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CREDIT CARD FRAUDS AND MEASURES TO DETECT AND PREVENT THEM

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ABSTRACT

Growth in the electronic payments sector has surpassed general economic growth and growth in other financial sectors. Electronic payments include credit, debit, and other electronic instruments used to transfer payments from consumers to merchants. A credit card is an instrument which provides instantaneous credit facilities to its holder to avail a variety of goods and services at the merchant outlet. It is made of plastic and hence popularly called as "plastic money". This paper elaborates about the timeline for innovation for credit cards, the modus operandi of credit card. It further analyses the credit card frauds and measures to detect and prevent them.

KEYWORDS: Credit Card, Fraud, prevention.

INTRODUCTION

Growth in the electronic payments sector has surpassed general economic growth and growth in other financial sectors. Electronic payments include credit, debit, and other electronic instruments used to transfer payments from consumers to merchants. This paper will use the terms "electronic payments" and "credit cards" interchange-ably but will refer explicitly to credit cards payments.

The growth in the electronic payments sector is accompanied by numerous economic and transactional benefits. As demonstrated by Muhammad Yunus and the Grameen Bank, winners of the 2006 Nobel Peace Prize, gains from financial innovations can be extensive, widespread, and developmentally favorable. Electronic payments improve economic inefficiencies, make payments more secure and convenient, and, as a corollary to the lessons learned from micro finance, provide the impetus for further economic and social development.

For developing countries, those gains could be significant, but they would depend on the concurrent development of the appropriate network and payments infrastructure, government regulation, consumer education, and competition within the sector. As governments in developed economies have learned, adequate regulatory oversight in the electronic payments sector is essential to maintaining financial stability, consumer confidence, and data privacy and security of the sector. Although electronic payments growth could represent an opportunity for developing countries to rebalance their economies by encouraging domestic consumption and it is essential to educate consumers to use electronic payments responsibly and securely.

OBJECTIVES:

This paper aims at the following objectives:

1. To study about the timeline of innovations of credit cards
2. To bring out the overview of credit cards
3. To study about the credit card frauds and measures to prevent and detect them

For the purpose of the study, Secondary Data was used and it was collected from Newspapers, Books, Journals, websites, etc.

TIMELINE OF INNOVATIONS IN CREDIT CARDS

PERIOD	INNOVATIONS
1946	John C.Biggins, Flatbush National Bank of Brookyln, New York launched a credit card called **“CHARGE-IT”.**
1950	Diners Club Credit card introduced.
1951	Franklin National Bank of New York in the United States adopts a credit card plan.
1958	American Express Company and two large banks, the Bank of America and Chase Manhattan entered the credit card field. These companies also introduced their cards in UK.
1966	Barclays Bank was the first British Bank to introduce credit card known as **“BARCLAYS Card”.**
1972	Lloyds Bank introduced “Access” cards.

CREDIT CARDS IN INDIA:

A credit card in India is a recent history. Recognizing the potential of credit cards, a few banks in India have taken initiative to introduce credit cards. ANZ Grindlays Bank came with classic cards in 1989. Citibank’s master and visa card became popular in 1990. Most of the banks in India are today competing to market credit cards. Usually, the facility of credit card is available to those persons who have a regular monthly income, credit worthiness, etc. the issuing bank first judges the income of the intending customer.

MEANING OF A CREDIT CARD:

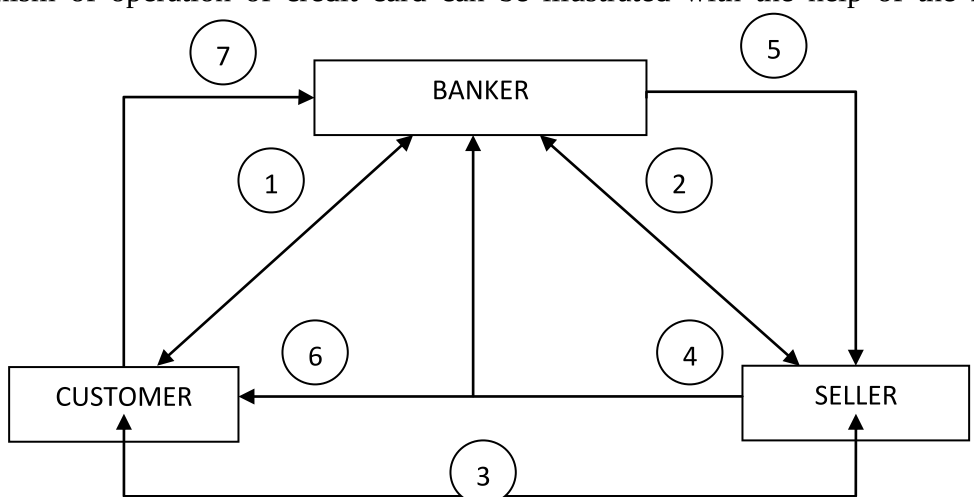
A credit card is an instrument which provides instantaneous credit facilities to its holder to avail a variety of goods and services at the merchant outlet. It is made of plastic and hence popularly called as "plastic money". The holders can use the cards to get credit from banks up to 45 days. The credit card relieves the consumers without any risk of carrying cash and ensures safety. It is a convenience of extended credit without formality. Thus credit card is a passport to, "safety, convenience, prestige and credit".

