AN ANALYSIS OF FINANCIAL LITERACY FROM THE PERSPECTIVES OF INDIVIDUALS AND FINANCIAL INSTITUTIONS USING SOCIAL MEDIA

Ph.D. THESIS

by

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CANDIDATE'S DECLARATION

I hereby certify that the work which is being presented in the thesis entitled "**AN ANALYSIS OF FINANCIAL LITERACY FROM THE PERSPECTIVES OF INDIVIDUALS AND FINANCIAL INSTITUTIONS USING SOCIAL MEDIA",** in partial fulfilment of the requirements for the award of the degree of Doctor of Philosophy and submitted in the Department of Management Studies of the Indian Institute of Technology Roorkee, Roorkee is an authentic record of my own work carried out during a period from December, 2014 to April, 2019 under the supervision of Dr. Sujata Kar, Assistant Professor, Department of Management Studies, Indian Institute of Technology Roorkee, Roorkee.

The matter presented in this thesis has not been submitted by me for the award of any other degree of this or any other institute.

(SNEHAL BAWRE)

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

(Sujata Kar)
Supervisor

Date:

ABSTRACT

Financial literacy has become a mandatory concern to improve economic growth and development for all the nations. For this, several governmental initiatives have been taken to reduce financial illiteracy and to make people better financial decisions. On the other hand, social media platforms are very popular among people. And, with the help of these social media platforms, many organizations are connecting with the people for multiple reasons. Thus, this study is divided into two phases; first is to investigate financial literacy level of urban Indians; second is to examine the impact of social media in creating financial awareness among people.

The first phase of this research is aimed to investigate the impact of demographic factors on financial literacy and its components, namely, financial behavior, financial attitude and financial numeracy skills. It also aims to examine the relationship between the components of financial literacy and the influence of financial numeracy skills on investment pattern. For this research, a slightly modified questionnaire is adopted which has been originally developed by the Organization for Economic Co-operation and Development (OECD, 2011).

The study considers 500 individuals from Tier 1, 2 and 3 cities in India. The data will be analyzed by using two logistic regression tools viz. Multinomial logistic regression (MLR) and Ordinary Least Square regression (OLS) in Statistical Package for the Social Sciences (SPSS). Further, the reliability of data will be measured using Cronbach's Alpha method.

The data shows that financial literacy in terms of familiarity with financial instruments and participation in formal financial system is quite reasonable at 65 percent among the participants. Demographic variables like gender, age, education, income, and reliability of income are found to have significant influence on financial literacy. Further, all the components of financial literacy are found to impact each other positively. The findings also suggest that financial numeracy skill may improve overall financial literacy and secondary market participation in India. However, the use of financial websites or social media sites for investment decisions is meager.

Next, the second phase of this research is aimed to identify the extent to which social media is used by Indian Financial Institutions (FIs) for various purposes such as connecting with customers, explore new market, sell products etc. including generating financial awareness more options. For this, a total 32 FIs that are listed with Bombay Stock Exchange (BSE)/ National Stock

Exchange (NSE) India are considered; 22 of them being banks and 10 non-banking financial companies (NBFCs). Managers of all the FIs will be interviewed using self-administered questionnaire.

The result shows that Facebook, Twitter and LinkedIn are the most widely used social media platforms for exploring new markets, developing new ideas, selling financial products, connecting with the customers and customer relationship management (CRM). Further, banks and NBFCs are found to adopt these media pages to post important financial announcements, which increases customer's interest in investment options. The study provides a view on social media usage in terms of cost reduction and customer satisfaction. However, there are some risks associated with social media such as reputation risks, operational risks, data and information risks etc. Furthermore, managerial discussions highlight their contribution to the use of social media to increase financial literacy.

Keywords – Financial literacy, Social Media Platforms, Financial Institutions, Banks, NBFCs, Multinomial Logit Model.

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TABLE OF CONTENTS

CHAPTER 4 ANALYSIS OF FINANCIAL LITERACY 61

CHAPTER 5 DATA ANALYSIS AND RESULTS: PHASE-II 81

LIST OF TABLES

LIST OF FIGURES

ABBEREVIATIONS

BSE	Bombay Stock Exchange
CRM	Customer Relationship Management
CSR	Corporate Social Responsibility
ELSS	Equity Linked Savings Scheme
FIs	Financial Institutions
FLCs	Financial Literacy Campaigns
GFIs	Global Financial Institutions
GOI	Government of India
HDFC	The Housing Development Finance Corporation
HSBC	The Hong Kong and Shanghai Banking Corporation
ICICI	Industrial Credit and Investment Corporation of India
IMF	International Monetary Fund
INFE	International Network on Financial Education
MFI	Micro Finance Institutions
MIS	Management Information System
MLR	Multinomial Logistic Regression
NACCS	Non-Agricultural Cooperative Credit Societies
NBFCs	Non-Banking Financial Companies
NGOs	Non-Governmental Organizations
NSE	National Stock Exchange

OECD	Organization for Economic Co-operation and Development
OLS	Ordinary Least Square
PMJDY	Pradhan Mantri Jan Dhan Yojana
RBI	Reserve Bank of India
SBI	State Bank of India
SEBI	Security and Exchange Board of India
SEWA	Self-Employed Women Association
SHGs	Self-Help Groups
UK	The United Kingdom
UPI	Unified Payment Interface
USA	The United State of America

CHAPTER – 1
INTRODUCTION

1.1 BACKGROUND OF THE STUDY

After the financial crisis of 2007-09, it was difficult for the Indian banking sector to deal with the situation similar to other sector companies. Deceleration in economic situation has affected banks' asset and profitability. On the other hand, the fear of financial crisis was preventing people from making justifiable financial decisions. As a result of financial illiteracy, it was arduous for people to determine the selection of appropriate investment products that could contribute a lot to improve financial conditions with positive returns. Because of this, the living standard of people was also going down which created an urgent need to overcome this situation.

Foreign direct investment has been considered as an aid to economic growth of any country (Agrawal, 2015). But now, in the case of economic development, financial literacy also has become mandatory concern for every country in the world. In recent years, an immense growth and advancement have been seen in Indian economy (Bhattacharyya and Chatri, 2012; Bhattacharyya, 2016; Chaudhuri, 2010). On one side, capital gains and efficiency were seen in private sector banks, whereas public sector banks had to face losses in these two areas. To strengthen the Indian economy with the standard of living of the people, the Indian government has started manifold economic reforms. Financial literacy plays an important role to improve the living standards of people. However, there are certain factors affecting the economic environment worldwide.

In recent years, social networking has occupied huge space over a period of time in the lives of millions of people all across the world. Today social media platforms connect everyone, acting as a tool for communication, accessing information, financial transaction, shopping, networking with customers, and a long array of similar activities. Moreover, banks around the world have started using social media platforms to share information with their customers and for developing public relation. However, Indian people are still scared to share their personal information through online platforms (Alathur et al., 2016).

Thus, this study is aimed to analyze the level of financial literacy in Urban India, to observe the various ways and purposes for which social media is being used by financial organizations as well as the role of banks and NBFCs in generating financial literacy in terms of initiatives and strategies adopted by them.

1.2 RATIONALE BEHIND THE STUDY

Development of an economy's financial system consisting of markets, institutions, instruments and overall infrastructure crucially depends on the financial literacy of its population. A well informed or financially literate population not only helps in financial deepening and broadening, but also thinks of making efficient investment decisions; they feed it back to the efficient performance of the financial system. A well-developed financial system requires large scale participation by a country's population in the financial markets to facilitate channelizing resources for the development of non-financial sectors, creation of jobs and income, and to ensure overall growth of the economy.

Further, with globalization as investment in financial products have become much more complex, and requires better understanding and knowledge of financial matters, financial literacy has become more pertinent a problem to look into (Lusardi, 2015). Governments around the world have launched financial educational programs to generate awareness among individuals about financial markets, products and services. The OECD has defined a country to be financially literate if at least 70 percent of its population is financially literate (Lusardi and Mitchell, 2011a). However, financial literacy is still low in most of the developing economies (Lusardi. and Mitchell, 2014).

The rationale of this study has arisen due to the initiatives taken by the Government of India (GOI) for the advancement of financial literacy in recent years. An article published in Forbes India Magazine (2017) states that the digitalization of banks in India started their journey almost three decades ago. But in the current decade, its pace has increased manifold and has also been facilitated by a digital India campaign, which focuses more on digitally empowering India by providing better online infrastructures and improved internet connectivity. It is pertinent to analyze the effectiveness of those literacy programs to understand whether they fulfill their promises or not and at what level they are benefiting individuals. As a result, there are two broad aspects of this study; first is to analyze the level of financial literacy in Urban India; and the second is to investigate the extent of using social media platforms by FIs for advancement of financial literacy in India.

1.3 INTRODUCTION TO FINANCIAL LITERACY AND SOCIAL MEDIA

To strengthen the economic condition, having basic understanding of saving and investment need something more in everyone's life has become an essential element. Financial literacy generally understood as the possession of required knowledge and skills for making informed and effective personal financial decisions have gained substantial prominence in the last one decade or so. The lack of financial literacy is the reason for low participation in financial activities.

Atkinson and Messy (2012) explained financial literacy as “An association of familiarity, knowledge, behaviour, attitude, numeracy and skills to make financial investment decision for betterment of individual’s life and growth of national economy”.

Similarly, The Center for Financial Inclusion, stated financial literacy as, “The combination of knowledge, skills, attitude and ultimate behaviors that translate into sound financial decision and appropriate use of financial services.”

According to National Financial Educator Council, financial literacy is defined as “Possessing the skills and knowledge on financial matters to confidently take effective action that best fulfills an individual’s personal, family and global community goals”.

The above definitions indicate that financial literacy encompasses three important components acting as main constituents in defining it. They are financial behavior, financial attitude and financial numeracy; presented in Figure 1. The Researcher has also reviewed some literature that represents the relationship among these three components of financial literacy and their impact on the economic conditions.

Few years ago, social networking sites were used by user only to connect with other users whom they have any interrelationship such as friends, colleagues, fans, etc. But today social media has been widely used by many organizations.

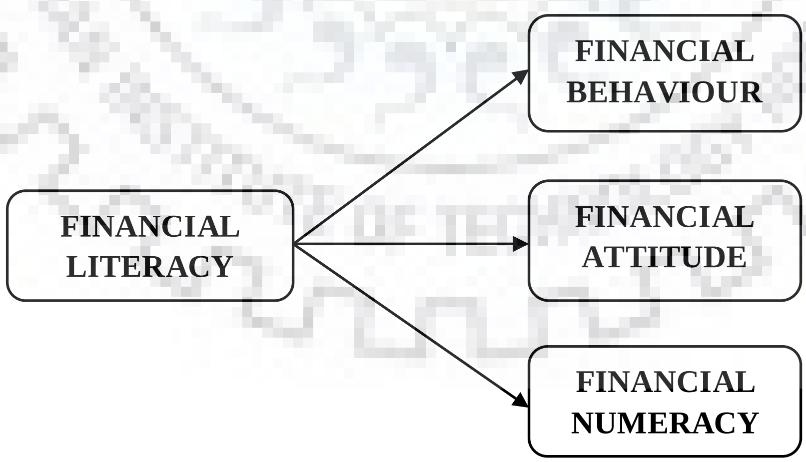

Figure 1.1 Components of Financial Literacy

Social media is a platform where organizations can communicate with society (Aula, 2010; Cata, 2007). The term social media includes blogs, microblogs, Wikipedia, virtual world, social networking sites primarily (Kaplan and Haenlein, 2010; Miranda et al., 2013). No particular definition of social media has been expounded yet.

1.4 IMPORTANCE OF FINANCIAL LITERACY

The lack of financial knowledge creates financial difficulties for individuals when banks and NBFCs inundate them with various types of saving and investment options. Insufficient financial decisions also generate problems in retirement phase such as low / no savings. Financially uneducated people are unable to make right financial choice which increases the risk of loos that results to financial problems. The study by Verma and Rangnekar (2015) state that education and experience have a positive effect on making decisions.

Existing financial products are really complex to understand in detail. In 2014, a report claimed that only 2 percent Indians invest in equities (Chauhan, 2014). In the era of financial globalization and development, this number is too meager to reckon with. Certain government initiatives have been undertaken on financial education, inclusion and security in the last 3-4 years. Master (2012) suggested that adoption of new technology can be an important element in terms to sustain any business.

The financial opportunity has become the fundamental right for all (including children, women and men), which is not limited to middle or upper income groups. To reduce economic inequality, financial literacy should be added to the educational program at the school level. The basics of savings and investment could develop an insight into making the right financial decision. Limited financial awareness has been found in India, and there is a need to reach the financially vulnerable people and make them aware about financial products and services.

Financial literacy has become imperative for everyone. Reserve Bank of India (RBI) has directed all public sector banks to start financial literacy training programs to increase the basic financial knowledge of children, rural women and men. The past few Indian studies have shown the low level of financial literacy in women, less-educated people and low income groups, etc. In recent years, Indian banking and non-banking sectors have been found to be involved in many financial activities to improve financial literacy in the country. These programs are designed not only for the rural people but also for educating the urban people. Thus, it is very important to examine the effectiveness of such financial literacy programme.

1.5 ROLE OF SOCIAL MEDIA

Social media has changed everyone's life whether there is a need to communicate, learn, shop, payment, fund transfer, balance enquiry and many more. In India, Facebook was found to be the most popular social media network which is being used for professional reasons and to share information by majority of people (Jain et. al., 2016). Through social media channels, advertising has become cheaper than traditional marketing methods such as print media, radio and television advertisements, etc. Now, with the help of social media marketing, it's easy to reach the target audience. Banerjee (2017) reports, social media enable communication between banks and their customers in real time, so that the banks can quickly identify any issue through these media platforms and resolve the same.

As a developing nation, India requires persistence efforts to improve its economic conditions. Indian banks need to be more involved in corporate social responsibility (CSR) activities as other private firms do (Gupta and Agrawal, 2014). Indian FIs (especially private banks) are focusing more on providing premium customer service (Fatma and Rahman, 2014). However, financial companies still have to improve their CSR activities in the disclosure of annual reports (Gupta and Agrawal, 2016). The online platform can be used to provide more customer services rather than just sharing information by the government (Norris and Reddick, 2013). Moreover, in order to conquer financial illiteracy, Indian banking sector has initiated working on the improvement of financial level of individuals with the help of many financial literacy programs and campaigns. These programs are designed to understand the basic financial concept and money management for rural as well as urban people. Similar to other sectors, financial sectors also have started using social media platforms on a regular basis. Particularly, their posts are related to banking and investment activities which work as a medium of communication between banks and millions of people.

Social media also facilitates advancement of digital services by the banks. Through these digital channels, FIs are also connecting with customers to build a strong communication. Some of the banks have started using these media platforms for new product announcements. Additionally, banks are also organizing financial literacy campaigns (FLCs) to create customers' interest towards the benefits associated with a savings bank account, and investment in various financial products via social media channels.

From a customer perspective, financial transactions have become easier with the use of digital channels compared to conventional methods. A customer can also access various financial activities such as balance enquiry, money transfer, bill payment and many more via mobile banking, e-banking, and even Facebook and Twitter. Social media has become an easy tool to connect with the banks or other FIs, where customer can provide feedback and complaint about any products or services. If the customer's expectations, meet their needs, then the bank may have a brand loyal customer. In order to retain customers or increase customer base, banks should provide quick response via these digital channels in a positive way.

1.6 APPLICATION OF SOCIAL MEDIA

Studies conducted in various countries show that public sector participation in social media has increased. American government is using these media platforms (such as Facebook, Blogs, YouTube and Twitter) to disclose information, for connecting people, cost reduction, and improving work efficiency (Reddick and Norris, 2013b). However, application of social media is still new to the governments in most countries around the world and is observed to have below average involvement (Karakiza, 2015; Reddick and Norris, 2013a). Researchers agreed on the fact that, for any developing country, it is extremely necessary to use the available resources of technology to strengthen the economic condition (Sharma and Ambrammal, 2015; Saxena and Bhattacharyya, 2017).

Today, many social media platforms are being used by people as well as organizations for various purposes. FIs are using these social tools as a medium to aware people about the benefits associated with the financial products and services (Ainin et. al., 2015; Parveen et. al., 2016). In addition, social media provides a low cost platform for marketers to communicate with the customers and product development (Rathore et. al., 2016). Generally, organizations use social media for social interaction, where anyone can get relevant information about their product or service on just one click. In recent years, many organizations started using social media marketing for the purpose of introducing a new product, job applications, attract consumers and many more. It has also been observed that, if a customer receives a quick response from the company, then he can recommend the product / services to others. Singh and Sahu (2008) suggested that Indian government should be compatible with internet technologies to provide fast services to the citizens.

The Hindu Business Line (2015) stated that Kotak Mahindra Bank became the first bank in India to launch 'Jifi saver account' used to access 21 banking activity (balance inquiry, online shopping, request check book, bill payment of mobile, etc.) via Facebook and Twitter under #banking services. However, the service was discontinued later.

Further, Gadekar (2016) states that some of the Indian banks (State Bank of India (SBI), ICICI, HDFC and Kotak Mahindra Bank) have introduced services such as balance inquiry, monetary transaction, financial advice etc. for their customers on Facebook and Twitter. In this era characterized by the wave of digital and social networking, it is pertinent to explore the extent to which the financial sector utilizes social media to its advantage. However, there has been a dearth of research in the said area in the Indian context.

1.7 INITIATIVES TAKEN BY THE INDIAN GOVERNMENT

In recent times, manifold initiatives have been taken by the RBI in terms to improve financial literacy of rural as well urban people. That is why, the current study is focused to analyze the level of financial literacy of Indian urban people and the impact of financial literacy programmes on individuals. RBI has directed all public sector banks to open a bank account under the Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme and under this scheme total 31.20 Cr. people opened bank account until February 28, 2018.

Similarly, FIs have started several financial literacy programs through campaigns, seminars on financial investment, saving, financial market, financial products, etc. Financial literacy is not limited to the responsibility of adults only, but it is considered equal to people of all ages, such as children, women and men. For this, some financial institutes have also organized seminars at the school level to improve financial habit of school going children.

For instance, PMJDY launched in 2014, a national program for making individuals understand how to manage savings by proper investment in financial products and services. The RBI is a partner in this initiative on financial inclusion and literacy. However, this program focuses primarily on the financial inclusion of rural and mostly unbanked population and allows individuals to open an account with zero balance in any bank branch. “Nivesh India” a unique knowledge sharing platform, an initiative in the investors’ education programme, is launched by National Stock Exchange (NSE) and Economic Times jointly. Simultaneously, other investment options also raise consumer’s interest such as Self-Help Groups (SHGs), National Pension System, Public Provident Fund (PPF), Senior Citizen’s Saving Scheme, Mutual Funds and so on.

The National Financial Education Center (NCFE) is a FIs formed by four government bodies[1] of India, which was established in 2015 with a view to promote financial education and to make people aware about money and investment. With the help of this institution, people are being made financially aware by organizing seminars, training, campaigns, workshops etc. on financial markets and digital transactions.

Recently in 2018, RBI has introduced financial literacy content targeting to five section of our society particularly farmers, small entrepreneurs, school children, self-help groups and senior citizens. These literacy contents are describing the relationship of financially literacy with all human basic needs, where they can easily understand the budgeting, basic of investment, multiple insurance, pension and loan schemes, loan application process, financial sector regulators, and banking ombudsman scheme. In addition, RBI has uploaded videos on YouTube which demonstrate basic financial literacy, unified payment interface (UPI) and going digital concepts through advertisement.

In this modern era, digital media has achieved more success in educating people than traditional mediums. Sud (2017) stated in an article that the RBI has estimated an increase of about 39% in digital transactions from November 2015 to March 2017. Today, most FIs are present on social media platforms such as Facebook, Twitter and YouTube. And anyone can view financial literacy videos available on their official social media pages or channels. Financial institutes update information on these media pages on a daily, weekly or monthly basis.

1.8 RESEARCH GAP

Previous literature studies were focused on identification of the financial literacy level particularly to evaluate economic status, and usage of social media platforms for advancement of financial performance globally from 2001 to 2017. It provides an apparent directional area of research required in economic development and profitability. The following five research gaps have been found in Indian context which created the need for further research.

[1] RBI, Security and Exchange Board of India (SEBI), Insurance Regulatory and Development Authority of India (IRDAI), and Pension Fund Regulatory and Development Authority (PFRDA).

- In the initial research, it has been observed that researchers have the scope to investigate the inter-relationship between the components of financial literacy and its impact on socio-demographic variables (Shivramakrishnan et al., 2017; Volpe et al., 2002).

- Second, the effect of financial numeracy on different financial instruments can provide direction for research to improve financial literacy level. In previous studies, only familiarity with financial products was examined (Bihari and Shukla, 2012; Bonte and Filipiak, 2012; Sultana 2010).

- Third, by overall literature, it can be concluded that social media platforms are used by people only for sharing information, videos, photos among family members, friends, peers, etc. (Chang et al 2015; Zhu and Chen 2015). Furthermore, different sector companies were using these media platforms for advertising their products and maintaining public relations (Chang et al, 2015; Go and You, 2016; Jucaityte and Mascinskiene, 2014; Tiago and Verissimo, 2014). As an emerging economy, Indian FIs have adopted social media platforms. And through the use of these media platforms, there is scope for further research in the advancement of financial literacy.

- Fourth, initiatives related to financial inclusion does not meet its purpose, and it needs to implement financial literacy programs and strategies to improve the literacy rate (Basak 2015; Rajpal and Tamang 2014). Consequently, the essence to explore the initiatives taken by Indian FIs to improve the financial literacy level arises.

- At last, previous studies lack to identify the role of social media in creating financial awareness by Indian FIs (Bihari et al., 2012; Basak 2015; Marar et al, 2009; Rajpal and Tamang, 2014; Shivramakrishnan et al., 2017; Singh 2014; Yonzon and Oveis 2016).

In order to fulfill the above knowledge gap, there is a novelty in this research study, which is contained in the following statements.

1. An in-depth descriptive analysis of the data collected,

2. Estimation of models exploring relationships between socio-demographic factors and financial literacy and its components,

3. Assessing the relationships between the components of the financial literacy,
4. Examining the impact of financial numeracy on investment in financial instruments in terms of portfolio diversification and investment in stocks and bonds,
5. Analyzing the extent to which social media influences investor’s financial awareness and financial decisions,
6. Summarizing the managerial view on the extent and various purposes of using social media platforms, and
7. Investigating the impact of social media adoption on financial literacy level.

In this research, The Researcher has also commented on the level of financial literacy based on familiarity of financial instruments and sources that influence the participant’s investment decisions. In addition, the name of websites referred by participants have been mentioned where they search information related to investment and financial products before taking financial decisions.

1.9 OBJECTIVES OF THIS RESEARCH

According to the Standard & Poor's (S&P) Global Survey (2014), the percentage of financially literate adults in India is only 24 percent. In order to improve financial literacy rates, people should be made aware of other investment plans other than fixed deposits. Nowadays, social media has become the easiest medium to connect with others. This is the reason that banks have started using social media platforms to connect with people and to advertise financial products / services. Thus, this study began with the purpose of analyzing financial literacy level and the impact of social media platforms on financial literacy in India. The main objectives of this study are defined as follows-

- ✓ **Objective 1:** To examine the socio-demographic characteristics that influence the level of financial literacy and its three components viz financial behaviour, financial attitude and financial numeracy;
- ✓ **Objective 2:** To assess the pattern and extent of any causal linkages between the components of financial literacy;
- ✓ **Objective 3:** To find out the impact of financial numeracy skill on investment pattern in terms of financial instruments and investment in stocks and bonds;

- ✓ **Objective 4:** To examine the various purposes for which social media platforms are used by financial organizations;
- ✓ **Objective 5:** To study the role of banking and non-banking financial organizations in generating financial literacy in terms of initiatives and strategies adopted by them, and
- ✓ **Objective 6:** To examine the extent of use of social media by financial organization to increase financial awareness.

1.10 RESEARCH QUESTIONS

Research questions provide a basis for identifying the field of study / research and provide guidance for preparing hypotheses to achieve research objectives. This study is mainly aimed at analyzing the financial literacy levels, and the impact of social media platforms on financial awareness in India. Based on the above research intervals, the following research questions have been prepared-

- ♦ **RQ1.** Does the level of financial literacy vary according to socio-demographic variables (age, gender, education, employment status and total income)?
- ♦ **RQ2.** Are the components of financial literacy inter-related to each other?
- ♦ **RQ3.** Does financial numeracy vary the investment pattern of financial instruments and stocks and bonds?
- ♦ **RQ4.** What are the various purposes of using social media by financial organizations?
- ♦ **RQ5.** What are the initiatives and strategies adopted by FIs in generating financial literacy?
- ♦ **RQ6.** What is the extent of social media adoption by FIs to increase financial awareness?

1.11 SCOPE OF THIS STUDY

Financial literacy has become an essential element for the developing nation like India. This study provides the insight into basic and advance financial literacy to individuals as well as researchers; and how social media usage will increase the level of financial literacy among individuals. In some recent years, GOI has taken manifold initiatives to strengthen the economy. This thesis provides scope for researcher in terms of financial literacy level as mentioned below-

To meet the research objectives, it is important to analyze the components of financial literacy with the help of a survey method. Here, basic financial literacy covers financial sectors such as saving patterns, retirement plans, familiarity with financial products, investment pattern, financial decisions; etc., where the financial behaviour and financial attitude of the respondents are measured through this section of survey. In addition, the advance financial literacy (representing financial numeracy) is to be measured through simple interest, compound interest, inflation rate, risk and return, stock market investment, bond price etc. Consequently, it provides an overview of basic and advanced financial literacy and the scope for further research to overcome financial illiteracy.

The second part of this research provides the scope for analyzing the policies issued by RBI to increase financial awareness and the initiatives taken by FIs with the help of social media platforms. This part of the survey covers areas like popular social media sites, social media department, reasons for using social media, cost reduction, policy review period, risk involved, social media site updation, etc. However, the risk can be reduced through monitoring the banking financial activities (Chauhan and Rastogi, 2013). There is a scope for interviewing FIs manager where the managerial approach provides information about the benefits of using social media and how these media platforms are being used to make people aware about the financial products or services. Even for the citizens, it has become a popular platform to provide feedback or complaint.

The above discussion presents an overview about the popular social media channels used by FIs and its usage patterns. It also describes the effects and benefits associated with the use of social media. In this way, this thesis provides the scope for FIs / researchers to search about the level of financial literacy in India, and not only by Indian banks, but also by other FIs, social media platforms are being used to solve this problem.

1.12 CONCLUSION

In this thesis, there are six chapters with a bibliography and an appendix. The summary is represented in Figure 1.2. Chapter 1 begins with background and motivation behind the current study. Introduction of financial literacy and social media terms explains about the different views on its necessity for individual’s life. Basic financial literacy has become a mandatory concern for the growth and development of any nation. Considering the fact, GOI has initiated several financial literacy programme to make people aware about investment related decisions. Hence, the social media platforms are being used for advertising and selling the product or services. Similarly, the FIs has adopted the strategy to improve the individual’s knowledge about the financial products or services that ultimately results to economic growth.

Chapter 2 reviews comprehensive literature on the situation of financial literacy around the world including Indian studies. This literature provides an overview of the initiatives taken by the

GOI to improve financial awareness, followed by the impact of socio-demographic variables on financial literacy status and the impact of financial literacy on financial decisions. Additionally, it determines the impact of financial numeracy on financial decisions. This chapter also discusses the study on the various initiatives taken by Indian government to remove financial illiteracy.

