light on some of the critical decisions facing issuers and merchants when forming an EMV strategy.

## WHAT'S CHANGING?

### The way consumers pay is changing.

In the U.S., consumers have traditionally used cards with a simple swipe. Unfortunately, magnetic stripe cards have proven susceptible to counterfeit fraud.

EMV cards are stepping in as a more secure way to pay. These cards are equipped with a “smart chip” which is capable of much more sophisticated authentication than magnetic stripe cards. Essentially, there is a fully operating computer system embedded in every EMV card. The chip is tamper-proof, making the card nearly impossible to clone.



**Magnetic stripe cards are easy to counterfeit, and fraud is rising.**



**Now EMV cards are stepping in as a new, more secure way to pay, equipped with a “smart chip.”**

## WHAT'S CHANGING?

# Dipping & Tapping

EMV chip cards aren't "swiped"; instead they are "dipped" into a terminal. Dual-interface cards (cards with both a contact chip and a contactless antenna) can also be "tapped" or "waved".

## DIPPING

The card is inserted into the terminal and stays there while the customer types in a PIN, much like an ATM transaction. Some cards will require a signature instead of a PIN; that won't change.

## TAPPING

Some EMV cards (dual-interface cards) can be used to "tap & pay," as long as the POS terminal is capable of accepting contactless cards. This is a much faster way to pay because customers can quickly "tap" or "wave" their card near the reader at checkout. It's as simple as that.

**There is no "swiping" an EMV card.  
It is inserted into the terminal, referred to as "dipping."**



**Dip.**

**A contactless card can be tapped  
or waved over the terminal.**



**Tap.**

## WHAT'S CHANGING?

### POS & Payment Processing

Merchants will need upgraded POS (Point of Sale) terminals and software to process EMV payments. The good news is that EMV is going to bring some perks that we haven't seen before. Most importantly, EMV-enabled POS terminals provide protection against counterfeit card fraud. Another benefit: contactless EMV terminals are capable of accepting NFC mobile payments, making it easy for merchants to join the mobile payment revolution.

### Payment Cards

EMV cards began circulating in the U.S. in 2010, and issuers are ramping up EMV migration quickly. The new cards have a prominent chip on the front and work with EMV terminals all over the world.



**Merchants need to install payment systems that can accept EMV cards before the fraud liability shift takes effect in 2015 in order to protect themselves from counterfeit transaction liability.**

## DO YOU “SPEAK” EMV?

# A whole new language is coming with EMV standards.

**EMV** – Stands for Europay, MasterCard, and Visa. EMV is a set of global standards for smart card payments and acceptance terminals.

**Chip & Pin** – EMV payment cards are commonly referred to as “chip & pin” cards because the chip card is often coupled with a PIN code for advanced security.

**Dynamic Data or Dynamic Code** – EMV cards generate a “dynamic code” which means the security code changes for each transaction. That way, if a card is copied or compromised, the data cannot be used to make multiple transactions. In contrast, the data transmitted by magnetic stripe cards never changes and, once compromised, can be used over and over for countless fraudulent transactions.

**Fraud Liability Shift** – Visa, MasterCard, American Express, and Discover have announced that on October 1, 2015, counterfeit fraud liability, which has traditionally been assumed by the card issuer, will be absorbed by the party that does not enable EMV during the fraudulent transaction.

**Dip/Dipping** – Instead of swiping a card, customers insert an EMV card into the POS terminal, much like an ATM. Inserting the card and removing it is called “dipping.”

