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Chapter – II
Literature Review

2.1 Introduction

The literature in the area of Plastic Money or Polymer Money/Cards is enormous and the studies vary from simple case studies to different state studies/cross-country studies to sector-wise comparison studies. Since it is difficult to review all the works carried out in the area of Plastic Money, this review is limited to only those studies which are relevant to the objectives of the present study. With this background, review of a few important works is made in the following paragraphs with an important objective to identify the research gap that exists at present.

The review for the study has been divided into eight categories, and is presented as follows:

2.1.1 Plastic Money (Debit and Credit Cards) Usages, Attitudes, Behaviour and Perception

2.1.2 Credit Card and Debit Card Transactions

2.1.3 Credit and Debit Card Frauds and Misuses

2.1.4 Plastic Money in Indian Context

2.1.5 Debit and Credit Cards in Global Level

2.1.6 Plastic Money and its Payment System

2.1.7 Theory and Models of Credit and Debit Cards, and

2.1.8 ATM Services and its Usages

2.1.1 Plastic Money (Debit and Credit Cards) Awareness, Usages, Attitudes, Behaviour and Perception

Achim Hartmann (2000)\(^1\) in his dissertation work *Credit/Debit/Cash Card Fraud and Abuse – An Outlook on Prevention and Possible Value Added* found that Plastic Money fraud has become a global business and he made an attempt to track down fraudulent and crime activities involved in the usages of the Debit and credit card, but it is found difficult because the development differs from country to country and moves on fast. Robert et.al, (2001)\(^2\) in their study, *Money Attitudes and Intentions towards Credit Card Use and Compulsive Buying among American College Students* used a casual modeling approach to investigate the role of money attitudes and credit card use in the campus buying within a sample of American college students. It was found in the study that the money attitudes, power, prestige, distrust...
and anxiety are closely related to compulsive buying and that credit card often moderates these relationships. Kaynak and Harcar (2001) in their study, *Consumers Attitudes and Intentions towards Credit Card Usage in an Advanced Developing Country*, made an attempt to investigate consumer attitudes and intentions towards credit card ownerships and usage in an advanced, and developing countries. In particular, knowledge structure, beliefs, likes and dislikes as well as attitudes of credit card owners in the possession and the use of credit cards are investigated.

Caron et.al, (2002) in their work, *Plastic Choices: Consumer Usage of Bank Cards v/s Proprietary Credit Cards*, examined the substitution of general purpose (bank) cards for proprietary cards and how issuers can predict which consumers are most likely to substitute convenience and rebates are the primary reasons for using a bank card. However, it was revealed during the work that consumers use their proprietary retail cards to obtain better service. These results in the study helped to explain the growth in popularity of co-branded cards.

Ramayah et.al, (2002) in their research study *Cardholders Attitude and Bank Credit Card Usage in Malaysia: An Exploratory Study* identified, examined and validating attributes that influence the differences in attitudes among active and inactive cardholders. It is believed that banks issuing credit cards can position themselves effectively via their marketing strategies to activate the usage rate of their existing cardholders and as well as to attract new, active cardholders. Thirteen important attributes were used to measure the attitude of a credit cardholder in this study. These attributes include acceptance level, credit limit, interest free payment period, annual fees, application approval period, ancillary functions, handling of card holder's complaints, issuing bank image, gift/bonus to new applicants, card design, leaflet to describe the card and advertising by the issuing bank.

Angela Lyons (2002) in their work *Credit Usage of College Students: Evidence from the University of Illinois*, studied the greater insight into the credit usage of college students at the University of Illinois and to encourage the University of Illinois, other campuses, and community as well as state organizations to identify ways in which they can help students to better manage their credit usage and avoid future misuse of credit down the road. In his work, it provided some intriguing
findings, especially with respect to those students who are most at risk financially. Tej Paul Bhatla et.al, (2003)\textsuperscript{7} in their work *Understanding Credit Card Frauds*, stated that as the card business transactions increase, so too do frauds. So it is clear that, global networking presents as many new opportunities for criminals as it does for businesses. While offering numerous advantages and opening up new channels for transaction business, the internet has also brought in increased probability of fraud in credit card transactions. The good news is that technology for preventing credit card frauds is also improving many folds with passage of time. The study was concluded by stating that educing cost of computing is helping in introducing complex systems, which can analyse a fraudulent transaction in a matter of fraction of a second.

Gupta Promod (2004)\textsuperscript{8} in his article *The Future of Plastic Money*, discussed the use of Plastic Money and its growth in India in recent years. He identified that the Use of Plastic Money is growing at an unprecedented rate in India. Lesser number of installed Points – of – Sale (PoS) terminals is the major obstacle in the growth of debt cards. Smart Card has many innovative features which may spurt the use of cards in India. Smart Card is safer to use in electronic form than the present form of cards. Metwally and Prasad (2004)\textsuperscript{9} in their research paper *Factors Restricting the Use of Credit Cards in GCC Countries*, examined the factors determining probability of using credit cards more frequently in domestic transactions in the members of the GCC (Gulf Corporation Council) which includes: Baharain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE. The state of Qatar is used as a case study where a sample of 385 consumers was surveyed. Respondents, who hold credit cards, were asked to indicate their degree of agreement using a five – point scale, with 23 statements relating to their reluctance to use credit cards frequently in domestic transactions.

Rao and Durga (2004)\textsuperscript{10} in their study *Marketing Strategies: Study of Bank Credit Cards* studied and aimed at comparing the marketing strategies of two commercial banks – Citi Bank and Andhra Bank. The study also evaluated the customer satisfaction with respect to their credit cards and suggested necessary steps for promoting credit card business by considering its benefits and scope in the business.
Jonathan Zinman (2004) in his research article *Why Use Debit instead of Credit? Consumer Choice in a Trillion – Dollar Market*, identified that the debit cards are overtaking credit cards as the most prevalent form of electronic payment at the point of sale, yet the determinants of a ubiquitous consumer choice is *Debit or Credit*. Several stylized facts suggest that debit card use is driven by behavioral factors. Rysman Mare (2004) in his paper *An Empirical Analysis of Payment Card Usage*, exploited a unique data set on the payment card industry to study the issues associated with network effects and two sided – markets. The study showed that the consumers concentrate their spending on a single payment network (Single – Homing), although many maintain unused cards that allow the ability to use multiple networks (Multi – Homing).

Master Card International Incorporated (2004) in its report *Attitudes and Trends toward Credit and Debit Card Use for Healthcare Services* revealed the usage habits, preferences and opinions of both patients and healthcare providers regarding the use of various payment card types as payment options for office visits and treatments. The information was obtained from two market research studies, commissioned by Master Card and referenced in this report, from an independent research organization in the spring of 2003. Jin et.al, (2005) in their study *Determinants of Debit Card Use: A Study from the Consumers Perspective Services* investigated the Debit Card use from the perspective of the demand side i.e. the consumer. The impact of consumer's demographic, socio - economic and credit related characteristics on Debit Card use were examined by using data from the 2001 Survey of Consumer Finances (SCF).