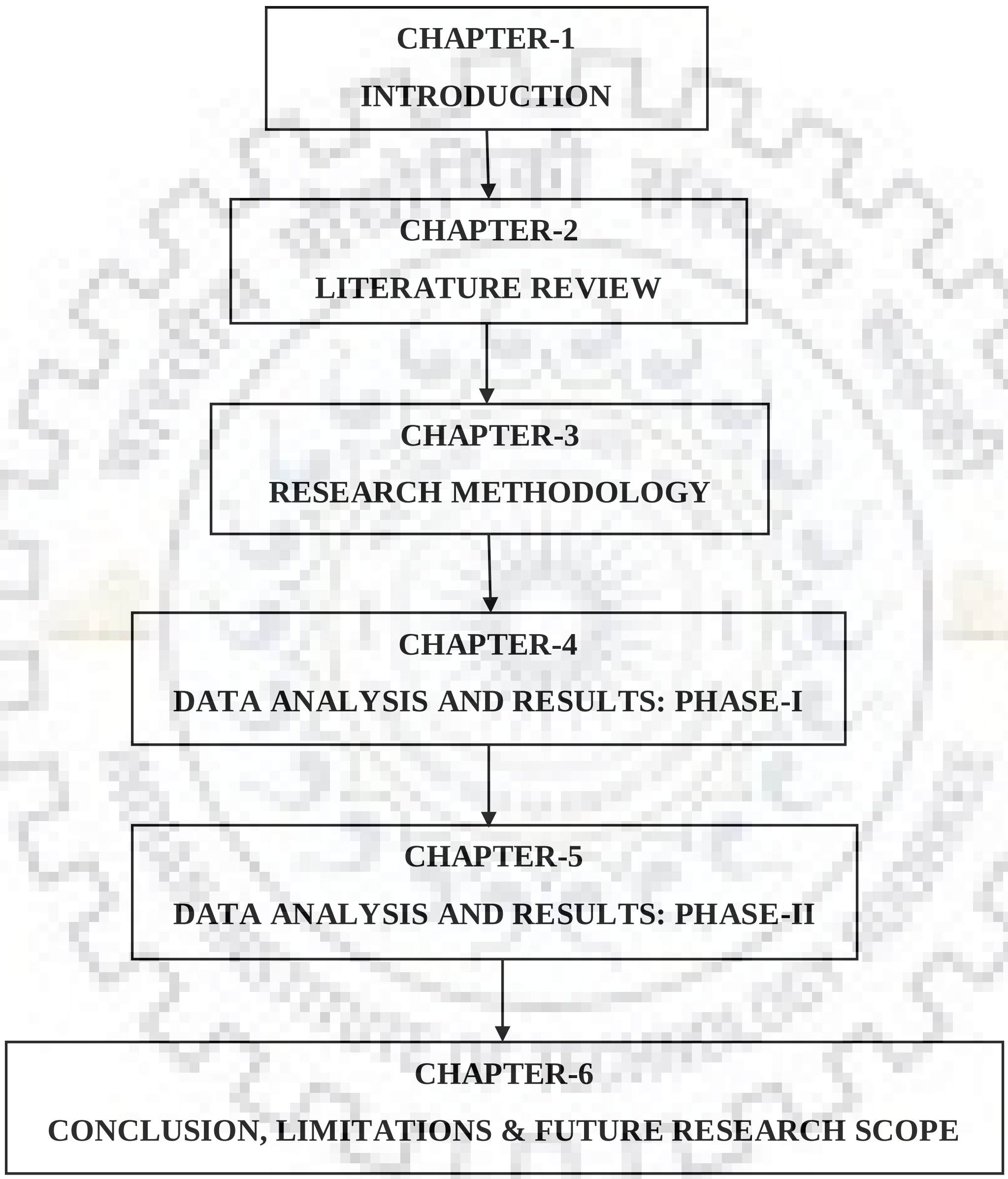

Figure 1. 2 Summary of the Thesis

Afterwards the literature review on the usage of social media platforms around the world has been presented in chapter 2. In this section, the summary shows various applications of social media by different organizations. In addition, multiple strategies adopted by FIs to make people financially aware with the help of social media platforms, and its impact on organizational performance have been reviewed.

Chapter 3 discusses the research methodology applied in this study. At the beginning of this chapter, the research gaps are presented after reviewing literature, especially in the Indian context. Then the objectives of the thesis are discussed, followed by hypothesis development. The research design and sample design presents the details about sampling method, sample size and sample unit used in this study. Apart from this, data collection methods, research dimensions and data analysis techniques are presented. Finally, the steps involved in coding of the variable are disclosed before applying any analytical tool.

Chapter 4 investigated the data analysis techniques used in Phase-I of this research, and its application on dependent and independent variables with interpretation. Primarily, it provides individual's responses according to the socio-demographic profile of respondents, and financial literacy dimensions viz. financial behaviour, financial attitude and financial numeracy. Next section presents the model estimates for financial literacy, where reliability and multicollinearity of data were tested. It also provided the details of base category of independent variables adopted while analyzing financial literacy. The effects of socio-demographic variables on financial behaviour, financial attitude, financial numeracy as well as financial literacy were examined in this chapter. In addition, the interrelationship was evaluated between the dimensions of financial literacy.

Chapter 5 provides an overview about the impact of social media adoption on financial literacy. First, the reliability of data has been tested. The data were collected from the managers of 32 Indian FIs (banking and non-banking). This survey also provided the managerial views on social media usage, the impact of using social media and strategies adopted by FIs to reduce financial illiteracy. Finally, the comparative analysis between banks and NBFCs provides the multiple factors affecting their social media usage pattern.

Chapter 6 provides an overview of findings that helps to fulfill the research objectives. There are some limitations of this study, which provides scope of further research. This chapter presents implications for researchers and financial intermediaries to improve the level of financial literacy in India. At last, the bibliography is attached that presents all references used in this study, and the supplement on the survey questionnaire which provides an overview on dependent and independent variables used in detail, followed by research papers publication detail.

CHAPTER – 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter begins with discussion on some initiatives taken by the GOI to improve financial awareness. The impact of socio-demographic variables (age, gender, education, income, social interaction, health, employment status, housing tenure, caste and marital status) has been found to influence financial literacy around the world. These variables are found to influence directly or indirectly on individuals and investor's perception while making financial decision. Some sources are found to influence the financial decisions such as expert advice, social media websites, minority programs, financial literacy camps, etc. This is the reason why it is important to understand thoroughly the availability of resources to make better financial decision.

The Lack of financial literacy among people results in no or low savings, financial losses, debts, basic daily life expenses, struggling at old age and so on. On the contrary, a financially literate person is more capable of making financial decisions (Gathergood and Weber, 2017). In addition to this, the chapter also discusses about the impact of financial literacy on financial decision making. The important thing is, individuals should know about how to deal with their money, where to invest, what will be the potential investment schemes, how will they get more profits and returns etc. That is why, the more the financial knowledge is gained, the more money can be save by investing in various investment schemes.

This research is started with the motivation of examining the current state of financial literacy in India and how FIs are working to improve it. In this research, the extant literature was reviewed on the said area conducted on different countries such as Australia, Bangkok, Brazil, Canada, Finland, Greece, Germany, India, Indonesia, Istanbul, Ireland, Italy, Korea, Latvia, Macedonia, Malaysia, Mexico, New Zealand, Poland, Portugal, Romania, Spain, South Africa, Taiwan, The Netherlands, The United Kingdom (UK), The United State of America (USA), Tunisia and Turkey.

This chapter provides an overview about the different strategies adopted and implemented by FIs in rural as well as in urban areas to improve financial literacy status. It also presents a review on various factors affecting financial literacy in the Indian context. It provides suggestions to the government and FIs that how they can improve the financial literacy in more effective way. This chapter also reviews the types of social media platforms used by FIs around the world. It also shows the benefits associated with these media platforms for overcoming financial illiteracy. The usage pattern of media channels shows how effectively the government or FIs have adopted it to improve their financial performance as well as financial literacy level of the particular country.

The literature on financial literacy and social media has been divided into six segments:

- Definitions of key terms; Subsection 2.2
- Studies on the initiatives taken by the GoI to improve financial awareness; Subsection 2.3
- Studies on the impact of socio-demographic variables; Subsection 2.4
- Studies on financial literacy and financial decisions; Subsection 2.5
- Studies on financial numeracy and financial decision; Subsection 2.6
- Studies on social media and organization performance; Subsection 2.7
- Studies on social media and financial awareness: Subsection 2.8

A discussion of these studies is preceded by a section on the definitions of key terms.

2.2 DEFINITIONS OF KEY TERMS

This section provides some important definitions and terminologies used in this thesis such as financial service, financial instrument, financial literacy, financial behaviour, financial attitude, financial numeracy and social media.

Financial Services

According to the International Monetary Fund (IMF), "A financial service is not the financial good itself, but something that is best described as the process of acquiring the financial good. It involves the transactions required to obtain financial good".

Financial Instruments

Luskin (2003) has defined financial instruments as convertible securities that can be exchanged for other securities and warrants.

Financial Literacy

Financial literacy generally understood as the possession of required knowledge and skills for making informed and effective personal financial decisions has gained substantial prominence in the last one decade or so. Following are some of the definitions provided by various researchers, who have described the meaning of financial literacy and its parameters.

Noctor et al. (1992), has defined financial literacy as “The ability to make informed judgments and to take effective decisions regarding the use and management of money”.

Financial literacy stated by Kim (2001) as “A basic knowledge that people need to survive in this modern society”.

Ray Morgan Research (2003) extended the definition as “Enabling people to make informed and confident decisions regarding all aspects of their budgeting, spending and saving and their use of financial products and services, from everyday banking through to borrowing, investing and planning for the future”.

Emmons (2005) elaborated financial literacy as “The potential to keep track of cash resources and payment obligations, understanding to open saving account and loan application, basic knowledge of health and life insurance, ability to compare competing offers, and future financial planning”.

U.S. Financial literacy and Education Commission (2007) defined financial literacy as “The ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being”.

According to the study by Servon and Kaestner (2008), “Financial literacy refers to a person’s ability to understand and make use of financial concepts”.

OECD INFE (International Network on Financial Education) (2011) defined financial literacy as ‘A combination of awareness, knowledge, skill, attitude, and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing’. The above definition indicates that financial literacy encompasses three important components acting as main constituents in defining financial literacy. They are financial behaviour, financial attitude and financial numeracy.

The definition by Atkinson and Messy (2012) describes financial literacy as "An association of familiarity, knowledge, behaviour, attitude, numeracy and skills to make financial investment decision for betterment of individual's life and growth of national economy."

Financial Behaviour, Financial Numeracy and Financial Attitude

The definitions stated by multiple researchers on financial behaviour, financial numeracy and financial attitude are presented below-

Xiao (2008) defined financial behaviour as "Any human behaviour that is relevant to money management (includes cash, credit, and saving behaviour)".

Atkinson and Messy (2012) have stated financial behaviour as "The way in which a person behaves will have a significant impact on their financial wellbeing".

Additionally, they defined financial numeracy as "The basic knowledge of key financial concept and the ability to apply numeracy skill in financial situation".

Similarly, Tezel (2015) defined financial behaviour as "The capability to capture of understanding overall impacts of financial decisions on one's (i.e. person, family, community and country) circumstances and to make the right decisions related to the cash management, precautions and opportunities for budget planning".

Financial attitude is defined by Parrotta and Johnson (1998) as "The psychological tendency expressed when evaluating recommended financial management practices with some degree of agreement or disagreement".

Social Media

Social media has been defined as the media for social interaction, using highly accessible and scalable communication techniques. Social media is the use of web-based and mobile technologies to turn communication into interactive dialogue. With so many positive aspects, some researchers have defined social media in their own perspective based on the meaning and benefits associated with the social media term, which is discussed in this way:

The term 'social networking sites' as defined by Boyd and Ellison (2008) as "Web-based services that allow individuals to construct a public or semi-public profile within a bounded system; articulate a list of other users with whom they share a connection; and view and traverse their list of connections and those made by others within the system."

Kaplan and Haenlein (2010) studied the social media concepts in detail and provided a new definition as "A group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content".

According to Bryer and Zavattaro (2011) "Social media are technologies that facilitate social interaction, make possible collaboration, and enable deliberation across stakeholders. These technologies include blogs, wikis, media (audio, photo, video, text) sharing tools, networking platforms (including Facebook), and virtual worlds".

In another study, Leonardi et al. (2013) explored the definition of social media as "Web-based platforms that allow workers to communicate messages with specific coworkers or broadcast messages to everyone in the organization; explicitly indicate or implicitly reveal particular coworkers as communication partners; post, edit, and sort text and files linked to themselves or others; and view the messages, connections, text, and files communicated, posted, edited and sorted by anyone else in the organization at any time of their choosing.

2.3 STUDIES ON THE INITIATIVES TAKEN BY THE GOI TO IMPROVE FINANCIAL AWARENESS

Evidently, India is a developing country and it requires more efforts to strengthen the economic conditions. In order to achieve that and to deal with financial instability, it is very important for its citizens to understand the basics of financial concepts. To overcome financial illiteracy, several initiatives and financial literacy programmes have been started by the GOI to make people financially aware. Further, public sector banks and private sectors banks have introduced various investment schemes for the citizens; they are also providing financial knowledge to the customers.

Vitt (2001) defined financial literacy as "The ability to read, analyze, manage, and communicate about the personal financial conditions that affect material well-being. It includes the ability to discern financial choices, discuss money and financial issues without (or despite) discomfort, plan for the future, and respond competently to life events that affect every day financial decisions, including events in the general economy".

In recent years, FIs have started to take initiatives to strengthen economy and to overcome financial illiteracy. Marar et al (2009) studied the effectiveness of Micro-Finance services provided by HSBC to rural women in Chennai. These micro finance services and self-help groups (SHGs) have been started to make the poor people aware about micro credit and financial investments. As a result, the number of borrowers has been increased by nearly 3 times. HSBC has partnered with some Micro finance institutions (MFI) and some non-governmental organizations (NGOs) such as Maandeshi Foundation, RUDI Manager's school, Self-employed Women Association (SEWA) and several others who work to make rural girls and women financially aware and a good entrepreneur.

Rajpal and Tamang (2014) studied economic condition of rural women of Odisha (India). The objective of the research was to analyze the effectiveness of minority programs like self-help groups (SHGs) to make rural women self-reliant. In order to collect data, a total of 30 Women Self-Help Groups (WSHG) members (10 out of every 3 villages) were selected. The result has showed that majority of SHGs are run by government institutions. The major problems faced by rural women were the finance, disease and seasonal nature of work. Most of the people (96%) were living below the poverty line and the literacy rate was very low (10%). Rural women adopted animal husbandry as their main activity, then to make Sal leaf plates as well as bowl. After joining SHGs, the level of income was almost doubled and the increase in savings was noticed.

The paper by Basak (2015) aimed to analyze the initiatives taken by urban cooperative banks (UCB) and NACCS (Non-Agricultural Cooperative Credit Societies) for financial inclusion in West Bengal (India). And the results were quite unpredictable. It showed that UCB and NACCS had not made any reasonable initiative for financial inclusion. Very few customers were benefiting from basic banking services such as depositing, providing loans, saving accounts etc. The result also indicated that the percentage of senior citizens and women customer was very low. To improve the financial condition of the state, researcher had suggested that these FIs should make a strong management information system (MIS) as well as people should be made aware of 'No frills account'.

The initiatives taken by the GOI to improve the financial literacy level were discussed in this study. It was found that the PMJDY was started as an initiative for financial inclusion in the year 2014 (Gomes, 2018). This plan focuses on benefiting the poor and other marginalized sections by providing banking facilities like savings, insurance, pension etc.

To further explore this scheme, Yonzon and Oveis (2016) studied the strategies used to make PMJDY plan successful. There were two steps to the plan; In the first phase (August 15, 2014-2015), through the literacy program, providing universal bank facilities including bank accounts, Rupay debit card and improving financial literacy. The purpose of the second phase (August 15, 2015-2018) was to provide credit guarantee fund, micro insurance, pension plan and financial inclusion. Bank employees are instructed to provide information on the benefits of bank accounts, credit facilities, subsidy benefits and so on. Researchers have seen an increase in the number of banks in the village. All public sector banks were directed by the RBI to open more than 7 crore new bank accounts within a period of five months. They are also directed to increase the insurance and pension beneficiaries. However, adding new accounts with banks is not the only target; instead people should be aware with the facilities associated by connecting with a bank. This is the reason that business correspondents are authorized to make people aware of the benefits using banking services, deposits, withdrawals, loans etc.

2.4 STUDIES ON THE IMPACT OF SOCIO-DEMOGRAPHIC VARIABLES

Hong et al. (2004) observed how individuals' decisions got influenced by social interaction particular to stock market investment in the USA. The result showed that communication via word of mouth influenced individuals' investment decisions in stock market. It was found that those people who were socially active were more prone to deal with the stock market than non-social persons. The impact of social interaction was found to be very strong at those places where people's participation rate in the stock market was high. Thus, it could be concluded that social interaction is the only tool which helps individuals to make the right investment in the stock market.

For the time span 1960-1995, 83 countries were considered by Clarke et al. (2006) to analyze the correlation between income inequality and finance. They observed that economic literacy affected individuals' benefit from financial investments and financial development was positively correlated with equal income distribution. Moreover, income inequality was found lower in the countries where financial markets were more developed.

The similarity and differences related to financial literacy among Australia, the USA & the UK were reviewed by Marcolin and Abraham (2006). Their study was conducted on two groups; i) college students and ii) working individuals. The result showed low level of financial literacy in Australia. Whereas, in the USA, the level of financial literacy was found better among the students having business related subjects and the individuals with higher education. The people were found more knowledgeable about the retirement plans. Similarly, the respondents of UK had better understanding of their financial dealings. Overall it could be said that education has positive significant relationship with the financial literacy.

Taylor (2011) observed age, health, household size and structure, housing tenure, and the employment status of the individual and other household members as key determinants of financial literacy. In his study, financial capabilities were found to be the lowest among British young single non-working adults who were living with non-working adults. In addition to this, two factors age and employment status are found to influence individual's financial capabilities more. However, education and employment helps individuals understand the financial resources and scope of investment efficiently. However, better financial capabilities are found in senior citizens (men) and working women (whose spouse is also working).

In this study, Bonte and Filipiak (2012) investigated the level of financial literacy and its determinants. Consequently, social interaction and caste were found to influence financial awareness and investment decisions positively. However, if individuals have enough knowledge about investment opportunities then social interaction would not affect their investment decisions. Further, they explored the level of awareness about financial instruments and investment behaviour among the low income families. They also reported that daily use of radio, TV, internet, newspapers etc. was related significantly to individual's financial awareness.

The study by Cameron et al. (2014) on the high school students of New Zealand considered a large number of factors that influenced financial literacy; namely, socio-demographic characteristics such as gender and age; students' ability in terms of performances in English, mathematics, and economics or business studies; consumers' socialization and financial experience, e.g. banking, employment, and consumer spending history; parental wealth; and financial risk tolerance. They observed that individuals' financial literacy depended positively on education, income, and age. Parent's financial status was found to be related to knowledge and comprehensive ability of the students. Further, high risk averse students were found to be better decision makers whereas poor students were found to have low financial literacy as well less English and mathematical ability.

Chen et al. (2014) observed that how social interaction affects individual investment level in the USA. Most individuals consult family members, friends, and peers before making investment decisions. Researchers observed that people rely more on peers' advice rather than traditional sources such as consumer report, expert guide etc. in the financial market. Social media websites related to investment have become an important platform where users can share their thoughts and experiences with others to increase the level of investment. Further, researcher also found the relationship between the article quality posted on these social media websites and investors view. It was observed that users pay more attention to the negative articles than positive articles.

In the context of economic development, Singh (2014) discussed the importance of financial literacy as well as the contribution of the RBI. For this, researcher used secondary data through newspaper, magazine, journals, websites etc. He observed that the level of financial literacy was very low among women compared to men, low income group, minority people and less educated people. Although, RBI has issued guidelines for banks to open financial literacy centers in urban as well rural areas. These centers will be opened with the aim of reducing financial illiteracy. With this initiative, many investors are expected to invest in long-term savings and investment plans.

Further, Agarwalla et al. (2015) studied the factors influencing financial literacy and its impact. A total of 1000 people living in the major cities of the country were surveyed to gather data. In the analysis, income and education were seen as two positive factors which affect financial literacy. They found that self-financial decision making leads to low financial knowledge. Therefore, authors recommended that financial knowledge could be increased by taking advice from experts. Further, it was also found that two variables, marriage and financial planning, increased the chances of positive financial attitude. Also, income was found to have positive impact on financial behaviour.

Grohmann et al. (2015) observed that financial literacy of 530 middle class people from Bangkok depended on economics taught at school as well as the quality of education. They found that parental education had positive effect on financial literacy and financial behaviour. Researchers had suggested four instruments to reduce financial illiteracy; i.e. basic numeracy at the school level, higher education, economics subjects at the school level, and parental knowledge about basic money management. According to them, if these four instruments are adopted, then it will be helpful to change the present condition of financial literacy.

Lusardi (2015) conducted an international research to analyze financial literacy levels among 18 countries. In this research, about 29,000 students were asked about basic questions on financial behaviour, financial knowledge and its application. The result clearly indicated that there is not much difference between boy and girl financial literacy. Between the students of economics subjects, the level of financial literacy was better than others. Most students had a bank account and were familiar with the facilities provided by the bank such as savings account, online banking services etc. It was also observed that low financial literate students are unaware of the right investment decision and hence, there is less chances of investing in the retirement plan.

Smyczek et al. (2015) investigated the financial literacy of five countries viz. Germany, United Kingdom, Spain, Poland and Romania. Financial illiteracy is found to be reliant on gender, education status and occupation. Apart from this, they found that financially literate people are capable of managing their money and making the right financial investment decisions. Conclusively, the level of financial literacy among individuals was found to be very low in all five countries. Three factors have been found to affect the level of financial literacy, which are education, financial status and employment status. Researchers suggested that if people are given proper financial training, then they will be able to understand the basic financial concept to make them more responsible for dealing with their money.

2.5 STUDIES ON FINANCIAL LITERACY AND FINANCIAL DECISIONS

This section discusses about the impact of financial literacy on financial decisions. Past studies has provided multiple factors affecting financial decisions. Similarly, to avoid over-indebtedness, individuals should control their credit habits (Gathergood, 2012).

Huston (2010) reviewed numerous literature on the impact of financial literacy among the nations and summarized the flaws in previous research and concluded with factors affecting financial literacy. The researcher found that financial literacy explores the knowledge of the person's skills and quantitative analysis. It also increases the sense of investment before making any financial decision or expense. The financial literacy program should be designed effectively to reduce the problems faced by individuals and family members while making financial decisions. However, even more standard approach is needed to identify obstacles in financial education more effectively.

In this research, the investment pattern of individuals was analyzed by Sultana (2010). With the help of referral sampling method, investors were asked about their risk tolerance capacity and investment decision. The results showed that male respondents are more risk tolerant than female respondents and prefer to invest more in the financial market. Inverse relation between risk tolerance and age has been found i.e. older people trade safely in comparison to youth.

Bihari and Shukla (2012) studied the investment behaviour of Indian investors particular in mutual funds. In this study, researchers analyzed the relationship of financial literacy with age, education and income. Result indicated that, in the context of mutual fund investments, age and education had a significant positive relationship with the level of financial literacy. Majority of respondents were found familiar with the mutual funds. Also, most respondents were well-acquainted with the term of the Equity Linked Savings Scheme (ELSS).

Prete (2013) found a positive relationship between financial development and economic literacy across 30 countries. The study considered financial development, economic literacy and inequality over the period of 1980-2005 (documented by Beck et al., 2007). The regression of economic literacy on the inequality produced a significantly negative coefficient. This implied that economic literacy is higher among the countries with low inequality.

Calcagno and Monticone (2015) conducted a study to examine the investment behaviour and financial literacy level of individuals living in Italy. They found that the investors were investing more in risky assets because of their trust on their financial advisors. Further, financial advisors were providing more information related to risky financial product to investors with higher financial knowledge. Consequently, the investors having low financial literacy were less prone to delegate their investment decisions to the experts, who were providing investment tips and were selling investment products simultaneously.

From OECD survey, Paramonovs and Ijevleva (2015) adopted three components of financial literacy as financial behaviour, financial attitude and financial knowledge. On the basis of these three components, they examined the financial literacy of individuals looking for home loans in Latvia. They observed that educational website of government authorities and banks had greater impact on consumer's financial literacy for the home loan market in Latvia. In addition, researchers suggested that, consumers would have to take an interest in the financial settlement itself in order to overcome financial illiteracy.

2.6 STUDIES ON FINANCIAL NUMERACY AND FINANCIAL DECISIONS

Research on financial literacy received attention in India primarily after 2010 and still remains largely insufficient. An initial study on the financial literacy of online investors was conducted by Volpe et al. (2002). For this, an online survey was conducted which covered financial instruments such as net asset value (NAV) calculation, compound interest, variation in stock and bond price, interest rate, tax rate etc. A total of 530 respondents participated in the online survey and provided the answers. The result showed that older people (30-50 years of age) were more financially literate compared to youth. Similarly, there was a positive and direct impact of education and income on financial literacy as well online traders performed better than others.

Cole et al. (2009) studied the demand for financial services and the effect of financial literacy program in India and Indonesia. For this, the data was collected on a very large scale (4856 individuals conjointly). To analyze financial literacy level, all individuals were asked about the calculation of simple interest, loan interest, discount rate, risk and return, and some financial approach questions about saving and expenditure. Result indicated that only 31 percent individuals were familiar with bank saving account and 74 percent people were interested to attend financial literacy training programme. In this training program, detailed information about savings bank account benefits was provided to the beneficiary. Initially financial literacy training programme was not found useful in terms to open saving account in banks. But during the six-month period, participants of financial literacy program showed more interest in opening bank accounts. Further researchers claimed that increase in demand of financial services may improve risk sharing and reduce economic volatility.

In a study by Van et al. (2011), 2000 household of The Netherlands were focused to analyzed familiarity with financial product and services. Result showed that the majority of the investors had limited financial knowledge such as compound interest rates, time value of money, inflation and also, the level of advanced financial literacy was found low among youth which resulted in low participation in stock market. In contrast, between 40-60 years of age group respondents, advanced financial literacy had been found better. They also found that participants who possessed high financial literacy consult the financial advisor before investing in the stock market.

This study was focused to examine the impact of financial numeracy on financial decision making. Disney and Gathergood (2013) focused on financial literacy and credit portfolio adopted by individuals in the UK. The results showed that 84.3%, 52.1% and 42.2% respondents answered correctly for simple interest rate, compound interest rate and minimum payment, respectively. The percentage of individuals who gave all correct answers was very low, and consumer credit was high among those having low financial literacy.

In another study, Agarwal et al. (2015) analyzed the influence of financial literacy programme on financial literacy and financial behaviour (investment, insurance and liability management decisions). With the help of the financial advisory firm, data were collected through 1694 investors. The investors were asked about interest rate, inflation rate and risk diversification. Most respondents (80 percent approximate) answered the correct answer for all three questions.

Thus, it can be concluded that the majority of Indians investors were found financially literate. The results also supported previous observations of higher financial literacy among male than female. Beside, higher education and marriage were two other factors positively affecting financial literacy. They also noted that individuals, who had more number of insurance policies and investment policies, were more focused to achieve their financial goals.

The study of Potrich et al. (2016) aimed to analyze the financial literacy of southern Brazilian university students. For this, researchers adopted a survey questionnaire based on basic and advance financial literacy, where students were asked about calculation of interest, investment, saving, risk, share and bond price. According to the results, financial attitude and financial knowledge found to influence financial behaviour of university students positively.

Mouna and Jarboui (2015a) studied the investment behaviour in stock market in Tunisia. For this 300 investors (trading in Tunisian stock exchange) were targeted to collect data on financial literacy and investors decision making skills. In this survey questionnaire, investors were asked about calculations of simple interest, compound interest, inflation, bond and stock price. The portfolio specification was found to be directly proportional to the experience of investors, that is, the higher the investor experience, the more diversified portfolio will be. The results of this study clearly indicated that low financial literacy was responsible for the low portfolio diversification.

Sivramakrishnan et al. (2017) investigated factors influencing the investor's decision in Stock Market investments. Data was collected from 30 retail investors and 31 financial experts by in-depth interview method in the first phase of research. While in second phase, sample from 900 respondents was collected by survey questionnaire. Consequently, they found advanced financial literacy between investors who possessed equity and basic financial literacy among those investors who did not hold / invest in equity. It clearly indicated that financial knowledge played an important role in purchase intension and reduced investment decision dependency. Further, investment intension was found to influence investor’s decision positively.

Overall the financial knowledge was found better among the European countries and need to improve the financial behaviour of American people in terms of saving and investment pattern. But in developing countries like India, overall financial literacy rate was found very low and required to work on to strengthen the basic financial awareness. The next section is going to discuss the previous studies on social media usage by different organizations.

2.7 STUDIES ON SOCIAL MEDIA AND ORGANIZATIONAL PERFORMANCE

This section discusses the studies on the linkages between financial organizations and social media platforms in terms of the types, percentage of customer's involvement, and the different reasons for using the latter. The literature on social media usage by FIs shows that a decade ago, banks around the world were unknown to various social media platforms and used to disclose information on their official website only. But now, many companies are using web based application to increase their customer base and market share (Lee and Cata, 2005).

As of now, business and research fraternity has studied enormously the impact of social media on individuals as well as organizations (Aral et al., 2013). Social networking sites are defined by Burke (2006) as "A loose affiliation of people who interact through websites. The web enables any person to build a vast number of relationships with others, regardless of geographical distance".

But now many financial and non-financial organizations have started using social media platforms such as Facebook, Twitter, YouTube, LinkedIn, Blogs, Forum, Wikis, Instagram, Pinterest, Google plus, and so on (Hamid, 2004; Castelo Branco and Rodrigues, 2006; Guriting and Oly Ndubisi, 2006; Waters et al., 2009; Nair, 2011; Senadheera et al., 2011; Miranda et al., 2013; Tsitsi Chikandiwa et al., 2013; Kirakosyan, 2015; Mucan and Ozelturkay, 2014; Gulbahar and Yildirim, 2015; Parveen et al., 2015; Dootson et al., 2016; Go and You, 2016). In a business world, social media has become an online platform to share opinion, acumen and viewpoint. There are many factors used by organizations to use social media. The study on the types and methods of social disclosure used by organizations is discussed below.

