



2018: A Year in Review



About EMVCo

EMVCo is the global technical body that facilitates the worldwide interoperability and acceptance of secure payment transactions by managing and evolving the EMV® Specifications and related testing processes.

EMV is a technology toolbox that enables globally interoperable secure payments across face-to-face and remote environments. Adoption of EMV Specifications and associated approval and certification processes promotes a unified international payments framework, which supports an advancing range of payment methods, technologies and acceptance environments. The specifications are available royalty free, designed to be flexible, and can be adapted regionally to meet national payment requirements and accommodate local regulations.

EMVCo is collectively owned by American Express, Discover, JCB, Mastercard, UnionPay and Visa, and focuses on the technical advancement of the EMV Specifications.

To provide all payment stakeholders with a platform to engage in its strategic and technical direction, EMVCo operates an Associates Programme and encourages all interested parties to get involved.

➤ Visit www.emvco.com for further information.
Join EMVCo on [LinkedIn](#).

EMV® is a registered trademark in the U.S. and other countries and an unregistered trademark elsewhere. The EMV trademark is owned by EMVCo, LLC.

Organisational foreword

Junya Tanaka,
Chair of the Board of Managers, EMVCo



With 2018 behind us and attention shifting to the year ahead, it is timely to reflect on EMVCo's achievements in the past twelve months and to look forward at 2019 priorities.

EMVCo has continued to facilitate worldwide interoperability and acceptance of secure payment transactions this year, through its evolution of the EMV Specifications. Strong progress has been made to support a range of secure payment methods and technologies, across both face-to-face and remote commerce acceptance environments. Further detail is provided in an update from EMVCo's Director of Technology later in this report.

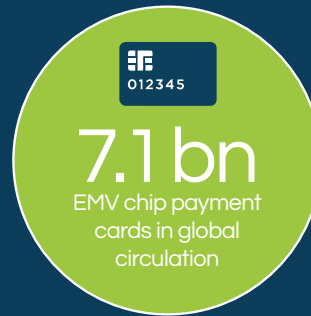
It was certainly welcome news to hear that global EMV chip card issuance and EMV chip transactions surpassed 54% and 63% respectively in 2018. Not only does this represent a critical-mass milestone, it signals the maturity and reach of the worldwide EMV payment infrastructure. Furthermore, the relevance and positive impact of EMV technology in the markets where it has been implemented, is widely evidenced by many objective data sources which point to the significant success of EMV technology in limiting card-present fraud.

One of EMVCo's goals as we move into 2019 and beyond, is to try and replicate that effective fraud reduction in other payment acceptance environments, particularly card-not-present transactions, while continuing to promote interoperability and consumer convenience in parallel. The organisation's continuing work efforts in EMV Secure Remote Commerce, EMV 3DS and EMV Payment Tokenisation support this goal in the remote commerce field. Similarly, ongoing activities relevant to QR codes, mobile and wearable devices, and contact and contactless payments support traditional and emerging payment trends and requirements within face-to-face environments.

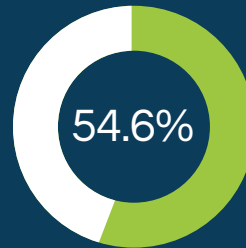
The ability of EMVCo to support rapidly advancing payment trends relies heavily on the organisation working in close partnership with the payments industry. EMVCo's Associates Programme gives the payment industry an active and welcome role in the organisation's strategic and technical direction. In 2018, 17 new organisations joined EMVCo's Associates Programme to contribute towards the development, enhancement and evolution of the EMV Specifications. At the end of 2018, 93 organisations were participating as EMVCo Associates. On behalf of EMVCo, I'd like to thank all Associates for actively contributing to EMVCo's progress throughout the past twelve months. We look forward to your continued and invaluable involvement in the year ahead.

EMVCo's focus for 2019 remains firmly on the ongoing development and maintenance of the EMV common global payments acceptance infrastructure. We will continue to do this with engagement from payment industry participants and other technical bodies, to support the payment needs of consumers, merchants, businesses, financial institutions and networks globally.