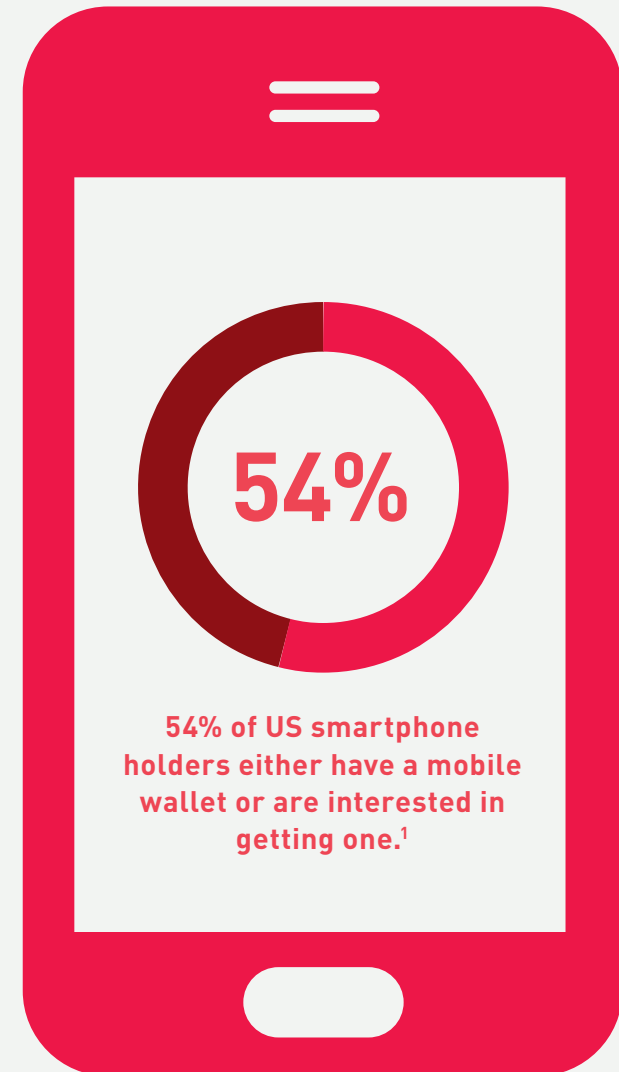
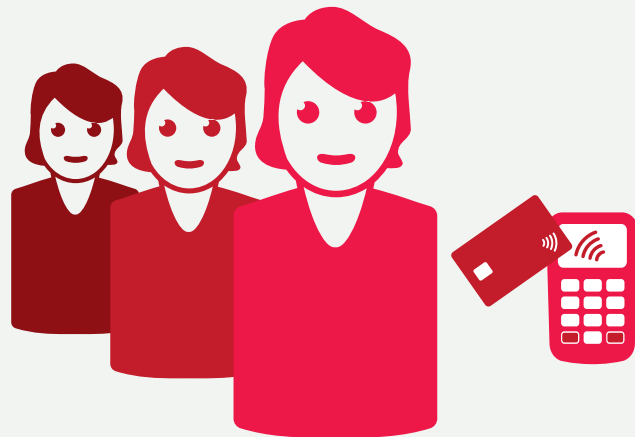
**Tap & Pay or Wave** – When using a contactless card, there is no dipping. The card is “tapped” or “waved” against the POS terminal. One quick tap establishes connection and verifies authorization.

## A MORE EFFICIENT CHECKOUT

# Faster & More Secure

EMV transactions are fundamentally more secure because consumers never need to hand over their card to a merchant, keeping control in the hands of the cardholder.

Perhaps the most popular perk of EMV transactions is the option to use contactless payments which can move consumers through checkout lines more quickly. An easy “tap” or “wave” of the card could complete a transaction.





## A MORE EFFICIENT CHECKOUT

### Dining

A portable POS provides a better experience for diners because they can pay in a matter of moments, right at the table. And establishments will benefit from a better, faster payment process.

At restaurants and bars, Americans have become accustomed to relinquishing their card to an employee when it's time to pay. The employee usually takes the card away, returning a moment later with a receipt. This opens the door to all kinds of fraud, but that is changing.

With EMV, consumers can shop and dine without worry that their card information may be stolen because the card never needs to leave the consumer's sight. Restaurants can use a portable POS system that allows servers to accept payments right at the table. This type of portable POS has proven very popular in countries that use EMV to manage fraud.





## KEY DECISIONS FACING MERCHANTS

### What do merchants need to know?

When choosing a POS system that is EMV-compliant, merchants should take into account their unique transaction setting and consider:

- > How will we ensure that we have EMV-compliant terminals in place before the Fraud Liability Shift deadline: October 1, 2015?
- > Do we want to accept mobile payments? If so, what type? NFC payments or QR code payments? Equipment and costs will vary based on this decision.

Of course, the more types of payments that a POS can accept, the more “future proof” it will be. Fortunately, the costs associated with installing EMV-enabled POS terminals that accept mobile payments are lower than ever before.

## Three reasons for contactless:

1

To qualify for financial incentives offered by Visa, MasterCard, American Express, and Discover, such as relief from PCI requirements or reduced chargeback penalties, merchants must install dual contact/contactless terminals.

2

Installing a POS terminal that accepts contactless cards also accepts NFC mobile payments. No additional equipment is necessary.

3

Contactless payments provide a quick checkout option.

## BRIDGE TO MOBILE

# What role do mobile payments play?

Card payments will continue; however, merchants should be ready for an evolution to mobile payments. And when choosing a POS system, it makes sense to consider mobile payments in conjunction with EMV.

