



**PREVIEW**

# *EMV In The U.S. - The Whole Story*

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# Report Overview

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## WHAT IS THIS REPORT?

This 86-page report is a guide to help understand what EMV is, who is impacted by the EMV migration and how the shift to EMV will impact the payments environment.

The first section of the report defines EMV and identifies stakeholders who have or will be impacted by the EMV migration, provides an overview of worldwide EMV deployment, identifies the drivers of EMV in the U.S., explains the fraud liability shifts associated with EMV and discusses the costs that accompany the EMV transition.

The second half of the report takes a deeper look into the fraud problem in the U.S. and provides analysis on EMV's impact on the card-not-present environment (i.e. online channel). The latter half of the report also provides guidance on how to address the overall fraud problem in the U.S. through various fraud management tools from both a merchant and processor perspective. In closing, the report points out how EMV is much more than a fraud prevention tool, and showcases how EMV could lay down a new foundation for the U.S. payment ecosystem.

## WHY IS THIS USEFUL?

This report will provide newcomers, and industry veterans in the merchant landscape and payments landscape, with useful information into the various facets of the U.S. migration to EMV. More than 200 articles/reports from a wide range of sources were analyzed and reviewed to provide readers with a comprehensive view of the state of EMV in the U.S. The report is an excellent tool for general reference purposes on the current state of the EMV migration in the U.S. market.

[Click here to purchase](#), the report price is \$1,840

*If you have any questions, or would like to purchase over the phone, please call 402.964.2617.*

# Report Overview

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# What Is EMV? – Preview Page

## What Is EMV?

EMV, named for the coalition of Europay, MasterCard, and Visa (the EMV Coalition or EMVCo) that developed the specifications for the system in the 1990s, improves safety through better card security and improved standards. EMV has become the world-wide standard and both U.S. neighbors, Canada and Mexico, have EMV mandates impacting U.S. multi-national retailers.

EMV is essentially a set of standards that defines the interoperability of secure transactions across the international payments landscape. Countries that have implemented EMV **have seen certain aspects of card fraud plummet**. Why? EMV cards provide improved security to the traditional magnetic stripe cards. EMV transactions introduce dynamic data specific to the card and the transaction, with the goal of devaluing transaction data in flight and reducing the risk of counterfeit fraud.

- Microprocessing chips embedded in EMV cards generate a unique number for each sales transaction making it extremely difficult to use a cloned card on a card-present transaction.
- Magnetic stripe cards use static data that can be stolen and reused for fraud.



### Major card brands support EMV because it:

- **Reduces criminal attractiveness of card fraud.**
- **Reduces chargebacks due to counterfeit or stolen cards.** Fewer chargebacks save merchants time and reduce the frustration typically involved with the chargeback process.
- **Helps merchants avoid the potential liability for card-present card fraud.**
- **Creates common cardholder experience.** Moving to the EMV standard in the U.S. will make it easier for U.S. travelers using cards abroad. Likewise, international travelers have peace of mind when conducting transactions in the U.S.
- **EMV also helps usher in the new technology and capability for contactless transactions. EMV is the stepping stone to the future of payments due to its dynamic data authentication (i.e. contactless, mobile).**