Hamid (2004) observed corporate social disclosure by small and large firms in Malaysia. In this study, annual report of 100 listed companies as well booklets, special articles etc. were considered. Annual report was found as popular medium of social disclosure compared to other. Product improvement was found at the highest level in the disclosure of annual report. Most companies believed that the situation of product improvement would definitely affect the investor's perception positively and would encourage people to invest with them. Although, the listed and larger firms, were more involved in corporate social disclosure, in compared to the smaller firms.

Similar to above research, Castelo Branco and Rodrigues (2006) studied the social disclosure medium used by Portuguese banks. This study focused on the annual report of 15 banks, along with their official websites. Social responsibility disclosure was classified as Environment, Human Resources, Product and Consumer, and Community Participation. The results showed that compared to the website, the annual report for social disclosure was found to be more significant, where the environmental and human resources were found in the highest class in the disclosure of annual reports. On the other hand, the highest category of social disclosure on website was on product and consumer, and community participation. Although, listed banks disclosed more information about environment and personnel using their corporate websites compared to unlisted banks.

In recent years, the blog has been used by many companies. However, corporate blog is a completely new word for all organizations. Therefore, the study done by Lee et al. (2006) is aimed to examine the various reasons for using corporate blogs. In this study, corporate blogs of 18 companies, which were in the Fortune 500 list in the year 2005, were included. Till 2006, only 3.6 percent of Fortune 500 companies had corporate blogs with bottom-up and top down blogging strategies for product advancement as well as customer assistance. Companies that adopted the bottom up strategy were more likely to focus on product enhancement and customer care. On the other hand, companies with top down blogging strategies were found to focus more on leadership and promotional activities.

Waters et al. (2009) studied the causes and benefits associated with social media use by non-profit organizations. In this study, Facebook pages of 275 non-profit organizations in various fields like Arts, Education, Health Care, Religious, Public Benefit and Human Services were considered. First of all, the researchers studied the types of information available on their Facebook pages. They found that some non-profit companies have started posting information related to latest updates and poster images on Facebook page linked with their official website. Their Facebook pages contained detail information on company's logo, email address, website link, contact number, calendar wise event list, etc. However, Facebook was not being used for the purpose of sharing organizational news. Second, they analyzed the strategies adopted by non-profit organizations to connect with people. It was found that most organizations used message board and video files, and posted it on their Facebook pages, while some organizations made the use of Facebook for fund raising. The authors suggested that creating a Facebook page was not enough; instead, maintaining a continuous posting would increase customer's attention, such as uploading new photos, videos etc.

In an article, Aula (2010) discussed the risks associated with social media use for various industries of the USA, and Finland. The most popular social media platforms in the corporate world are Facebook, MySpace, LinkedIn and Twitter. With the adoption of social media, there are some risks associated with it. And among all the risks, reputational risk is the most dangerous risk for companies around the world. It negatively affects stakeholders, media relations, which results in encroachment behavior of customers. The researcher advised that the reputable risk should be given more importance than other risks in order to maintain brand image, profit growth and customer retention. Also, ambient publicity should be handled appropriately to reduce the reputational risk.

Bolotaeva and Cata (2010) discussed about the benefits and disadvantages associated with social media marketing. They found that majority of users were using Myspace and Facebook media platforms and suggested that organizations can use these platforms to save advertising costs and increase brand awareness among customers. Other benefits associated with the use of social media are recruitment, branding, connecting clients, advertising, feedback and market research. Indirectly it helped in building a strong relation between the customer and the company. Along with many benefits, there were some disadvantages such as negative feedback or comment, legal issues, lack of operations etc. There were some risks associated with social media use such as economic variation, ethical issues, and third party advertisements. The researcher also provided some managerial implications for better use of social media channels such as financial awareness and customer interaction.

Today, the Internet has become a platform where people connect with each other and share information. In this case, banks are also using such platforms to connect with customers and providing services such as internet banking, mobile banking, etc. to their customers. In this research, Joshua and Koshy (2011) examined the customer's usage pattern of these banking services. Customers of nine Indian banks participated in the survey based on usage pattern of internet, banking services and transaction via internet banking, mobile banking, etc. Result indicated that though internet banking usage increased by 22 percent between 2006 and 2009, electronic banking means other than ATMs were yet to penetrate in a big way. The study suggested that banks should focus more on electronic banking services usage by individuals.

Nair (2011) discusses the importance of social media in the USA. In this study, the best social media channels are found as Facebook, Twitter and YouTube; whether some media channels (blogs, vlogs, mashups, wikis, and widgets) are used by individuals to present various types of expressions. Most companies are using media channels to share information related to product or service, connecting customers, brand positioning, customer support, etc. In addition to this, it has become important to provide better services to customers in order to gain adequate benefits. Social media usage enhances transparency among organizations and customers. With enough benefits, there are some disadvantages of using social media. Today, some people also share inaccurate information that is misleading the person's behavior and ideas. The researcher has suggested to the society as well as organizations to understand the value of the social networking platform.

Senadheera et al. (2011) analyzed the use of social media by Australian banks. In this study, four social media channels via Facebook, My Space, Twitter and YouTube were considered. Before 2010, many Australian banks were not proactive on social media platforms. From 2010 onwards they had started to share information on the banks official Facebook page and gradually Twitter had become the most popular social media platform among Australian banks and customers. Unlike large banks, small banks were found to be less active on Twitter. It was also observed that almost all banks had their official channels on YouTube where they can share any video to the audience. But YouTube was not found suitable for maintaining customer relationships, so banks preferred uploading video clips to Facebook, where the number of views would be higher than YouTube channels.

In the USA, a survey was organized by Hong (2013) at a wide level, where 2200 people were selected from the nation survey database and their Internet usage patterns were seen. In this research, people were being asked about the usage pattern of services offered through government official website. The level of trust had been found to be the highest amongst users who used updated government websites. At the same time, the positive impact of social media was seen in relation to those who believe in states and local government. On the contrary, it was also seen that low-quality content on the government's official website and social media pages creates a situation of distrust and dissatisfaction among users. He suggested that the government should increase quality content, which engages the user's interest while surfing their official web pages and websites.

Luo et al. (2013) studies the relationship between media and equity value fluctuations. This study is especially based on secondary data obtained from many online sources (such as online blogs, rating websites) about ten major software and hardware companies. It is seen that positive post on blogs result has increased the firm's return. On the contrary, negative posts on blogs have negative effect on return and investors but for a short time only. In addition, consumer ratings also affect the relationship between firm and investors for a long term period. Investment decision is influenced by the rating level of a company. Generally, new investors see the ratings given by the current investors. Thus, it can be concluded that rating is the most anticipated factor of risk and return.

Miranda et al. (2013) considered 200 International banks to examine the extent and purpose of using Facebook as a social media platform by them. In this research, Facebook Assessment Index (FAI) index was used to evaluate the necessary information uploaded on official Facebook pages. The FAI index has three components (popularity, interactivity and content) of high level of information sharing on Facebook page. The results showed that only 60 percent of the banks had Facebook presence and their popularity and interaction were below average. Also, very few banks posted information related to financial products on their Facebook pages. The number of followers for half the banks was approximately 20,000. Some banks were using Facebook as a recruitment platform. Apart from this, it could be concluded that retail banks have started adopting social media platforms only to comply with current trends. Making a presence only on social media is not enough, but it is also necessary to manage the forum. Most banks are using media channels as marketing tools for various purposes like sales promotion, branding, customer relations etc. (Gupta and Shukla, 2002) Although, majority of large banks were found to have the social presence, it need to improve, maintain and active involvement. Additionally, they suggested that improvement in the social media activity would result into customer loyalty.

Reddick and Norris (2013) studied the factors affecting social media applications by the local government in the United States (USA). In this study, five social media platforms, Facebook, YouTube, Twitter, Blog and Flickr were found to be among the most popular among the local government. Most of these media networks were used for activities related to information and transaction. There are some factors that affect the use of social media by the government, such as population, type of local government, internal government management, location, IT service level, experience of managing online platforms, income level and education status of citizens. However, to maintain relations with the public, the local government needs to improve the interactivity through social media.

This study by Yu et al. (2013) showed a relationship between media and stock market fluctuations. Four types of media were considered for this study in the form of blog, forum, micro blog and traditional media. For this study, a total of 824 companies were involved from different sectors and 52,746 messages posted on the official media pages of these companies were analyzed by researchers. First of all, they found that social media has more impact on stock market performance compared to traditional media. Then, a comparison between posts on blogs and forums revealed that blogs had more positive posts related to company's products than forums; and positive post had significant positive impact on stock's return whereas negative post created pessimism among viewers. In addition, the positive effect of the blog and Twitter post was seen at risk. Thus, continuous monitoring of social media posts and reviews could provide many investors with quality information about the stock.

The role of social media in building corporate image (a category of impression management) was discussed by Schniederjans et al. (2013). They also investigated the strategies affecting the financial performance of firms. To this end, the researcher had focused on five impression management strategies that focused on integration, threats, organizational promotions, examples, and prayers, which were used to measure financial performance. The data was collected through 150 pharmaceutical companies' blogs, forums and corporate websites. The results showed that in the use of social media in impression management strategies, there was only partial, positive relationship for financial performance. In the same way, impression management was found to affect the attitude of the consumer positively (Schniederjans et al., 2018).

Jucaityte and Mascinskiene (2014) reviewed literature for the purpose of examining the benefits associated with the use of social media in commercial communication. With the use of social media in business, finding potential customers had become easier, as well as communicated with many customers in a more effective way. A clear communication between the customer and the company was found to be helpful in increasing the quality of the product / service and increasing the customer base, which automatically increased in profit for the company. In recent years, social media has become more popular than traditional media because it offers customers a two-way communication platform, where they can exchange ideas and participate openly in any conversation. For many organizations, social media has become a tool for branding, customer relationship management, sales promotion, and many other purposes. On the contrary, some business companies did not like the decision to invest in social media because negative comments on social media could affect others' decisions.

Tiago and Verissimo (2014) discussed various reasons which apply to companies for social media use. About 170 marketing managers of Portugal's companies responded through the online survey method. Most managers agreed that digital marketing is used to maintain brand image, learning progress, sharing information and good communication flow because only social media enables large user participation. The digital platform used by most users is the company's official website. After this, Facebook, LinkedIn, Twitter and many other media platforms were given priority. However, many benefits are associated with social media marketing. Most managers believe that there is a good deal of investment in it, because if the investment cost is being compared with the traditional media, then there is a low cost of investment with social media from a marketing perspective.

The study by Chang et al (2015) aimed to analyze that how the effective post attracts people to like and share with the help of social media platforms. Researchers targeted the iCook website which is Taiwan’s largest cooking website and observed the impact of recipes posted on its social media page Facebook. A survey was organized on the basis of argument quality, post popularity, post charms, utility, and preference, such as intent, share intentions, relative importance and user expertise. The researchers found that it affected followers’ behaviour; generally, people liked and shared the post of their favorite recipe. According to the fans, some posts were useful depending to individual needs. However, advertising by celebrity also made posts popular and affected the perception of individuals for that particular post. So no researcher could analyze or interpret the extent of popularity for any post.

Gulbahar and Yildirim (2015) conducted a research in Istanbul Hotel industry, to analyze the extent of social media and electronic channels for the purpose of marketing. A structured questionnaire was adopted to collect data from 19 hotel managers. In the interview, they agreed to the fact that Facebook and Instagram are the most active media channels among hotel industries. The industries were using social media networks for the purpose of advertising and marketing of their services. A team of employees was also appointed to handle issues related to customers. Most hotels were using mobile applications for the purpose of sharing information among customers; But only some hotels were found using it for online reservations, bill payment etc.

Before relying on any company or product or service, people review the online response given by others and it affects their purchase decision. The study conducted by Kim et al. (2015) is focused on examining the impact of online reviews on hotel business performance. In this study, a hotel chain was considered, having 128 hotels in the USA. The online review was analyzed by two significant variables rating and responses provided by customers. It had been observed that compared to positive comments, people were more affected by negative comments. But a satisfactory response to negative comments could change the way others think. In addition, appropriate feedback given to the customer's complaint, could prevent financial losses, and ensure customer retention. Lastly, researchers suggested that the hotel management team should focus on the online rating provided by the customers. However, the number of reviews was not found to affect the intentions of others.

Similarly, Parveen et al. (2015) examined the social media impact on organizational performance in Malaysia. In this study, six companies from different areas were selected, which are listed on the Kuala Lumpur Stock Exchange. Managers of these companies were interviewed about the usage pattern of social media. According to them, the company had the social presence on Facebook, Twitter, YouTube and Blogs. Some common objectives of using social media platforms by various organizations were found such as promotional activities, sharing information, customer reviews, customer relationships, advertising, connecting with new customers, etc. Further, researchers concluded that adoption of social media had improved their relationship with customers in terms of positive brand image as well as cost reduction. However, social media was a new thing for the organizations as well as the customers, and they had started adopting media channels to find information and payment related activities.

The most popular social media platforms among corporates were investigated by Smith et al. (2015). In this study, a total of 250 companies were selected, which are listed in the Fortune 500 in the year 2013. The collected data was based on total assets, total sales revenue and total liability. Ten social media platforms were observed in this study, such as Facebook, Twitter, YouTube, LinkedIn, Instagram, Google+, Foursquare, Pinterest, Tumbler and Blog. The result shows that most companies use Facebook, Twitter and YouTube social media platforms. Overall, a well-maintained Facebook page had a good effect on financial performance.

In recent times, public sectors participation in social media has been increased. Based on the characteristics, social media classification in the USA was discussed by Zhu and Chen (2015). This study presents a review on the use of social media services by individuals in four categories such as relationships, self-media, collaboration and creative outlets. It can be concluded that relationship based social media platforms such as Facebook were used by individuals to build and maintain relationship with society, not with the corporates. In self-media based social media as Twitter, people wanted to follow other celebrities or influential people. Generally, people used such social media for self-esteem, where they wanted a similar lifestyle of their favourite personality. In collaborative social media platforms such as Reddit, individuals searched for answers, asked questions and share information / news. These types of social media are also used to seek advice and solution on a particular topic or subject. In addition, they observed that creative social media outlets like Instagram, Flickr and Pinterest, were selected to show beauty and pleasure associated with the products or services by individuals. Ultimately the researchers suggested to the marketers that social media platforms should be chosen according to its theme to serve better in the society.

Furthermore, the usage patterns of social media in 317 Korean companies were examined in this study. According to Go and You (2016), non-profit companies are more involved in customer engagement and information disclosure through social media sites. Blog is a social media platform especially for one-way communication with viewers. This is the reason that blogs were being used by most organizations for public relations and marketing of products compared to other social media platforms like Facebook, YouTube. In addition, non-profit organizations were also found to be active on social media platform for two-way communications with the public. Apart from this, companies in the fashion and furniture sector were using several social media platforms such as Facebook, Blogs, YouTube and Flickr. Similarly, organizations are using social media for branding through advertisement such as posting any image or link on these media pages that positively attract consumer's interest (Kujur and Singh, 2016).

2.8 STUDIES ON SOCIAL MEDIA AND FINANCIAL AWARENESS

The paper by Bonson and Flores (2011) aimed to analyze the use of social media and web 2.0 technologies by global financial institutions (GFIs). The study was based on secondary data, which was collected from accounting and stock market database available at the web sites of 132 GFIs (54 institutes from Europe, 55 from Asia-pacific region, and 23 from America). Result showed that social media is mainly used to share content, corporate disclosure, resolving credit problems, customer relationship management etc. Further, researchers suggested that social media usage could increase the transparency between organization and customer relations.

Social networking is still not widely used for dissemination of information and requires transformation to a more lucid state for information disclosure. The study by Mitic and Kapoulas (2012) is based on case studies from banking sector. Three banks of three countries (Greece, FYROM and Romania) agreed to provide information for this case study; Macedonia was called FYROM because of naming dispute in country. The purpose of this study was to understand the need and role of social media, relationship marketing and online marketing approaches. The result of this case showed that only 10-18% of Greece customers were using online banking services because of low bank involvement in online banking. It was observed that bank personnel prefer one to one interaction with the customers. The frequency updating information on the social media platform was also found to be less. According to the bank personnel, the reason for the low activism on social media is unreliability.

Apart from this, they further stated that Greek people believe in non-formal social interactions that strengthens trust and relationship between the bank and the customers. Now, in the second case study, the online platform was being used for only business purposes between the financial intermediaries, and no presence of bank had been found on social channels. The researchers believed that social media could harm their corporate image by negative comments / complaints. First and foremost, people should be aware of the benefits of online banking services. In particular, they focused on investment from corporate perspective to strengthen relationships with their corporate clients. Similarly, according to the study of the third case, the social presence of the banks was not found. Although they were familiar with the trends of social media and plans to adopt the media platform in the future, they considered social media a risky platform that could negatively impact customers.

In this research, Tsitsi Chikandiwa et al. (2013) analyzed the purpose of using social media by South African banks. The marketing managers of banks and expert from social media channels were interviewed on the involvement of the bank with social media. They stated that Facebook and Twitter were the most popular channels used by banks to communicate with customers. These two media channels were found to be more effective in case of customer relationship, branding, promotion, feedback and prominence. More than half of the managers have agreed on the idea that Twitter is the most popular channel to deal with customer feedback or complaints. Most banks were found active on social media channels for 2-5 years. Nevertheless, the adoption of social media channels is new to all banks and there is a need to understand and implement the social media model to maintain the customers / stakeholders. With the help of these media channels, banks need to include customers to educate them on investment matters and social media benefits.

In a study conducted by Giannakis-Bompolis and Boutsouki (2014), the participation of banks in social media was discussed. In order to retain customers, Greek banks (especially retail sector banks) were more focused on customer satisfaction, which provided more loyal customer in turn. Result also indicated that Greek retail banks had started using social media platforms to share financial information among customers, as well as customers were interested in using online banking services. After all, it strengthened the bond of trust between the bank and the customers.

The objective of using social media through the Malaysian banking sector was reviewed by Goi (2014). While using the media platform, commercial banks were using four key elements such as negotiation, sharing, publication and partnership. Social media provides a forum for exchange of ideas on various topics. From a business perspective, it is easy for customers to share information about products or services. It also provides participation in any conversation at a large level. Again, Facebook has become the most popular media platform among customers. Researchers concluded that the banks were using social media for new product development, customer relationships management, customer service, brand positioning and sales.

In this research, Kirakosyan (2015) studied the strategies adopted by Romania and Mexico banking sector to get maximum benefit of social media platforms. The comparative results indicated that the most popular social media channels for the Romanian banks were Facebook and LinkedIn, while it is Twitter for Mexican banks. However, Mexican banks used more types of social media channels. On the other side, Romanian banks were always available to serve the customers using social media compared to Mexican banks. Only Romanian banks had a team of employees to handle social media activities; as a result, they were found to be more focused on implementing social media strategies and risk management. Therefore, customers of Romanian banks were found to use more of social media channels for money transactions. The main purpose of both banks to use social media was brand strengthening. Thus, it could be concluded that Romanian banks used media channels more profitably than Mexican banks.

Similarly, the purpose of the study by Mucan and Ozelturkay (2014) was to analyze the usage pattern of social media by Turkish banks. For this, 45 banks were selected to analyze the presence of social media channel links on their official website. These media links include Facebook, Twitter, YouTube, and LinkedIn and others. The result shows that Facebook, Twitter, and LinkedIn have become the most popular social media platforms among the Turkish banks and the links of these social media platforms are available on individual bank official websites making them professional platforms as well. Some banks are not found so active to update their official Twitter accounts. If seen, social media usage has been found to be lower by banks. That's why researchers have suggested banks to increase social media usage to strengthen the relationship between banks and customers.

Social media networking has increased interaction with customers and has provided a larger platform for sharing any information with millions of people. Therefore, Durkin et al. (2015) has attempted to analyze the impact of adopting new technology in the banking sector in Ireland. The survey received feedback from 667 customers who were using online banking services. The results show that Facebook is a more suitable and interactive medium between banks and customers. Young customers (between 18-30 years of age) are more targeted to get updated information through online media platforms. Unlike the youth, middle-aged customers (between the ages of 31 to 60 years) are more interested in return and investment information. However, adoption of Facebook in the banking sector is appreciated, but it can not displace the online banking.

The study of Nitescu (2015) discussed the challenges faced by Romanian banks with the use of social media. In the digital world, customers wanted basic information related to saving and investments as per their life style. Typically, banks respond quickly to address customer questions and complaints received on Facebook and Twitter. Simultaneously, consumer interest can be determined by the number of likes, shares and comments received on digital posts. When a customer shared their banking experience on social media platforms, it was open to everyone. In addition, positive comments positively impact customers and investors' opinions, and vice versa. Apart from this, the risk involved in digital banking was a reputational risk, as well as cyber security risks specifically related to the customer's personal information. Due to this security risk, most bank customers did not allow any financial activities and transactions through these social platforms.

In this research, Dootson et al. (2016) examined consumer's perception on usage pattern of social media by FIs in Australia. A comparative analysis was made for consumers on the adoption of new technology for the year 2010 and 2014. Perception was positively found to affect value (monetary, social, etc.). In recent years, customer interaction with Australian FIs had increased through social media platforms (Facebook and Twitter) as customers preferred to adopt this way of communication. It was also found that consumers are using social media platforms mostly for their own personal use rather than financial use.

Similarly, in the Nebraska State (USA), Gao and Lee (2017) had investigated the reasons for social media adoption by the local government. A survey was conducted to analyze social media usage pattern by the local government. The results showed that most government officials used Facebook and Twitter. However, for activities related to transaction, Facebook was used mostly in comparison to Twitter. Similarly, for information on services, local governments were more likely to adopt Twitter than Facebook. Researchers also analyzed the local government's social activities status on Facebook and Twitter. It was found in the results that the local government is more active on Facebook related to posts, comments and customer feedback.

2.9 CONCLUSION

The above literature review discusses upon the level of financial literacy around the world as well as the sources influencing financial decision making. Some important sources have been investigated such as social interaction, financial advice from family members, peers, friends, experts and educational websites of government. There are some factors investigated by some researchers in this literature. That are economics subjects, mathematical ability, education level, financial capabilities, age, gender, parental education and employment status. Financial literacy has a great impact on financial decision making. The numerical ability to solve simple interest calculations was found very poor among majority of country's survey. Whereas in some countries, advance financial literacy was found better among the higher age group people (between 40-60 years). Income inequality was found low in the countries where financial markets are more developed.

Furthermore, in many countries, government and FIs have started financial literacy programme to overcome the issue of financial illiteracy. They are designed to enhance the basic financial concept of people in order to make appropriate financial investment decisions. Experience is an important factor found for the investment related decisions. Therefore people have started to take financial advice from the experts before making any financial decisions. It is also found that the financial advisor are providing more detailed information related to risky financial product to investors with higher financial knowledge.

Next, the Indian studies on financial literacy level revealed the factors affecting financial literacy that are, age, gender, social interaction, education, employment status, caste, marital status, family type, and income. It can be concluded that financial literacy of middle aged people (30-60 years) are found better compared to young people. In addition, there is a direct impact of income and education on financial literacy. In India, the government has also started many financial literacy programmes for the rural and urban people. These programmes are benefiting many poor people and help them to make a good entrepreneur. Under this financial literacy programmes, many people are getting familiar with financial products and services provided by FIs in our country. So, the individuals are also becoming much capable of investing their money to the right financial plans.

In this digital era, everyone is connected with the social media platforms for several reasons. It is a platform for connecting people across the boundaries, sharing information, participating in the dialogue etc. Today many companies as well as government authorities are trying to connect with customers with these social media platforms. In recent years, Facebook, Twitter, LinkedIn and YouTube have become popular among the individuals and organizations both. That's why banks and other FIs also have started using these platforms mainly for the purpose of connecting with customers. The other reasons of using social media platforms are advertising, sales promotion, customer relationship management, customer service and so forth. Many international firms are analyzing the customers' interest by their social activities, such as number of post like, share or comments by viewers. Earlier, only traditional methods were used to resolve customer issues but now, social media platforms enable corporates to respond customers quickly with the help of these social media channels. People have also shown their interest of using social media channels for the purpose of feedback and complaints.

Overall, it shows that the financial and non-financial companies choose multiple social media platforms and the benefits obtained include primarily improved public relation, customer awareness, profit enhancement, cost reduction, information sharing, customer interaction, and marketing of products/services. Further, Facebook, Twitter and blogs are found to be the most popular social media channels used by organizations in the large number countries. It enables corporators to share any information among multiple users by single post on media pages. Some corporates also use these platforms for the purpose of recruitment. Social media platforms are also being used by the firms other than FIs for different purposes such as marketing of products or services, selling, promotional activities etc. Individuals are found to use social media for multiple reasons such as payment of bills, online reservation, booking tickets, follow the current trends, feedback or complaint etc.

With an ample of advantages, social media also has some threats. A negative feedback is harmful for the company image which results into losses and breaks the faith of customers. People generally pay more attention to the negative response given by the customers before making investment decisions. That's why it has become a mandatory concern for all organization to handle it carefully. A proper reply by firm influences others decision positively. In recent years, Indian financial sector has also started using social media channels. No studies has been found discussing managerial view on initiatives and strategies adopted to improve financial literacy in India also no studies analyzed the impact of social media usage by financial and non- FIs in India to overcome financial illiteracy. Thus, this research aims to identify the ultimate use of social media channels by banking as well as non-banking FIs in India.

CHAPTER – 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research has been defined as careful consideration to examine the facts by using scientific methods to reach new conclusions. In the research method, researchers use different sources and criteria to solve research problems. Thus, the research method can be defined as a process in which information is collected and evaluated for future profits or prediction of business decisions.

In this research, the researcher has reviewed various literary studies to identify the factors and sources affecting the level of financial literacy. Apart from this, the various reasons of adopting social media platforms around the world were studied. The research gaps were found on the basis of previous studies. For fulfilling these research gaps, the current factors / sources that affect the financial literacy of individuals were analyzed with the help of some statistical methods. Subsequently, the managers of FIs (banking and non-banking) were requested information about how their use of social platforms aimed at creating financially cautious.

3.2 RESEARCH GAPS AND RESEARCH OBJECTIVES

To be financially literate, individuals have to learn how to save money and to invest it properly. For this, it is important to take initiatives to improve financial knowledge for the purpose of self-educating; particularly earning, saving and investment such as smart payments, investment in retirement plans, mutual funds, insurance etc. Interest calculation is an important measure of financial knowledge. Everyone should know about the basics of interest rate calculations (simple and compound interest) and how it works (Bauer, 2018).

The conceptual model of financial literacy is presented in Figure 3.1. The relationships depicted by the model can be divided into three groups. The first set of relationship are between socio-demographic variables and financial literacy as well as its three components, namely financial behaviour, financial attitude and financial numeracy; they are marked in yellow. The second set of relationships are the ones between the components of financial literacy; they are marked in red. And the third set consists of the impact of financial numeracy on investment in financial instruments, as well as investment in equities and bonds; they are marked by green arrows.

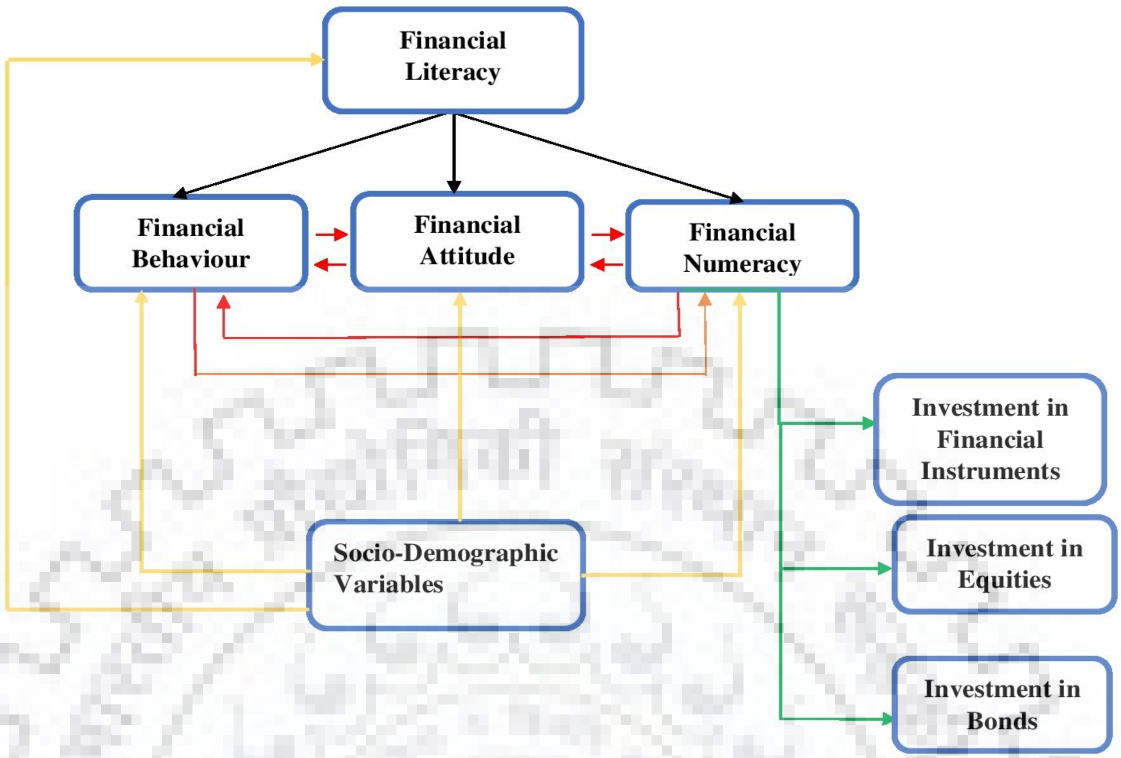

Figure 3.1 Conceptual model of financial literacy

Following Table 3.1 illustrates the research objectives developed from the research gaps identified from the literature review. The gaps provide the area of future research in the area of improving financial awareness particular to the Indian context. Research gap 1 and 2 assisted to develop research objectives 1, 2 and 3. Similarly, research objectives 4, 5 and 6 are developed with the help of research gap 3, 4 and 5. The Phase-I of this research is focused to achieve the initial three research objectives. And, to achieve the last three research objectives, the study is conducted in phase-II.

