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CREDIT CARDS: FRAUDS & PREVENTION



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ABSTRACT: 1.GENERAL

A Credit or cash card in its various avatars is a money payment device rather a device for taking loan or making purchase on credit. They are used extensively. Business worth trillions of rupees is being transacted through credit cards annually worldwide.

The credit card is used only at certain specified mercantile centers without paying the cost of merchandise to the merchant at the spot. In other words purchase are made on credit. The merchant has already an agreement to collect the sale money from the issuer or acquirer of the card on production of the sale receipts duly signed by the cardholder. The issuer of the card after payment to the merchant at the POS, debits the amount to the account of the card holder¹.

The credit card thus is an authorization from the issuer (or acquire) to the card holder to obtain money, goods and services, on credit from the specified outlets and other transaction sites- points of sale (POS).

KEYWORDS

authorization , Nature , encrypted identity and security protocol .

INTRODUCTION

2. Nature

A Credit Card is laminate of three plastics sheets of PVC usually the central sheet (~0.5mm thick) is rigid opaque and white. It is the core stock (sheet) of graphics, the encrypted identity and security protocol etc. The other two plastics sheets each about 0.1 mm thick are transparent. They are laminated through core sheet. The final usual dimensions of the cards are:

1. DR. B. R. Sharma Bank frauds- prevention & Detection. Universal Law publishing co. pvt. Ltd New Delhi-2011

9.0*4.5*0.07cm:

Or

8.5*5.5*0.06 cm.

The credit card is then embossed. The details embossed on the credit card are:

1. Name of the cardholder
2. Credit card number
3. Expiry date

The card also carries identification data in MICR and there is a port for the signature of the cardholder without which the card is invalid.

A lot of work has been done and still more is being done to make credit card safe : forgery and fraud proof. But the criminal is also at work to defeat the efforts of the issuer. The credit card manufacture technology therefore is being updated continuously. There are numerous IT research institutions in India and abroad which are making credit card safer.

The payment cards since their birth in the teens of the twentieth century have undergone a sea change. There are numerous varieties of the card in the market. The prominent current types are:

1. Credit card
2. Debit card
3. Charge card
4. Travel and Entertainment card
5. Smart Card
6. Credit card on Internet
7. Miscellaneous other Cards.

2.1 Credit Card

When a cardholder wants to make purchase without paying cash he presents the credit card to accredited merchant at the point of sale (POS). The merchant swipes the cards in an imprinter and gets the card details printed on the sale voucher. It records his identity and that of the card. The cardholder signs the purchase voucher and takes away the items purchased.

The bank pays the sale money (bill) to the merchant after deducting its percentage and debits the

ill money to the account of the cardholder.
The card is classified as a Pay later card.

2.2 Debit card

The debit card is used in the same way as the credit card except that it is linked to an account of the cardholder maintained in the acquirer's bank. The bank debit the debit raised in a purchase to the said account of the cardholder. The card is also called a Charge Card. It a Pay No type of card.

Recently a Chennai youth posing as a bank manager phoned his debit card holder victims that he wanted to check the correctness of the particulars thereon to prevent their fraudulent abuse. The victims gave all : account number data on the debit card even the PIN number. The youth along with his friends was able to loot about three lakhs of rupees before the police caught up with him².

There is common feelings among bank customers that debit cards are better than credit cards mainly because of no debt traps and no exorbitant interest. But unfortunately they are less safe unless one has a card with a maestro logo which requires PIN drubbing (like an ATM card) before money gate opens up and the cardholder collects cash or kind. Debit card as well as its will needs the following precautions against the fraudster;

1. Never convey Debit card data to e-mailers or phone callers who pose as bankers. They are fraudsters. No banker asks for the details on phone or e-mails.
2. Never use Debit card for telemarketing.
3. No online financial transactions with debit cards.
4. No swiping on debit card in your absence. Debit card can be cloned (skimmed).

An American took his family to a restaurant for dinner. He paid the bill through his debit card which was given to the bearer for swiping. When the diner checked his debit card account after about a week he found he had lost about seventy thousands rupees thanks to the swiping in absentia³.