Mann Ronald (2005) in their paper *Credit Cards, Consumer Credit and Bankruptcy*, analyzed the effects of credit card use on broader economic indicators, specifically consumer credit. Using aggregate national level data from Australia, Japan, the UK and the US, it is found that credit card spending, lagged by 1 – 2 years has a strong positive effect on consumer credit. In the study, it is found that there is no significant relation between credit card usage and savings was observed. Vivek (2005) in his article *A Gentle Swipe*, showed the growth of credit cards, the spending patterns at restaurant, jewelry etc. and demand the need for issuing fresh guidelines by RBI connected with payment cards to prevent frauds.
Mann Ronald (2005) in their paper *Global Credit Card Use and Debt: Policy Issues and Regulatory Responses*, dealt with global use of the credit card connected policy questions. The pressures of globalizations are rapidly driving convergence in card usage except in those countries that have dropped substantial *Speed Bumps* to slow the growth of cards. The study mainly focused to devise policies that will be useful to confine the problems related to credit cards without creating undue inefficiencies in retail payment systems.

Adrian and Rodriguez (2005) in their article *Endogenous Credit Card Acceptance of Precautionary Demand for Money*, pointed out with a model, how the use of credit cards can differ so widely across countries. It was also discussed as to how Retailer’s propensity to accept cards reduce the need for buyers to hold cash as the chance of a stock–out (of cash) is reduced. Goyal and Anitha (2006) in their study *Consumer Perception towards the Purchase of Credit Cards*, focused on understanding how consumers perceive and consider service product features (core benefit, facilitating services and supplementing services) in pre–purchase evaluation and to understand the position of supplementary services at product levels.

Ron Borzekowski and Elizabeth (2006) in their article *Consumers’ Use of Debit Cards: Patterns, Preferences and Price Response* studied that the Debit Card use at the point of sale has grown dramatically in recent years in the U.S. and now exceeds the number of Credit Card transactions. However, the study identified that many questions remain regarding patterns of Debit Card use, consumer preferences when using Debit, and how consumers might respond to explicit pricing of card transactions. Using a new national representative consumer survey, this research paper describes the current use of debit cards by U.S. consumers, including how demographics affect use.

Chetsada Noknoi et.al, (2009) in their article *Have Debit Cards Changed Thai Consumer Shopping Behavior?* studied the behavior of using debit card and the quality perceiving on using debit card of the consumers in Thailand. The research found that the demographic characters of the consumers were females between 21 – 30 years old, and held bachelor degree. Two – third of the consumers were students, government and company officers. By studying their demographic details, it tried to
assists the issuing bank to pay the attention or define strategy to the right target group and expand the market to the new target group such as males. Ramalingam (2009) in his research paper *Usage Pattern of Credit Card Holders*, analysed the purpose and use of credit card, behavioural changes of credit card holders and their consumption pattern. In the study, it appreciated the role played by the credit cards in the current day financial system. It will be equally instructive and informal to explore the credit card business in India to identify the factor underlying credit card usage.

Tufan Ekici and Lucia Dunn (2009) in their work *Credit Card Debt and Consumption: Evidence from Household – Level Data*, investigated the relationship between Credit Card debt and consumption using household level data. This is a departure from previous studies which have used aggregate measures of consumption and general debt such as the Debt Service Ratio or total revolving credit. Rajani (2009) in her thesis *An Evaluation of Business Deals Using Plastic Money in Kerala*, studied the various aspects of debit cards and credit cards from the point of view in both the cardholders and merchant establishments. Volume of business transactions using Plastic Money in Kerala has shown an increasing trend in recent years. In her study, it is expected that in the near future the Plastic Money will acclaim as one of the most widely used financial instrument that accelerate business deals and economic prosperity.

Margie Tidwell et.al, (2009) in their work *The Swipe and Spend Economy*, stated that the Credit Card uses and abuses have found a worldwide audience with the recent downturn of the economy. This paper discussed the beginnings of credit card usage with the recent marketing by credit card companies to teenagers and will continue through the senior citizen’s need for credit card usage to pay medical bills. How the emphasis will be placed on the use of credit cards by college students whether the student is 20 years old or 40 years old is also discussed.

Muhammad Imtiaz Subhaniet.al., (2011) *Plastic Money/Credit Cards Charisma for Now and Then (A Thin Line between Easy Money and Risky Money)*, studied that the monetary rattle between consumption and affordability slammed the household severely for every now and then in all spheres of life from one pole to another. This research focused on the charisma of Plastic Money, its usability and
affordability while they are impacting on its preference to use. The research pointed out that friends and family have an influence on the use of Plastic Money which is taken as a proxy of Plastic Money charisma while convenient use of Plastic Money along with spending adjustment and use of Plastic Money along with prediction of future income are the proxies of its usability and affordability. Rupa and Vani (2011) Debit Card Usage in India – A Perspective, states that Debit cards are the important components in the retail payment system. It is seen that while the number of valid debit cards is currently 10 times higher than the number of valid credit cards, the average number of transactions per debit card is 10 times lower than that of credit cards.

Anneke Kosse (2011) in his Working Paper Do Newspaper Articles on Card Fraud Affect Debit Card Usage, discussed the economic significance of the consumers’ response to skimming fraud publications provides several meaningful messages. The study shows that Point – of – Sale (PoS) skimming fraud announcements deter cardholders from paying by debit card, whereas ATM skimming fraud restrains consumers from withdrawing cash and instead stimulates debit card payments. This indicates that the temporarily created fear for using the debit card at the ATM does not automatically translate into fear for using the debit card at the PoS. Instead, ATMs and PoS terminals are perceived as being substituted.

Tapas Ranjan (2005) in the article Credit Card and Frauds, provided awareness about various credit card frauds, and suggestions about precautionary measures with tips for safety use of it. Govindarajan et.al, (2012) in their study A Study on the Awareness and Utilization of Credit Cards in India, discussed about the hectic efforts of bankers in India to popularize Internet Banking, Mobile Banking, Debit Cards and Credit Cards, so that their cost of operation will come down. The work identified the fact that though in terms of number of cards in circulation, Debit Card is higher than that of Credit Card in terms of business, Credit Card is better placed. Users of credit card must be aware of various features of Credit Card such as safety and security, utility, operational difficulties and support provided by the Credit Card Department.
Marty Ludlum et al. (2012) in their research article *Financial Literacy and Credit Cards: A Multi Campus Survey*, studied that credit cards in campus have been a disaster, leaving students buried in debt before graduation, often with little hope of paying off the debt before high fees and interest double the amount. This research details the multi-campus survey of current American College students and their use of Credit Cards. Nyasha Kaseke (2012) in his work *Cash or Plastic Money – An Investigation into the Payment Mode Post Multi – Currency Period in Zimbabwe*, studied and investigated how consumers use cash or Electronic (Plastic) Money in the multicurrency period. The study found the use of Plastic Money to be, whether they liked using it and in particular how they compared it to using cash. Fumiko Hayashi (2012) in his work *The New Debit Card Regulations: Initial Effects on Networks and Banks*, studied how the American consumers are using debit cards more than ever before, affecting how banks and merchants do business and triggering key changes in the payment card industry and also, at the same time, the growing fees levied on merchants by the payment card industry for processing debit purchases have stirred controversy.