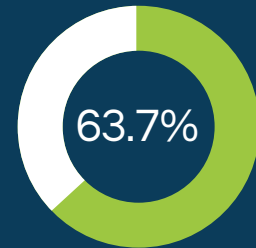
Worldwide EMV chip deployment statistics*



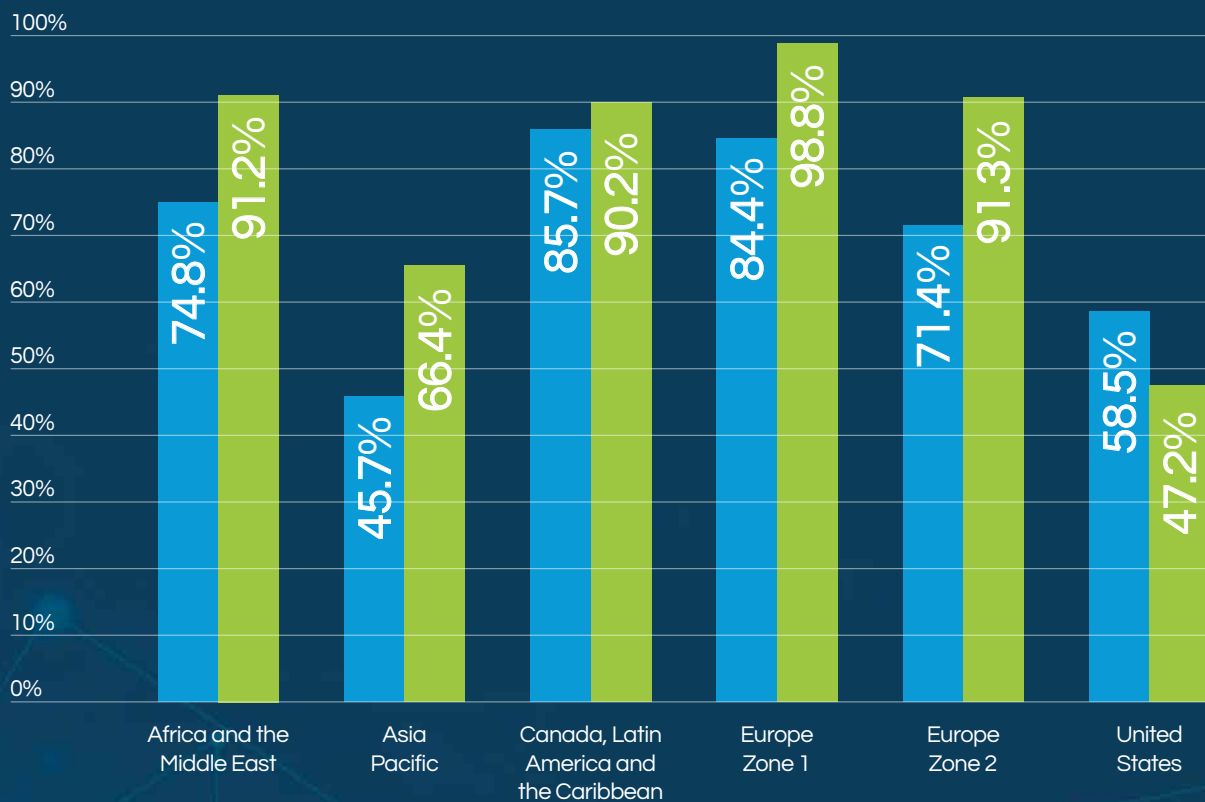
EMV chip card adoption rate †
Percentage of card-present transactions that are EMV ‡