3.3 HYPOTHESIS DEVELOPMENT

3.3.1 Influence of socio-socio-demographic variables on financial literacy and its components

Financial literacy was defined as an individual's ability to make sound financial decisions (Noctor et al., 1992). But there are certain socio-demographic factors that are found to influence individual's investment related decisions (age, gender, education, income, social interaction, employment status, caste, and marital status). It is observed that social interaction influences the investment decision (Hong et al., 2004; Bonte and Filipiak 2012; Chen et al., 2014).

Table 3.1 Description of Research Gap with Research Objectives

Research Gap	Objective
Research Gap 1 • The inter-relationship between the components of financial literacy must be investigated, and there is a need to examine the impact of demographic variables on the components of financial literacy.	**Objective 1 and 2** • To examine the demographic characteristics that influence the level of financial literacy and its three components mentioned above. • To assess the pattern and extent of any causal linkages between the components of financial literacy.
Research Gap 2 • Lack of analyzing the ability of financial calculations that affects the level of financial literacy in India.	**Objective 3** • To find out the impact of financial numeracy skill on investment pattern in terms of financial instruments and investment in stocks and bonds.
Research Gap 3 • Lack of identifying the social media usage by Indian financial institutions	**Objective 4** • To examine the various purposes for which social media is used by financial organizations.
Research Gap 4 • Insufficient research on the impact of FIs initiatives for improving financial literacy of our country.	**Objective 5** • To study the role of banking and non-banking financial organizations in generating financial literacy in terms of initiatives and strategies adopted by them.
Research Gap 5 • There is an absence of identifying the role of social media particular to create financial awareness.	**Objective 6** • To examine the extent of use of social media by financial organization to increase financial awareness.

Education has a positive impact on the financial literacy level (Marcolin and Abraham, 2006; Taylor, 2011; Cameron et al., 2014; Grohmann et al., 2015; Agarwalla et al., 2015; Lusardi 2015; Smyczek et al., 2015). It has also been observed that parental education level and economics subject at school, play an important role in developing a financial base in children.

Income has been found to have a positive impact on financial behaviour (Cameron et al., 2014; Agarwalla et al., 2015). Before making any investment, it is required to be financially capable. Thus, employment status is found to influence financial capabilities of individuals (Taylor, 2011; Smyczek et al., 2015). Similarly, marital status and financial planning have a positive impact on financial attitude (Agarwalla et al., 2015).

Further, age plays an important role in making financial decisions. It has been observed that senior citizens are more accurate in dealing with financial matters (Taylor, 2011; Cameron et al., 2014). Apart from this, less financial literacy has been found in women (Singh, 2014); On the contrary, better financial capabilities were found in working women (Taylor, 2011).

Consequently, the above literature shows a parallel relationship of socio-demographic characteristics with financial literacy and its components. According to first research gap, there is a need to examine the impact of socio-socio-demographic variables on the components of financial literacy; thus, the following hypotheses have been proposed:

H1 (a): Financial literacy varies across gender.

H1 (b): Financial behavior varies across gender.

H1 (c): Financial attitude varies across gender.

H1 (d): Financial numeracy varies across gender.

H2 (a): Financial literacy varies across age groups.

H2 (b): Financial behavior varies across age groups.

H2 (c): Financial attitude varies across age groups.

H2 (d): Financial numeracy varies across age groups.

H3 (a): Financial literacy varies across level of education.

H3 (b): Financial behavior varies across level of education.

H3 (c): Financial attitude varies across level of education.

H3 (d): Financial numeracy varies across level of education.

H4 (a): Financial literacy varies across city of residence.

H4 (b): Financial behavior varies across city of residence.

H4 (c): Financial attitude varies across city of residence.

H4 (d): Financial numeracy varies across city of residence.

H5 (a): Financial literacy varies across living status.

H5 (b): Financial behavior varies across living status.

H5 (c): Financial attitude varies across living status.

H5 (d): Financial numeracy varies across living status.

H6 (a): Financial literacy varies across employment status.

H6 (b): Financial behavior varies across employment status.

H6 (c): Financial attitude varies across employment status.

H6 (d): Financial numeracy varies across employment status.

H7 (a): Financial literacy varies across household income pm.

H7 (b): Financial behavior varies across household income pm.

H7 (c): Financial attitude varies across household income pm.

H7 (d): Financial numeracy varies across household income pm.

H8 (a): Financial literacy varies across reliability of household income.

H8 (b): Financial behavior varies across reliability of household income.

H8 (c): Financial attitude varies across reliability of household income.

H8 (d): Financial numeracy varies across reliability of household income.

3.3.2 Interaction between components of financial literacy

The findings of Agarwalla et al. (2015) supports that sufficient financial knowledge of an individual results in modest financial behavior. He also observed that financial attitude has a negative correlation between financial behaviour and financial knowledge. Borden et al. (2008) concluded that financial knowledge has a positive impact on financial attitude. Authors have also felt that there is a need to make changes in financial behaviour to improve financial literacy (Paramonovs and Ijevleva, 2015). The present study also proposes the following hypotheses to investigate the inter-relationship between the components of financial literacy.

H9: Financial behavior and financial attitude have positive bi-directional relationship between them

H10: Financial behavior and financial numeracy have positive bi-directional relationship between them

H11: Financial attitude and financial numeracy have positive bi-directional relationship between them

3.3.3 Influence of financial numeracy on financial instruments, investments in bonds and equities

Financial literacy can be defined by a set of financial behaviour, particularly saving pattern and portfolio selection (Lusardi and Mitchell, 2011b). Lusardi (2012) stated the importance of compound interest as a most basic financial calculation to make financial decisions. Furthermore, the researcher added that financial decision requires the capability to do basic mathematical calculations related to percentage, division and interest. Financial numeracy can be measured through a set of attributes such as interest (simple and compound) calculation, fluctuation in pricing of shares, bonds, stocks, discount rate, risk and return, inflation (Volpe et al., 2002; Cole et al., 2009; Disney and Gathergood, 2013; Agarwal et al., 2015; Mouna and Jarboui, 2015b; Mouna and Jarboui, 2017; Sivramakrishnan et al., 2017).

In addition, familiarity with financial products helps to take better financial decisions (Bihari and Shukla, 2012). Inequality plays an important role in improving economic conditions, as it has an inverse relationship with financial literacy, i.e. lower the inequality, higher will be the financial literacy (Prete, 2013). Investors with less knowledge about portfolio selection, seek advice from financial expert before making any investment related decision (Calcagno and Monticone, 2015). Consequently, it can be stated that financial knowledge plays an important role in financial decision making. The above literature supports the fact that individuals need to improve their financial knowledge to achieve better financial outcome. There is a need to investigate the impact of financial knowledge of numeracy on investment decisions in the Indian context. The hypotheses formed in this regard are as follows:

> H12: There is a positive impact of financial numeracy on investment in financial instruments.
>
> H13: There is a positive impact of financial numeracy on investment in equities.
>
> H14: There is a positive impact of financial numeracy on investment in bonds.

3.4 RESEARCH DESIGN

A systematic approach to collect and analyze data for experimental study is known as research design. Accuracy in the results can be obtained from a clear understanding of research design. In this study, research design is exploratory and descriptive in nature, both primary and secondary data are used to collect data and further analysis.

The research was conducted in two phases. The first phase was focused to analyze the level of financial literacy of the urban individuals. There are three dimensions of financial literacy (defined by Atkinson and Messy, 2012) viz. financial behaviour, financial attitude and financial numeracy. These three dimensions explored individual’s financial literacy status in the first phase of this study, and observed the factors affecting the FL level and its components. Further, the individual’s familiarity with financial products and the ability of basic financial calculation was investigated. The second phase of this study described the managerial approach on the benefits associated with social media adoption by Indian FIs particularly to improve financial literacy.

3.5 SAMPLING DESIGN

The process of incorporating a part from the population is known as the sample method. In this section, the techniques used to select target population, sample size and sample unit are going to be discussed in detail. As the study is divided into two phases the design of the sample will be used in both phases.

3.5.1 Sample method

Many different sampling techniques / methods have been used by researcher, which can be divided into two main groups: probability sampling and non-probability sampling. In the first phase of this research, the data is collected through non-probability snowball sampling methods, where the target population are requested to forward the survey questionnaire to a people known to them.

In the second phase of the research, data are collected through quota sampling method from 32 FIs (22 banks and 10 NBFCs) operating in India. All selected banks are listed with India's two leading stock exchanges, BSE and NSE. The banks are listed as the top banks in terms of their market capitalization on the website of moneycontrol.com on January 15, 2017. Further, the NBFCs are selected from a list of top 50 Indian NBFCs based on their annual turnover published in 'The Banking & Finance', an online magazine in 2017. The selection of NBFCs is driven by availability of data as per the requirement of this study.

3.5.2 Sample size

Starkweather and Moske (2011) agreed upon the fact that MLR requires minimum 10 cases for each predictor variable. Large samples provide accurate measurements in MLR analysis (Monyai, 2016). Thus, for the first phase of this research, sample size is chosen to be of 500 respondents from the Tier I – III cities of India.

In the second phase, the target sample size was 35 FI but three of them (foreign banks) refused to provide facts due to their social disclosure policy. Therefore, data was collected from a total of 32 Indian FIs (banking and non-banking) who agreed to provide necessary information for this research. Out of these 32 FIs, 22 are banks and 10 are NBFCs. Of the banks considered, 10 are public sector banks, 10 private sector banks and 2 are foreign banks.

3.5.3 Sample unit

Sample unit can be defined as a single unit that acts as a participant in the targeted population of the study. From the National Survey report on population census 2001, Indian cities have been categorized as Tier-1 with population of 100,000 and above, Tier-2 with population of 50,000 to 99,999, and Tier-3 with population of 20,000 to 49,999. In the first phase, a sample of 500 individuals belonging to Tier1, Tier 2 and Tier 3 Indian cities was selected as a sample size for this study where the sampling unit is urban individuals living in India. For the second phase, individual managers from each FIs constitute sample unit.

3.6 DATA COLLECTION

Data collection is a systematic approach where information is collected from different sources based on the nature of the data. Mainly there are two sources for collecting data, one is the primary source and the second is a secondary source. This research is majorly based on primary sources of data collected in three steps. Table 3.2 shows the details of data collection time span for all three steps. Now, the process of collecting data at each step will be discussed.

Table 3.2 Data collection steps and time span

Steps	Time span
I - Financial Literacy survey	Between April and September, 2016
II - Social media adoption by banks	Between May and August, 2017
III - Social media adoption by NBFCs	Between May and June, 2018

3.6.1 Financial literacy survey

In the first step of data collection, only primary data source is used to gather information. Primary data were collected through physical distribution of questionnaire along with online surveys. Participants of this survey include university professors, students, research scholars, working professionals and non-working individuals. Thus, during this data collection step, a total of 500 individuals were surveyed, which provided the necessary information at the financial literacy level with the help of the questionnaire, presented in Annexure I.

3.6.2 FIs survey

The classification of the FIs is presented in the Table 3.3. It provides a clear understanding of the FIs targeted in this study. In the second step, data were collected from the bank managers through the structured interview method between May and August 2017; see table 3.2. Here, the banks are categorized as top 10 public sector banks, 10 private sector banks and two foreign bank operating in India. More than 2 branches of each bank were needed to be visited, because in some places, either the new appointed manager had no information or they were not available to give information. So the information collected at this level has been provided by the senior level manager of banks. Thus, all managers were interviewed using a questionnaire which is presented in Annexure II.

Similarly, from Table 3.3, it is clear that in the third step, data were collected from managers of 10 NBFCs between May and June 2018; details of NBFCs are presented in Table 3.3. At this step, the questionnaire used in the second step of data collection was revised, the details of which are presented in Annexure III. All the managers had work experience of more than a year.

Table 3.3 Details of FIs

S.No	Public sector banks	Private sector banks	Foreign banks	NBFCs
1	State Bank of India	HDFC Bank	Standard Chartered Bank	Bajaj Finance Limited
2	Punjab National Bank	ICICI Bank	HSBC Bank	India Infoline Finance limited
3	Bank of Baroda	AXIS Bank		Muthoot Finance Ltd.
4	Canara Bank	Kotak Mahindra Bank		Manappuram Finance ltd.
5	Bank of India	Yes Bank		Magma Fincorp Ltd
6	Syndicate Bank	Federal Bank		Mahindra and Mahindra Finance Services Limited
7	Vijaya Bank	IndusInd Bank		Reliance Capital
8	Allahabad Bank	RBL Bank		Cholamandalam Investment and Finance Company Limited
9	Andhra Bank	City Union Bank		Shriram Transport Finance
10	Oriental Bank of Commerce	DCB Bank		HDB Financial Services Limited

3.7 RESEARCH DIMENSIONS

INFE (International Network on Financial Education) (2011) defines financial literacy as ‘a combination of awareness, knowledge, skill, attitude, and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing’. The above definition indicates that financial literacy encompasses three important dimensions acting as main constituents in defining financial literacy; they are financial behaviour, financial attitude and financial numeracy.

Table 3.4 Classification of attributes

Dimensions of FL	Attributes
Financial Behaviour	Saving practices
	Investment behaviour
	Familiarity with financial products
	Sources influencing financial decisions
Financial Attitude	Spendthriftness
	Affordability
	Payment pattern
	Spending habit
	Risk appetite
	Extent of debt and so on
Financial Numeracy	Simple interest rate
	Compound interest rate
	Inflation rate
	Inheritance
	Price fluctuations
	Concepts related to investments in stocks and bonds
	Risk and return

The financial literacy is categorized into two sections, namely basic financial literacy and advanced financial literacy. Basic financial literacy is measured by the elements of financial behaviour and financial attitude, while advanced financial literacy is measured with the help of financial numeracy (Van et al., 2011).

A total of 500 Indian individuals from different cities responded to a slightly modified questionnaire, originally developed by the OECD (OECD, 2011). The questionnaire has 31 questions divided into three broad sections on socio-socio-demographic factors, financial behaviour along with attitude, and financial numeracy. The attributes that broadly define components of financial literacy are mentioned in Table 3.4.

There are total six questions on saving practices, investment behavior, familiarity with financial products and sources affecting financial decision, where these attributes help to define the financial behavior of individuals. Then financial attitude was measured by a five point Likert scale of nine questions which is based on some attributes such as spendthrifts, affordability, payment pattern, spending habit, risk appetite and extent of debt. The final section on financial numeracy has 16 questions that deal with questions based on calculation of financial outcome like simple interest rate, compound interest rate, inflation rate, inheritance, price fluctuations, concepts related to investments in stocks and bonds, risk and return.

Next, in the second step of this data collection, bank managers are targeted to collect information about the impact of social media on financial literacy. It was measured through self-administered questionnaire; presented in Annexure II. The questionnaire has three sections, viz. background information about bank and manager, usage pattern of social media, and social media and financial awareness. A total of nine questions is presented in the first section that define the general information such as bank name, designation, service period, education, age, gender, years of operation, category of bank and ownership pattern. Second section has nine questions on preferred social media site, participation, cost, risk, benefits, frequency of policy review and site monitoring. And third section has 5 questions defining the relationship between social media and financial awareness.

Thus, the questionnaire has a total of 23 questions (20 close ended and 3 open ended) on the purpose and extent of using social media platforms and methods adopted to spread financial awareness with the help of media channels. Open ended questions are included to know more specifically about the methods adopted to generate financial awareness and change in bank performance after the adoption of social media platforms. The bank managers provided their views on strategies used to improve financial literacy. The interviews with bank managers reveals that how social media platforms are being used by the banks particularly to increase financial awareness in the country. Also some suggestions have been provided by FIs managers to improve financial literacy policies.

Finally, managers from the selected NBFCs are requested to provide information about the impact of social media on financial literacy in the third step of data collection. The questionnaire used in the second step was slightly revised and adopted in the third step of the data collection, which is presented in Annexure III. The questionnaire has three sections similar to the second step, i.e. background information about NBFCs and manager, usage pattern of social media; and social media and financial awareness. But the number of questions is different at every section. The first section has seven questions on background information; second section has eleven questions on preferred social media site, participation, cost, risk, benefits, frequency of policy review and site monitoring; and the third section has five questions defining the relationship between social media and financial awareness. Thus, the questionnaire also has total 23 questions with 20 close ended and

3 open ended questions. Open ended questions provide the managerial views on the change in NBFCs performance with social media adoption, and different methods used by them to generate financial awareness.

The literature of this study provides a wide range of social media platforms used by individuals and firms. Based on popularity, Facebook was found as the most popular media platform in the world. Accordingly, six social media platforms has been opted like Facebook, Twitter, YouTube, LinkedIn, Google Plus, and Instagram, primarily on the basis of three considerations; first, number of active monthly users; second, relevance for a business enterprise; and third, usage in the Indian context. Beside primary data, secondary data on the number of followers on social media pages of individual FIs were taken from their respective websites. The annual reports of the banks (SBI and HDFC bank) have been considered to collect the information on the bank's involvement with social media and financial awareness.

3.8 TECHNIQUES OF DATA ANALYSIS

The methods used for data analysis comprises of check for reliability and validity of the data, simple descriptive statistics, OLS regression and MLR or discrete choice models. In many research areas, it is a common fact to get nominal data from respondents (Hedeker, 2003).

MLR is a tool used to analyze discrete outcome variables with more than two responses. Further, most of our regression equations have ordinal outcome variables with financial behaviour, attitude and numeracy categorized as low, average and high. These models are called *baseline logit model*, a variant of MLR (Hosmer et al., 2013).

This is so called, because the coefficients are log-odds ratios comparing category $Y = k$, $k = 1, 2\ldots K$, to a baseline category, $Y = 0$. Under this model the logits are

$$g_k(x) = ln\left[\frac{\pi_k(x)}{\pi_0(x)}\right] = \beta_{k0} + x\hat{\beta}_k \qquad \text{for } k = 1, 2, \ldots, K,$$

Where x is the vector of p covariates and β is a $(p \times 1)$ vector of estimated coefficients and $\pi_k(x) = \Pr(Y = k| x)$ for $k = 1, 2\ldots K$. Further, the conditional probabilities for each outcome category given the covariate vector are

$$\pi_j(x) = \Pr(Y = j| x) = \frac{e^{g_j(x)}}{\sum_{j=0}^{K} e^{g_j(x)}} \qquad \text{for } j = 0, 1, \ldots, K$$

Table 3.5 List of Models Estimated

SN	Dependent variable	Independent variable	Model
1	FB code	Socio-demographics	MLR
	FB score		OLS
2	FA code	Socio-demographics	MLR
	FA score		OLS
3	FN code	Socio-demographics	MLR
	FN score		OLS
4	FL code	Socio-demographics	MLR
	FL score		OLS
5	FB code	FA code	MLR
	FB score	FA code	OLS
		FA score	
6	FA code	FB code	MLR
	FA score	FB code	OLS
		FB score	
7	FN code	FA Code	MLR
	FN score	FA Score	OLS
		FA Code	
8	FA code	FN Code	MLR
	FA score	FN Code	OLS
		FN Score	
9	FN code	FB Code	MLR
	FN score	FB Code	OLS
		FB Score	
10	FB code	FN Code	MLR
	FB score	FN Code	OLS
		FN Score	
11	No. of FI held: code	FN code	MLR
	No. of FI held: score	FN code	OLS
		FN score	
12	Equity Investors	FN Score	OLS
		FN code	
13	Bond Investors	FN Score	OLS
		FN code	

The advantage with MLR is that unlike standard regression procedures like OLS, it does not require the assumptions of linearity, homoscedasticity and normality of the data; see e.g. Monyai et al.

(2016) and Starkweather and Moske (2011). In accordance with the first three research objectives stated in Section 3.2, the relationships between financial literacy and the socio-socio-demographic factors are examined by estimating a number of models with alternative methods of OLS and MLR. OLS is used when it has been directly considered the scores of the individual respondents while MLR is used when the outcome or the dependent variables are coded. To code the scores into categories, the standard (mean ± s.d.) approach has been considered. While financial behaviour and attitude have been categorized as *superior*, *neutral* and *inferior*, the categories of financial numeracy skill are termed as *good*, *average* and *poor*. All the models are estimated using SPSS. A list of the models estimated is presented in Table 3.5. Further, the data collected from the FIs are analyzed using cross-tabulations and percentage calculations.

3.9 CODING OF VARIABLES

In order to analyze response of respondents given in the questionnaire, initial coding is required as the basic unit. The collected information is coded in a suitable form which helps in processing with statistical software. Now, the form of coding adopted for predictor and outcome variables used in the entire study is going to discuss.

3.9.1 Code assigned to the variables measuring financial literacy

In this study, Annexure I presents the questionnaire adopted to analyze the financial literacy level of Indian urban. There are three sections in this questionnaire; socio-demographic information, information related to financial behaviour and information related to financial numeracy. Here, the predictor variable is socio-demographic characteristics, and outcome variables are financial behaviour, financial attitude and financial numeracy. Below sub-sections are going to discuss the coding done for each section of this questionnaire.

3.9.1.1 Socio-demographic Information

In the first section of the questionnaire, the information was collected related to socio-demographic detail of respondents. The components of financial literacy are influenced by predictor variables that are socio-demographic characteristics. There are total eight questions presented in this section and coding is represented in Table 3.6.

3.9.1.2 Information related to financial behaviour

This section particularly focuses to analyze financial behavior and financial numeracy. The first part of this section analyzes financial behavior of the respondents. Financial behaviour and financial attitude are categorized as low, average and high. In this part, the respondent has a choice to select more than one answers for each question. So the term coded ‘1’ for selecting an individual option, otherwise ‘0’. Thus, if a respondent’s score is less than 11, it shows low level of financial behavior. Similarly, the score between 12 and 27 indicates the average level of financial behaviour, and more than 28 score represents a high level of financial behavior. Moreover, the coding done for these three categories as 0=low, 1= average and 2=high.

Table 3.6 Description and coding of predictor variables

S.No.	Socio-demographic Variables	Coding
1.	Gender	1=Male; 0=Female
2.	Age (in years)	1=18-25 2=26-35 3=36-45 4= Above 45
3.	Education	1=12th Standard 2= Bachelor Degree 3= Master Degree 4= Other Higher Degree
4.	City of Residence	1= Tier-I 2= Tier-II 3= Tier-III
5.	Living Status	1= Alone 2= Family 3= Friends/Colleagues
6.	Employment Status	1=Self Employed 2=Govt. Employee 3=Private Employee 4=Not Working 5=Student
7.	Household Income (per month in Indian rupees)	1=up to 30,000 2=30,000-50,000 3=50,000-70,000 4=70,000-100,000 5=More than 100,000
8.	Reliability of Household Income	0=Don’t know 1=Yes 2=No

The second part of this section measures financial attitude of respondents using 5-point Likert scale for nine statements based questions on 1 to 5 scale where 1 = Strongly Disagree, 2 = disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. Thus, the maximum score received by an individual is 45. If a respondent's score is less than 24, it shows low financial attitude. Similarly, the score between 25 and 33 indicates the average level of financial attitude and the score more than 34 indicates a high level of financial attitude. Further, these three categories are coded as 0=low, 1= average and 2=high.

3.9.1.3 Information related to financial numeracy

In the last section, every correct answer is coded for '1' and wrong answer to '0'. Thus, the maximum score any respondent can obtain is 16. The respondent who scores up to 6, followed under the low numeracy category. Likewise, if the score is between 7 and 11 falls in the average category, and more than 12 indicates advance financial numeracy of respondents. Accordingly, financial numeracy is coded as 0=low, 1= average and 2=high.

3.9.2 Code assigned to the variables measuring social media influence on financial awareness

Annexure II and III present the questionnaire used to analyze the role of social media in creating financial awareness by Indian FIs. The questionnaire has three sections; first section discusses about the general information provided by FIs manager; the second section discusses multiple reasons for using social media, as well different benefits and risk associated with social media usage; and last section represents the relationship between social media and financial awareness. Accordingly, the responses are differentiated based on FIs categories (bank or NBFCs).

In the second section of the questionnaire, the multiple reasons of social media adoption were measured using 5-point Likert scale for six statement based questions from 1 to 5 scale where 1 = Strongly Disagree, 2 = disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The managerial response through the Likert scale helps us to understand the actual reasons for using social media. Further responses of the second and third section were coded as 1=Yes, 2=No, and 3= Do not know. In addition, the managerial comments have been encapsulated on social media impact on institutional performance and the initiatives taken by all FIs to improve financial literacy with the help of social media platforms.

3.10 CONCLUSION

The chapter has presented the comprehensive methodology design adopted in this research. This study is divided into two phases; first is to identify factors that affect financial literacy and its three components, i.e. financial behaviour, financial attitude and financial numeracy; and the second phase is aimed to identify the effect of various initiatives taken by FIs and benefits associated with the use of social media to increase financial awareness.

The section 'Research objective' clearly indicates the purpose of this study and detects the variable to meet the research gaps. Research interval helps to identify hypothesis development to achieve the objectives of this research. Furthermore, this chapter provides an overview about the sample design and data collection steps adopted in both phases. This study explores the questionnaire, research dimension and its features adopted in both phases of the study, which provides a clear understanding of the reason for their adoption.

Logistic regression models (MLR and OLS) were adopted to analyze individual responses in the first phase. While, in the second phase, managerial reactions were summarized with the help of basic statistical tools representation like graphs and charts. For this, the information has been coded to present particular responses in the required format of statistical instruments. The next chapter is going to discuss in-depth data analysis for the first phase of this research, and its interpretation.

CHAPTER – 4

ANALYSIS OF FINANCIAL LITERACY

4.1 INTRODUCTION

Data analysis is a process of investigating information using statistical tools to achieve research objectives. As discussed earlier, this study is divided into two phases; the purpose of the first phase is to analyze the financial literacy level of urban Indians; and the purpose of the second phase is to investigate the impact of social media in creating financial awareness. So this chapter is going to analyze the data obtained for the first phase of this research.

This chapter discusses statistical tools used to test the hypotheses H1: a – d, H2: a – d, H3: a – d, H4: a – d, H5: a – d, H6: a – d, H7: a – d, H8: a – d, H9, H10, H11, H12, H13 and H14 that have been formulated on the basis of research gaps one and two. The hypotheses help in achieving the initial three research objectives of this study. They are

i) to examine multiple socio-demographic characteristics that influence the level of financial literacy and its three components mentioned above;

ii) to assess the pattern and extent of any causal linkages between the components of financial literacy; and

iii) to find out the impact of financial numeracy skill on investment pattern in terms of financial instruments and investment in equities and bonds.

Before proceeding with logistic regression, reliability test with Cronbach's Alpha method was performed, and checked multicollinearity for predictor variables. Afterwards, the effect of socio-demographic variables was analyzed on the level of financial literacy and its three components viz financial behaviour, financial attitude and financial numeracy with the help of MLR and OLS logistic regression method. Analysis of financial literacy provides solution to achieve initial three objectives of this research. Now, the socio-demographic details of respondents of the first phase of the research is going to discuss.

4.2 SOCIO-DEMOGRAPHIC PROFILE OF RESPONDENTS

In this chapter, the level of financial literacy was measured through the effect of the socio-demographic variables of 500 respondents. Initially, in the socio-demographic section of this phase, nine predictor variables were considered that were gender, age, religion, education, living status, employment status, income, city of residence and reliability of household income. But later, a predictor variable ‘religion’ was removed and only 8 predictor variables were considered for further analysis.

