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## RECENT TRENDS IN BANKING SECTOR



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SWATIDHAN PUBLICATIONS



## EMV Chip Card : A Backbone of Banking Security

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### Introduction :

Recently The Reserve Bank of India (RBI) has mandated to the all banks of india to replace all existing magnetic stripe-only cards with EMV chip cards by 31 December 2018. After 31 st Dec. 2018 all the Magnetic Stripe Card are deactivated. RBI Regulate new regulation from 01 January 2019. All the Indian Banks are replacing the magnetic stripe-only cards with EMV chip cards free of cost.

In the Scenario the banking frauds are increased. Most of the advanced countries are used EMV Chip Card to safe guard the interest of bank and their customer. India has big challenge to prevent the customer from cyber attacks and fraudulent transaction. The directive is applicable to all domestic as well as international cards, and the older magnetic stripe-only cards will not be valid from 01.01.2019 . The cards need to be replaced even if their validity date ends after 31 December 2018. As of June 2018, there are 39.4 million active credit cards and 944 million debit cards in the country, according to RBI.

### Magnetic Stripe Card :

Magnetic stripe cards are out date today. It has do not protct the customer from cyber crime compare to the EMV Chip Card. Magnetic stripe cards are just classic credit cards (also known as swipe cards), the ones we're all familiar with. The actual stripe is on the backside of the card, and it uses modified iron-based magnetic particles to communicate data between the strip and the receiving credit card terminal. Magnetic strip card has possible to cloning the card.

Magnetic stripe cards simply serve as static storage devices to be read by the terminal. The terminal then performs a card swipe, PIN encryption, and signature capture function.

### The actual transaction flow:

1. Card is swiped.
2. The terminal sends an authorization request (which includes the customer's card data) to the acquiring bank (whichever bank the company receiving the payment uses).
3. The terminal sends an authorization request to the issuing bank (Visa, Mastercard, etc.).
4. The terminal facilitates an authorization response from the issuing bank to the acquiring bank.
5. The terminal facilitates an authorization response from the acquiring bank to the terminal
6. Assuming the authorization responses weren't turned down for any reason, the transaction completes.

The Big problem of Magnetic Strip Card is, there's no system in place to individualize these magnetic stripe transactions. They're all bulked together, meaning if someone can steal your credit card information during a transaction, then they can use that for future transactions.

### EMV Chip Card :

In the simple word EMV stands for Europe, MasterCard and Visa. EMV Chip Card is very useful as per the cyber security view. These cards are protecting the customer from the fraud or fraudulent transaction. Excluding the way we interact with a terminal, the EMV Chip Cards act and look just like magnetic stripe cards, but behind the scenes it is much more intricate and protective.

They're sometimes referred to as EMV chip cards as well, with EMV denoting the developers of the chip: Europe, MasterCard, and Visa. EMV Chip Cards use an actual computer chip placed on the top part of a credit card to communicate with terminals. These chips allow a much more intricate and secure transaction process to occur. This card is more secured with the comparison of Magnetic Strip Card.

### A typical chip card flow:

1. Inserted Card is into terminal
2. Terminal makes contact with the chip inside the card using pins.
3. Chip is activated; terminal verifies the issuer from the chip on card.
4. Chip verifies PIN details
5. Information is sent to bank for official authorization.
6. Transaction is completed.

### Benefits of EMV Cards :

#### A Unique Code :

In the EMV Chip Card Each transaction is a unique code that cannot be used again, so even if a fraudster captures someone's credit card data at a terminal, they couldn't use it for future transactions. Each swipe is only good for one transaction.

#### Greater Confidence :

EMV also enables greater confidence for offline transactions, as details can be verified from the Chip embedded on the card without contacting the issuer.

#### Identify Fraudulent Activity :

These cards are protecting the interest of Customer. This also makes it easier for credit card algorithms to spot and identify fraudulent activity.

#### Easy Upgrading and Cost-effective.

EMV-certified terminals start as low as \$200 as discussed in this article, and depending on your setup, your existing hardware can become EMV-certified with a custom integration.

#### Reduce chargeback:

If you have better transaction security, you'll deal with less fraud and fewer chargebacks. A few years ago, credit card network rules were updated to place more financial risk on merchants without chip cards for lost or stolen transactions. If you're late to switching to EMV, you're at risk of seeing chargebacks continue to increase and will lose cases at a much higher rate.

#### Build customer trust :

Switching to chip cards is more than just saving money and reducing chargebacks, it's about protecting your customers. As mentioned, EMV equipped transactions are unique, ensuring that charges are never duplicated or faked. Plus, less fraud means fewer headaches from disputes and better service for your customers!

Higher level of security :  
Chip-based cards and storage technology require just a swipe on a PIN as well to complete a transaction.

### Conclusion :

EMV Chip and PIN stripe cards. These cards are more secure than fraudulent 'card present' EMV chip-based cards. These cards are more secure than these, making it difficult for a fraudster to clone a chip is encrypted and secure.

The shift to chip cards is a major step in reducing fraud. Cloning stems from magnetic stripe cards. The card is used at an ATM. It has dynamic information. Chip and PIN cards are more secure. Fraud continues to occur with anyone. EMV Chip Cards are more secure from the duplication of magnetic stripe cards.

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### Higher level of security :

Chip-based cards, also called chip and PIN cards, use higher standards of data encryption and storage technology compared to magnetic stripe cards. Unlike magnetic stripe cards that require just a swipe on a point of sale (PoS) device to complete a transaction, chip and PIN cards require a PIN as well to complete the transaction. This provides an extra level of security.

### Conclusion :

EMV Chip and PIN Cards provide enhanced level of security compared to magnetic stripe cards. These cards help prevent card skimming or cloning and are effective in mitigating fraudulent 'card present' or PoS transactions.

EMV chip-based cards also have a magnetic stripe, sensitive customer data is stored on a chip in these, making it difficult for fraudsters to access customer information. The information in the chip is encrypted and so is the transmission of information thereon.

The shift to chip-based cards is driven globally due to increased risks of card cloning. Cloning stems from magnetic stripe cards that have static information which is easily captured if the card is used at an ATM where a cloning device is installed. Having an EMV card helps as it has dynamic information instead of static information. In a physical card cloning scenario, EMV chip and PIN cards eliminate the risk to a large extent. But in case of online payments, the risk of fraud continues to exist. Make sure you never share sensitive card-related information with anyone. EMV Chip Cards are protecting to the interest of Card owner. It also protect to the owner from the duplication or the cloning of the card.

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