Kamal et al. (2012) in their research work *Electronic Credit Cards Usage and their Impact on Bank’s Profitability: The Rate of Return on Owners Equity Model – An Empirical Study*, described the effect of using the electronic credit cards included the number of electronic credit cards the proportion of Investment in credit cards, and the operation expenses to the credit cards, and explaining its effect in the net income from credit cards and showing the effect of the net income from credit cards for the bank's profitability by using return on equity model. This study was applied on a sample of Commercial banks working in Jordan, the information and data were collected from Annual Reports given by the banks and by returning to the credit management in Commercial banks. Sudhagar (2012) in his research article *A Study on Perception and Awareness on Credit Cards among Bank Customers in Krishnagiri District*, discussed how credit card, a small plastic card issued to users as a system of payment, allows its holder to buy goods and services based on the holder's promise to pay for these goods and services. It also pointed out that the issuer of the card creates a revolving account and grants a line of credit to the consumer (or the user) from which the user can borrow money for payment to a merchant or as a cash advance to the user.
2.1.2 Credit Card and Debit Card Transactions

Benito Arrunada (2005) in his paper *Price Regulation of Plastic Money: A Critical Assessment of Spanish Rules Card*, had analysed the extent of cardholder’s fee, mandate payment systems to include only two costs when setting their domestic Multilateral Interchanges Fee (MIFs): a fixed processing cost and a variable cost for the risk of fraud, the pricing scheme arising from the decisions will cause unbundling and under provision of those services whose cost are excluded. Vincent (2005) in the article *Credit Cards – Modern Payment System* provided information about credit card functioning in India and payment settlement. The study concluded that it is a blessing to both the traders and customers. Bansal (2006) in his article *Plastic Card Currency – A Convenient Mode of Payment*, explained the role of Plastic Money, its various forms and the positive impact of Plastic Money on the lives of people of all walks of life and being accepted as a convenient mode of payment in the modern era of electronic technology driven Commerce.

Adam Levitin (2007) in his article *Priceless? The Competitive Costs of Credit Card Merchant Restraints*, argued that credit card merchant restraints lead to an over consumption of credit cards as a transacting device and distort competition within the credit card industry and among payment systems in general. The article contends that merchant restraints are antitrust violations and demonstrates that the economic justifications for merchant restraints are unfounded. Keith Wilcox et.al, (2011) in their article *Leave Home without It? The Effects of Credit Card, Debt and Available Credit on Spending*, in their research work examined that how credit card debt affects consumer spending. In five experimental and field studies, the authors demonstrate that outstanding credit card debt increases spending for consumers with high self – control. The study showed that this effect can be eliminated by increasing the available credit on the credit card. Tim Mead et.al, (2011) in his research article *The Role of Interchange Fees on Debit and Credit Card Transactions in the Payments System*, studied the use of debit or credit cards to make purchases, merchants are assessed fees for processing the transactions, the largest of which is called an *Interchange Fee*. Rising interchange fees, along with the growing dominance of card transactions in the payments system, have brought increasing scrutiny from regulators on the appropriate level of interchange fees and the competitive aspects of card networks.
2.1.3 Credit and Debit Card Frauds and Misuses

Peter Burns and Anne Stanley (2002)\(^{42}\) in their work *Fraud Management in the Credit Card Industry*, the Payment Cards center of the Federal Reserve Bank of Philadelphia sponsored a workshop on fraud management in the credit card industry. The study provided an overview of fraud in the card industry and discussed some of the challenges he faces as a risk manager. Tej Paul Bhatla et.al, (2003)\(^{43}\) in their research article *Understanding Credit Card Frauds*, studied the state of the credit card industry, different types of frauds, how fraudsters attempt to take advantage of loopholes, impact of credit card fraud on card holders, merchants, issuers, how a comprehensive fraud detection system could help maintain the cost of detecting fraud, and losses due to fraud, i.e., the total cost of fraud, under manageable levels.

Dube and Vijaye (2005)\(^{44}\) in his article *Credit Card Frauds — Prevention is Better Than Cure*, briefly explained various credit card frauds and suggested suitable measures to prevent it. Linda et.al, (2009)\(^{45}\) in their article *Credit Card Fraud and Detection Techniques: A Review* discussed the fraud is one of the major ethical issues in the credit card industry. The main aims are, firstly, to identify the different types of credit card fraud, and, secondly, to review alternative techniques that have been used in fraud detection. The sub – aim is to present, compare and analyze recently published findings in credit card fraud detection.

Australian Transaction Reports and Analysis Centre – (ATRAC) (2011)\(^{46}\) in this report *Card Fraud* identified that the transactions using plastic cards have become more popular with the introduction of Internet - Based shopping and banking. The number of card frauds has also increased as organised crime finds ways to profit from vulnerabilities in the market. Irina Sakharova and Latifur Khan (2011)\(^{47}\) in their article *Payment Card Fraud: Challenges and Solutions*, studied that payment card fraud is causing billions of dollars in losses for the card payment industry. Besides direct losses, the brand name can be affected by loss of consumer confidence due to the fraud. This research paper provides an overview of payment card fraud and begins with payment card statistics and the definition of payment card fraud. It also describes various methods used by identity thieves to obtain personal and financial information for the purpose of payment card fraud.
Anneke Kosse (2012) in their De Nederlandsche Bank (DNB) working paper *Do Newspaper Articles on Card Fraud Affect Debit Card Usage?*, investigated the impact of newspaper articles about skimming fraud on debit card usage in the Netherlands. The direction and strength of the media effects strongly depend on the specific characteristics of the publications, such as type of fraud addressed and their position in the newspaper. The effects, however, are economically small compared to other factors, such as calendar and holiday effects, and do not sustain or accumulate in the long run.

Orzechowski and Walker (2012) in their report *Debit Card Fraud: The Impact of Proposed Regulations on the Food Retailing Industry*, in their report it is identified that fraudulent debit transactions involve signature debit transactions were it is responsible for $1.15 billion of the $1.35 billion in total debit fraud losses in Europe. The study also gave some suggestions to their consumers to adopt more secure PIN debit, or move toward the more reliable systems which is currently used in Europe, where from fraud loss could be reduced dramatically.