2. Times of India, Chandigarh edn., Sep., 9, 2012.

3. Hindustan Times, New Delhi. Oct., 2013.

5. Ensure periodic check of the debit card account.

2.3 Charge Card

Charge card is a debit card with the provisos:

1. It is single purpose card usual that is it is used to purchase only one type of material (say, petroleum products).
2. It is usually period specific.
3. The payments are made at the end of the period.

2.4 Electronic purse

Electronic purse is a 'Pay Before' payment card, like the pre-paid card of a mobile cell phone. The issuer bank loads it with money. The cardholder goes on spending the stored money till is

exhausted. The holder can know the balance whenever required like the recharging of a mobile phone.

3. Times of India Chandigarh Edn. sep9, 2012
3. Hindustan Times New Delhi-oct-2013

2.5 Smart Card

A smart card is like other credit cards excepts that there is one or more microprocessor chips and a storage chip embedded in it. The two chips do not need electricity for their maintenance. They utilize the current from the host device (imprinter) for their functioning. The smart card offers better security against fraudster. It can store details of a large number of transactions and carry better protected identification parameters. The cards need compatible gadgetry in the imprinters which is not available in orders imprinters. Once the compatibility is achieved they functions like other payment card with better safety margins.

The smart card is also known as chip card or Intelligent Token.

2.6 Super smart card

A super smart card is an improved smart card. Like computers it has processor memory input and output device entry pin code. These input make it secure from deception and reply fraud.

The advent of computers Internet e-mails has promoted credit card payments via Internet. The main advantage are:

1. Shopping while sitting at home (home marketing!)
2. Safe. Quick. Hassle-free.
3. Multi-currency purchases.
4. Worldwide Market.

3. CREDIT CARD FRAUDS

The Inductions of credit card also brought in credit card frauds as a natural evil fail out. They are increasing with the increasing credit card business. Billions of dollars are lost to the credit card fraud abroad. This is in spite of the fact that the credit card issuers are taking every conceivable precautions to frustrate the efforts of the fraudster. Major modes of credit card frauds are :

1. Lost and found genuine cards are fraudulently used in about 30 percent cases.
2. Fake identities and impersonation are used to obtain genuine credit card.
- 3.3. Fraudulent telemarketing is done with stolen credit card data.
4. POS operators commit many a fraud at sale terminals.
5. E-commerce, M-commerce and increasing use of online and Internet facilities increase the credit cards frauds.

Ajay is 16 and a class X student. But let him loose in cyberspace and he returns a millionaire turning some credit card holder in some part of the globe bankrupt Ajay was arrested from Mumbai in hacking case that has baffled Gujarat police with its sheer global spread.

A cog in this network of cyber crooks, this st Ann'Student from Mulund learnt the ropes of

hacking online marketing websites and siphoned off money paid by cyber buyers into his account. The racket surfaced when the Ahmadabad crime branch investigated hacking of a popular online shopping bay and arrested three boys Wahid khan, Sahid Khan and Haadi Ghoghain who were in Ajay's gang. Under Ajay's guidance they learnt how to create fake accounts, crack into others credit card accounts and make big bucks. Investigations revealed Ajay's network spread to Mumbai, Hyderabad, Bangalore and Ahmadabad. His mentors live in the US, Vietnam and other countries.

Apparently your prowess in hacking communities of which Ajay was a member which then gives access to the huge data-base of credit card customer Verification Value (CVV) numbers of prominent Foreign banks across the globe.

4. Times of India, New Delhi, Edn., Nov. 2013.
numbers, etc.

3.1 Abuse of Genuine Cards

Genuine cards are stolen while in transit from the issuing institution to the prospective user or from the owners. Sometimes the card is lost. The misuse of these stolen or lost card to sign sale voucher.

Stolen or found (lost) cards incur big losses to the bank. After the report of the loss card reaches the bank and it stops further payments on that card the fraudster may have some genuine cardholders falsely reports the loss of their cards and immediately go on a purchasing spree. They use the money available on the card before the acquirer bank issues alert to stop transaction on the reported lost card.