Table 4.1 Socio-demographic Characteristics of the Respondents, N = 500

Variables		Socio-demographic characteristics	
		Number	Percentage
Gender	Male	320	64
	Female	180	36
Age Group (in years)	18-25	110	22
	26-35	276	55.2
	36-45	99	19.8
	45 and above	15	3
Religion	Hindu	458	91.6
	Muslim	24	4.8
	Christian	6	1.2
	Others	12	2.4
Education	12^{th}	13	2.6
	Bachelor Degree	99	19.8
	Master Degree	252	50.4
	Others (Ph.D., M. Phil)	136	27.2
Living Status	Alone	123	24.6
	Family	337	67.4
	Friends/colleagues	40	8
Employment Status	Self employed	24	4.8
	Govt. Sector employee	104	20.8
	Pvt. Sector employee	191	38.2
	Not working	20	4
	Retired	4	0.8
	Student	157	31.4
Income	Up to ₹ 30000;	135	27
	Between ₹ 30000 - ₹ 50000;	122	24.4
	Between ₹ 50000 - ₹ 70000;	86	17.2
	Between ₹ 70000 - ₹ 1,00,000	77	15.4
	More than ₹ 1,00,000	80	16
City of Residence	Tier 1	165	33
	Tier 2	128	25.6
	Tier 3	207	41.4
	Other	0	0
Reliability of Household Income	Yes	344	68.8
	No	135	27
	Do not know	21	4.2

Table 4.1 represents the classification of socio-demographic variables of 500 respondents. The ratio between male and female participants of all respondents is 16:9. The table clearly indicates that most respondents (55.2%) are between the ages of 26 and 35 years, and the percentage of respondents in 18 to 25 and 36-45 years is 22% and 19.8% respectively, while only 3% of the respondents age 45 and above.

The score of Hindu religion category is 458, which indicates that most respondents belong to Hindu, while the percentage of respondents in the Muslim, Christian and other categories is 4.8%, 1.2% and 2.4%, respectively. It shows very few percentages compared to Hindu religion respondents. Consequently, religion variable has been removed from further analysis.

In addition, it was found that approximately 20%, 50% and 27% of respondents have a bachelor degree, a master's degree, and other higher degrees such as Ph.D. / and M. Phil. respectively, while only 2.6 percent of respondents have 12th degree. In the category of living situation of the respondents, most people (67.4%) are living with the family, about 25% are living alone, while only 8% are living with friends or colleagues. In the employment status category, only 4 out of 500 respondents were found retired; 20 were not working and 24 were self-employed; while the percentage of respondents in the private sector, students and government sector is 38.2%, 31.4% and 20.8% respectively.

Income category indicates that the majority of respondents (27%) comes under income groups up to Rs. 30,000 then according to the salary increase in the income group, the percentage of respondent declined, i.e. approximately 24%, 17% and 15% respondents come under income categories between Rs. 30,000 to 50,000, Rs. 50,000 to 70,000, and Rs. 70,000 to 100,000 respectively; whereas only 80 respondents were found in more than Rs. 100,000 income group. Moreover, respondents have been classified according to Tier 1, Tier 2 and Tier 3 cities where most respondents (41.4%) are from Tier 3 cities, while 33% and 25.6% respondents are from Tier 1 and Tier 2 towns respectively. Finally, it is found that, 68.8% of respondents are reliable for their household income, 27% respondents are not reliable, while only 4.2% of people do not know about the reliability of their household income sources.

4.3 FINANCIAL LITERACY PATTERNS

This section presents a discussion on the patterns of financial behaviour, attitude and numeracy observed in the collected dataset. Thus, a completed dataset was received from 500 individuals on financial literacy status. As per earlier discussion, financial literacy is measured through three dimensions viz. financial behaviour, financial attitude and financial numeracy. The following subsections would shed light on the information content of the data collected in relation with these three dimensions of financial literacy.

4.3.1 Financial Behaviour

This section presents the evaluation of individual responses received on financial behaviour. According to the results, maximum numbers of respondents (65 percent) are found to save money in savings bank account during the past one year followed by 37 percent in fixed and recurring deposits and 21 percent in forced saving instruments like insurance policies to avail tax benefits. Investment in other instruments like bond, stocks, gold and immovable properties have been meager at 13 to 16 percent. Only 8 percent respondents mentioned that they are confident about their plans for retirement while nearly 18 percent said that they are somewhat confident. Consequently, a hoping 41.4 percent said that they didn't make any plan for retirement while 29 percent depended on occupational or workplace pension plan and 18 percent on income generated by financial or non-financial assets.

Despite poor investment patterns, familiarity with financial instruments has been reasonable. The most familiar instruments having at least 50 percent respondents familiar with them are savings bank account (89%), insurance policies (78%), credit cards (75%), stocks and shares (62%), current bank account (60%), secured bank loans (55%), and bonds (51%). The respondents seem to be least familiar with unsecured bank loans. Further, 90 percent of the respondents were found to have a savings bank account while 35 percent hold credit cards. However, holders of stocks and bonds constitute only 18 percent and 9 percent, respectively with mortgage holders at only 3 percent. Nearly 37 percent respondents said that their investment decisions were influenced by friends and relatives working in the financial industry.

The other options that closely follow were product specific information available in internet (35%), advice of friends and relatives not working in the financial industry (30%), information picked up from a bank branch (29%), newspaper articles (26%) and one's own experience (26%). Only, 22 respondents or 4.4 percent mentioned some websites they followed for making investment decisions. They are represented in Table 4.2.

The above discussion reflects that participation in non-traditional financial markets like equity and bond markets is very low though familiarity is reasonable. Further, internet or social media is not common source of information used for financial decision making. Rather people still prefer to take advice from friends and relatives primarily.

Table 4.2 Details of financial websites

S.No.	Website	No. of respondents
1.	moneycontrol.com	15
2.	valueresearchonline.com	3
3.	economictimes.indiatimes.com	2
4.	businessnews.com	1
5.	equitymaster.com	1

4.3.2 Financial Attitude

Financial attitude in terms of one's approach towards purchase and saving behaviour indicated that more than 86 percent of the respondents are concerned about affordability before making purchases and a similar number is particular about paying their bills on time. However, the percentage of people who plan for tomorrow are relatively less at only 56 percent and 51 percent said that they get more satisfaction from current spending compared to savings for tomorrow. While 49 percent of the respondents are ready to take some risk, only 47 percent said that they set long term goals and try to achieve them. Also only 12 percent of the respondents said that they had too much of debt currently. Overall, financial attitude of the respondents appears to be broadly positive as people prefer to stay away from debt, have medium risk appetite and most are concerned about affordability.

4.3.3 Financial Numeracy

Financial numeracy has been very high for certain sections while for advanced questions, it has been very low. For instance, 89 percent of the participants could answer basic questions on simple and compound interest rates and 72 percent are found to be aware of the volatile and risky nature of stocks compared to bonds. Further, 68 percent are aware of the benefits of portfolio diversification while 59 to 66 percent are familiar with the concept of real value of money. Interestingly, a reasonable percentage of 59 to 61 are found to be aware of the implications of stock ownership and the functions performed by the stock market. Moreover, 39 to 43 percent respondents have the basic knowledge about mutual funds investment. Similarly, nearly 39 percent are able to compare the returns from stocks, bonds and savings bank accounts. However, as might be expected that for typical questions on financial matters like the relationship between bond prices and interest rate, only 19.6 percent of the respondents could give correct answers. This outcome is in line with the result of Disney and Gathergood (2013).

4.3.4 Overall Financial Literacy

Finally, among the collected sample, 47 percent secured a mean score of 58. If average financial literacy is defined as mean ± s.d., then 70 percent of the respondents would fall in that group while nearly 14 percent and 16 percent will be on the lower and higher sides, respectively. This may tempt us to infer that majority of the respondents have average financial numeracy. Looking from a different perspective, it is observed that if 147 is the maximum score, only 8 percent could score 50 percent or more while it jumps to 73 percent for a score of one-third or more and further to 97 percent for scores of one-fourth or more. Overall, financial literacy among the respondents could be considered to be average only; refer Table 4.3.

Table 4.3 Summary Statistics of Financial Literacy and Its Components

Variable	Max.	Min.	Mean	s.d.	Maximum possible score
Financial Behaviour (FB)	55	5	19.63	8.05	69
Financial Attitude (FA)	44	10	29.06	4.16	45
Financial Numeracy (FN)	16	0	8.87	3.83	33
Financial Literacy (FL)	95	28	57.56	11.72	147
Investment in Financial Instruments (FI)	13	1	2.78	1.76	14

4.4 MODEL ESTIMATES FOR FINANCIAL LITERACY AND ITS INTERPRETATION

This section will present the results of the 13 models listed in Table 3.4 of previous chapter in the same sequence. However, all regressions of financial attitude on financial numeracy turned out to be insignificant implying that financial attitude does not predict financial numeracy skill. On the other hand, financial numeracy is found to have a weak impact on financial attitude observed through MLR; OLS results are insignificant. The models that are found insignificant are excluded.

4.4.1 Reliability Test

At the outset, the study would also like to mention that even though the questionnaire adopted is already a tried and accepted tool for data collection, reliability tests was conducted by reliability coefficient Cronbach's Alpha with a preliminary small sample of 30 observations (n=30) and later with the entire sample (n=500). Generally, the range of the Cronbach’s Alpha is defined between 0 and 1, where the value of alpha is acceptable for $\alpha > 0.7$ (Gliem and Gliem, 2003; Nunnally, 1978). The result confirmed the reliability of the tool by obtaining $\alpha = 0.70$, though they are presented in following Table 4.4.

4.4.2 Multicollinearity Analysis

Before presenting the model estimates, Table 4.5 includes the multicollinearity statistics for each group of socio-demographic factors with respect to financial behaviour only as the tolerance/ variance inflation factor (VIF) values are same up to two decimal points with alternative dependent variables of financial attitude, numeracy and overall literacy. The tolerance and VIF values do not indicate any strong presence of multicollinearity among the variables.

Table 4.4 Reliability Statistics

Cronbach's Alpha (α)	No. of Items
0.70	31

Table 4.5 Multicollinearity Statistics

Variables	Financial Behaviour	
	Tolerance	VIF
Gender	0.91	1.09
Age group	0.71	1.40
Religion	0.99	1.01
Education	0.84	1.20
City of residence	0.85	1.18
Living status	0.98	1.01
Employment status	0.75	1.34
Household income pm	0.82	1.22
Reliability of household income	0.97	1.04

Table 4.6 Classification of Base categories

Variables	Base Category
Gender	Male
Age group	45 and above
Education	Others (Ph.D., M. Phil)
City of residence	Tier3
Living status	Friends/colleagues
Employment status	Student
Household Income pm	More than 1,00,000
Reliability of household income	No
Financial Behaviour	Inferior
Financial Attitude	Inferior
Financial Numeracy	Low
Financial Literacy	Low
Investment in Financial Instruments	Low

4.4.3 Classification of Base categories

All the regressions were initially run with all the socio-demographic variables. However, the insignificant ones were dropped and the model estimates presented here included only the significant ones. For all MLR and those OLS regressions with coded independent variables, the base categories of different variables are presented in Table 4.6.

4.4.4 Impact of socio-demographic variables on Financial Behaviour

Each table is followed by its interpretation. It begins with the first set of models with financial behaviour as the dependent variable and socio-demographic variables as independent variable in Table 4.7. The MLR results show that women are only half as likely to have neutral financial behaviour compared to men while the likelihood further decreases to 40 percent for women to have superior financial behaviour. The OLS estimates also indicate that female respondents have 2.81 times inferior financial behaviour compared to male respondents. Overall women are more likely to have inferior financial behaviour compared to men. The three age group categories up to 45 years, turned out to be highly significant with all odd ratios nearing zeros. This implies that none of the age group below 45 is likely to have neutral or superior financial behaviour compared to the respondents above 45 years of age.

The OLS results suggest that the age band of 18 to 25 and 26 to 35 have significantly inferior financial behaviour (3.69 and 3.53 times respectively) compared to older people in the category of above 45 years of age. Therefore, respondents of all age groups below 45 are more likely to have inferior financial behaviour. However, as indicated in Table 4.1, the number of respondents with age 45 or above constitutes only 3 percent of the respondents. This may have influenced the results.[2]

The respondents with bachelor's and master's degrees are found to have significantly superior financial behaviour compared to the respondents with education level of 'other' category in OLS as well as in MLR. Finally, only the income group of up to Rs. 30,000 is 22 percent more likely to have inferior financial behaviour compared to the income group of above Rs. 100,000. Also, all income group with income less than Rs. 70,000 are less likely to have superior financial behaviour compared to the same base income group. OLS results are also consistent with the above observations. Thus, the respondents with income higher than Rs. 100,000 pm are significantly more likely to have superior financial behaviour compared to most other respondent categories.

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[2] MLR estimates without the '45 and above' age category (N= 485) had all categories under 'Age group' insignificant, though other estimates were comparable.

Table 4.7 Models of Financial Behaviour with Socio-demographic Factors as IV

MLR				
	Variables		**Coefficients**	**Odd ratios (β)**
FB: Neutral	Intercept		19.28*	
	Gender	Female	-0.71*	0.49
	Age group	18-25	-16.77*	0.00
		26-35	-17.06*	0.00
		36-45	-16.95*	0.00
	Education	12th	-1.20	0.30
		Bachelor's Degree	-0.34	0.71
		Master's Degree	0.17	1.19
	Income (p.m.)	≤ 30000	-1.52*	0.22
		30000 – 50000	-0.42	0.66
		50000-70000	-0.15	0.86
		70000-100000	-0.05	0.95
FB: Superior	Intercept		18.56*	
	Gender	Female	-0.91*	0.40
	Age group	18-25	-17.89*	0.00
		26-35	-17.77*	0.00
		36-45	-16.78*	0.00
	Education	12th	-0.99	0.37
		Bachelor's Degree	1.12**	3.06
		Master's Degree	1.21*	3.35
	Household Income (p.m.)	≤ 30000	-2.32*	0.10
		30000 – 50000	-1.80*	0.17
		50000-70000	-1.26**	0.28
		70000-100000	-0.99	0.37
Pseudo R square		Cox and Snell	0.16	
		Nagelkerke	0.19	
		McFadden	0.10	
OLS				
Variables			Coefficients	*t*-statistic
Intercept			24.95	24.26*
Gender		Female	-2.81	-3.89*
Age		18-25	-3.69	-3.33*
		26-35	-3.53	-3.80*
Education		Bachelor's Degree	3.11	3.03*
		Master's Degree	2.83	3.39*
Household Income (p.m.)		≤ 30000	-5.55	-4.86*
		30000 – 50000	-3.75	-3.23*
		50000-70000	-3.74	-3.11*
		70000-100000	-3.45	-2.85*
R^2 / Adjusted R^2			0.14/ 0.13	

*: significant at 1%; **: significant at 5%; ***: significant at 10%

4.4.5 Impact of socio-demographic variables on Financial Attitude

The MLR results presented in Table 4.8 indicate that women are more likely to have inferior financial attitude compared to men. OLS results also support the view that the female respondents have 1.66 times inferior financial attitude compared to the male respondents. While education remains insignificant in MLR, in OLS only the respondents with bachelor's degree turn out to be significant with inferior financial attitude compared to those with M.Phil. and doctoral degrees.

On the other hand, only MLR regression has significant results for the 'living status' variable. The respondents who are living alone and with family, are significantly and substantially more likely to have better financial attitude compare to those living with friends or colleagues. In the linear regression, only the respondents with income up to Rs. 30,000 pm have nearly 1.5 times superior financial attitude compare to the income group of above Rs. 100,000. The MLR results also show that the lowest income group is nearly 5 times more likely to have superior financial attitude compare to the base category. This may indicate that the respondents from lower income group are more careful about spending money.

Table 4.8 Models of Financial Attitude with Socio-demographic Factors as IV

MLR				
	Variables		**Coefficients**	**Odd ratios (β)**
FA: Neutral	Intercept		0.91***	
	Gender	Female	-0.60**	0.55
	Living status	Alone	1.19**	3.29
		Family	1.11*	3.04
	Income	Up to Rs 30000	0.15	1.16
		Rs 30,000 – Rs 50,000	0.74	2.10
		Rs 50,000 – Rs 70,000	0.54	1.71
		Rs 70,000 – Rs 1,00,000	-0.07	0.94
FA: Superior	Intercept		-2.92**	
	Gender	Female	-1.33*	0.26
	Living status	Alone	2.97*	19.50
		Family	2.50**	12.23
	Income	Up to Rs 30000	1.53**	4.61
		Rs 30,000 – Rs 50,000	1.04	2.82
		Rs 50,000 – Rs 70,000	0.88	2.42
		Rs 70,000 – Rs 1,00,000	-1.04	0.35
Pseudo R square		Cox and Snell	0.09	
		Nagelkerke	0.12	
		McFadden	0.07	
OLS				
Variables			Coefficients	*t*-statistic
Intercept			29.50	107.55*
Gender		Female	-1.66	-4.35*
Education		Bachelor's Degree	-1.21	-2.62*
Income		Up to Rs 30,000	1.48	3.61*
R^2 / Adjusted R^2			0.07 / 0.06	

*: significant at 1%; **: significant at 5%; ***: significant at 10%

4.4.6 Impact of socio-demographic variables on Financial Numeracy

With respect to financial numeracy the MLR regression shows that men are 40 percent and 20 percent more likely to have average and good financial numeracy skill compared to women; refer to Table 4.9. Linear regression shows that overall financial numeracy skills among men are nearly twice compare to women. In OLS, respondents in all age group categories up to 45 years are found to have poor financial numeracy skill compare to those above 45 years of age while, MLR confirms the same only for the category of 26 to 35 and 36 to 45 (at 10 percent level of significance).

Only Bachelor's degree holders in MLR are found to be nearly three times more likely to possess high numeracy skills compared to M.Phil or PhD degree holders. Education remains insignificant in linear regression. Employment status is insignificant in MLR; but in OLS only the government employees are found to have significantly poorer financial numeracy skill compared to the students' category. The highest income groups of Rs. 100,000 pm is found to have better financial numeracy skill consistently in both MLR and OLS regressions. While income groups of up to Rs.30000 and Rs.70000–100000 are found to have poorer numeracy skill in linear regression, the same two groups are also found to be 35-43 percent less likely to have average numeracy skill compare to the highest income category in MLR. Additionally, these two groups are observed to be 22-23 percent less likely to have high numeracy skill. Finally, households with reliable income are approximately two times and more than three times more likely to have average and high financial numeracy skill respectively, compare to those without reliable household income. Similarly, the respondents who perceive their household income to be reliable are found to have 1.21 times better financial numeracy compare to the respondents not having reliable household income in the OLS.

4.4.7 Impact of socio-demographic variables on Financial Literacy

Table 4.10 shows the results for overall financial literacy. As expected, women are more likely to have poor financial literacy against male respondents following MLR as well as (likelihood ratios are at 30 and 10 percent) OLS estimates. Education is found significant only in MLR, where respondents with Master's degree are 2.5 times more likely to have high financial literacy compared to MPhil and PhD degree holders. On the other hand, the private sector employees are indicated to have better financial literacy compared to the student-respondents only in OLS results. All income groups compared to the highest income group of 'above Rs. 100,000' are less likely to have significant high financial literacy. This indicates that the level of financial literacy is low among all income groups compared to the base category.

Table 4.9 Models of Financial Numeracy with Socio-demographic Factors as IV

MLR				
	Variables		**Coefficients**	**Odd ratios (β)**
FN: Average	Intercept		1.34	
	Gender	Female	-0.99*	0.37
	Age group	18-25	0.77	1.08
		26-35	0.14	1.15
		36-45	0.06	1.06
	Education	12^{th}	-0.63	0.53
		Bachelor's Degree	0.62	1.85
		Master's Degree	0.44	1.56
	Income (p.m.)	≤ 30000	-1.06**	0.35
		30000 – 50000	-0.53	0.59
		50000-70000	-1.10**	0.33
		70000-100000	-0.84***	0.43
	Reliable Household Income	Do not know	-0.50	0.61
		Yes	0.73**	2.08
FN: High	Intercept		1.94***	
	Gender	Female	-1.67*	0.19
	Age group	18-25	-1.74	0.18
		26-35	-2.21**	0.11
		36-45	-1.96***	0.14
	Education	12^{th}	-0.58	0.56
		Bachelor's Degree	0.95**	2.58
		Master's Degree	0.53	1.69
	Household Income (p.m.)	≤ 30000	-1.50*	0.22
		30000 – 50000	0.08	1.09
		50000-70000	-0.68	0.51
		70000-100000	-1.48**	0.23
	Reliability of Household Income	Do not know	-1.42	0.24
		Yes	1.30*	3.68
Pseudo R square		Cox and Snell	0.19	
		Nagelkerke	0.20	
		McFadden	0.11	
OLS				
Variables			Coefficients	*t*-statistic
Intercept			12.52	12.52*
Gender		Female	-1.82	-5.40*
Age group		18-25	-2.71	-2.67*
		26-35	-3.14	-3.25*
		36-45	-3.04	-3.07*
Employment status		Govt. sector employee	-1.06	-2.28**
Household Income (pm)		Up to Rs 30000	-1.71	-4.40*
		70000-100000	-1.00	-2.14**
Reliability of Household Income		Yes	1.21	3.43*
R^2 / Adjusted R^2			0.14/0.13	

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Table 4.10 Models of Financial Literacy with Socio-demographic Factors as IV

MLR				
	Variables		**Coefficients**	**Odd ratios (β)**
FL: Average	Intercept		2.27*	
	Gender	Female	-1.27*	0.28
	Education	12th	-0.90	0.41
		Bachelor's Degree	-0.36	0.70
		Master's Degree	0.27	1.31
	Income (p.m.)	≤ 30000	-1.15**	0.32
		30000 – 50000	-0.63	0.53
		50000-70000	-0.89	0.41
		70000-100000	-0.62	0.54
	Reliable Household Income	Do not know	-0.52	0.60
		Yes	0.92*	2.52
FL: High	Intercept		1.01	
	Gender	Female	-1.65*	0.19
	Education	12th	-0.46	0.63
		Bachelor's Degree	0.13	1.14
		Master's Degree	0.94**	2.55
	Household Income (p.m.)	≤ 30000	-1.95*	0.14
		30000 – 50000	-1.56*	0.21
		50000-70000	-1.45**	0.24
		70000-100000	-1.38**	0.25
	Reliable Household Income	Do not know	-0.63	0.53
		Yes	1.00*	2.71
Pseudo R square		Cox and Snell	0.12	
		Nagelkerke	0.15	
		McFadden	0.08	
OLS				
Variables			Coefficients	*t*-statistic
Intercept			61.18	38.25*
Gender		Female	-6.33	-6.10
Employment Status		Private Sector Employees	2.23	2.19**
Household Income (pm)		≤ 30000	-6.24	-4.00*
		30000 – 50000	-4.14	-2.62*
		50000-70000	-4.94	-2.91*
		70000-100000	-5.69	-3.23*
Reliability of Household Income		Yes	3.33	3.07*
R^2 / Adjusted R^2			0.13/0.12	

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Finally, the respondents with reliable household income are more likely to have better financial literacy with odd ratios between 2.5 and 2.7. OLS estimates also supported the observation. The *R*-square (pseudo, adjusted) values from all the regressions are very small ranging between 6 to 20 percent. This implies that the included variables explain very small percentages of the variations in the dependent variable. However, our objective is not to identify the factors that influence the maximum variations in financial literacy and its components. Rather, this study attempts to identify the socio-demographic factors that affect financial literacy of the sample respondents.

In the above analysis of hypothesis testing, socio-demographic variables have shown positive impact on financial literacy level excluding age, place and income. According to the findings, financial literacy among male participants was likely to be significantly higher compared to female participants. Similar results are obtained for financial behaviour, financial attitude and financial numeracy. So it can be state that the hypothesis H1: a – d is accepted. The impact of age is insignificant on financial literacy. However, age is found significant with financial behaviour, and financial numeracy. Thus, the hypothesis H2 is partially supported. The results also indicated that higher education has significant positive impact on financial literacy and its components. Thus, the hypothesis H3: a – d is accepted. The city of residence does not influence the financial literacy, thus hypothesis H4 is rejected. Living status has a significant impact on financial attitude only; thus hypothesis H5 is supported partially. Moreover, employment status has a positive effect on financial literacy only, especially private sector employees. Thus, the hypothesis H6 is also partially accepted. Though, total income is found to be insignificant for financial literacy, but it has a significant impact on financial behaviour, financial attitude and financial numeracy, thus hypothesis H7 is partially supported. Finally, the reliability of household income is found to have a significant impact on financial literacy and financial numeracy; hence, H8 is partially accepted.

4.4.8 Interrelationship between Financial Behaviour and Financial Attitude

Table 4.11 shows that respondents with neutral financial attitude are more likely by 2.15 times to have neutral financial behaviour compared to those with inferior financial attitude. Similarly, respondents with neutral and superior financial attitude are four times more likely to have superior financial behaviour. OLS also support such observation and therefore, overall, financial attitude is found to affect financial behaviour positively. Similarly, as depicted in Table 4.12, financial behaviour is also found to have a significantly positive impact on financial attitude.

4.4.9 Interrelationship between Financial Numeracy and Financial Attitude

The relationship between financial numeracy skill and financial attitude is shown in Tables 4.13 and Table 4.14. While respondents with neutral financial attitude is nearly three times more likely to have average numeracy skill, they half less likely to have high numeracy skill compared to those with inferior attitude. Superior numeracy skill and financial attitude are not found to be significantly related.

Table 4.11 Models of Financial Behaviour with Financial Attitude as the IV

MLR				
	Variables		**Coefficients**	**Odd ratios (β)**
FB: Neutral	Intercept		0.72**	
	Financial Attitude	Neutral	0.77**	2.15
		Superior	0.31	1.36
FB: Superior	Intercept		-1.22**	
	Financial Attitude	Neutral	1.42*	4.15
		Superior	1.49**	4.42
Pseudo R square		Cox and Snell	0.02	
		Nagelkerke	0.03	
		McFadden	0.01	
OLS (Financial Attitude Codes)				
Variables			**Coefficients**	***t*-statistic**
Intercept			16.02	15.21*
Financial Attitude		Neutral	3.89	3.45*
		Superior	5.47	3.57*
R^2 / Adjusted R^2			0.03/0.03	
OLS (Financial Attitude Scores)				
Intercept			10.67	4.24*
Financial Attitude Score			0.31	3.60*
R^2 / Adjusted R^2			0.03/0.02	

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Table 4.12 Models of Financial Attitude with Financial Behaviour as the IV

MLR				
	Variables		**Coefficients**	**Odd ratios (β)**
FA: Neutral	Intercept		1.24*	
	Financial Behaviour	Neutral	0.77**	2.15
		Superior	1.42*	4.15
FA: Superior	Intercept		-0.53	
	Financial Behaviour	Neutral	0.31	1.36
		Superior	1.49**	4.42
Pseudo R square	Cox and Snell		0.02	
	Nagelkerke		0.03	
	McFadden		0.02	
OLS (Financial Behaviour Codes)				
Variables			**Coefficients**	***t*-statistic**
Intercept			27.99	62.88*
Financial Behaviour	Neutral		1.11	2.22**
	Superior		1.95	3.13*
R^2 / Adjusted R^2			0.02/0.02	
OLS (Financial Behaviour Score)				
Intercept			27.45	56.62*
Financial Behaviour Score			0.08	3.60*
R^2 / Adjusted R^2			0.03/0.02	

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Table 4.13 Models of Financial Numeracy with Financial Attitude as the IV

MLR				
	Variables		**Coefficients**	**Odd ratios (β)**
FN: Average	Intercept		-1.53*	
	Financial Attitude	Neutral	1.14**	3.13
		Superior	0.83	2.30
FN: High	Intercept		0.23	
	Financial Attitude	Neutral	-0.68**	0.51
		Superior	-0.43	0.65
Pseudo R square		Cox and Snell	0.04	
		Nagelkerke	0.04	
		McFadden	0.02	
OLS (Financial Attitude Codes)				
Variables			**Coefficients**	***t*-statistic**
Intercept			6.97	13.84*
Financial Attitude		Neutral	2.19	4.06*
		Superior	1.25	1.71
R^2 / Adjusted R^2			0.04/0.04	
OLS (Financial Attitude Scores): insignificant				

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Table 4.14 Models of Financial Attitude with Financial Numeracy as the IV

MLR				
	Variables		**Coefficients**	**Odd ratios (β)**
FA: Neutral	Intercept		1.32*	
	Financial Numeracy	Average	0.38**	1.97
		High	1.82*	6.18
FA: Superior	Intercept		-0.48	
	Financial Numeracy	Average	0.43	1.54
		High	1.27**	3.54
Pseudo R square		Cox and Snell	0.04	
		Nagelkerke	0.05	
		McFadden	0.03	
OLS (Financial Attitude Codes and Scores): insignificant				

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Table 4.14 shows that the respondents with average and high numeracy skill are more likely to have better financial attitude as compared to those with low numeracy skill. Overall, the relationship between financial numeracy and attitude seems weaker with more meaningful causal effect running from numeracy to attitude.

4.4.10 Interrelationship between Financial Behaviour and Financial Numeracy

Results reported in Table 4.15 suggest that financial behaviour affects financial numeracy positively. The respondents with neutral (superior) financial behaviour is 4 to 16 (8 to 75) times more likely to have better numeracy skill compared to those with inferior financial behaviour in MLR results. The OLS estimates also indicate a very high positive influence of financial behaviour on numeracy skill. Similarly, the impact of financial numeracy on behaviour has also been significantly positive as presented in Table 4.16.