2.1.4 Plastic Money in Indian Context

Anil et.al, (2004) in their report *Biometrics in Credit Cards: A New Way to Pay*, throws light on biometrics which reduce the credit card fraud and identity theft which can be used as a means of payment and replace the actual credit cards, They point out that fingerprint biometrics are most widely used and voice is a promising biometrics for online transactions, and consumer acceptance.

Douglas et.al, (2005) in their research article *Overview of Recent Developments in the Credit Card Industry*, explained the function of credit card networks: the various kinds of network models, and the significance of interchange fees in the most complex model. Orr and Bill (2006) in their article *Virtually Cashless Society*, has identified the emerging changes in the field of payment industry and bring forth the benefits of cashless society and the need for micro payments infrastructure. Ramakrishna Reddy (2006) in his article *Card Products in India*, commented on the reasons for not attaining full growth potential among card products and suggest remedies for growth in this field for the benefit of all players.
Saha and Tapash (2006) in the article *Debit Cards Overtaking Credit Cards in India*, provided comparative features of both credit cards and debit cards and its volume of transactions from 1995 to 2005 and points out that the growth of debit cards is out placing the credit cards. Slagel et.al, (2006) in their study *Credit Card Debt Reduction and Developmental Stages of the Lifespan*, examined the link between theory based developmental stages of the lifespan and factor associates with troubling debt and change. Stages of the lifespan were linked to anxiety over credit card debt rapture and the confidence participants felt in their ability to get out of debt.

Srinivas (2006) in his study *An Analysis of the Defaults in Credit Card Payments*, has tried to analyse the socio – economic profile of the defaulters of credit cards, to identify the set of factors which contributed to such defaults and suggest relevant measures to minimize the default cases. Analysis of reasons indicated that economic hardship is the major reason as identified by the sample units and follows by rigid payment structure and loss of job/business.

Stanley Sienkiewicz (2007) in his research paper *Prepaid Cards: Vulnerable to Money Laundering?*, discussed the potential money laundering threat that prepaid cards face as they enter the mainstream of consumer payments. This paper provides an overview of money laundering, describes how prepaid cards could be abused, and outlines how both the government and the payment sectors have responded to mitigate risks.

Rangaswamy and Ramesh (2007) in their article *Plastic Money in Retail Distribution*, highlighted the growth of Plastic Money particularly ATM cum debit cards, its importance in retail distributions, cost effects, benefits and suggesting some tips to avoid frauds and necessity of increasing its usage. Annamalai and Muthu (2008) in their article *Retail Transaction: Future Bright for Plastic Money*, projected the growth of debit and credit cards in the retail transactions. In the study, it is also mentioned the growth factors, which leads to its popularity, important constraints faced by banks and summarized with bright future and scope of Plastic Money.
Nayak et.al, (2008) in their paper *Consumer's Behaviour in Selecting Credit Cards*, discussed the factors influencing the selection of credit cards among consumers. The major factors pointed out by them are service offers, promotional offers, interest benefits, and cash benefits, ease of payments, payment charges, card benefits and time benefit. Sarangapani and Mamatha (2008) in their article *The Growing Prominence of Debit Cards and Credit Cards in the Indian Banking Industry*, highlighted the growing prominence of debit and credit cards by providing necessary statistics, comparative features of both cards and also pointed out more popularity of debit cards than credit cards.

Ashish Das (2008) in his work *Acceptability Standards in Credit Card Industry*, analyzed the various players in the credit card business. It presents the dilemmas in acceptability standards of payments by credit cards. In this research paper, the author brings out the predicament among the various players in the Credit Card industry on the two issues under focus. On analyzing these responses, it is found that in absence of any regulatory framework to address these aspects, the customer is left to the nonchalant disposition of these players. Subramanian and Shiva (2010) in their work *It's Your Number..... It's Your Life!*, analysed Plastic Cards (both credit and debit cards) which posed universal presence and acceptance are being used for a variety of general purchases including for cash withdrawals. The authors seriously target a cashless society, where the use of plastic cards in different sectors are increasing and moving from possibility to reality.

Rupa and Vani (2011) in their work *Debit Card Usage in India – A Perspective*, studied the fraud prevention mechanism available in the market, such as public key crypto – systems and digital signatures. They suggest that during payment, at least one digital signature must be created to verify the process and Digital signatures can be used both to assure integrity of the data and the identity of the originator. Govindarajan et.al, (2012) in their article *A Study on the Awareness and Utilization of Credit Cards in India*, analysed the statistics published by the Reserve Bank of India on both debit card and credit cards facts and figures. Though in terms of number of cards in circulation, debit card is higher than that of credit card, in terms of business credit card is better placed. They suggest that the users of credit card must be aware of various features of credit card such as safety and security, utility, operational difficulties and support provided by the credit card association in India.
2.1.5 Debit and Credit Cards at Global Level

Wright and Julian (2000)\(^6\) in their paper *An Economic Analysis of a Card Payment Network*, presented a model of card payment system to address the social optimality of the rules that govern such systems based on Rochet and Tirole (1999) model. They showed that no – surcharge rule which credit card associations have adopted to prevent merchants surcharging customers for the use of their cards, is generally welfare improving. The research paper provides the socially optimal interchange fee and explained why regulating interchange fees on the basis of cost is likely to be inefficient.

Cabral, Luis M.B. (2005)\(^7\) in the paper *Market Power and Efficiency in Card Payment Systems: A Comment on Rochet and Tirole*, commented on the main ideas of R and T models used for economic analysis of card payments and lay down a simple basic model that essentially captures the features of R and T model. Association for Payment Clearing Services (APACS) Report (2005)\(^8\) in this report *Plastic Money: The Credit Card Industry’s Contribution to the U.K. Economy*, examines the range of benefits that the credit card industry contributes to the U.K. economy. Many of these benefits are straightforward, such as the tens of thousands of Britons employed by the credit card industry, the wage the industry pays to its employees, and the money it invests in other businesses. The economic burden of over–indebtedness and credit card fraud are not insignificant and cannot be ignored. It is the belief, however, that the myriad benefits outweigh the costs and that the breadth and depth of these benefits should not be overlooked or marginalized in the ongoing credit card debate.