3.2 Altered Cards

An Altered credit card is originally a genuine card, manufactured and issued by proper authority. The fraudster comes by it. He alerts it suitably may re-emboss a new name or a convenient expiry date: may or may not replace signatures strip. If he replaces the strip he gets genuine account numbers fraudulently from a Bunco banker dishonest operator at POS discarded carbons used to prepare copies of the sale drafts or from illegal Websites selling the credit card.

It takes a long time to detect altered card frauds usually the victim card holder detects them when he receives credit card account statement from the bank containing abnormal transactions.

An altered credit card is abnormal. The altering process requires heating which distorts the security features such as the bank identity number the holographic insignia etc. if the POS operators appraise the cards carefully they can identify such altered fraudulent cards.

3.3 White Plastics

The duplicate fraudulent credit cards are called 'White Plastics'. They are imitation of some original card. Usually professional card makers make white plastics for fraudsters they use similar materials similar process for printing embossing magnetic encodings etc. the duplicates often pass as genuine. But duplication is never perfect though they may give similar pictorial effect. They don't possess the safety features. An experienced operator at the POS can identify the fake nature if he appraises the card properly.

3.4 Telemarketer Frauds

Dishonest tele-marketers defraud credit card holders quite frequently they offer goods to the potential purchaser at reduced prices or by lottery system. They congratulate the hooked customer about his fake win and ask for the address and the delivery date to receive the articles. They request payment for nominal processing and dispatch charges through mail or by phone he prepares fraudulent sale drafts in cash them directly or through other merchants on commission basis.

Occasionally the dishonest telemarketer purchases the account number or the credit card details from other dishonest tele-marketers or POS operator. Illegal websites also sell or purchase stolen credit cards or their details.

3.5 Impersonations Frauds

Impersonations Frauds are also known as application frauds. The fraudster assumes the name and address of a well-known bigwig in industry or politics. Any banker would like to provide them banking facilities including credit cards. He also gives telephone number on which additional information if required can be asked for. Once the card is obtained it is misused. This is a fast growing crime in western countries. India will not lag far behind in the coming years.

3.6 POS Merchant Frauds

A fraudster merchant Frauds or his operator at the pos commits many types of credit card frauds:

1. Prepares a number of vouchers with the card given to him for a single transactions. On one he gives the merchandise to the card holder. He uses the other sale drafts fraudulently to get merchandise for himself by forging the signatures of the customer or obtaining the signature of the customer by deceit.
2. Allow a fraudster to get goods on a forged card for considerations.
3. Reconstruct a fake card from the data on the used sale draft and misuse it for gains.
4. Allows a fraudster to use data on the sale draft or on the machine to prepare fake cards.

Dishonest merchant at the POS is dangerous. He needs operator However he is often callous in the sale process and does not scrutinize the card and the signature thereon properly. Perhaps courtesy to the customers or collusion with the customers to make a quick buck are responsible.

A fraudster in a case used a forged visa card. It carried an image of a pig instead of a hologram of a dove. He used the same card eleven times at the same sale terminal before the pig on the card could be detected.

4. IDENTIFICATIONS OF FORGED CARDS

It is not difficult to identify a fake credit card if one knows the basics. The following drill helps:

1. Check deformations of the card. Altering of card requires heating. The heat deforms the card.

- The laminations is affected. The finish is not smooth. Wrinkles may appear.
- The dimensions of the credit card change slightly.
- The fluorescence (UV) is characteristically affected. It is different from the original. The original tint cannot be restored.

- The spacing of the letters, digits, design pattern etc., inter se, is affected.

2. Check the embossing. A new embossing machine embosses letters, digits and graphics, etc., which do not correspond. They have usually different shapes, sizes and inter-distances. Acts of omission and commission introduce additional variations and individualities in the printing if a machine is used. All these factors give identification features which are individualistic in nature and confer a unique personality to the embossing machine and its prints.

3. Check graphics. Graphics have highly intricate artistic and individual designs. They are inimitable. A close look reveals differences in the graphics of the fake card.