of cards issued are EMV



of all card-present transactions conducted globally used EMV chip technology



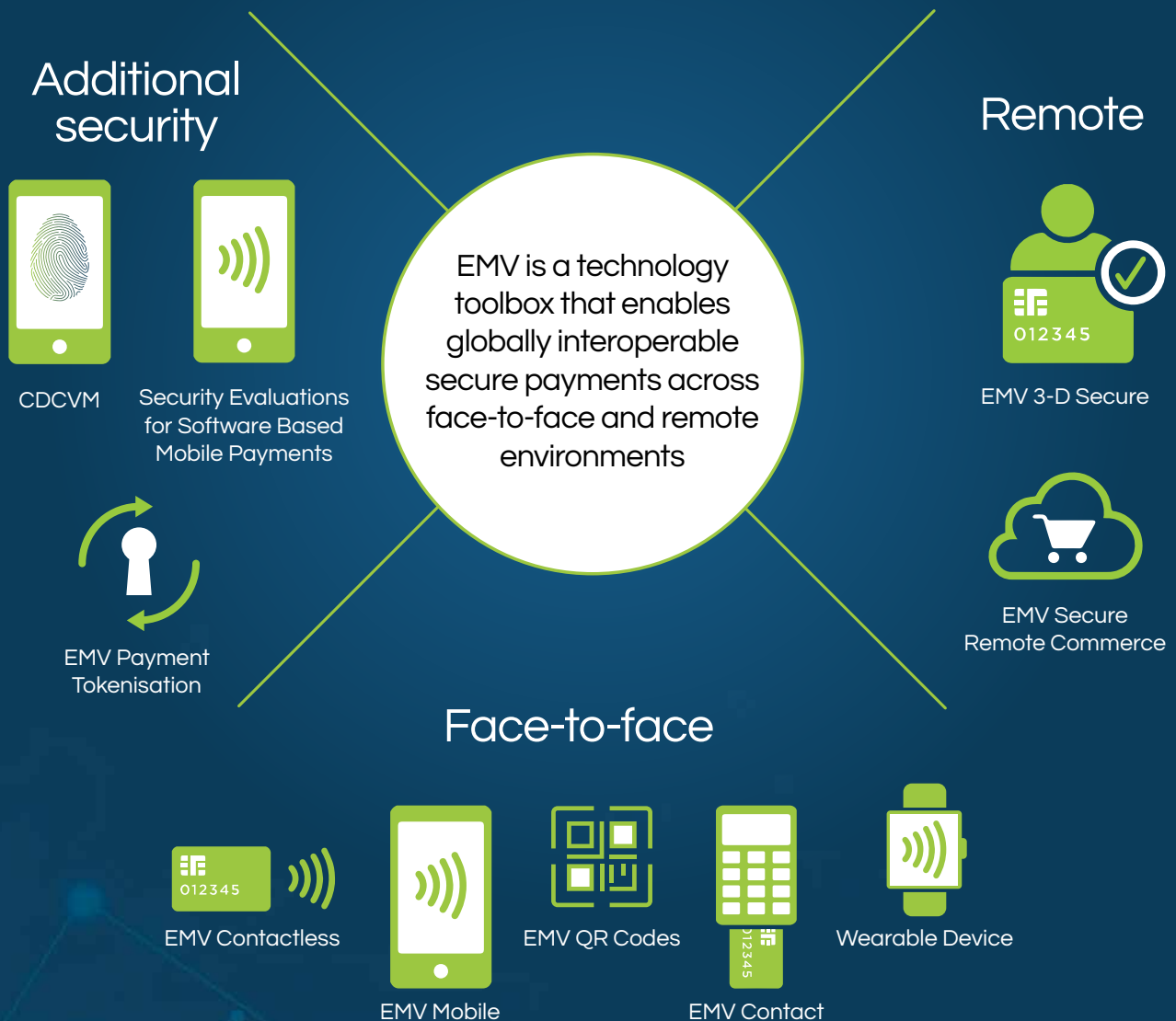
A full breakdown of the data is available on the [EMVCo website](http://EMVCo.com).