Kataria Neera (2005)\(^9\) in his article *Credit Cards – Challenges Ahead*, pointed out the growth of credit cards in India, market share of each individual banks, challenges faced by bankers. Klee and Elizabeth (2005)\(^10\) in their research work *Paper or Plastic? The Effect of Time on Check and Debit Card Use at Grocery Stores*, used scanner data from grocery store transactions to examine time costs associated with media of exchange. The study showed that time factors significantly determine the use of media of exchange and sensitivity to these time factors depend on the income, age and demographic characteristics local market.
Bemthal et.al, (2005) in their study *Credit Cards as Lifestyle Facilitators*, found credit cards as an important facilitator of consumer emancipation through lifestyle within the current market structure and analyse the accounts provided by consumers, credit counselors and participants in a credit counseling seminar in order to develop a differentiated theory of life style facilitation through credit card practice. Santiago et.al, (2007) in their work *The Economics of Credit Cards, Debit Cards and ATMs – A Survey and Some New Evidence*, described the large and diffuse literature on credit cards, debit cards and ATMs and conclude that point of sale (debit card) and ATM transactions are substitutes, and that ATM surcharges impact point of sale volume significantly.

Elif et.al, (2009) in their work *The Impact of Credit Cards on Spending: A Field Experiment*, studied the impact of payment with credit card as compared with cash on insurance company employees' spending on lunch in a cafeteria. In the study, it was observed that it exogenously changed some diners' payment medium from cash to a credit card by giving them an incentive to pay with a credit card.

James (2008) in his article *Growth of Plastic Money: Prospects and Problem*, had discussed economic and business prospects and problems involved in the Plastic Money market. In his work, he clearly studied the basic terms of plastic money, electronic payment and credit cards and it also focused on plastic money penetration in India, reasons for growth and strong future for Plastic Money.

Barry Scholnick et.al, (2008) in their work *The Economics of Credit Cards, Debit Cards and ATMs: A Survey and Some New Evidence*, analyzed the critical survey of the large and diffuse literature on credit cards, debit cards and ATMs. The impact of networks on the provision and pricing of ATMs, as well as the tradeoffs that consumer make between different types of payment mechanism, including debit cards, credit cards and ATMs. This paper is also amongst the first to provide new evidence on this latter question from bank level data (from Spain). And conclude that point of sale (debit card) and ATM transactions are substitutes, and that ATM surcharges impacts point of sale volume significantly.
Don Ogilvie (2009) in their report, *Crisis in the Credit Card Industry Navigating the Perfect Storm*, studied credit cards have gone from being one of the most profitable areas of lending to one of the least. Record levels of defaults and stalled securitization markets have rapidly reversed the profitability of the industry. Stewart Mackinnon (2009) in his report *Demystifying Credit and Debit Cards in Canada*, focused in Canada on the domestic card market to establish what reforms are required. The passing into law of the Credit Card Act in the USA earlier this year also has relevance as Canadian legislators and consumers alike may see many of the new rules in the USA as pragmatic solutions to reform certain practices in the card market place in Canada, which are perceived as unfair, unreasonable or deceptive.

John and Pradeep (2009) in their discussion paper *Credit Cards and Inflation*, studied the use of credit cards which increase trading efficiency but, by also increasing the velocity of money, it causes inflation, in the absence of monetary intervention. The monetary authority attempts to restore pre-credit card price levels by reducing the money supply, it might have to sacrifice the efficiency gains.

Phylis et.al, (2010) in their work *Consumers and Credit Cards: A Review of The Empirical Literature*, discussed the research in the area of consumer credit card abundance of literature in the business, psychology, and public policy fields. In the 1960s, the work revolved around descriptive characteristics and evolved as scholars probed deeper by investigating relationships between credit cards and psychological constructs, and the need for consumer policy. This paper identifies the empirical research conducted over the past four decades in order to provide insights and recommendations for additional research.

Winston Moore (2011) in his research article *Trends and Prospects for the Debit Card Industry in Barbados*, studied the growing importance of the debit card industry in Barbados, there exists no previous research on the topic. At present, debit card transactions are even more important than credit cards as a means of payment and could soon overtake some other popular means of conducting transactions.
Fredrick Obura (2012)\textsuperscript{81} in his work \textit{Firms Turn to Plastic Money to Cut Costs}, stated that the technology is changing perception of many companies. The study also focused on turning of Plastic Money instead of liquid cash to reduce risks of handling cash. The study set to escalate with banks, telecommunication companies launching various e–payment products now being accepted by consumers.

Rich Williams (2012)\textsuperscript{82} in his report \textit{The Campus Debit Card Trap: Are Bank Partnerships Fair to Students?} analysed and identified that the banks and other financial norms are taking advantage of a variety of opportunities to form partnerships with colleges and universities to produce campus student ID cards and to offer student aid disbursements on debit or prepaid cards.

Adam Rust (2012)\textsuperscript{83} in his report \textit{Principles for the Reform of the Prepaid Debit Card}, discussed the prepaid card sector for it to be a financial service that helps not hurts users. The prepaid card product has the potential to be a useful low cost financial service with strong consumer protections. But, a consumer buying a card today is challenged to know what functions it provides, what it costs and what consumer protections it offers.

Banerjee and Jose (2012)\textsuperscript{84} in their \textit{Credit Risk Analysis of Credit Card Portfolios under Economic Stress Conditions}, studied the empirical framework for the credit risk analysis of a generic portfolio of revolving credit accounts and apply it to analyze a representative panel data set of credit card accounts from a credit bureau. The data cover the period of the most recent deep recession and provide the opportunity to analyze the performance of such a portfolio under significant economic stress conditions.

Nyasha Kaseke (2012)\textsuperscript{85} in his work \textit{Cash or Plastic Money – An Investigation into the Payment Mode Post Multi – Currency Period in Zimbabwe} investigated about how the consumer use cash or Plastic Money in the multicurrency period. In the study, it is concluded that Plastic Money may have advantages in certain situations but marketing effort should be concentrated on identifying niche opportunities or bundling appropriate services onto the card to provide a relative advantage for increasingly discerning consumers.
Siyanbola and Trimisiu (2013) in their work *The Effect of Cashless Banking on Nigerian Economy*, studied the effect of cashless banking on Nigerian economy, and discussed the various aspects of cashless banking channels, the real E-Banking problems cashless banking (Plastic Money) along with its advantages and disadvantages to Nigerians.

Omotunde et.al, (2013) in their research article *Impact of Cashless Economy in Nigeria*, studied the impact of cashless policy in Nigeria. The study showed that the introduction of cashless economy in Nigeria can be seen as a step in the right direction. It is expected that its impact will be felt in modernization of Nigeria payment system, reduction in the cost of banking services, reduction in high security and safety risks and also curb banking related corruptions. Karen Kinney and Colleen Donovan (2013) in their report *The “A to Z” of EBT, Credit and Debit Cards in Washington*, state that Washington farmers markets are giving shoppers the option to pay with Plastic whether it is Electronic Benefit Transfer (EBT) cards or credit and debit cards. There are compelling reasons to offer these services at your market or not.