Source: EMVCo; Smart Card Alliance; American Banker; Federal Reserve

# What Is EMV? – Preview Page

## EMV Myths Exposed

### EMV Myths

EMV doesn't solve the fraud problem	<ul style="list-style-type: none"><li>The fact is that EMV has been a tremendous success in preventing fraud. Wherever EMV has been implemented comprehensively, including the objective PIN verification by the chip, significant fraud reduction ratios have been achieved and sustained.</li></ul>
EMV is not secure enough	<ul style="list-style-type: none"><li>EMV is based on strong cryptography and elaborate key management; a fundamental EMV principle is to digitally sign payment data to ensure transaction integrity. As opposed to magnetic stripe technology, a chip is extremely difficult to crack; card authentication and PIN verification are performed automatically and objectively by the chip.</li></ul>
EMV is outdated and not relevant for contactless or mobile transactions	<ul style="list-style-type: none"><li>EMV specifications are continuously monitored by EMVCo and the other stakeholders reflecting the ever growing implementation experience in multiple markets across the globe. They have been updated in an evolutionary and backwards compatible way to meet the changing requirements of the payment industry.</li></ul>
EMV only benefits the issuers	<ul style="list-style-type: none"><li>Issuers are generally liable for card fraud related to face-to-face transactions, and therefore, benefit from the reduction of direct fraud cost in this channel. One of the most understated aspects of the migration to chip is the productivity increase on the merchant and acquiring side of the equation. Significant savings result from replacing signed paper slips by electronic records, simplifying the handling of fraud, in particular the retrieval of payments records while dealing with chargeback requests.</li></ul>
Everybody can go at their own pace	<ul style="list-style-type: none"><li>In order to optimize the business case of the two market sides, issuers and acquirers / merchants / ATM providers have to move in lock step. In order to achieve this, the stakeholders are well advised to consider forced replacements of cards and terminals outside of the normal replacement cycles.</li></ul>
The U.S. industry is ready and prepared to start the migration	<ul style="list-style-type: none"><li>There is a long list of stakeholders in this country: consumers, merchants, issuers, acquirers, processors, ATM service providers, regulators, media, analysts, etc. The composition of this set of market participants is very inhomogeneous: there are the four or five major nationwide issuers and hundreds of small banks and credit unions; there are giant merchant chains and mom and pop shops, regional PIN only networks and international payment systems.</li></ul>
After having spent billions on PCI DSS compliance, EMV just adds another major expenditure for the merchant side	<ul style="list-style-type: none"><li>The goal of PCI DSS is to protect cardholder and sensitive authentication data anywhere this data is present within the payment eco-system, thus limiting the availability of this data to fraudsters. In contrast, by using dynamic data, EMV aims to reduce fraud before it happens and to eliminate the reusability of payment transaction data for fraudulent transactions.</li></ul>
We can skip EMV Chip & PIN and move straight to contactless and mobile	<ul style="list-style-type: none"><li>Contactless and mobile payment transactions are based on the EMV specifications. This relates to their functionality and transaction flow as well as to the associated security fundamentals.</li></ul>

Source: Federal Reserve; Smart Card Alliance

# EMV Fraud Liability Shift Explained – Preview Page

## Liability Approaching

Each card network's EMV deadline varies slightly, but these are the broad requirements put forth for their implementation:

- **April 2013** - Merchant acquirers and card processors had to upgrade their systems to be able to process chip card transactions.
- **October 2015** - Liability for magnetic stripe card fraud is shifted to the entity that does not support EMV technology. The broad idea is that the merchant, issuing bank, or credit card processor that's not on board with EMV would bear the responsibility when fraud occurs.
- **October 2017** - The liability shift goes into effect for organizations that sell fuel. These businesses have much more expensive payment terminals and have more time to upgrade.

One way to think of the EMV deadline in the context of the liability question is to liken it to a game of chicken. The different players in the card processing ecosystem will face different incentives and risks in the migration to EMV, and some will nudge other players in the chain to upgrade. Some players will delay implementation even as fraud risk piles up, and that is why full EMV compliance will happen over a period of years, rather than quickly after the deadline. The Durbin Amendment will complicate EMV implementation for debit card transactions. In order to comply with aspects of the amendment, debit card networks will face a host of technical challenges as they migrate to the EMV system.

	October 2012	April 2013	October 2013	April 2015	October 2015	October 2016	October 2017
Visa	PCI audit relief	Acquirers & processors required to support merchant acceptance of EMV transactions		3 <sup>rd</sup> party ATM acquirer processors & sub-processors required to support EMV data	Card-present counterfeit liability takes effect excluding automated fuel dispensers (AFD)		ATM liability shift Card-present counterfeit liability takes effect for automated fuel dispensers
MasterCard			Account data compromise (ADC) relief (50%)		ADC relief (95% - 100%)	ATM liability shift Lost or stolen liability shift	Lost or stolen liability shift for AFD
Discover			PCI audit relief				
American Express							

Source: EMV Migration Forum; TSG Analysis and Commentary; Federal Reserve; Retail Info Systems (RIS); Card brands