† Data as of Q4 2017

‡ Data as of Q2 2018

*Data collection: Data represents the most accurate possible data that could be obtained by American Express, Discover, JCB, Mastercard, UnionPay and Visa during the noted period. The transaction data reflects an average of 12 months' data as reported by all members to take into consideration seasonal variations. To qualify as an 'EMV transaction', both the card and terminal used during a transaction must be EMV-enabled. Data is reported from the acquirer perspective. These figures do not include offline transactions, 'on us' transactions (defined as a transaction handled exclusively by another processor) and/or transactions processed by non-EMVCo member institutions, such as national payment networks.
Fluctuations: Due to the scope and size of the data collection process and variations in regional reporting and data collection methodologies, EMVCo expects that there may be small fluctuations in transaction volumes at times.

EMV technologies



EMVCo makes the EMV Specifications available on a royalty-free basis to all industry participants and to the public

Key EMV technologies

Face-to-face:

EMV Chip - describes the requirements for global interoperability between chip-based payment applications and acceptance terminals to enable secure contact and contactless transactions and other emerging payment technologies.

EMV QR Codes¹ - simplifies the development and potentially broadens the acceptance of both consumer-presented and merchant-presented QR Code payment solutions.

Remote:

EMV 3-D Secure (3DS) - promotes frictionless consumer authentication and enables consumers to authenticate themselves with their card issuer when making card-not-present (CNP) e-commerce purchases. The additional security layer helps prevent unauthorised CNP transactions and protect the merchant from exposure to CNP fraud.

EMV Secure Remote Commerce (SRC) - offers an approach to promote security and interoperability within the card payment experience in a remote payment environment.

Additional security:

EMV Payment Tokenisation - enhances the underlying security of digital payments by potentially limiting the risk typically associated with compromised, unauthorised or fraudulent use of Primary Account Numbers.

Consumer Device Cardholder Verification Method (CDCVM) - promotes confidence and consistency for Cardholder Verification Methods (CVM) performed on the consumer device, rather than the merchant system.

Security Evaluations for Software Based Mobile Payments - security evaluations promote a robust security foundation for software-based mobile payment solutions.



¹ QR Code is a registered trademark of DENSO WAVE.

Areas of focus: 2019

Bastien Latge,
Director of Technology, EMVCo








Plans for 2019

The way consumers pay for goods and services continues to change at a dynamic pace. At the physical point-of-sale payment technologies, form factors and cardholder verification methods are diversifying. This creates increased choice and convenience for the consumer, but also raises new challenges for payment industry stakeholders.

In parallel remote commerce continues to grow in an ever more connected world. According to Statista, retail e-commerce sales worldwide are projected to rise to 4.88 trillion US dollars in 2021¹. As the ecosystem expands, increasing levels of fraud need to be addressed as a key priority. Research indicates that the growth in remote commerce fraud attempts outstripped the growth in remote commerce transactions by 83% in the first quarter of 2018². In addition, consumers are demanding convenient and frictionless payment experiences.

In 2019 and beyond, EMVCo's technical efforts will focus on promoting security and interoperability to meet the requirements of emerging payment technologies across both the face-to-face and remote environments.

2018 technical milestones

-  EMV® Level 1 Specifications for Payment Systems - Contactless Interface Specification, v3.0 published
-  EMV Secure Remote Commerce Draft Specification v0.9 released for public comment
-  EMV 3-D Secure Testing and Approval Process launched
-  EMV 3-D Secure Specification v2.2 published
-  EMV Software Based Mobile Payment Security Evaluation Process launched
-  EMV Level 3 Tool Qualification Process (for Card Simulator & Test Tool components) launched
-  EMV Payment Tokenisation – A Guide to Use Cases published
-  EMV Specification Bulletin n° 185: Biometric Terminal Specification released and associated contact terminal testing process published
-  EMV Merchant-Presented QR Guidance and Examples published
-  Self-Evaluation Processes for EMV QR Code Specifications published
-  EMV Book A (Architecture and General Requirements) and Book B (Entry Point) v2.7 published
-  Books C-x Kernel Specification published