CREDIT CARD HOLDER MUST BE:

- The general criteria applied is a person's spending capacity and not merely his income or wealth.
- The other criteria is the worthiness of the client and his average monthly balance.
- Most of the banks have clear cut norms for giving credit card.
    1. A person who earns a salary of Rs.60,000/- per annum is eligible for a card.
    2. A reference from a banker and the employers of the applicant is insisted upon.

MODUS OPERANDI OF CREDIT CARDS:

The mechanism of operation of credit card can be illustrated with the help of the following diagram:



Source: Indian Banking, R.Parameshwaran

OPERATIONS:

1) Customers apply and get the credit card.
2) Arrangements are completed between the banker and the seller.
3) The customer makes the actual purchases and signs on the sales vouchers.
4) The seller sends the detailed vouchers to the bank.
5) The bank settles the claims of the seller.
6) The customer receives the intimation for the purchases made by him.
7) The customer makes the payment for the purchases made by him.

PARTIES TO A CREDIT CARD:

There are three parties to credit card

1. The issuer,
2. The cardholder and
3. The member establishments.

1. Issuer:

The banks or other card issuing organizations.

2. Card holders:

Individuals, corporate bodies, non-individual and non-corporate bodies such as firms.

3. Member Establishments:

- Shops and service organization enlisted by credit card issuer who accept credit cards.
- The member establishments may be a business enterprise dealing in goods and services such as retail outlets, departmental stores, restaurants, hotels, hospitals, travel agencies, petrol bunks, etc.
- Member establishments have to pay a certain percentage of discount on the credit card transactions to the issuer.
- Some organizations charge a specified sum as service charge. For instance, Indian railways levy a service charge of re.1 per ticket in addition to the fare.

TYPES OF CARDS:

1. CASH CARDS:

A special plastic card used for getting currency notes from a machine generally near a bank. The machine is generally known as "Automated Teller Machine".

2. DEBIT CARDS:

Debit card allows for direct withdrawal of funds from a customer's bank. The spending limit is determined by the user's bank depending upon available balance in the account of the users.

3. CHEQUE CARDS:

It is a card given to the customer by the bank that must be shown when he writes a cheque which promise that the bank will pay out the money written on the cheque.

4. CHARGE CARDS:

A small plastic card provided by an organization with which one may buy goods from various shop, etc. the full amount owed must then be paid on demand. Credit facility is not available in their accounts. The periodical bill amount should be paid off by charging it to customer's account. A fee is also payable by the cardholder to the card issuing institution.

5. SMART CARDS:

A smart card enables the card holder to perform various other banking functions apart from credit purchases. For eg., one can draw cash from ATMs, by using credit cards.

6. CORPORATE CREDIT CARDS:

Corporate cards are issued to private and public limited companies and public sector units. Depending upon the requirements of each company, operative add-on cards will be issued to the persons authorized by the company i.e., directors, Secretary of the company. The name of the company will be embossed on add-on cards along with the name of the add-on cardholder. The main card is only a dummy card no. in the name of the company for the purpose of billing all the charges of the add-on cards. The transactions made by add-on cardholders are billed to the main card and debits are made to the company's account.

7. BUSINESS CARDS:

A business card is similar to a corporate credit card. It is meant for the use of proprietary concerns, firms, firms of chartered accounts, etc. This card helps to avail certain facilities for reimbursement and makes their business trips convenient. An overall ceiling fixed for this card is also based on the status of the firm.

CREDIT CARDS AND FRAUDS

Today credit card fraud is one of the biggest threats to the business world. In simple terms, credit card fraud is defined and is committed in the following ways:

a) An act of criminal deception (mislead with intent) by use of unauthorized account/personal information;

b) Illegal or unauthorized use of account for personal gain;

c) Misrepresentation of account information to obtain goods and/or services.

Credit card frauds can be broadly classified into three categories: card related frauds, merchant related frauds and internet related frauds. Different credit card frauds are as follows:

- **a) Application Fraud:** This type of fraud occurs when a person falsifies an application to acquire a credit card. Application fraud can be committed in three ways: a) assumed Identity, whereby an individual illegally obtains personal information of another individual and opens account in his or her name, using partially legitimate information. b) Financial Fraud, where an individual provides false information about his or her financial status to acquire credit. c) Non-received items (NRIs) also called postal intercepts occur when the card is stolen from the postal service's before it reaches its owner's destination.
- **b) Lost/Stolen cards:** This type of fraud occurs when a legitimate cardholder loses the card or someone steals the card for criminal purpose.