Common Wealth Bank Report (2013) in its report *Important Information about Credit Cards* studied the various types of cards conditions of use apply, card account details, additional cardholders, how to protect our access methods (which include a card, PIN and Password), transactions – regular payment arrangements, unauthorized use, loss or theft of our card, PIN or password, variation, default, suspension, cancellation and termination and other details discussed. Mburu and Peris Njoki (2012) in his work *Investigating the Impact of Credit / Debit cards in enhancing Customer Satisfaction amongst Commercial Banks in Kenya*, studied the raising awareness about the Credit and Debit Cards in the market. The credit card business has been around for the last fifty years though the same is relatively new in Kenya. Though some studies have been undertaken in this area, none has attempted to demystify these products.
2.1.6 Plastic Money and its Payment System (Fee, Charges and Others)

Robert (2003)^91 in his work *An Introduction to the Economics of Payment Card Networks*, studied the open payment card networks typically co–ordinate the activities of thousands of financial institutions that issue cards, millions of retail locations that accept them, and several hundred million consumers that use them. This co–ordination can include the collective setting of certain prices and other controversial network rules.

Guthrie et.al, (2003)^92 in their paper *Competing Payment Schemes*, presented a model of competing payment schemes. The models highlight the fact that, in a payment system, one type of user (merchants) competes to attract users on the other side of the market (card holders). It also analysed how competition between card associations affects the choice of interchange fees and thus the structure of fees charged to cardholders and merchants. Hayashi et.al, (2003)^93 in their paper *Technology Adoption and Consumer Payments: Evidence from Survey Data*, commented that payment choices depends consumers propensity to adopt new technologies and nature of transactions. This paper also analysed the use of consumer payment instrument at the point of sale. It is indicated that consumers who use new technologies and computer are more likely to use e – payment instruments such as Debit Cards, Credit cards and Smart Cards etc.,

Robert Hunt (2003)^94 in his article *An Introduction to the Economics of Payment Card Networks* provided an overview of the economics of the card industry and explained some of the differences from the text book model of review of literature and competitive markets. Such differences are important factors for the antitrust analysis of payment card networks. James and Jabrina (2005)^95 in their discussion paper *Risking Homes to Pay Off Credit Cards – Debt – Consolidation Mortgage Refinancing is not a Winning Financial Formula For Many Families* paper, discussed the cash – out mortgage refinances, homeowners replace their current mortgage with a loan amount larger than the amount they owe on their home.
Pacheco and Richard (2005) in their research work *Interchange Fees in Credit and Debit Card Industries: What Role for Public Authorities?*, discussed that the Credit and Debit Card transactions are on the rise worldwide. Interchange fees is an integral part of the pricing structure of credit and debit card transactions. Indirectly paid by merchants to card issuers, interchange fees in most countries are set by credit and debit card networks. Jia LokeYiing (2007) in his study *Determinants of Merchant Participation in Credit Card Payment Schemes*, aimed to empirically establish the determinants of merchant participation in credit card payment schemes. It is also found that a merchant’s personal background, type of business and total value of sale are significant in determining a merchant’s acceptance of cards in payment transactions.

Robert et.al, (2008) in their report *Regulatory Intervention in the Payment Card Industry by the Reserve Bank of Australia – Analysis of the Evidence*, described valuable reward programmes and by reducing the incentives of issuers of four – party cards to invest and innovate. The study found that there is no evidence that these losses to consumers have been offset by reductions in retail prices or improvements in the quality of retailer service. The empirical evidence thus provides no support for the view that consumers have derived any net benefits from the intervention.

Victor and Zinman (2008) in their report *Debit v/s Credit: How People Choose to Pay?* discussed that understanding how households make financial decisions is a foundational piece of economic knowledge, but many questions about household finances remain unanswered. One recurring question is whether standard economic models can fully describe how households make decisions, or whether economic models that incorporate psychology perform better. Charles and Joanna (2008) in their work *Credit Card Debt and Payment Use*, described the credit card holders in the United States regularly carry unpaid credit card debt. Previous literature has focused on the adoption of debit cards by people who carry credit card balances, but so far there has been no empirical analysis exploring the relationship between revolving behavior and patterns of payment use, such as substitution away from credit cards to other payment methods.
Raymond (2009) in their research article *Credit Cards and Small Business: the Benefits, Opportunities and Policy Debate*, studied that the track record on government price controls has never been positive, and the potential negatives for interchange fees are numerous. Price controls sound like a simple and reasonable solution to some, but they always come with shifting costs, reduced services and less innovation. David McArthur (2009) in his article *Search and Bargaining with Plastic: Money and Charge Cards as Competing Media of Exchange*, described as to how Charge cards are introduced into the Lagos – Wright money search model to examine the implications of intermediated exchange for monetary policy. The study identified that Charge cards lower the cost of inflation, and can make some inflation beneficial.

Jashim and Margaret (2009) in their article *Cashless Transactions: Perceptions of Money in Mobile Payments*, analysed the number of cashless transaction and study addressed the issue that the mode of payment affects perceptions of money and purchase behaviour, the majority of the research in the area of the credit card payment mode. Credit card based research has shown that the credit card based payment is used, the volume, value and type of products purchased increased.

Vinayak Bhakta (2009) in his white paper *Credit Card Charge – Offs: Clear and Present Danger* discussed and analysed the current market trends in the collections area of the card industry. It further explores the strategies which need to be adopted by the card industry in the immediate future to tackle with the present economic situation specifically to reduce charge – offs and improve the prospects of debt collections. Cannon and Richard (2009) in their article *Impact of the New Dodd – Frank Financial Reform Act on Debit*, discussed the significant impact on merchant acceptance of debit cards, including: (a) lowering interchange fees deducted by card issuers from amounts due to merchants from card transactions; (b) granting merchants the right to give different discounts to customers for cash, check, debit card or credit card use, and allowing merchants to set a $10 minimum credit card transaction size; and (c) giving merchants greater control over the routing of debit transactions among networks, potentially leading to dual bugged debit cards with a choice of routing signature debit transactions over the visa, Master Card or Discover networks, or Debit Cards with multiple PIN debit network choices.
John Bulmer (2009) in his work *Payment Systems: The Credit Card Market in Canada*, described the structure of the credit card payment system in Canada with particular emphasis on the structure, cost and functioning of the four-party model for credit card transactions. It also outlines the recent history and structure of the credit card industry and explains the cost to merchants of credit card transactions.

Richard J. Sullivan (2010) in his report *The Changing Nature of U.S. Card Payment Fraud: Industry and Public Policy Options*, identified that Debit and Credit Card payments are convenient for consumers, widely accepted by merchants, and more efficient than paper forms of payments. But, the cards have become the primary payment instrument in retail transactions; awareness of identity theft and concerns over the safety of payments has increased.