Mobile wallets come in two basic forms: NFC and code-based wallets. NFC mobile payments are built on the same technology as contactless EMV cards. And so a POS terminal that accepts contactless EMV cards can also accept NFC mobile payments simply by loading that wallet's software. Code-based mobile wallets require a scanner at the POS that can read barcodes or QR codes along with the corresponding



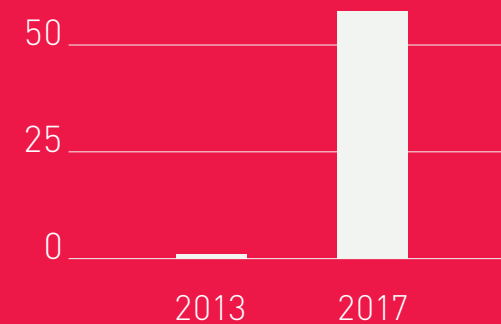
**The most versatile option is a  
“one size fits all” POS terminal.**

software. The most versatile option for merchants is to install a “one size fits all” type of POS terminal that can accept legacy magnetic stripe, contact EMV, contactless EMV, and mobile payments. After all, the more types of payment forms that a merchant can accept, the more customers they will likely attract.

**BONUS:** Mobile Wallets give the opportunity to integrate coupons and other loyalty offers into the payment experience.



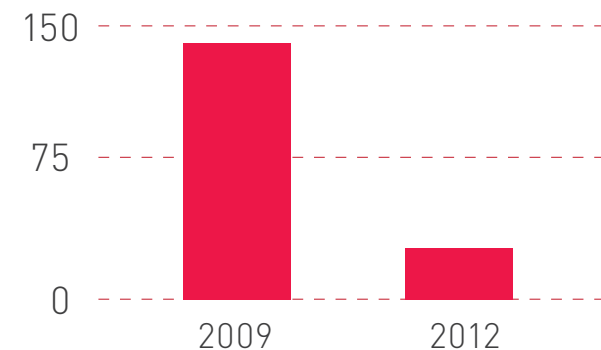
eMarketer estimates that **mobile payments** at the retail POS will top \$1 billion in the United States in 2013, and reach **\$58 billion by 2017.**<sup>2</sup>



It is clear that the migration to EMV is highly advantageous for merchants and the U.S. payments infrastructure as a whole.

## The Benefits of EMV

**Less counterfeit fraud.** In Canada, for example, debit card fraud losses fell dramatically after the implementation of EMV – they fell to \$38.5 million in 2012 from a high of \$142 million in 2009.<sup>3</sup>



**Incentives.** The U.S. payment brands will not hold merchants or acquirers liable for counterfeit fraudulent transactions that are processed with EMV.

**A streamlined checkout process.** Consumers never hand over their card, plus faster transactions with contactless payments.

**An easier international shopping experience.** Because EMV is the global standard for payments, consumers will be able to use their cards internationally, and travelers can pay in the U.S. without any barriers.



## ABOUT GEMALTO

Gemalto (Euronext NL0000400653 GTO) is the world leader in digital security with 2012 annual revenues of \$2.49 billion and more than 10,000 employees operating out of 83 offices and 13 Research & Development centers, located in 43 countries.

Gemalto is the leading provider of EMV payment cards worldwide. When financial institutions are conceiving new, digitized payment programs, they increasingly look to us for support. As the trusted, long-standing partner of over 3,000 financial institutions, we have the broad-based knowledge and deep-seated expertise to meet their needs.

➔ [GEMALTO.COM](http://GEMALTO.COM)

## ABOUT VERIFONE SYSTEMS, INC.

VeriFone Systems, Inc. ("VeriFone") (NYSE: PAY) is the global leader in secure electronic payment solutions. VeriFone provides expertise, solutions and services that add value to the point of sale with merchant-operated, consumer-facing and self-service payment systems for the financial, retail, hospitality, petroleum, government and healthcare vertical markets. VeriFone solutions are designed to meet the needs of merchants, processors and acquirers in developed and emerging economies worldwide.

➔ [VERIFONE.COM](http://VERIFONE.COM)

### Sources:

- ➔ <sup>1)</sup> **Datamonitor:** Mobile Proximity Payments: Sizing the Opportunity (2013)
- ➔ <sup>2)</sup> **eMarketer:** U.S. Mobile Payments to Top \$1 Billion in 2013 (2013)
- ➔ <sup>3)</sup> **Interac®:** Interac® Debit Card Fraud Skimming Losses Plummet to Lowest Level on Record (2013)