c) **Amount Takeover:** This type of fraud occurs when a fraudster illegally obtains all the personal confidential information of any bonafide person. Then being impersonate as the genuine cardholder, he/she informs the bank that his residential or office address is hanged. Next, he/she reports that his credit card is lost and request for mailing of a new card to his new address. He/she receives the card and thus the criminal is able to successfully takeover the account.

d) **Counterfeit Card Fraud (also known as Skimming):** A counterfeit, cloned or skimmed card is one that has been printed, embossed or encoded without permission from the card company or one that has been validly issued and then altered or recorded. Most cases of counterfeit fraud involve skimming, a process where the genuine data on a cards' magnetic stripe is electronically copied on to another card, without the knowledge of the legitimate cardholder. Skimming can occur at retail outlets – particularly bars, restaurants and petrol stations.

e) **Card-not-present (CNP) Fraud:** This type of fraud is conducted over the Internet, by telephone, fax and mail order. It occurs when criminals obtain card details by the theft of card details of any individual from discarded receipts or by copying down details of cardholder during a transaction without the legitimate cardholders' knowledge. It is now seen largely in UK. The problem in countering this type of fraud is that neither the card nor the cardholder is present at a still point in a shop.

f) **Triangulation:** It occurs when a fraudster acts as a bogus intermediary to connect legitimate customer and the merchant. He advertises and sells an item, receives the payment and then fulfills the order by using stolen credit card details.

g) **Mail Non-Receipt Fraud:** It occurs when a criminal intercepts a replacement card sent to a legitimate cardholder and uses it.

h) **Identity Fraud:** It occurs when someone illegally obtains personal information and repeatedly uses it to open new account or to initiate transaction in the name of legitimate customer. Majority of identity thefts occur offline like stealing the wallets, intercepting the mail or rummaging through the trash.

i) **Phasing:** It occurs when the criminal solicits sensitive information like the cardholders' financial data or other account related information through e-mail posting to be the card-holders' banker or seller where the cardholder as made recent purchases.

Credit card fraud has become regular on Internet. Through all the agencies involved in the transactions i.e. cardholders' merchants and the card issuers suffer losses, but among them merchants are the most affected in credit card fraud.

DIFFERENT MEASURES FOR DETECTING AND PREVENTING CREDIT CARD FRAUDS

There are different key measures, which are used for detecting and preventing credit card frauds. Some of them are as follows:

1. Address Verification Service (AVS): This technique matches the cardholders' billing address and ZIP code information given for delivering the purchases against the bank record. This system is available in the USA and in a few countries of Europe. However, this technique has different weaknesses i.e. the address information is available online; it makes the bankers work boring in preventing the fraud; it cannot check the entire informational card. Only American Express bank has the facility to check all the international frauds through its AVVS system.

2. Credit Verification Values (CVV): This technology checks 3-4 digit number embossed codes on credit card. This technology has advantage that it requires physical possession of card but this advantage can be nullified by phasing. It also cannot protect the merchant from transactions placed on physically stolen cards.

3. Negative Databases: This technology checks the order against fraud attempts.

4. Fraud Rates: This technology checks for recognized patterns associated with the fraud. It carries the advantage that it is easy to configure and understand, but the disadvantage is that in case the fraud patterns are changed. A new fraud pattern may not be recognized.

5. Relocation: This technology checks the consumers' geographic location based on IP addresses. It is advantageous as it can block or flag orders originating from high-risk countries. However, negative aspect is non-applicability on IP proxies and satellite.

6. 3D-Secure: This technology works on the principle of authenticating the consumer via previously established password. The positive side of this system is that the fraudster needs legitimate cardholders' password to complete the transaction. However, this advantage can also be neglected as the passwords can be hacked.

7. Chip and PIN: The smart cards introduced to prevent credit card fraud by using this technology. The credit card has an encrypted EMV chip storing all information and a PIN instead of a signature, which are used to prove that you are the genuine cardholder. Thus, this technique minimizes fraud.

8. Biometrics: This is the most recent and sophisticated technology to prevent credit card frauds. It records a unique characteristic of the cardholder like fingerprints, voice, signature, iris, and other similar biological components so that a computer can read it. Then the computer compares the stored characteristics with that person who presents the card for ensuring that he/she is the legitimate cardholder. Negative aspect of this technology is that it carries additional costs and customers are still reluctant to accept it.

9. Expertise: A team, having the responsibility of managing the infrastructure, handling over verification, processing of charge back, analyzing the transactions, etc., is required to ensure that the technology is well managed.

10. Collaboration: The whole industry has to work in collaboration to prevent fraud. This is the right time when a united group is required to combat fraud and safeguard the business.

CONCLUSION

Although credit card frauds are found in large number in some major economies like the UK, Malaysia, Japan, Taiwan, Australia, and Hongkong as compared to India, because credit card industry in India is still in its nascent stage and cards have low credit limits. Of all the credit cards issued in India, 80-85% cards are active which is equal to 3-4 times smaller than Malaysia, which is on credit card fraud list.

Although, the incidences of fraud in India are less, the RBI has advised the banks to establish the internal control system to check the credit card frauds within certain limits, and to strengthen their appraisal system.

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