Table 4.15 Models of Financial Numeracy with Financial Behaviour as the IV

MLR				
	Variables		Coefficients	Odd ratios (β)
FN: Average	Intercept		0.12	
	Financial Behaviour	Neutral	1.33*	3.76
		Superior	2.03*	7.58
FN: High	Intercept		-2.69*	
	Financial Behaviour	Neutral	2.75*	15.64
		Superior	4.32*	75.43
Pseudo R square		Cox and Snell	0.14	
		Nagelkerke	0..16	
		McFadden	0.07	

OLS (Financial Behaviour Codes)			
Variables		**Coefficients**	***t*-statistic**
Intercept		5.50	14.59*
Financial Behaviour	Neutral	3.60	8.50*
	Superior	5.41	10.27*
R^2 / Adjusted R^2		0.18/0.18	

OLS (Financial Behaviour Scores)		
Variables	**Coefficients**	***t*-statistic**
Intercept	4.79	11.85*
Financial Behaviour Score	0.21	11.07*
R^2 / Adjusted R^2	0.20/0.20	

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Table 4.16 Models of Financial Behaviour with Financial Numeracy as the IV

MLR				
	Variables		Coefficients	Odd ratios (β)
FB: Neutral	Intercept		0.42**	
	Financial Numeracy	Average	1.36*	3.88
		High	2.90*	18.13
FB: Superior	Intercept		-1.65*	
	Financial Numeracy	Average	1.91*	6.78
		High	4.35*	77.73
Pseudo R square		Cox and Snell	0.16	
		Nagelkerke	0.20	
		McFadden	0.10	

OLS (Financial Numeracy Codes)			
Variables		**Coefficients**	***t*-statistic**
Intercept		15.18	26.09*
Financial Numeracy	Average	4.63	6.06*
	High	9.41	10.94*
R^2 / Adjusted R^2		0.19/0.19	

OLS (Financial Numeracy Scores)		
Variables	**Coefficients**	***t*-statistic**
Intercept	11.27	13.72*
Financial Numeracy score	0.94	11.07*
R^2 / Adjusted R^2	0.20/0.20	

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Overall, the findings suggest that financial behaviour, attitude and numeracy grow together and feed on each other. Therefore, any policy designed to increase financial awareness in terms of enhanced numeracy skill is expected to improve the other components of financial literacy as well. If individuals have basic knowledge about financial terms, investing in the financial instruments and the ability to calculate its benefits, then they can make more accurate financial decisions. Table 4.11 to Table 4.16 presents the interrelationship between the components of financial literacy. The result clearly indicates that all the components have bi-directional positive relationship with each other. Thus the hypotheses H9, H10 and H11 are accepted.

4.4.11 Impact of Financial Instruments on Investment decision

This study also assessed whether financial numeracy influences decisions related to investments in various financial instruments in general, and stocks and bonds, in particular. Investment in financial instruments is categorized as high, average and low, depending on the number of instruments held by an individual. Refer to Table 4.3 for its summary statistics.

Table 4.17 Models of Investment on Financial Instruments (FI)

MLR				
	Variables		**Coefficients**	**Odd ratios (β)**
FI: Average	Intercept		0.00	
	Financial Numeracy	Average	0.94*	2.56
		High	1.91*	6.75
FI: High	Intercept		-1.88*	
	Financial Numeracy	Average	1.30*	3.65
		High	3.03*	20.73
Pseudo R square		Cox and Snell	0.12	
		Nagelkerke	0.14	
		McFadden	0.07	
OLS (Financial Numeracy Codes)				
Variables			**Coefficients**	***t*-statistic**
Intercept			2.61	16.05*
Financial Numeracy		Average	0.55*	3.11
		High	1.45*	7.29
R^2 / Adjusted R^2			0.10/0.09	
OLS (Financial Numeracy Scores)				
Variables			**Coefficients**	***t*-statistic**
Intercept			1.49	7.81*
Financial Numeracy Score			0.14	7.36*
R^2 / Adjusted R^2			0.10 / 0.10	

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Table 4.18 Models of Investment in Equities

OLS (Financial Numeracy Codes)			
Variables		**Coefficients**	***t*-statistic**
Intercept		0.40	1.33
Financial Numeracy	Average	0.12	3.14*
	High	0.35	8.14*
R^2 / Adjusted R^2		0.12/0.12	
OLS (Financial Numeracy Scores)			
Variables		**Coefficients**	***t*-statistic**
Intercept		-0.12	-2.93*
Financial Numeracy Score		0.03	7.97*
R^2 / Adjusted R^2		0.11/0.11	

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Table 4.19 Models of Investment in Bonds

OLS (Financial Numeracy Codes)			
Variables		**Coefficients**	***t*-statistic**
Intercept		0.05	1.96**
Financial Numeracy	Average	0.05	1.59
	High	0.10	2.93*
R^2 / Adjusted R^2		0.02/0.01	
OLS (Financial Numeracy Scores)			
Variables		**Coefficients**	***t*-statistic**
Intercept		0.24	0.72
Financial Numeracy Score		0.01	2.27**
R^2 / Adjusted R^2		0.01/0.01	

*: significant at 1%; **: significant at 5%; ***: significant at 10%

The results are reported in Tables 4.17- Table 4.19. As expected, respondents with average and high numeracy skill are more likely to invest in a larger variety of instruments compared to those with low numeracy skill leading to greater portfolio diversification. Further, OLS estimates show that with improvements in numeracy skill, investment in the number of financial instruments increases by 14 percent. The observation broadly remains the same for investment specifically in stocks. However, with increase numeracy skill, the number of respondents investing in stocks increases only by 3 percent. And finally by considering investment in bonds, it is observed that though positive, the impact of numeracy skill is on investment in bonds weakens further. However, this may imply that improvement in financial numeracy skill has the potential to increase participation in secondary markets though at slow and gradual pace.

As discussed above, financial numeracy plays an important role before investing in financial instruments. If a person has the ability of basic financial calculation, then he can predict the profit or loss on his savings and investment. This indicates that financial numeracy skill has significant influence on investment in financial instruments, equities and bonds. Therefore, the hypotheses H12, H13 and H14 are accepted.

4.5 CONCLUSION

This chapter provides a thorough analysis of the various factors affecting financial literacy, which helps in achieving the initial three aims of this research. The socio-demographic profile of all 500 respondents gives us basic information about each respondent such as gender, age, religion, education, living status, employment status, income, city of residence and reliability of their household income. After that, the financial literacy pattern was analyzed using the information provided by all respondents for each questions included in questionnaire 1; has been presented in Annexure I. The financial literacy pattern is analyzed with its three components i.e. financial behaviour, financial attitude and financial numeracy, which provide information about the overall financial literacy of individuals.

Some respondents have disclosed the names of websites that provide financial assistance / information before making any decision related to investment. The reliability test by Cronbach's Alpha confirms that the dataset is acceptable for further analysis. Similarly, the VIF value confirms that there is no multicollinearity between the predictor variables. In addition, in the logistic regression method, it is necessary to determine the base category of each predictor variable for clarity in the result obtained. Thus, the last category of each predictor variable is set as the base category.

On the basis of research gaps in literature review, a total of fourteen hypotheses have been formulated and tested to achieve the initial three objectives of this study. In this chapter, all the hypotheses are tested with the help of MLR and OLS regression methods. Finally, it can be concluded that socio-demographic variables (gender, education, employment status and reliability of household income) have significant influence on the financial literacy level; these findings support to achieve the RO1 of this research. Whereas the age, place of residence, living status and total income of respondents did not affect individual's financial literacy level. Apart from this, the interrelationship between the components of financial literacy confirms the bi-directional impact on each other; that supports to achieve RO2. Similarly, financial numeracy skills have a positive impact on investment in financial instruments, equities and stocks; results to achieve RO3 of this study. The next chapter is going to discuss the data collection methods used in second phase of this study.

CHAPTER – 5

ANALYSIS OF FINANCIAL INSTITUTIONS AND THE USE OF SOCIAL MEDIA

5.1 INTRODUCTION

There are three objectives to conduct research in the second phase. First is to examine the various purposes for which social media is used by financial organizations; second, to study the role of banking and non-banking financial organizations in generating financial literacy in terms of initiatives and strategies adopted by them; and third, to examine the extent of use of social media by financial organization to increase financial awareness. Moreover, six social media platforms have been considered in this study; that are Facebook, Twitter, YouTube, LinkedIn, Google Plus, and Instagram.

Thus, the purpose of this chapter is to analyze the data obtained in the second phase of this research, where data is gathered from 32 FIs managers by interviewing through a structured questionnaire. The FIs include 10 public sector banks, 10 private sector banks, 2 foreign banks, and 10 NBFCs operating their functions in India. The information given by all FIs managers is analyzed and presented through graphs and charts in this chapter. The managerial suggestions will provide an insight on how to better utilize social media platforms to increase financial awareness of the people.

This chapter begins with reliability test performed by Cronbach's Alpha method in section 5.2. After that, managerial responses of banks are presented in section 5.3, followed by the managerial responses of NBFCs in section 5.4. The annual report of two leading banks, SBI and HDFC, has also been considered in this study for the purpose of disclosing the initiatives taken by them to improve financial awareness. Subsequently, managerial views on social media usage have been summarized in section 5.5, followed by the multiple methods adopted by FIs for financial awareness in section 5.6. Finally, in section 5.7, a comparative result has been presented between the banks and NBFCs on their individual efforts to remove financial illiteracy in India.

5.2 RELIABILITY TEST

Before proceeding with the data analysis, the reliability test results of the data collected are presented in Table 5.1. As discussed in Chapter 4, the value of reliability coefficient Cronbach's Alpha is acceptable if $\alpha > 0.7$ (Gliem and Gliem, 2003). In this phase of research, the Cronbach's

Alpha value for 11 items turned out to be 0.71. These 11 items describe the preferred social media platforms by FIs, multiple reasons and benefits for using the media platforms, change in cost and organizational performance, risks, and the use of social media platforms in financial awareness.

Table 5.1 Reliability Statistics

Cronbach's Alpha (α)	No. of Items
0.71	11

5.3 ANALYSIS OF RESPONSES PROVIDED BY BANK MANAGERS

The responses provided by public sector, private sector and foreign banks manager have been discussed in section 5.3.1. The socio-demographic profile provides general information about bank managers such as work experience on that position, education, age and gender. After that, the information about the social media usage by banks is given in the section 5.3.2. The next section 5.3.3 discusses the initiatives taken by India's two largest banks SBI and HDFC, which have been disclosed in their annual report 2017-18.

5.3.1 Socio-demographic profile of bank managers

The socio-demographic profile of all bank managers including public sector, private sector and foreign banks, has been presented in Table 5.2. This clearly indicates that most respondents (68.2%) have up to 2 years of experience, while 13.6% managers have 2-5 years of experience and only 4 managers have 5-10 years of experience. The analysis looked forward to that approximately 45% and 54% of managers have a bachelor's degree and a master degree respectively. Most respondents (77.3%) are aged 25-35 years, while about 23% respondents are between 35-45 years of age. Finally, out of 22 banks, there are 18 male and only 4 female managers who participate in this research.

Table 5.2 Socio-demographic characteristics of bank managers

Variables		Socio-demographic characteristics	
		Number	Percentage
Experience (in years)	0-2	15	68.2
	2-5	3	13.6
	5-10	4	18.2
Education	Bachelor Degree	10	45.5
	Master Degree	12	54.5
Age Group (in years)	25-35	17	77.3
	35-45	5	22.7
Gender	Male	18	81.8
	Female	4	18.2

5.3.2 Association between banks and social media adoption

In this section, the data obtained from the 22 banks are analyzed. As on July 24, 2018, out of the six social media platforms considered, the most widely used ones by the banks are Facebook and Twitter (both at 91%), followed by LinkedIn (64%); see Figure 5.1. The banks without a Facebook account are Canara Bank, and Syndicate Bank, both are public sector banks. And the two banks without Twitter accounts are Syndicate Bank and DCB Bank, the last one is a private sector bank. Further, out of the eight banks without a LinkedIn account, five are public sector banks. Overall, public sector banks seem to have less presence in social media platforms compared to their private sector counterparts.

Further, Google Plus and Instagram are the least popular channels among the banks considered, each one of them is used by four and six banks, respectively. Among all the 22 banks considered only the Oriental Bank of Commerce, a public sector bank, is present in all the social media platforms though its number of followers are one of the lowest. Two public sector banks, namely SBI and Bank of Baroda, are the next most active ones having presence in all social media channels except for Google Plus. On the other hand, there are five private sector banks active in five platforms. Overall, the private sector banks including the foreign banks are found to be nearly 1.3 times more active in using social media platforms compared to the public sector banks. On average the number of social media accounts per bank is 3.5 for the former while it is 2.7 for the latter.

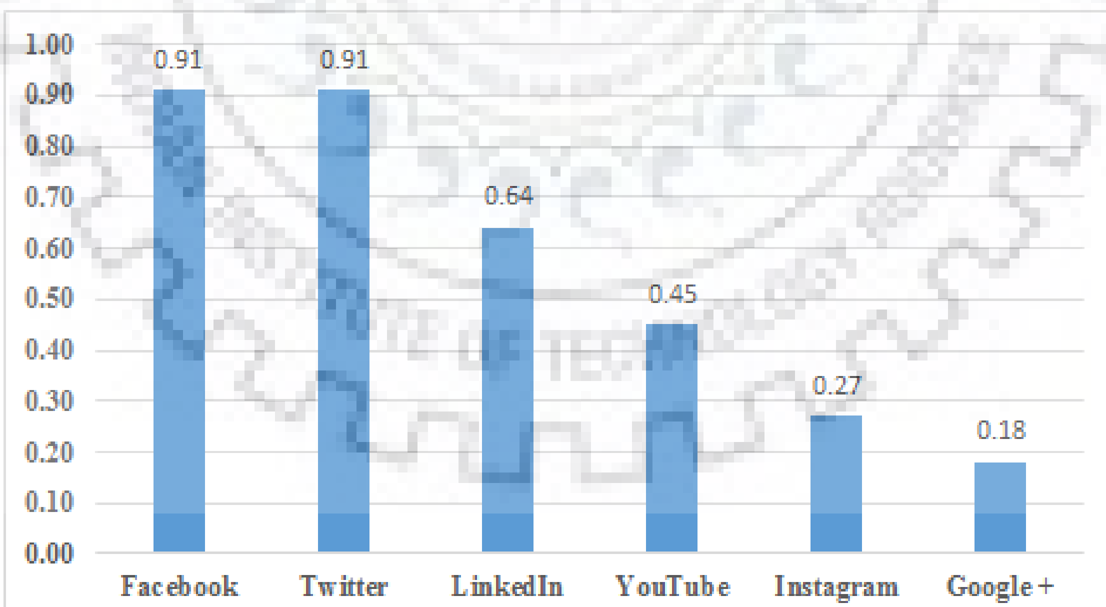

Figure 5.1 Percentage of Banks using Different Social Media Platforms

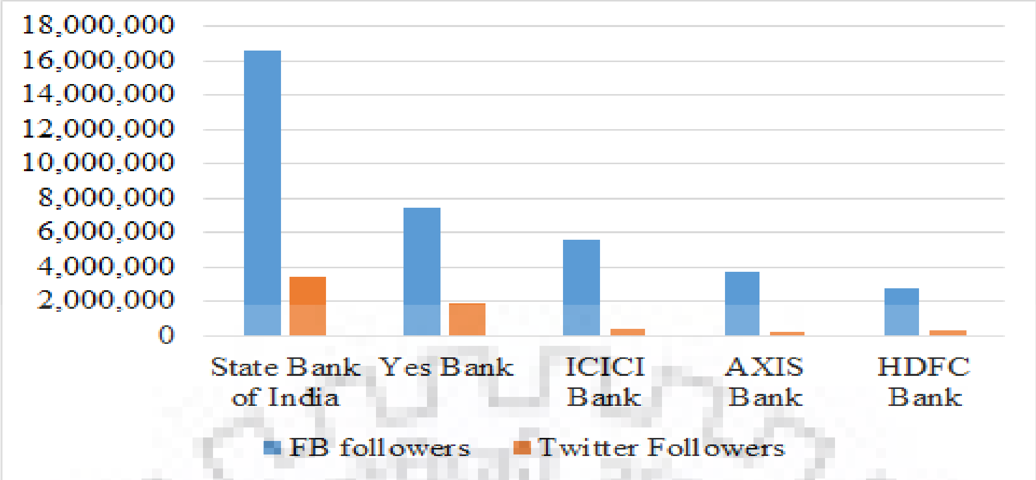

Figure 5.2 Number of Facebook (FB) and Twitter Followers for Top Five Banks

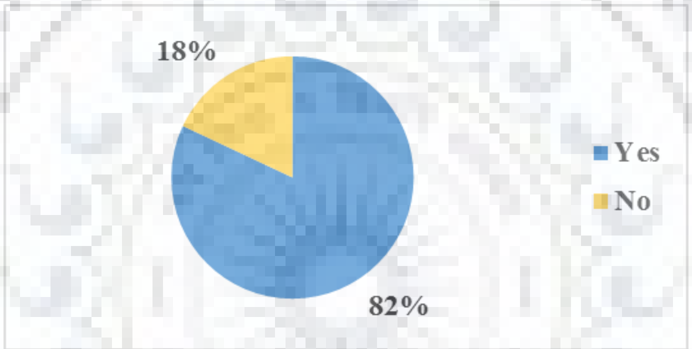

Figure 5.3 Percentage of Banks with Social Media Department

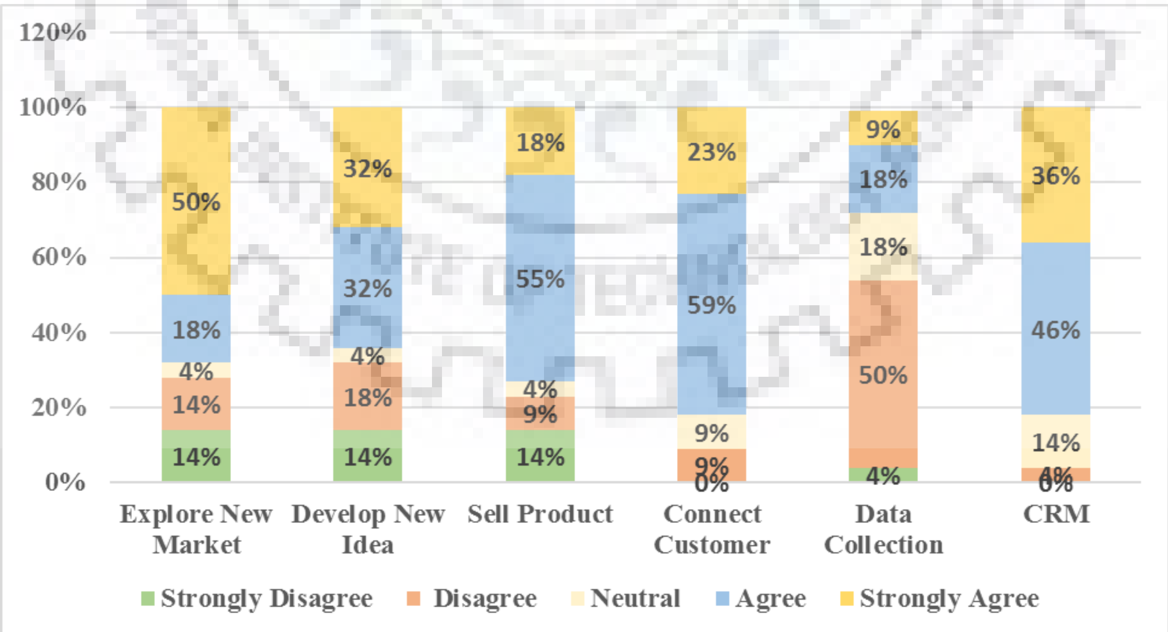

Figure 5.4 Reasons for using Social media

However, participation in social media has improved manifold for the public sector banks within a span 14 months, from May 2017 to July 2018. First of all, the average number of social media accounts per public sector bank was only 1.9 in May 2017. Second, all public sector banks with Facebook account, except for Punjab National Bank, experienced a two to five fold increase in their follower base. Allahabad Bank joined social media platforms through Facebook and Twitter. While the private sector banks though made some progress, they were not as substantial as portrayed by their counterparts. Though Twitter and Facebook have equal number of participating banks, the number of followers in Facebook, however, is far ahead of the rest.

Figure 5.2 plots the number of followers in Facebook and Twitter of the top five banks having maximum number of followers. SBI leads the pack with maximum number of followers across all platforms (YouTube, Instagram and Google Plus not shown here) though other banks fail to hold their positions consistently in the rest of the platforms.Majority of the banks (82%) reported to have social media departments to operate their social media channels (Figure 5.3). The banks without social media departments are Canara Bank, Syndicate Bank, Allahabad Bank and Bank of India; all four are public sector banks. However, despite not having any social media department, Bank of India and Allahabad Bank have Facebook accounts and Canara Bank operates a Twitter account.

Next the reasons for using social media channels by the banks are analyzed. It was identified and offered six reasons to the bank managers to express their views on a five point scale from strongly disagree to strongly agree. The responses depicted in Figure 5.4 show that fifty percent of the bank managers strongly believed that social media platforms are used to explore new markets and an additional 18 percent also agreed to that. A total of 64 percent thought that social media could be used to develop new ideas while 73 percent believed that it could be useful for selling products. The maximum number of managers (82%) agreed to the fact that social media is useful for connecting with the customers through reviews and reactions, and CRM. However, the only reason for using social media that most of the managers (55 percent) found irrelevant was collecting socio-demographic data of the customers.

A segregated look at the data presented in Figure 5.5 tells us that the percentage of private sector banks approving all the reasons for using social media except for data collection on customer socio-demographics has always been higher than the percentage of public sector banks. This may imply that the private sector banks perceive social media platforms to be more relevant for business growth and sustainability compared to their public sector counterparts.

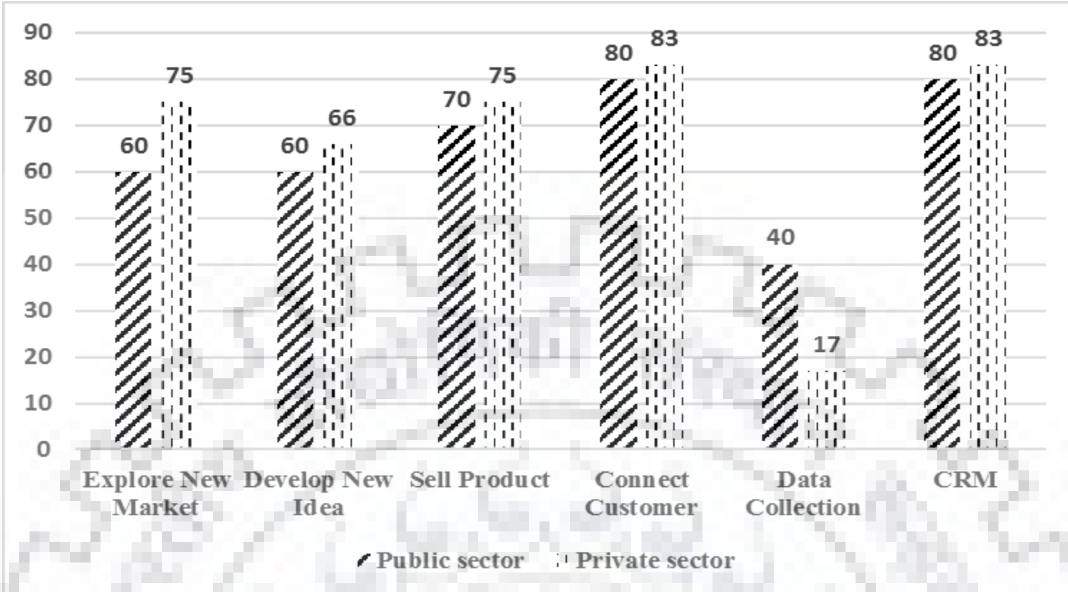

Figure 5.5 Group wise Reasons for using Social Media: Agree - Strongly Agree

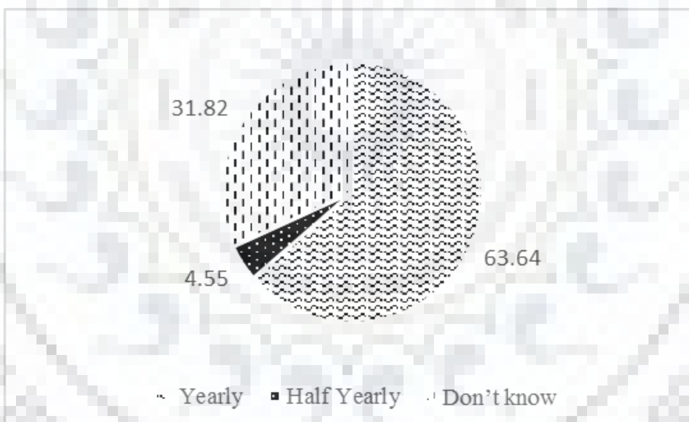

Figure 5.6 Frequency of Reviewing Social Media Policy

Figure 5.6 shows that nearly 32 percent (7 bank managers, 6 from public sector banks) didn't know whether their banks have a social media policy or not and how frequently it is reviewed. Among the rest only ICICI Bank stated to review its social media policy semi-annually while others reviewed annually.

Further, 45 percent (10 banks) of the banks are found to monitor and update their social media sites on a daily basis and another 36 percent (8 banks) claimed that they update on a weekly basis; refer to Figure 5.7. While ICICI Bank was again the only to monitor and update its social media website on an hourly basis, there are three banks, all public sector, without any information on this. This again shows that overall the public sector banks are less proactive in managing social media channels while ICICI Bank is highly active compared to the rest.

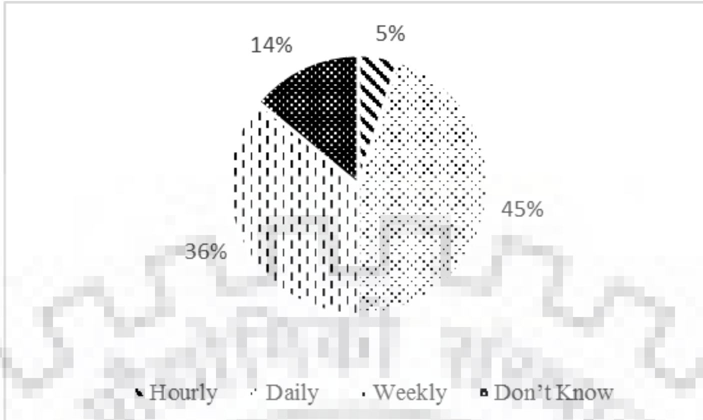

Figure 5.7 Frequency of Monitoring and Updating Social Media Sites by Banks

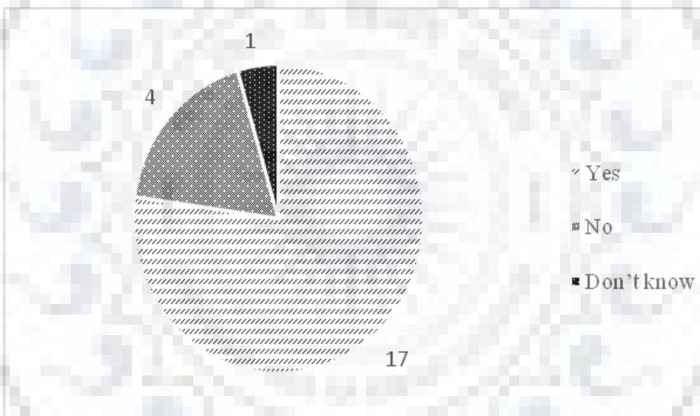

Figure 5.8 Reduction in the Cost of Customer Acquisition due to Social Media Adoption

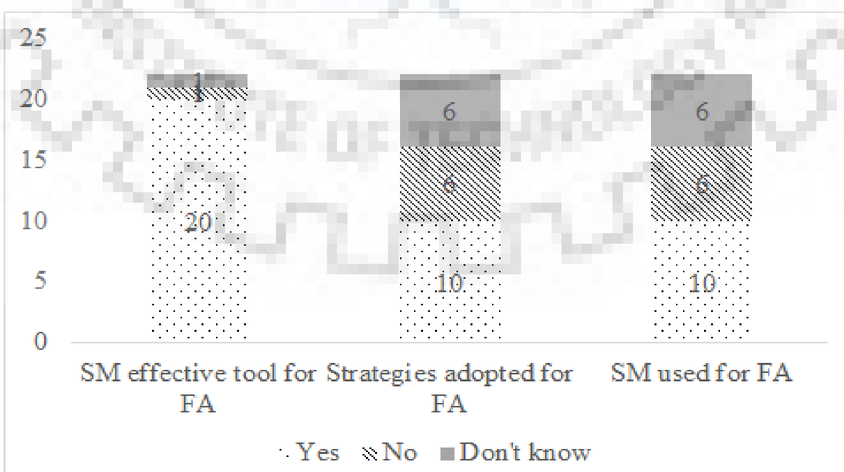

Figure 5.9 Social Media (SM) and Financial Awareness (FA)

Further, 45 percent (10 banks) of the banks are found to monitor and update their social media sites on a daily basis and another 36 percent (8 banks) claimed that they updated on a weekly basis; refer to Figure 5.7. While ICICI Bank was again the only to monitor and to update its social media website on an hourly basis, there were three banks, all public sectors, without any information on this. This again shows that overall the public sector banks are less proactive in managing social media channels while ICICI Bank is highly active compared to the rest.