Manoj et.al, (2010) in their research paper *How Credit Card Payments Increase Unhealthy Food Purchases? Visceral Regulation of Vices*, studied the advantages of visceral regulators, consumers might tend to rely on their will power based on the potentially misplaced belief that willpower is as effective as visceral regulators. Preliminary evidence for this proposition comes from the anecdotal observation that although over 60 per cent of American adults are overweight or obese and only 14 per cent of American consumers use cash payments on their shopping trips. Scott et.al, (2010) in their discussion paper *Who Gains and Who Loses from Credit Card Payments? Theory and Calibrations*, studied the merchant fees and reward programs that generate an implicit monetary transfer to credit card users from non-card (or cash) users because merchants generally do not set differential prices for card users to recoup the costs of fees and rewards.

Richard Sullivan (2010) in his article *The Changing Nature of U.S. Card Payment Fraud: Issues for Industry and Public Policy*, studied the rapid transition to card payments which has sparked a search for effective counter measures to those who exploit card payment security vulnerabilities to commit payment fraud. A review of these vulnerabilities finds that they are tied together by information-intensive payment approval system.
David et al. (2011) in their work *Economic Analysis of the effects of the Federal Reserve Board’s Proposed Debit Card Interchange Fee Regulations on Consumers and Small Businesses*, studied the impact of the reductions in interchange fees proposed by the Federal Reserve Board on consumers and small businesses. The study found that consumers and small business would face higher retail banking fees and lose valuable services as banks rationally seek to make up as much as they can for the debit interchange revenues they will lose under the Board’s proposal. The number of unbanked consumers would increase as lower-income households reduce the use of higher-priced accounts. Biliana et al. (2012) in their work *The Adoption Process of Payment Cards – An Agent – Based Approach*, investigate the payment adoption rate under consumers’ and merchants’ awareness of network externalities, given two levels of Interchange Fees in a multi-agent card market.

Pat Meredith (2012) in her report *Credit and Debit Card Markets*, discussed that Credit and Debit Cards are an important part of Canada’s payments system. Canadians are among the world’s heaviest users of card-based payments, and for good reason they are widely accepted, generally offer better protection than cash or cheques, and allow users to purchase high-priced goods without having to carry large sums of money. The research included both academic sources and in-person interviews with officials from Australia, New Zealand, the United Kingdom and the United States.

Sebastien and Cathy (2012) in their article *Paper or Plastic? Money and Credit as Means of Payment*, studied the technological advances in electronic record-keeping have made credit cards as ubiquitous as cash as means of payment in many economies. This transformation in the payments landscape poses several new challenges for policymakers, particularly in determining how inflation, market structure, and new regulation shape how consumers pay and what merchants accept. Fumiko and Stavins (2012) in their discussion paper *Effects of Credit Scores on Consumer Payment Choice*, investigated the effects of credit scores on consumer payment behavior, especially on Debit and Credit Card use. Anecdotally, a negative relationship between Debit Card use and Credit score has been reported; however, it is not clear whether that relationship is related to other factors, such as education or income, or whether it is a mere correlation. The results indicate that an increase in
consumers’ cost of debit cards – in response to regulatory changes, for example – would have an adverse effect on low-credit-score consumers (typically those with lower incomes and less education). Zhu Wang (2012) in his Debit Card Interchange Fee Regulation: Some Assessments and Considerations, analysed and investigated the regulations empirical impact on different players in the debit card market. The regulation has substantially reduced interchange revenues of large issuers who are covered by the regulation, while small issuers who are exempt have been shielded well so far.

Federal Trade Commission (FTC) Staff Report (2013) Paper, Plastic... or Mobile? – An FTC Workshop on Mobile Payments, studied about the mobile payments and the study which focused on potential to provide significant benefits to consumers and businesses. Industry is experimenting with many technologies, business models, and partnerships that provide consumers with new and exciting products and services. Although the industry is still young, FTC staff encourages those developing mobile payment products and services to create them with financial, security, and privacy protections in mind.

2.1.7 Theory and Models of Credit and Debit Cards

Gans et.al, (2003) in their paper A Theoretical Analysis of Credit Card Reforms in Australia, in the study, it described about how to develop a model of payment systems and analyse the impact of credit card reforms in Australia based on Reserve Bank of Australia’s (RBA) main assumptions. RBA moved to reform credit card associations by increasing entry, allowing merchants to surcharge for card payments and regulating the interchange fee. Allowing merchants to surcharge may eliminate much of their concern over the interchange fee.

Emmanual (2003) in their paper Online Credit Card Processing Models: Critical Issues to Consider by Small Merchants, discussed and made an attempted to address the current state of the online credit card processing system. The credit card processing mechanism, followed by a discussion of various credit card processing systems also are provided. The research paper focused on the various models of online, real-time credit card processing system and discussed several factors such as cost, complexity and security issues related to implementing such a system and also offered suggestions which are extremely valuable to small business that are venturing into
Internet – Commerce. Robert et.al, (2003) in their paper *Behavioural Models of Credit Card Usage*, examined the repayment and transaction behaviour with credit cards by using behavioural models. They describe the development of Markov Chain Models for late re-payment, investigate the extent to which there are different classes of behaviour patterns and explore the extent to which distinct behaviours can be predicted.

Sujit Chakravorti (2003) in his research work *Theory of Credit Card Networks: A Survey of the Literature*, studied the Credit Cards and its benefits to consumers and merchants not provided by other payment instruments as evidenced by their explosive growth in the number and value of transactions over the last 20 years. Recently, credit card networks have come under scrutiny from regulators and antitrust authorities around the world. The costs and benefits of credit cards to network participants are discussed.

Jonathan Zinman (2006) "Debits or Credit?" Studied the several modeling, policy, and business questions hinge on how consumers respond to the price of payments. For most consumers, a critical pecuniary margin is the price of a credit card charge. John and Dubey (2008) in their research paper *Credit Cards and Inflation*, identified that the introduction (and widespread use) of credit cards increases trading efficiency but, by also increasing the velocity of money, it causes massive inflation, in the absence of monetary intervention. The monetary authority will then have to accept less than pre–credit card efficiency in order to restore pre – credit card price levels, or else it will have to accept substantial inflation if it is unwilling to cut efficiency below pre – credit Card levels.