¹ <https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/>

² <https://www.threatmetrix.com/info/q1-2018-cybercrime-report/>

Organisational structure

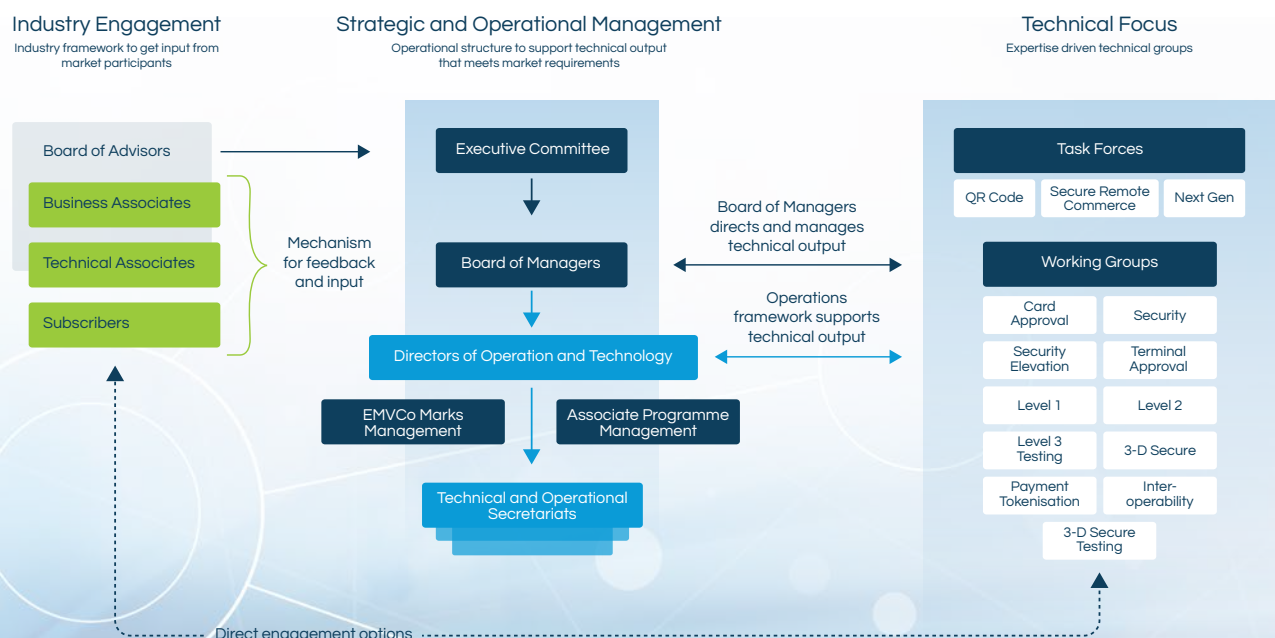
A Board of Managers, comprising representatives from each of the six payment system member-owners of EMVCo, directs the operations of the technical body.

An Executive Committee provides oversight and strategic direction as it relates to the evolution and management of the organisation.

A Board of Advisors, comprised of EMVCo Associates who represent the payments community at large, serves as an advisory forum. The advisors provide input to the Executive Committee, facilitating discussion about new initiatives and the future direction of the EMV Specifications and related processes.

EMVCo also has eleven working groups and a number of task forces, which are responsible for developing and publishing the EMV Specifications, and evolving and managing EMVCo's testing and approval processes. These groups consist of EMVCo member-owners' staff who are technical subject matter experts.

Visit www.emvco.com for more information or to view the latest Board of Managers.



Collaboration at the core: welcoming industry engagement

2019 EMVCo Associate & Subscriber Meetings

Join us at the following meetings in 2019:

March	April	June	Oct	Nov
06	08	19	09	11
Hong Kong	North America	Czech Republic	France	Japan

For more information, visit the [Meetings & Events page](#) on the website.

Associates Programme:

The EMVCo Associates Programme allows global payment industry stakeholders including card or terminal manufacturers, processors, banks, payment systems, mobile network operators, transaction processors and merchants to play an active role in the strategic and technical direction of the global technical body.