On the effectiveness of social media adoption for reducing cost of customer acquisition, 17 of the 22 banks agreed to it while 4 disagreed and one was uncertain; refer to Figure 5.8. Among the four banks that disagreed, three are those public sector banks that have the minimum participation in social media platforms.

Besides having some advantages, social media also poses some threats by exposing the banks to certain risks, like reputational risk, operational risk, and data and information risk. As expressed by the bank managers, 50 percent of them perceive data and information risk to be the major risk while for 6 banks it is operational risk and for the rest 5, it is the reputational risk. Using complaint and suggestion box for receiving customers' response or feedback is a common procedure followed by 20 out of 22 banks. Only two banks said that they received customers' feedback by meeting them personally. Both are public sector banks, namely Vijaya Bank and Allahabad Bank, and both being also the least active banks on social media platforms. However, all managers admitted that they received complaints from customers through email and those with Facebook pages received complaints through that as well.

The bank managers were also asked structured questions to express their views on the usefulness of social media for generating financial awareness. Accordingly, 20 out of 22 bank managers thought that social media could be used as an effective tool for generating financial awareness. While Canara Bank, a public sector bank, didn't agree to it, DCB Bank, a private bank, was not sure on this issue. However, only 10 banks, including DCB Bank, stated that they had adopted strategies for generating financial awareness among individuals. Among the rest, six said that they didn't have such strategies and six didn't have information. Consequently, it was noticed that among the public sector banks, only SBI stated to have adopted strategies for generating financial awareness and the rest nine are private sector banks. These banks also confirmed that all of them use social media as platforms for generating financial awareness. These data are presented in Figure 5.9.

Next, a brief comment is presented on the two foreign banks considered though they have been part of the analysis presented above as private sector banks. Standard Chartered is present in Facebook, Twitter and LinkedIn while HSBC is active only on Facebook and Twitter, but has a pool of followers five times larger than Standard Chartered. Both banks have social media departments and social media policy which are revised annually while social media websites are updated and monitored on daily basis. Further, both believe that social media can be used for exploring markets, developing new ideas and for selling products. Moreover, HSBC agrees to the fact that social media can be used for collecting customers' reviews and reactions while Standard Chartered views it to be useful for CRM. Both agree to the usefulness of social media in reducing the cost of customer acquisition. The duo also thinks that data and information risk is the greatest threat posed by social media while they also agree that it is a useful tool for generating financial awareness. And both banks have adopted strategies for the same and use social media as a means.

Overall the analysis presented above shows that the public sector banks have lesser presence in social media platforms compared to the private sector banks. Consequently, the former category is much less certain about its usefulness and effectiveness for business development, cost reduction as well as generation of financial awareness.

5.3.3 Analysis of annual report of banks

SBI, the country's largest bank in terms of bank branches and deposit holding (Seth, 2017), is also the most followed or liked one in social media platforms, surpassing all other private or public banks. Private banks together, on the other hand, are far more active in social media platforms, having strong conviction about its usefulness. And, social media is part of many of the banks' strategies for generating financial awareness.

From the annual reports of the two largest banks in India, one public sector bank namely SBI and the other one a private sector bank, HDFC, it is noted that they use social media extensively for various purposes as mentioned above. Other than that SBI also uses social media for spreading awareness against corruption as a part of its vigilance mechanism as well as continuous security awareness programs. HDFC Bank reported to uses social media channels for recruitment as well. Further, it has become the first bank to offer financial transaction services through the social media channel Facebook Messenger. Using this platform, customers can pay bills, mobile recharge, booking movie tickets, hotels, etc.

The annual reports of SBI and HDFC banks speak volumes for their efforts in spreading financial awareness and literacy. For instance, SBI has 336 Financial Literacy Centers (FLCs), 151 Rural Self-Employment Training Institutes (RSETIs) and 58,000 Business Correspondent (BC) channels, where employees of the bank provide financial information about the banking products and services to the customers. In the scheme of PMJDY, more than 100 million bank accounts have been opened by SBI. In addition, the bank has taken several initiatives to increase the financial literacy of rural people. Self-help group was launched to improve the financial literacy of rural women and loans were provided to support them in business. The bank introduced in a financial literacy program 'Kisan Milan' to connect the farmer and provided loan related information.

On the other hand, HDFC Bank has successfully conducted more than 6 lakh financial literacy programs, which benefited about 59 lakh participants by March 2018. For any new business to start or repair machinery, the bank offers training under literacy program as well as financial assistance. In addition, HDFC Bank has become the first bank to offer financial transaction services through the social media channel Facebook Messenger. Using this platform, customers can pay bills, mobile recharge, booking movie tickets, hotels, etc.

5.4 ANALYSIS OF RESPONSES PROVIDED BY NBFCS MANAGERS

The responses provided by NBFCs managers are discussed in section 5.4.1. The socio-demographic profile provides the general information about the NBFCs managers such as work experience at that position, education, age and gender. After that the reason for social media adoption by NBFCs is summarized in next section 5.4.2.

Table 5.3 Socio-demographic characteristics of NBFCs managers

Variables		**Socio-demographic characteristics**	
		Number	Percentage
Experience (in years)	0-2	5	50
	2-5	5	50
Education	Bachelor Degree	0	0.00
	Master Degree	10	100
Age Group (in years)	25-35	7	70
	35-45	3	30
Gender	Male	8	80
	Female	2	20

5.4.1 Socio-demographic profile of NBFCs managers

The socio-demographic characteristics of all NBFCs managers illustrated in Table 5.3. According to this table, the ratio of 0-2 year and 2-5 years of manager's work experience is 1:1. On the other side, all managers hold a master level degree such as MBA and M.Com. The percentage of respondent for 25-35 year and 35-45 year age group is 70% and 30% respectively. It can be clearly seen that the ratio between male and female respondent is 4:1.

5.4.2 Association between NBFCs and social media adoption

This section provides an analysis of the data collected from the ten NBFCs. As on July 26, 2018, Facebook and LinkedIn are the social media platforms used by all the NBFCs; see Figure 5.10. It is also observed that majority of the NBFCs have their presence in Twitter (80%), and YouTube (70%). The two NBFCs without an account in Twitter are Cholamandalam Investment and Finance Company Limited (Cholamandalam now onwards), and Shriram Transport Finance. Further, three NBFCs, namely Magma Fincorp Ltd, Reliance capital, and HDB Financial Services Limited are found without YouTube account.

As per Figure 5.10, Instagram and Google Plus are found to be the least popular ones; so was the case with the banks. Only India Infoline Finance limited has both Google Plus and Instagram accounts while Muthoot Finance is active on Instagram, and Bajaj Finance along with India Infoline Finance hold accounts with Google Plus.

Subsequently, the reasons for using social media platforms by the NBFCs have been analyzed. Fifty percent of the managers of the NBFCs believed that social media platforms could be used to explore new markets; 70 percent thought that social media could be used to sell financial products; 90 percent agreed to the fact that it is useful for collecting socio-demographic details of customers, and agreement with statements on connecting with customers for reviews and reactions and CRM was 100 percent; refer to Figure 5.11. However, 60 percent of the managers feel that social media is not a platform through which new ideas can be developed. This shows that compared to the banks managers, the managers of the NBFCs were more enthusiastic about the usefulness of social media though their opinion differed from the former on the statements on developing new ideas and data collection on customer socio-demographics.

Figure 5.12 shows that only two NBFCs, namely India Infoline Finance and Reliance Capital review their social media policy annually. Majority of the NBFCs (80%) do not have social media policies in their companies. Additionally, it is found that four NBFCs monitor and update social media sites on a daily basis, four on a weekly basis and two on a monthly basis; see Figure 5.13. Overall it indicates that though specifically the private sector banks are more structured in handling social media by having policies which are updated mostly annually, both groups of FIs are equally proactive in updating information on their social media websites.

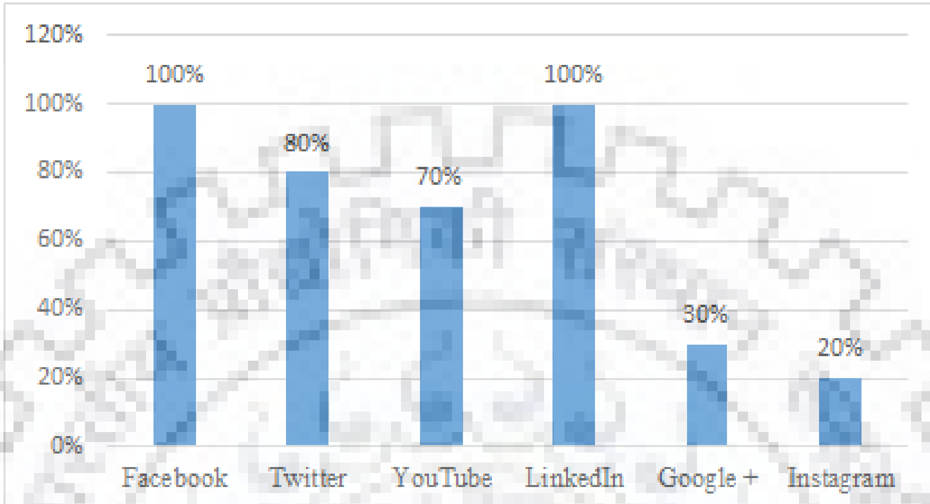

Figure 5.10 Percentage of social media sites used by NBFCs

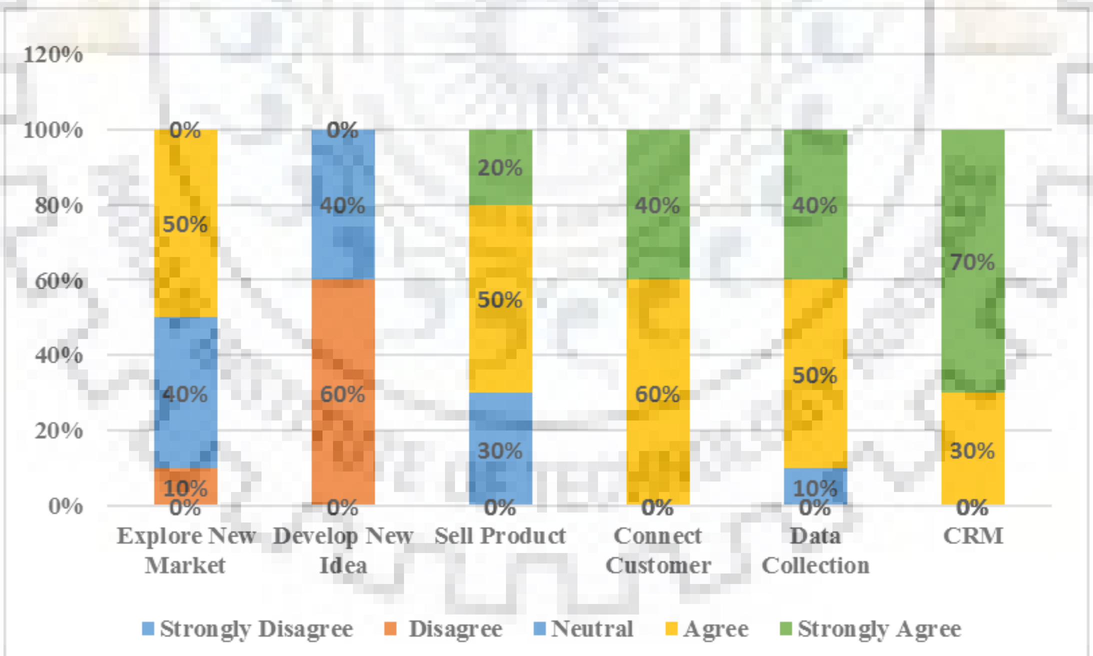

Figure 5.11 Reasons for using social media

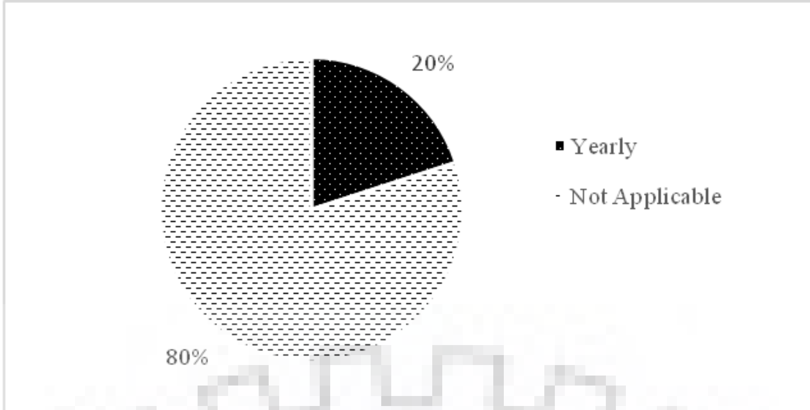

Figure 5.12 Frequency of reviewing social media policy

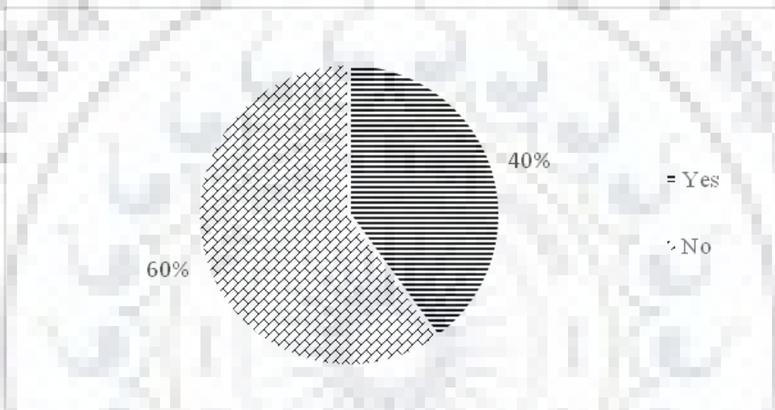

Figure 5.13 Frequency of Monitoring and Updating Social Media Sites by NBFCs

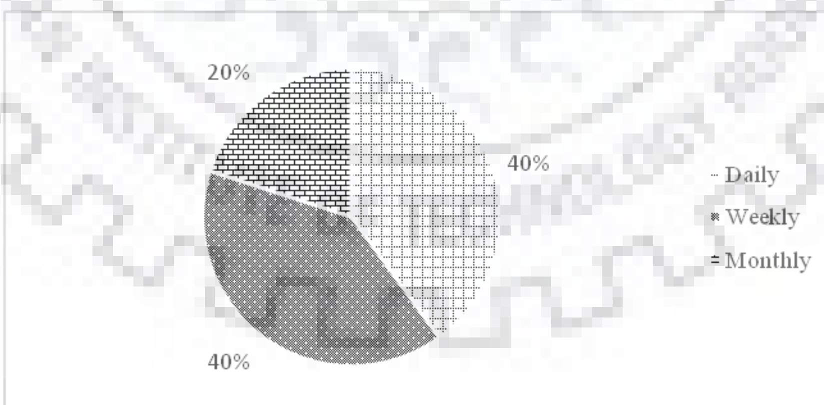

Figure 5.14 NBFCs' opinion on reduction of cost of customer acquisition by social media

Sixty percent of the NBFCs agreed to the fact that social media reduced their cost of customer acquisition; see Figure 5.14. Contrary to the bank managers, majority of the managers with the NBFCs (60%) considered reputational risk as the major risk followed by operational risk for the rest four. Eight NBFCs stated that customers' feedbacks were received through official mail id, and complaint and suggestion boxes, which is placed at every branch. Only two claimed to receive customers' feedback by survey method.

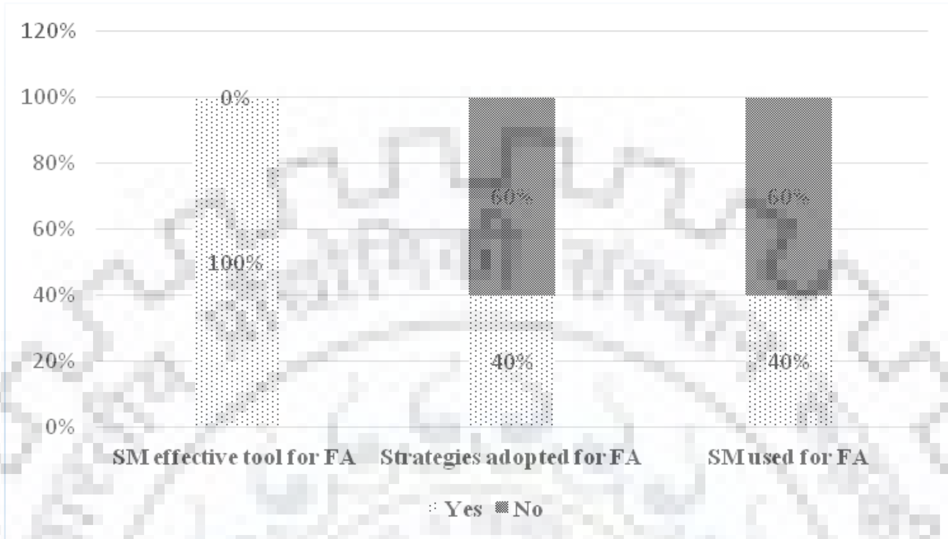

Figure 5.15 Social Media (SM) and Financial Awareness (FA)

While all the NBFCs agreed to the fact that social media could be an effective tool for generating financial awareness, only four out of ten NBFCs stated that they adopted strategies for generating financial awareness and social media is an integral of such processes. This is plotted in Figure 5.15. The four firms are Bajaj Finance, India Infoline Finance, Muthoot Finance and Reliance Capital.

5.5 MANAGERIAL VIEW ON SOCIAL MEDIA USAGE AND ITS IMPACT

The discussion with the bank managers reveals about any transition in the bank performance after the social media praxis. The managers observed that since detailed information regarding financial products and services is available on the bank's official website, customers now prefer online banking instead of visiting bank branches. Banks also have started to share financial information or investment related information on social media pages such as Facebook, Twitter and YouTube. This is the reason why more and more customers are connecting with the banks each day though these platforms. Links to social media pages are available on the official websites of the banks for directing customers to the authentic social media pages. Customers prefer to send mail on official email id or on Facebook and Twitter pages to provide feedback and to lodge complaints or for any query. As a result, banks are also responding quickly to the posts and feeds received in these platforms.

In addition to these social media platforms, FIs are providing many facilities (online banking, mobile banking apps, and SMS banking) to their customers to access financial activities such as balance enquiry, fund transfer, bill payment, stop payment etc. Further, some banks (Canara Bank, OBC Bank and AXIS Bank) have started sharing information through WhatsApp groups operating at the branch level. Besides, SBI has discussion forum about safe banking on Twitter. On December 2016, Punjab National Bank (PNB) launched ‘PNB Kitty’ an online money wallet to send and receive money online; City Union Bank (CUB) recently introduced a robot named ‘CUB Lakshmi’ which can easily deal with customers account balance enquiries and fund transfer activities.

Many initiatives and literacy programmes have been started by the GOI, India’s Central Bank, the RBI, and other FIs. All banks are directed by the RBI to run financial literacy programmes in order to make people aware about financial products and investments. Some managers suggested that promotion through popular social media sites and online financial awareness sessions might be effective for generating financial awareness. A specific comment by a bank manager suggested that individuals handling social media pages at branch level must confine posts related to banks’ financial products only and not posts of one’s own interests. Other suggestions were on improvement in customer services which would widen the scope for further investment.

The usage pattern of social media was also discussed with the managers of the NBFCs. They claimed that, similar to the banks NBFCs have also started using these media platforms to make people aware of their financial services. But usually customers like to visit online websites or branch, instead of visiting social media pages, to get any detailed financial information before making investment decisions.

5.6 MANAGERIAL VIEW ON METHODS ADOPTED FOR FINANCIAL AWARENESS

The discussion with the aforementioned bank managers provides an in-depth understanding of the methods adopted to generate financial awareness. Though some banks are still using traditional methods like advertisement through TV, newspapers, magazines, radio etc., other means like social events, tech learning centres, training to farmers, campaign, literacy programmes, and advertisement on social media pages are also coming up in a big way. They provide customers with detailed information on handling their online accounts and the best investment options for them.

Moreover, celebrity endorsement is also found to be an effective method for drawing people's attention towards a particular financial product. Yes Bank and RBL Bank use sponsoring event such as IPL (Indian Premier League) as one of their promotional strategies. Additionally, they also make people aware by print media, such as newspapers, television (TV), radio and short films. Majority of the bank managers admitted to use banners, posters, leaflets, brochures, bill board etc. inside the bank branches to let customer know about their financial products and investment policies. Whereas some banks believe on the word of mouth method and they don't put much efforts to attract new customers.

The managers of the NBFCs considered advertisement through print media like newspaper, magazine, and, TV and radio along with social media as the most important channels for generating financial awareness. Some of them also offer discount on EMI (Equated Monthly Installment) payments, online shopping and movie ticket booking to attract customers' attention. Celebrity endorsement is also thought to contribute to customer interest in financial investment plans.

5.7 COMPARATIVE ANALYSIS OF THE USE OF SOCIAL MEDIA BETWEEN BANKS AND NBFCS

A comparison between the banks and the NBFCs in terms of their social media usage and other information presented above brings out the following observations:

- ❖ For both groups Facebook, Twitter and LinkedIn are the most popular social media channels. But the NBFCs have greater presence in all of them compared to the banks.
- ❖ The usefulness of social media as perceived by the banks are in terms of CRM, for connecting with customers through reviews and feedback, for selling products, exploring new markets and for developing new ideas in that order. However, the NBFCs consider socio-demographic data collection and selling products are the two major functions social media performs after CRM and connecting with customers.
- ❖ While for the banks data, the information risk is the primary risk social media poses, for the NBFCs it is the reputation risk.
- ❖ Complaint and suggestion boxes along with emails are used by both categories of FIs for customers' feedback. Besides, the banks are stated to use messenger as well.

- ❖ The services offered via media channels are quite extensive for the banks compared to the NBFCs. For instance, the banks provide facilities for fund transfer, stop payment, receive fund, balance enquiry, customer's feedback, video banking, and acceptance of biometric fingerprinting for financial transaction to name a few. While, the NBFCs facilitate bill payment, online shopping, movie tickets booking and EMI payments via media channels.

- ❖ Both sets of FIs are found to adopt several media for generating financial awareness, like web media, TV, radio, print media, and celebrity endorsement. The banks further use bill boards, posters, leaflets, brochures and banners while the NBFCs stated to used discount on EMI payment as an additional tool.

5.8 CONCLUSION

Social media usage for business purposes is a new phenomenon in Indian context. Although, many organizations have been using these media platforms for multiple reasons, but now banking sectors have also been involved with social media adoption. The chapter has analyzed the information about the impact of social media in organizational performance and generating financial awareness, which is provided by FIs managers. First, the data obtained from 22 bank managers were analyzed. Accordingly, Facebook and Twitter are found the most popular social media platform used by banks. Most of the bank has separate department to operate social media activities including policy review, site updation, respond to customer query, etc. The managers confirm that social media platform by their banks is being used for the purpose of exploring new market, developing new ideas, selling products and connecting with customers.

Social media adoption has benefited to banks in terms of cost reduction. With ample of benefits, there are some risk associated with social media usage such as data and information risk, operational risk and reputational risk. Most banks receive customer feedback through suggestion and complaint box placed at major bank branches. Managers also admitted that now the customer connect with bank personnel using official mail id and Facebook messenger for any complaint. Some banks disclose their initiatives taken for financial awareness in country under its social disclosure column.

Next, the information provided by NBFCs manager confirms that Facebook and LinkedIn are most popular social media platforms used by them for multiple purposes such as explore new market, selling financial products, collecting customers' basic information, and connecting with customers. Although, social media platforms are still new to use, that is why there is not any social media policy exist within majority of NBFC. Resultant, social media usage does not impact positively in cost reduction. Reputational risk was found as a major risk for NBFCs while using social media platforms. The managers agreed to the fact that social media platforms can be an effective tool for generating financial awareness, but few of them are using the platform for the similar purpose.

The bank managers admitted that customers preferred to visit official online website for accessing any financial product or service related information. As well as, the social pages are also being popular among customers because of the easy access to obtain any financial services such as online banking, online payments, balance enquiry, fund transfer and many more. But still, there is an urge to aware people about the benefits associated with banking services. For this reason, banks have started many financial literacy programme through seminars, campaigns, learning centers, training, etc. besides the traditional methods such as advertisement through TV, newspapers, magazines and radio.

Managers of FIs have agreed that customer’s attention is being drawn towards financial products and investment by celebrity endorsement, banners, posters, leaflets, brochures, bill board, discount offers, etc. under promotional strategies. At last, comparative analysis between the banks and the NBFCs is presented to express the common and unique facts on their social media usage.

In this phase of data analysis, the various purposes of using social media by FIs have summarized. As a result, it can be said that the study successfully achieved the RO4. The FIs managers also disclosed the strategies adopted by them to generate financial awareness using social media platform, which helps to achieve the RO5. The extent of using social media platforms by FIs is illustrated in above findings and it confirms that the RO6 is achieved.

CHAPTER – 6

DISCUSSIONS, CONCLUSIONS, LIMITATIONS & RECOMMENDATION FOR FUTURE RESEARCH

6.1 INTRODUCTION

Financial literacy can be understood as a key element in generating investments in financial markets. As a developing nation, very small percentage of Indian population have clarity in basic financial concepts. A financially literate person will be able to balance between earnings and expenditure. This eventually turns the interest of individuals towards investment plans. The government also has the responsibility to make people aware of various investment schemes so that people can invest according to their income. Thus, the purpose of the present study is to identify factors that are affecting the financial literacy of a person. Also, how can financial awareness be increased to maintain a better living standard.

Against this background we developed the research objectives outlined in Chapter 3. This chapter briefly presents a discussion on the findings of both phases of research to provide an overview of the factors affecting financial literacy and investment patterns individuals; as well as the involvement of FIs with social media adoption reflecting on their usage pattern of media platforms in order to reduce financial illiteracy, followed by a conclusion.

Most studies had focused on the socio-demographic factors affecting financial literacy among different economic or social class. However, no one had explored the relationship between the components of financial literacy and financial numeracy on portfolio diversification or investment patterns of individual investors.

This research also has some limitations that are discussed in the next section of this chapter. At last, future research scope is discussed. It provides further research direction to financial intermediaries and researchers, to improve the strategies adopted to overcome financial illiteracy.

This research can be summarized as follows-

- The extensive literature provided the level of financial literacy around the world; presented in Phase-I of this research. Indian studies were also being included in the literature. After that, research gaps had been identified on the basis of literature review, which supported to formulate the research objectives and research questions.

- The literature on social media usage pattern by multiple organizations across the nations is presented in the Phase-II of this research. On the basis of this literature, the research gaps are identified that assisted to outline the research objectives and research questions.

- The logistic regression models (MLR & OLS) have been adopted to achieve the research objectives and to answer research questions. Further, the comments by FIs managers provide a managerial perspective on the pattern of social media adoption.

- Finally, the overall findings of this research fully supports eight out of fourteen hypotheses; they are- H1: financial literacy varies across gender, H3: financial literacy varies across level of education, H9: financial behaviour and financial attitude have positive bi-directional relationship between them, H10: financial behaviour and financial numeracy have positive bi-directional relationship between them, H11: financial attitude and financial numeracy have positive bi-directional relationship between them, H12: there is a positive impact of financial numeracy on investment in financial instruments, H13: there is a positive impact of financial numeracy on investment in equities, and H14: there is a positive impact of financial numeracy on investment in bonds.

- The finding partially supports five hypotheses, which are- financial literacy varies across age group (H2), financial literacy varies across the living status (H5), financial literacy varies across employment status (H6), financial literacy varies across household income pm (H7) and financial literacy varies across reliability of household income (H8).

- Only one hypothesis H4 is rejected, that financial literacy varies across city of residence.

6.2 FULFILLMENT OF RESEARCH OBJECTIVES

This section presents an overview of the achievement of the research objectives. First phase of this research presents a detailed analysis of financial literacy using data from 500 respondents living in urban India. Financial literacy was measured in terms of financial behaviour, attitude and numeracy skills. Alternative models of MLR and OLS regression estimating relationships between financial literacy and its components in one hand and socio-demographic factors on the other, consistently suggested that male participants have better financial behaviour, attitude, numeracy skill and overall literacy compared to the female participants. Further, a positive impact of age has been observed on financial literacy.

While higher income group was found to have better financial behaviour, numeracy and overall literacy, financial attitude was better among the lower income group. Financial behaviour and numeracy were also found to be better among the higher age group, though no overall significance is observed for financial literacy. Other significant factors included education; but primarily a Bachelor's and Master's degree holders have better financial behaviour, numeracy and overall literacy. People living alone or with family were found to have a better financial attitude while private sector employees had significantly better overall financial literacy. And finally, reliability of household income had significant positive impact on financial numeracy and overall literacy.