# Who is ready (and who is not) for the transition to EMV in the U.S.? – Preview Page

## How Ready Are U.S. Merchants For The EMV Migration?

Retailer	Changes expected by October 2015?	EMV Store-Branded Cards	Will new EMV card be chip and Sig or chip and PIN?	Will new card also have magnetic stripe?
Exchange	100% Upgrade	No	N/A	N/A
BI-LO Super Saver	100% Upgrade	N/A	N/A	N/A
BJ's	100% Upgrade	Yes	Chip and Sig	Yes
CostCo	100% Upgrade	N/A	Chip and PIN	Yes
CVS Caremark	100% Upgrade	N/A	N/A	N/A
H-E-B	100% upgrade by June	N/A	N/A	N/A
K-Mart	Systems compatible with EMV	N/A	Chip and PIN	N/A
Kroger	Systems compatible with EMV	Yes	Both	Yes
Food Lion	100% Upgrade	N/A	PIN capabilities	N/A
Lowe's	Upgraded terminals	N/A	N/A	N/A
Macy's	100% Upgrade	N/A	PIN capabilities	N/A
McDonalds	Customers can use the Softcard App (based on the global EMV standard)	N/A	N/A	N/A
Menards	100% Upgrade	Not currently planned	PIN capabilities	N/A
Nordstrom	100% Upgrade	Yes	Chip and Sig	Yes
Publix	In process of updating its terminals	N/A	PIN capabilities	N/A
Rite Aid	EMV-ready equipment for domestic and international transaction processing	N/A	N/A	N/A
Subway	Adopted Softcard App (which uses the EMV global standard)	N/A	N/A	N/A

Source: CardHub; Company news releases

# Who is ready (and who is not) for the transition to EMV in the U.S.? – Preview Page

## How Ready Are U.S. Merchants For The EMV Migration?

Retailer	Changes by October 2015	EMV Store-Branded Cards	Will new EMV card be chip and Sig or chip and PIN?	Will new card also have magnetic stripe?
SuperValu	100% Upgrade	N/A	PIN capabilities	N/A
Taco Bell	Launched a mobile ordering and payment app	N/A	N/A	N/A
Target	Chip card readers were installed in 2014	Credit and debit cards will be reissued as EMV cards in 2015	Chip and PIN	Store cards will not have a magnetic stripe but the MasterCard REDcard will
The Home Depot	100% Upgrade	N/A	PIN capabilities	N/A
Walgreens	All stores accept chip and PIN cards	N/A	N/A	N/A
Walmart	100% Upgrade in 2014	Cards already have EMV chips	Both	Yes

Source: CardHub; Company news releases

## How Ready Are Issuers For The EMV Migration?

Banks	% of credit cards will be chip-based by October 2015?	Will all customers or just new applicants get them?	Will new EMV card be chip and Sig or chip and PIN?	Will new card also have magnetic stripe?	Do you plan to issue EMV debit cards as well?
American Express	Majority of cards	All customers	U.S. Consumers: chip and Sig Int'l consumers: chip and PIN	Yes	N/A
Bank of America	Majority of cards	All customers	Chip and Sig	Yes	Yes
Barclaycard	65%	All customers	Both	Yes	N/A
Capital One	Majority of cards	All customers	Chip and Sig but considering options to enable PIN in future	Yes	Yes
Chase	Majority of cards	Existing card members: can request one by phone; New card members will be issued EMV cards	Chip and Sig	Yes	Yes
Citi	Majority of cards	Existing card members: can request one by phone; New card members will be issued EMV cards	Chip and Sig	Yes	Yes
Discover	Majority of cards	All customers	Initial implementation is for chip and Sig	Yes	Yes
US Bank	Started issuing EMV credit cards in fall 2014	N/A	Chip and Sig	Yes	Yes
USAA	Majority of cards	All customers	Both	Yes	Yes
Wells Fargo	Does not currently have a date by which all cards will have a chip	All customers	Both	Yes	Yes

Source: CardHub; Company news releases

# Related Reports & Services

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The Strawhecker Group (TSG) is a management consulting company focused on the payments industry. The company specializes in providing financial institutions, merchant acquirers, card associations, ISOs, processing companies, large merchants, and the investment community with advisory services to maximize their growth and profitability. TSG is also a resource for consumer spending data, industry research, benchmark studies and developing trends. For more information please visit [www.TheStrawGroup.com](http://www.TheStrawGroup.com).

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