As of Q4 2018, the Associates Programme included:

- 22 Business Associates
- 33 Technical Associates
- 38 Dual Business and Technical Associates

Associates Programme by Region:



Subscribers:

EMVCo Subscribers receive advanced notice of pending developments and changes, as well as participate in a regular and formal dialogue with EMVCo. Any interested party can become an EMVCo Subscriber.

As of Q4 2018, EMVCo had:

448

Subscribers

Business Associates

- Adyen
- Amazon
- ANZ
- AsiaPay
- Australian Payments Network
- BANCOMAT
- Bank of America
- Bank of America Merchant Services
- Barclaycard
- BKM A.S.
- BPCE
- Bundesverband deutscher Banken e.V.
- Carrefour Banque
- Cartao Elo
- Cartes Bancaires
- Citi
- Connexus
- Credit Mutuel
- Dutch Payments Association
- EFTPOS Payments Australia Ltd.
- equensWorldline
- EURO 6000, S.A.
- European Card Payment Association
- European Payments Council
- Expedia
- Financial Software & Systems (FSS)
- First Data
- Global Payments Inc.
- Google
- Interac Corp.
- JP Morgan Chase & Co
- MAG
- Merchant e-Solutions
- Microsoft
- Moneris Solutions
- National Credit Card Center of R.O.C.
- National Payments Corporation of India
- NMI
- NSPK
- PAN-Nordic Card Association
- PASA
- Poste Italiane
- Redsys
- Saudi Arabian Monetary Authority
- SHAZAM
- SIA-SSB
- Soft Space
- Sony Interactive Entertainment LLC
- Square
- SRC Research
- STET
- Stripe
- Swedbank AB
- Target
- The Clearing House
- TSYS
- U.S. Bank
- Vantiv
- Verve International
- Wibmo
- Worldpay

Technical Associates

- Adyen
- Amazon
- Ant Financial Services Group
- AsiaPay
- Australian Payments Network
- Barclaycard
- BKM A.S.
- Carrefour Banque
- Cartao Elo
- Cartes Bancaires
- CA Technologies*
- Consult Hyperion
- Citi
- CTC Advanced GmbH
- EFTPOS Payments Australia Ltd.
- Everi
- Expedia
- Feitian Technologies Co., Ltd.
- FIME
- First Data
- FIS OTS
- Fujian LANDI Commercial Equipment Co., Ltd
- Global Payments Inc.
- Google
- Ingenico Terminals*
- Intel*
- Interac Corp.
- JP Morgan Chase & Co
- Micro Focus
- Microsoft
- Moneris Solutions
- Modirum
- mSIGNIA*
- National Credit Card Center of R.O.C.
- National Payments Corporation of India
- Nets DK
- Netcetera
- NCR
- NMI
- NSPK
- NTT DATA Corporation
- PAAY
- Panasonic Mobile Communications
- PAN-Nordic Card Association
- PAX Computer Technology (Shenzhen) Co., Ltd.
- Poste Italiane
- Rambus
- RSA
- Saudi Arabian Monetary Authority
- SHAZAM
- Soft Space
- Sony Interactive Entertainment LLC
- Square
- SRC Research
- Stripe
- Thales
- Tencent
- The Clearing House
- ThreatMetrix
- Toshiba Global Commerce Solutions
- TRUXTUN Capital
- TSYS
- TTA
- TUV Product Service
- UL
- U.S. Bank
- Vantiv
- Verifone*
- Verve International
- Wibmo
- Worldpay

**Elected as a Technical Associate representative to EMVCo's Board of Advisors for 2018*

Secure and interoperable payments: an industry effort

A unified global payments framework is enabled by many different stakeholders. Secure payment transactions are only possible thanks to many industry and technical bodies working together to provide security and interoperability standards,

specifications and requirements. EMVCo engages with industry, regional and national bodies to obtain input and share perspectives on areas of respective interest.

Multiple bodies provide requirements for security and interoperability



Payment
Systems

National
Regulations



For more information on EMVCo, please visit

 www.emvco.com

 LinkedIn