Thus, following first research objective (RO1), socio-demographic variables like gender, age, education, income and reliability of household income were found to have significant impact on financial literacy and its components, and ultimately provided answer for research question 1, i.e. the level of financial literacy varied according to the socio-demographic variables that were gender, age, education, income and reliability of household income.

Our second objective (RO2) was to explore the causal relationship between the components of financial literacy. It is observed that both financial attitude and financial behaviour had a strong positive impact on each other. Similar was the observation between financial numeracy and financial behaviour. However, between financial numeracy and financial attitude, the former had a more meaningful and stronger positive impact on the latter. Thus, it provided answer for research question 2 that the components of financial literacy are inter-related to each other.

The third objective (RO3) was to find out the impact of financial numeracy skill on investment pattern. It was observed that financial numeracy had a positive impact on portfolio diversification in terms of the number of financial instruments held by an investor, as well as its impact on investment in stocks and bonds. While the effects of financial numeracy had been positive and substantial on portfolio diversification, the impact on the stocks and bonds had been very small though significantly positive. So, the research question 3 could be answered as financial numeracy vary the investment pattern in financial instruments, equities and bonds.

This study also examined the financial literacy based on familiarity with financial instruments. The data indicated that while 48 percent participants were familiar with at least 50 percent of the instruments listed in the questionnaire, 41 percent was familiar with at least 60 percent of the instruments. And only 25 percent of the participants were familiar with at least 75 percent of the instruments. In addition, 37 percent of the respondents stated to usually consult their friends or relatives on investment decisions, who work in a financial firm. Internet was the second favorite source of information for 35 percent of the respondents. Moreover, only 14.6 percent of the respondents were found to use social media for any investment related information. And finally, respondents were asked about websites they consulted for financial decision making. The most referenced websites turned out to be moneycontrol.com, followed by valueresearchonline.com, economictimes.indiatimes.com, businessnews.com, and equitymaster.com.

Now, the findings of Phase-II of this research is being summarized below. This phase of the research is focused on the use of social media and its perceived as well as realized usefulness by 32 Indian FIs, 22 of them being banks and 10 NBFCs. It also presents the information on the strategies adopted by FIs to generate financial literacy with or without the help of social media.

The results provides answer for research question 4 which also achieved RO4, i.e. social media channels are used by the banks for the purpose of exploring new markets, developing new ideas, selling financial products, connecting with the customers and CRM. The NBFCs were of the opinion that social media would be most useful for CRM through reviews and feedback followed by collecting data on socio-demographic characteristics of the customers and selling products. All FIs admitted that the cost of customer acquisition came down after adopting social media. Most banks perceived data and information risk as the major threat posed by social media while according to the NBFCs it is the reputation which faces the maximum risk.

Today's young generation hardly visits bank branches as technological advancement has made banking services available anywhere and everywhere. Findings of this paper confirm that FIs have also realized the importance of capitalizing on technology by using social media for customer satisfaction and to maintain relationship with them in order to retain market share in a highly competitive environment. As the data indicated that private sector banks have greater presence in social media platforms, while many public sector banks have a meagre or no presence at all, that might have a reflection in bank performances as well.

In order to answer research question 5, the finding clearly indicates that FIs are found to adopt several media for generating financial awareness, like web media, TV, radio, print media, and celebrity endorsement. The banks further use bill boards, posters, leaflets, brochures and banners while the NBFCs stated to used discount on EMI payment as an additional tool; that ultimately achieves RO5 of this study.

Last research question 6 can be answered as, the Banks have been adopted the social media for CRM, connecting with customers through reviews and feedback, selling products, exploring new markets and for developing new ideas in that order. However, the NBFCs consider socio-demographic data collection and selling products as the two major functions for using social media platforms after CRM and connecting with customers; that ultimately achieves RO6 of this study.

6.3 DISCUSSION ON THE FINDINGS

This section presents a comparative analysis of the results from this study with respect to similar studies from the literature. Some of the above results are in commensurate with a few existing studies. The findings of Garg and Singh (2018) suggest that socio-demographic factors like age, gender, marital status, education, employment status, family background and income are affecting financial literacy and its components. In the Indian context, it was observed that men have better financial knowledge than women and education has a positive effect on financial literacy. To strengthen the financial economy, it has become a mandatory concern to deal with financial illiteracy. Moreover, financial literacy training program can be positively affect the financial literacy of individuals who had low financial literacy. The government needs to work jointly at the central and state levels for the benefit of the environment and economic growth (Sinha and Rastogi, 2017; Bhattacharyya, 2016).

However, it is observed that respondents with middle level education like Bachelor’s and Master’s degree holders have better financial behaviour, numeracy and overall literacy compared to higher degree holders like M.Phil and Ph.D. Only financial attitude is better among the highest degree holders. Cao and Gu (2018) findings support to the fact that academic programs at the university level develop the skills necessary to achieve business goals. The percentage of respondents with knowledge of typical financial matters like relationship between bond prices and interest rate was very meagre at less than 20 percent. This was in alignment with the findings of Disney and Gathergood (2013).

Finally, higher income had significant positive impact on financial literacy. Overall financial literacy among the respondents could be considered to be average as 70 percent of the respondents’ score lied in the interval of mean ± standard deviation. While earlier authors reported financial literacy to be low among Indians (Bihari et al., ibid; and Singh, ibid.), an improvement has been offered through this study, which could at least be relevant for the urban respondents. In an article, Zawar (2017) states that Kotak Mahindra bank has introduced first junior finance wiz named

"National Finance Olympiad" for school children in collaboration with Brainsalt education in India. In this scheme, students in the age group of 9 to 18 years are taught the basic concepts of financial saving, investment, banking and insurance. In recent years, Indian government has initiated many training programme to improve skills of people (Mukherjee and Rastogi, 2018).

The use of social media by FIs was discussed in particular to attract more people's participation in financial markets. Product innovation is a key to generating profit, but for maximum profit, innovation is required in different types of products (Dhanora et al., 2018). Concurring with the views of Cao et.al. (2018), our finding also indicates that social media has a significant impact on the organizational performance. Similarly, a positive influence of information technology has been found on the business performance (Sirisomboonsuk et al., 2018). However, the size and efficiency of the firm also had a greater effect on its performance. The results of this research are in line with the study of Kujur and Singh (2017), which supports the fact that social networking sites have a significant impact on the consumer's attitude while participating online. Lenka and Sharma (2017) suggested that in addition to opening a new branch, banks should take some steps to bring banking facilities to the common people.

Some political parties are found to use social media platforms to influence people's decisions at the time of general election (Safiullah et al., 2017). Pandey and Sahu (2017) observed that developed nations are focusing more on the advertising of their products / services through online promotion by consumers, known as electronic promotions. Online feedback by existing customers (positive or negative) are influencing the mind of other customers for product and company image, thus it requires to handle all the queries published online in a positive manner (Pandey et al., 2017); which is in line of the finding of this study.

6.4 LIMITATIONS OF THIS RESEARCH

This study has a few limitations. First, the study is limited to only 500 individuals from Tier 1, Tier 2 and Tier 3 cities of India. A larger sample size understandably would give more accurate and generalized results about financial literacy at a macro level. However, due to time constraint this study had a limit to a sample size of 500 only.

Second, the sample is not a true representation of the population because of several factors like

- It consists of only urban participants and people from rural areas are completely ignored. Inclusion of respondents from rural areas would bring in more heterogeneity and might facilitate a comparative analysis along with the possibility of further generalization.

- Various sections or segments of the society are also not truly represented as the number of female participation is proportionately much less than the male participants. Similarly, the level of education and income of the participants are also proportionately much higher than the average education and income level in India.

Third, convenient sampling method was being used in this research, by distributing questionnaires physically to people in and around the institutional campus and also through internet to people located in other cities. Consequently, the average education and income level have gone up as mentioned above.

Fourth, the observation of the Phase II of this study is obtained from only 32 FIs. This can be further extended by considered larger number of banks or NBFCs to conduct more in-depth analysis.

6.5 MANAGERIAL IMPLICATIONS

The current study provides some managerial implications that can contributes to improve financial awareness in our country. They are mentioned below-

- The managerial approach presents a range of uses of social media platforms and various reasons of social media adoption, and it suggests how financial awareness of individuals can be improved.

- The finding confirms that Facebook, Twitter and LinkedIn are the most widely used social media platforms for exploring new markets, developing new ideas, selling financial products, connecting with the customers and customer relationship management (CRM). Thus, FIs manager should update the information via these platforms on a regular basis.

- Further, some of the banks and NBFCs are found to adopt these media pages to post important financial announcements, which increases customer’s interest in investment options. So, the managers can promote the financial products in a more easy and effective way.

- The study provides a view on social media usage in terms of cost reduction and customer satisfaction. Thus, FIs can implement their strategies to reduce cost.

- However, there are some risks associated with social media such as reputational risks, operational risks, data and information risks etc. Furthermore, managerial discussions highlighted their contribution to the use of social media to increase financial literacy.

6.6 RECOMMENDATION FOR FUTURE RESEARCH

Scope for future research could begin with the limitations mentioned above.

- ✓ A larger sample size specifically confined to a particular area or locality can help in developing an understanding about that area's status of financial literacy and facilitate policy making.

- ✓ However, this study despite not being concentrated to any particular area, could show some broad trend which should be considered as the common factors that affect financial literacy and its components in Indian cities.

- ✓ In recent years, the GOI has initiated several financial literacy programs to overcome financial illiteracy. Thus, it gives direction for further research to examine the effect of these initiatives in India. Also, other factors should also be investigated, which affects the individual's financial literacy level.

- ✓ Basic financial education for children at school level will develop their interest in financial matters. Based on the findings presented above, it is recommended that government should focus on financial literacy programme to enhance overall literacy and specifically among women.

- ✓ FIs should encourage individuals for investment in retirement plans. Given the popularity of social networking sites, they should be fully utilized for generating financial awareness.

- ✓ Introduction of compulsory training in basic finance among the school children and college goers could also be an important step towards increasing financial literacy. Similar initiatives at larger scale as well as and as part of compulsory education programme should be taken into consideration.

- ✓ In recent years, the Government of India has initiated several financial literacy programs to increase financial literacy among its population. So, another dimension of future research could be to examine the effect of these initiatives in the Indian context.

- ✓ Although, the research also recommends a greater participation of the public sector banks in the social media usage for an array of purposes as described above.

The contribution of this research work provides a wider scope for future research. Financial intermediaries will be required to introduce financial literacy programmes to develop personal financial literacy. As well as, financial literacy education at school level will improve the level of financial literacy from the childhood stage of any individuals. Thus, FIs have much scope for further research and development of such literacy programmes.

6.7 CONCLUSION OF THE STUDY

This section presents a conclusion on the multiple factors affecting financial literacy level of an individual. For instance, female respondents are found to have lower financial literacy compared to men. However, while higher education was significant with financial literacy status, and observe that respondents with middle level education like Bachelor's and Master's degree holders have better financial behaviour, numeracy and overall literacy compared to higher degree holders like M.Phil and Ph.D. Only financial attitude is better among the highest degree holders.

The data indicated that despite having familiarity with financial instruments, investment in assets bearing some risk has been meagre. It was also observed that keeping money in savings bank account dominated saving behaviour, and the majority didn't plan for retirement. Financial attitude was assessed to be largely positive as the majority of the respondents held low or no debt, were regular in paying bills and considered affordability before making purchases. The majority of the participants was found to have good financial numeracy skill in terms of having knowledge about interest rates, inflation and stock market volatility. Advanced financial numeracy skill was found only among a small percentage of the respondents.

Furthermore, this study also considered top 22 banks, all listed with India's nationalized exchanges (BSE and NSE). And going by market capitalization, the top positions are primarily occupied by private sector banks except for SBI (reference: moneycontrol.com). Interestingly, SBI is also the bank with the highest number of followers or users in social media platforms. Though this does not imply a claim of social media's impact on market capitalization, but may imply a holistic approach adopted by the SBI for overall growth enhancement. The SBI and HDFC Banks are also extensively working on generation of financial awareness which is expected to ensure an overall social and economic growth which would generate a cycle of financial inclusion and improved financial infrastructure beneficial for the growth of FIs.

Indian FIs are now more focused on to economic growth and development. To make people financially literate, financial literacy centers has been created in multiple locations. In the era of technology advancement, the role of social media is found very important. Although, the information related to financial products/ services or any investment schemes is available on the official website of FIs, but now FIs are found to update this information on the social media platforms. People also get attracted to such a post on social media.

The study recommends greater participation of public sector banks in social media for an array of purposes discussed above along with greater usage of social media for attracting greater participation of common people in the financial markets. Still, FIs needs to develop the financial literacy programmes in a more effective way, so the maximum people (urban as well as rural) should get the benefits of investment. On the other side, social media also provide an option to connect directly with the customer service centers of FIs. And, FIs should respond positively to any query or complaint, in order to reduce the reputational risk.

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APPENDIX-A

APPENDIX-A: QUESTIONNAIRE ON FINANCIAL LITERACY SURVEY

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Research Problem: Does the financial literacy of an individual influences by the socio-demographic factors?

We are conducting the survey on the factors affecting financial literacy and its three components such as financial behaviour, financial attitude and financial numeracy. The survey has three sections, first section collects information on the socio-demographic details; second section collects the responses over the financial behaviour and financial attitude; and last section collects the answer provided for the financial numeracy.

We would like to get your feedback on financial literacy and investment decisions. We would appreciate your candid and honest answers to the all survey questions. This survey will take 10-15 minutes of your time and your responses are completely anonymous.

Section-I: Socio-demographic Information

Please tick on only one option

1. Gender:

   a) Male; b) Female

2. Age group (Years):

   a) 18-25; b) 26-35; c) 36-45;

   d) 46-60; e) Above 60

3. Education:

   a) 12^{th}

   b) Bachelor's degree (Please Specify) ____________________

   c) Masters (Please Specify) ____________________________

   d) Others (Please Specify) ______________________________

4. City of residence ______________________________________

5. Who do you usually live with in your household? (May select more than one)

a) Alone

b) With a partner/spouse

c) With your own children

d) With parent or parent-in-law

e) With other relatives

f) With friends, colleagues

g) Others, Please Specify_____________

6. Which of these best describes your current work situation? Please tick only one option

a) Self employed

b) Govt. Sector employee

c) Pvt. Sector employee

d) Not working

e) Retired

f) Student

7. Household income per month: Please tick only one option

a) Up to ₹ 30000;

b) Between ₹ 30000 - ₹ 50000;

c) Between ₹ 50000 - ₹ 70000;

d) Between ₹ 70000 - ₹ 1,00,000

e) More than ₹ 1,00,000

8. Considering all of the sources of income coming into your household each month, would you say that your household income is reliable?

a) Yes; b) No; c) Don't know

<u>Section-II: Information related to Financial Behavior</u>

9. In the past 12 months have you been [personally] saving money in any of the following ways, whether or not you still have the money? (May select more than one)

a) Saving cash at home

b) Saving money into a savings account

c) Giving money to family to save on your behalf

d) Saving through recurring or fixed deposits

e) Buying financial investment products such as bonds, stocks and shares

f) Or in some other way (including remittances, buying livestock, gold or property)

g) Through forced saving instruments like insurance policies which gives tax benefits

h) Has not been actively saving

i) Not applicable as I don't have personal income

j) None of the above, I have saved in (……………………….)

10. Overall, how confident are you that you have done a good job of making financial plans for your retirement? Rate in a scale of 1-5 where 1 is not at all confident & 5 is very confident.

a) 1

b) 2

c) 3

d) 4

e) 5

11. How will you - or do you - fund your retirement? (May select more than one)

a) from drawing a government pension/ old-age benefit

b) from an occupational or workplace pension plan

c) from a private pension plan

d) from selling your financial assets (such as: stocks, bonds or mutual funds)

e) from selling your non-financial assets (such as a car, property, art, jewels, antiques, etc.)

f) from income generated by your financial or non-financial assets

g) by relying on a spouse or partner to support you

h) by relying on your children or other family members to support you

i) No plan yet

j) Not applicable as I don't have any personal income

k) Others (Please Specify)…………………

12. Please select if you have heard of any of the following financial products. (May select more than one)

a) A pension or retirement product other than compulsory products

b) Investment account such as a unit trust

c) Mortgage

d) A bank loan secured on property like gold, vehicle etc.

e) Unsecured bank loan

f) Credit card

g) Current account

h) Savings account

i) Microfinance loan

j) Insurance

k) Stocks and shares

l) Bonds

m) Mobile phone payment account [not directly linked to a bank account]

n) Prepaid payment card [not directly linked to a bank account]

13. Do you [personally or jointly] currently hold any of these types of products? (May select more than one)

a) A pension or retirement product other than compulsory products

b) Investment account such as a unit trust

c) Mortgage

d) A bank loan secured on property like gold, vehicle etc.

e) Unsecured bank loan

f) Credit card

g) Current account

h) Savings account

i) Microfinance loan

j) Insurance

k) Stocks and shares

l) Bonds

m) Mobile phone payment account [not directly linked to a bank account]

n) Prepaid payment card [not directly linked to a bank account]

14. Which sources of information do you feel have most influenced your decision? (May select more than one)

a) Unsolicited information sent through the post

b) Information picked up in a branch

c) Product specific information found on the internet

d) Information from sales staff of the firm providing the products (including quotes)

e) Best-buy tables in financial pages of newspapers/magazines

f) Best-buy information found on the internet

g) Specialist magazines/ publications

h) Recommendation from independent financial adviser or broker

i) Advice of friends/relatives (not working in the financial services industry)

j) Advice of friends/relatives (who work in the financial services industry)

k) Employer's advice

l) Newspaper articles

m) Television or radio programmes

n) Newspaper adverts

o) Television adverts

p) Email adverts

q) Mobile messages

r) Social media and other web adverts

s) Other advertising (newspaper inserts)

t) My own previous experience

u) Other source

15. Please mention if you have any specific websites relevant to any of the options under question 14. Otherwise leave it blank.

____

16. For each statement given below assign on a scale of 1 to 5 where 1 is for Strongly Disagree, 2 for disagree, 3 for Neutral, 4 for Agree, 5 for Strongly Agree.

Statements	
a) Before I buy something I carefully consider whether I can afford it	
b) I do not tend to live for today and let tomorrow take care of itself	
c) I find it more satisfying to save money for the long term than to spend it	
d) I pay my bills on time	
e) I am prepared to risk some of my own money when saving or making an investment	
f)I keep a close personal watch on my financial affairs	
g) I set long term financial goals and strive to achieve them	
h) My financial situation limits my ability to do the things that are important to me	
i) I am satisfied with my present financial situation	

Section-III: Information related to Financial Numeracy

17. Suppose you had ₹100 in a savings account and the simple interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow:

a) More than ₹102;

b) Exactly ₹102;

c) Less than ₹102?

d) Don't know

18. Suppose you had ₹100 in a savings account and the compound interest rate is 20% per year and you never withdraw money or interest payments.After5years, how much would you have on this account in total?

    a) More than ₹200;
    b) Exactly ₹200;
    c) Less than ₹200;
    d) Don't know;

19. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy with the money in this account?

    c) More than what it is today;
    d) Less than what it is today;
    c) Exactly what it is today
    d) Don't know

20. Assume a friend inherits ₹10,000 today and his sibling inherits ₹10,000 3 years from now. who is richer because of the inheritance?

    a) My friend; b) His sibling; c) Do not know;

21. Suppose that in the year 2020, your income has doubled and prices of all goods have doubled too. In 2020, how much will you be able to buy with your income?

    a) More than today;
    b) The same as today;
    c) Less than today;
    d) Do not know;

22. Which of the following statements describes the main function of the stock market?

    a) The stock market helps to predict stock earnings;
    b) The stock market results in an increase in the price of stocks;
    c) The stock market brings people who want to buy stocks together with those who want to sell stocks;
    d) None of the above;
    e) Do not know;

23. Which of the following statements is correct? If somebody buys the stock of firm B in the stock market:

    a) He owns a part of firm B;
    b) He has lent money to firm B;
    c) He is liable for firm B's debts;
    d) None of the above;
    e) Do not know

24. Which of the following statements is correct?

a) Once one invests in a mutual fund, one cannot withdraw the money in the first year;

b) Mutual funds can invest in several assets, for example invest in both stocks and bonds;

c) Mutual funds pay a guaranteed rate of return which depends on their past performance;

d) None of the above;

e) Do not know;

25. Which of the following statements is correct? If somebody buys a bond of firm B:

a) He owns a part of firm B;

b) He has lent money to firm B;

c) He is liable for firm B's debts;

d) None of the above

e) Do not know

26. Considering a long time period (for example10 or 20 years), which asset normally gives the highest return?

a) Savings accounts; b) Bonds; c) Stocks; d) Don't know; e) Refuse

27. Normally, which asset displays the highest fluctuations over time?

a) Savings accounts; b) Bonds; c) Stocks d) Don't know

28. When an investor spreads his money among different assets, does the risk of losing money:

a) Increase; b) Decreases; c) Remain the same; d) Don't know

29. If the interest rate falls, bond prices will?

a) Rise; b) Fall; c) Remain the same; d) Don't know

30. For each statement, select one option.

	True	False	Don't know
If you buy a 10-year bond, it means you cannot sell it after 5years without incurring a major penalty.		F	
Stocks are normally riskier than bonds	T		
Buying a company stock usually provides as much return as mutual fund stock.		F	

APPENDIX-B

APPENDIX-B QUESTIONNAIRE ON SOCIAL MEDIA USAGE BY BANKS

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Research Problem: Does the social media usage influences the financial awareness of people?

We are conducting the survey on the role of social media in creating financial awareness. The survey has three sections, first section collects information on the socio-demographic details of bank and its manager; second section collects the responses over the usage pattern of social media; and last section collects the answer provided for the relationship between social media and financial awareness. The managerial view provides an insight on the actual reasons for using social media platforms to create financial awareness.

We would like to get your feedback on the social media usage pattern by your bank. We would appreciate your candid and honest answers to the all survey questions. This survey will take 5-10 minutes of your time and your responses are completely anonymous.

Section-I

1. Name of the Bank: ____

2. Your designation in the Bank: ____

3. Your service period with the current Bank in the current designation: ___years ___months

4. Highest degree obtained (with specialization): _______________

5. Age (Years): _____________

6. Gender: ___________

7. Using the categories below please indicate how long your bank has been in operation in India?
   a) 0-10 Years; b) 11-20 Years; c) 21-30 Years; d) 31 & Above Years

8. Please indicate the category of your Bank (please tick one).
   a) Public Sector Bank

i) Scheduled Commercial Bank; Ii) Other

b) Indian Private Sector Bank

i) Scheduled Commercial Bank; Ii) Other

c) Foreign Bank

9. Ownership Pattern:

a) Listed; b) Unlisted

Section-II

10. Which of the following social media site do you use?

a) Facebook; e) Google +;

b) Twitter; f) Instagram;

c) YouTube; g) Others (Please Specify) __________

d) LinkedIn;

11. Does your bank have a social media department?

a) Yes; b) No

12. Kindly indicate the level of agreement with the following statement as a reason for using social media in your bank. Assign on a scale of 1 to 5 where 1 is for Strongly Disagree, 2 for disagree, 3 for Neutral, 4 for Agree, 5 for Strongly Agree.

To explore new/untapped markets	1	2	3	4	5
To develop new product ideas	1	2	3	4	5
To sell products	1	2	3	4	5
To connect with the customers (reviews and reactions)	1	2	3	4	5
To collect data on socio-demographics of the customers	1	2	3	4	5
Customer relationship management	1	2	3	4	5

13. Has the adoption of social media interaction reduced the cost of customer acquisition in your bank?

a) Yes ; b) No ; c) Don't know

14. Does your bank have a social media policy? If yes, how frequently is the policy reviewed?

a) Quarterly ; b) Half yearly ; c) Yearly ; d) Others (Please Specify)__________

15. Has social media interaction created risk management concerns in your bank? If yes, what are the major risks brought about by social media usage?
    a) Reputational risk ; c) Operational risk
    b) Data and information regulatory risk ; d) Others (Please specify)__________

16. How frequently is the social media site monitored and updated?
    a) Hourly; b) Daily; c) Weekly; d) Monthly; e) Others (Please specify) __________

17. What is the modus operandi for obtaining customer feedback?
    a) Customer meets; b) Customer surveys; c) Telephonic interview; d) Suggestions & complaint box; e) Informal interactions with customers

18. Your comments/ observations related to social media usage and bank performance, if any.

____

____

Section-III

S.N.	Statements	Yes	No	Don't know
19	Do you think social media platforms could be used as an effective tool for generating financial awareness?			
20	Does your bank have adopted any strategy for generating financial awareness among individuals?			
21	If yes, does your bank use social media platforms to generate financial awareness?			

22. Please specify the methods that has been adopted for generating financial awareness by your bank.

____

____

23. Please specify the methods, if any, which you think should be adopted for generating financial awareness by your bank, other than those already adopted.

____

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APPENDIX-C

APPENDIX-C: QUESTIONNAIRE ON SOCIAL MEDIA USAGE BY NBFCs

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Research Problem: Does the social media usage influences the financial awareness of people?

We are conducting the survey on the role of social media in creating financial awareness. The survey has three sections, first section collects information on the socio-demographic details of NBFCs and its manager; second section collects the responses over the usage pattern of social media; and last section collects the answer provided for the relationship between social media and financial awareness. The managerial view provides an insight on the actual reasons for using social media platforms to create financial awareness.

We would like to get your feedback on the social media usage pattern by your company. We would appreciate your candid and honest answers to the all survey questions. This survey will take 5-10 minutes of your time and your responses are completely anonymous.

Section-I

1. Name of the Company: ____

2. Your designation: ____

3. Your service period with current designation: ___years ___months

4. Highest degree obtained (with specialization): ________________

5. Age (Years): ______________

6. Gender: ____________

7. Using the categories below please indicate how long your company has been in operation in India?
   a) 0-10 Years; b) 11-20 Years; c) 21-30 Years; d) 31 & above years

Section-II

8. Which of the following social media site do you use?

a) Facebook;
b) Twitter;
c) YouTube;
d) LinkedIn
e) Google +;
f) Instagram;
g) Others (Please Specify) _________

9. Does your company have a social media department?

a) Yes; b) No

10. Kindly indicate the level of agreement with the following statement as a reason for using social media in your company. Assign on a scale of 1 to 5 where 1 is for Strongly Disagree, 2 for disagree, 3 for Neutral, 4 for Agree, 5 for Strongly Agree.

	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
To explore new/untapped markets	1	2	3	4	5
To develop new product ideas	1	2	3	4	5
To sell products	1	2	3	4	5
To connect with the customers (reviews and reactions)	1	2	3	4	5
To collect data on socio-demographics of the customers	1	2	3	4	5
Customer relationship management	1	2	3	4	5

11. Has the adoption of social media interaction reduced the cost of customer acquisition?

a) Yes ; b) No ; c) Don’t know

12. Does your company have a social media policy?

a) Yes b) No

13. If yes, how frequently is the policy reviewed?

a) Quarterly ; b) Half yearly ; c) Yearly ; d) Others (Please Specify)__________

14. Has social media interaction created risk management concerns in your company?

a) Yes b) No

15. If yes, what are the major risks brought about by social media usage?

a) Reputational risk ; c) Operational risk

b) Data and information regulatory risk; d) Others (Please specify)__________

16. How frequently is the social media site monitored and updated?

a) Hourly; b) Daily; c) Weekly; d) Monthly; e) Others (Please specify) _________

17. What is the modus operandi for obtaining customer feedback?

a) Customer meets; b) Customer surveys; c) Telephonic interview;

d) Suggestions & complaint box; e) Informal interactions with customers

18. Your comments/ observations related to social media usage and company performance, if any.

____

____

Section-III

S.N.	Statements	Yes	No	Don't know
19	Do you think social media platforms could be used as an effective tool for generating financial awareness?			
20	Does your company have adopted any strategy for generating financial awareness among individuals?			
21	If yes, does your company use social media platforms to generate financial awareness?			

22. Please specify the methods that has been adopted for generating financial awareness by your company.

____

____

23. Please specify the methods, if any, which you think should be adopted for generating financial awareness by your company, other than those already adopted.

____

____

APPENDIX-D

APPENDIX-D: PUBLICATION ACCEPTED IN PEER-REVIEWED INTERNATIONAL JOURNALS

1. Bawre, S. and Kar, S. (Accepted in 2019). An Investigation of the Socio-demographic Factors affecting Financial Literacy and Its Components among Urban Indians. *International Journal of Education Economics and Development*, **Scopus Index,** Inderscience Publication.

2. Bawre, S. and Kar, S. (Accepted in 2018). Social Media and Financial Institutions in the Indian context. *International Journal of Economics and Business Research***, ABDC (C)** and **Scopus Index,** Inderscience Publication.

PAPER PRESENTED IN INTERNATIONAL CONFERENCE

A Study of Financial Literacy among Urban Indians. Presented at *International Journal of Arts and Sciences International Conference for Business and Economics*, University of Freiburg, **Germany,** held on 03 – 06 December, 2018.