4. Check the latent image. The fraudster is not able to induct similar latent image in the fake card. The latent image has been a great distorted if the card is heated for alteration

The credit card industry volume-wise is one of the fastest growing activities of the banking industry. The cone artist has to be there [where the money] the credit card frauds harass all: the issuer the acquire the merchant at POS and of course the card holder. In USA the POS merchant is the main suffer. Not so in India. Here the main suffers is the card holder. He first loses the money and later suffers mental agony in the process to recover the money He also loses part of the money in the bargain.

5. FRAUD PREVENTION

The credit card industry has come a long way to reduce the incidences of frauds it can certainly further reduce them considerably through more stringent preventive measures. The point of sale (POS) and other transaction sites are the sites where credit card frauds can be controlled and contained. The following suggestions may help:

1. Speed up the transmission of the information about the stolen lost counterfeit altered and other non-acceptable cards to all the relevant POS through a dedicated website the operator should be able to view the list on a computer screen fixed over the card information stamping head (or other card checking device) while handling the card. It has to be on the pattern of hot box [hot card file terminal suitably modified to make it up-to-date. The action should be on a centralized basis.

2. Appoint trained operators at the POS to recognize and differentiate between the genuine and the fraudulent credit card.

- Practise to recognize proper form of the logo the writings (including the signatures) and the transient image in the credit cards and differentiate them from the ones on the fake cards.
- Observe the behavior of the customer. The fraudster is in a hurry. He is nervous and fidgety while using the credit card or signing on the sale voucher.
- Identify the customer from the photograph of the customer if available on the credit card.

3. Monitor the working of the sale terminals periodically to detect unscrupulous merchants. They knowingly use or allow the use of the sale drafts. They thus make a fast buck with or without collusion with the dishonest customer. The following check modes are common:

- Statistical method is the simplest here the sale proceeds of all the POS merchants are determined on a weekly or monthly basis and the normal activity level is determined a sudden spurt in business volume in suspect. Investigate. If fraud revealed do not rest on closing the POS only but take legal action also
- Complaint statistics can reveal a fraudster merchant.
- Decoy customer can reveal a fraudster merchant.

The unscrupulous POS merchant or operator is a serious menace. It incurs huge losses. About 25 per cent of the total losses are due to POS failures. The top card companies to counter the menace have initiated risk management services. They identify the high risk POS and scrutinize their transaction and credit card number to find if any listed fraudulent stolen or lost card were used. POS with high fraudulent transactions are identified and reported to the concerned bank which investigates and takes necessary administrative and legal steps.

4. Keep an eye on a POS with electronic Data Capture [EDC] technology to transact business electronically. credit card transactions are authorized and recorded electronically no sale draft is used the POS merchant at the end of the day sends the sale details to his bank computer telephonically or electronically the bank computer transfer the same proceeds to his account the bank does not come to know about the transactions till the card holder reports the losses or the banker notices the sudden fattening of the merchant account huge losses are incurred before the fraud is discovered in some cases.

Induction of risk management services has reduced the credit card crimes a substantially by about 30% in U.S.A Similar action in India can curb dishonest dealings at POS.

If the tele-marketing is to succeed the fraudulent marketer has to be removed from the scene. A list of telemarketers should be prepared. Those who have indulged in frauds should be identified and blacklisted. The card issuers the sale terminals and the public should be informed. The government should be requested to make rules for tele-marketing.

The credit card safety integrity and authenticity are paramount to the issuers They have put in many security features in the credit card during the past decade or two. Some of them are

- A photograph of the customer is printed on the card. The operator at the POS is thus able to identify the customer from the photograph
- A personal identification number (PIN or PIC as in the ATM card) is introduced in the system which works only with correct PIN or PIC of the cardholder.
- A chip rather two chips are incorporated in the card. They convey the data to the acquire bank if the POS is online. The chips use electricity from the POS machine.
- The SET system is primarily meant for internet transactions but with minor modification can be a safe credit card proposition
- Research for the further improvements in secure card transaction continues and has to continue forever.

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