Marc Anthony (2011) in his research article *Debit v/s Credit: A Model of Self – Control, Evidence from Checking Accounts*, in this study, the author argued that some households use debit cards as a spending restraint tool, explaining why debit is the fastest growing consumer payment method despite being more expensive and less convenient than credit cards. A simple model is presented which predicts that debit card users are paying down a credit card balance among other predictions.
2.1.8 ATM Services and its Usages

Srinivas (2004)\textsuperscript{125} in his article \textit{Bio – Metric ATMs}, studied and pointed out the use of biometric technology in ATMs for preventing the frauds connected with it and also points out some of its limitations. Stix and Helmut (2004)\textsuperscript{126} in his paper \textit{How to Do Debit Cards Affect Cash Demand? Survey Data Evidence}, analysed how EFTPOS payments and ATM withdrawals affect cash demand. The result revealed that cash demand is significantly and size ably affected by debit card usage and that there are significant differences in cash demand for individuals with different debit card usage frequencies. In addition, the effect of EFTPOS payments on cash use at the Point – of – Sale is also discussed. Hossain and Razwanul Bari (2006)\textsuperscript{127} in their research work \textit{Understanding of ATM (Automated Teller Machine) in Bangladesh}, discussed the real time infrastructure of how ATMs are connected and how they maintained. They, in the study conclude that they have read and how it works in live situation are totally different from our expectation. In this research paper, it is written with a contrast with both sides from the bookish knowledge and real time experience.

Maruti Rao (2009)\textsuperscript{128} in his research paper \textit{A Study on Customers Satisfaction towards ATM Services in Dharwad City}, studied the account holders' satisfaction level towards ATM cum Debit Card services and to understand the popularity of debit card as a means of purchase through Point of Sales. In his paper, he made an attempt to understand the awareness level of ATM and its overall development of ATM – cum – Debit Card business in the Dharwad city. The study mainly focused on the Plastic Money specially ATM cum Debit Card as a New Tech – Product.

Shamsher Singh (2008)\textsuperscript{129} in his article \textit{Analysis of CRM Effectiveness: ATM Services in Banking Services}, analyses the CRM and its core marketing activity in the market driven economy, where the consumer has occupied the central position. The paper studied the effectiveness of ATM services of leading Indian Banks such as State Bank of India, ICICI bank, HDFC Bank and Punjab National Bank in NCR Delhi. He states that banking sector has undertaken various initiatives to attract, built and retain their customers. ATM is the most visible and used practice by the customers. Customers are the king in the present business scenario and Customer Relationship Management (CRM) is the key to attract and retain customers.
Dhande (2009) in his book *Opportunities for Better Services and Consumer Relations through Innovations in ATM Technologies*, focused on the current scenario of Indian banking Sector from reform to transform, need for CRM in Banking Sector of India, effects of competition, strategic elements in CRM policy formulation, CRM as a system of information management, tools for CRM, ATM Service Points and its potential, opinion of customers on ATM Services of the SBI group of banks, managerial problems in ATM systems, customers’ demands preferences and choices on the technologies advancements for better services.

Prasad and Siva Rama (2004) in their article *ATM v/s KCC (Product Development and Innovation)*, provide an outlook for ATMs and credit cards, benefits of technology to agriculturists, extension of ATM facilities to agriculturists etc. Lawan Ahmed Mohammed (2011) in his article *Use of Biometrics to tackle ATM Fraud*, research work provided an overview of the possible fraudulent activities that may be perpetrated against ATMs and investigates recommended approaches to prevent these types of frauds. In particular, it developed a prototype model for the utilization of biometrics equipped ATM to provide security solution against most of the well – known breaches. To ensure that such security approach will be accepted by the majority of users, the model was tested and the users’ opinions were given.

Mc Andrews and James (2003) conducted a survey on *Automated Teller Machine Net Work Pricing – A Review of Literature*, in the study discussed and disclosed the ways that ATMs have altered the relationship between banks and their depositors as well as the competitive relationships among banks and concluded with suggestions for further research.
There are large number of studies conducted at the Indian level and very few works are presented in this chapter focusing on the Plastic Money holders, usage, perceptions, awareness level, satisfactions, attitudes, behavior of the card holders, frauds and crime activities, security issues, impact on the banks, adoption of new technologies involved in the Plastic Money, payment systems and other e – clearance and settlements through the use of Bank cards. But, studies relating to the Impact of Plastic Money in Karnataka State, Southern Region are extremely limited. Keeping this point of view, an attempt has been made to study the Impact of Plastic Money on the Bank Customers of Karnataka – An Empirical Study.
2.2 Conclusion

This chapter deals with the review of the earlier studies which are classified under eight categories focusing on usage patterns of Credit Cards and Debit Cards, security aspect of Plastic Money, Debit Card and Credit Card frauds and their prevention, economics of card usage, attitude towards Plastic Money, comparative studies of old and modern instruments, customer acceptance and usage patterns, general view of Plastic Money etc. At the end of the chapter as attempt has been made to identify the research gap in the area.
## Exhibit – 2.1

### Summary of Literature Review on Plastic Money with related Elements

<table>
<thead>
<tr>
<th>Journals/Articles/Magazines</th>
<th>Reports/ Survey Based</th>
<th>Statistics Based Studies/ Working Research Paper</th>
<th>Literature</th>
<th>Edited Book/Thesis</th>
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<tr>
<td>Plastic Money Behavior and Attitude, Perception towards the purchase</td>
<td>6 Credit Card Use – Reports</td>
<td>5 Competing Payment Schemes Payment Card Centre</td>
<td>1 Credit Card Usage</td>
<td>2 ATM Services</td>
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<tr>
<td>Card Holders (Debit and Credit Card Charges)</td>
<td>7 Cash Transaction</td>
<td>2 Online Credit Card Processing Model</td>
<td>1 Card Holders</td>
<td>3 Credit card Model, Networks in Banking</td>
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<td>Plastic Money (Bank Card)</td>
<td>5 Plastic Card Payment System</td>
<td>6 Credit Card Usages, Consumer Credit and Bankruptcy</td>
<td>1 Plastic Card Networks</td>
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<td>Holder-Consumer Credit card, Possession</td>
<td>8 Credit Card in economies – Payment Network</td>
<td>4 Credit Card Acceptance of Precautionary Measure</td>
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<td>Credit Card Application and Spending, usages, Benefits, Awareness</td>
<td>7 E – Payment Card Network</td>
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<td>Debit Card Revolution</td>
<td>3 ATM Networking</td>
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<td>Virtual Cashless society</td>
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<td>Credit Card Profits</td>
<td>1 Price Regulation of Plastic Money</td>
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<td>Credit Card Holders study</td>
<td>1 Credit Card Fraud Prevention</td>
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<td>Economics of Credit Card – Payment Network, Mode of Payment Systems</td>
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<td>Credit Card Reform</td>
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<td>Credit Card Fraud</td>
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<td>Technology initiatives by SBI, Banking Technology</td>
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<td>Application of Biometrics in the Indian Banking</td>
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SUM 57

Source: Literatures, since 2000 – 2012.
Reference and Notes


76. Don Ogilvie, (2009). Crisis in the Credit Card Industry Navigating the Perfect Storm, Produced by the Deloitte Center for Banking Solutions, Andrew Freeman, PP No. 1 – 20.


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