

CHAPTER – II

REVIEW OF LITERATURE

The review of the literature proliferates the subject's knowledge and provides the framework for future research. It summarises, explains, and organises the information from past research that is relevant to the current study. The research problem is provided with a strong theoretical foundation, and a research gap is identified for the study. The objective of this section is to present the study's key variables and to examine the type of relationship among variables found in previous studies, particularly in the derivative market. The first part describes the theoretical framework and standard techniques used to measure the key variables. The later part provides a brief overview of the different outcomes from the literature review and the research gap. The literature relevant to the topic “**Determinants of Trading Behaviour of Retail Investors in Derivative Market – A Multidimensional Approach**” was discussed and presented under the following heads

2.1 Theoretical Background of the Study

2.2 Review of Previous Studies

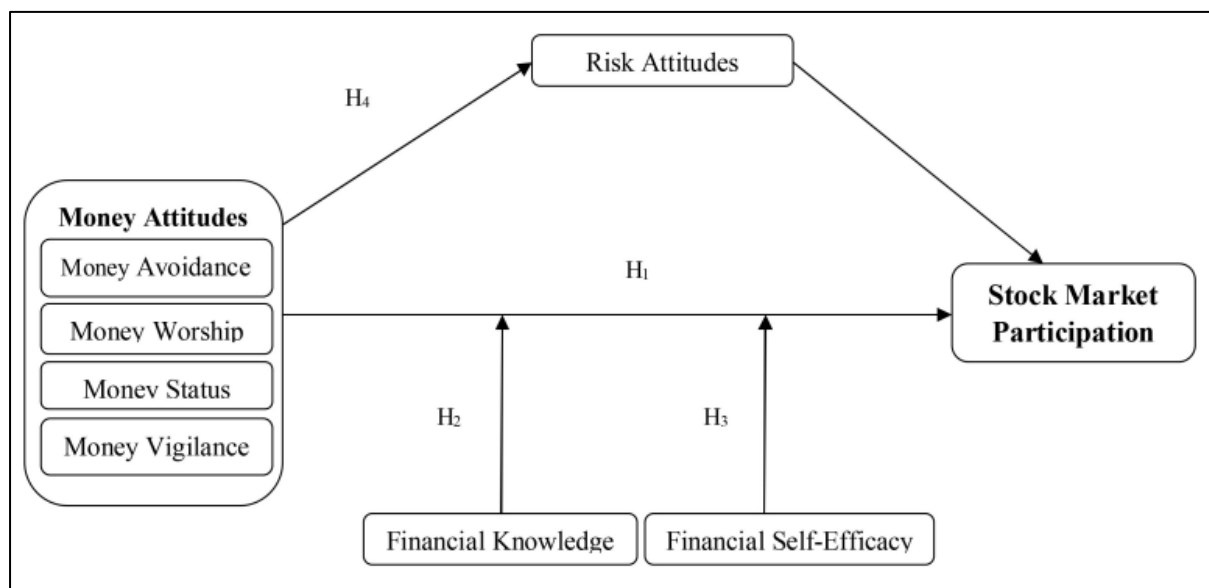
2.1 Theoretical Background of the Study

In the theoretical background of the study, two models are taken into consideration namely, the model of investor behaviour proposed by Nadeem et al (2020) and Akhter and Hoque (2022) based on the concepts of the Theory of Planned Behaviour (TPB) (Ajzen, 1991), through which it explains in-depth about the effect of the human behaviour over the investment. This theory states that human behaviour is affected by motivational factors like attitudes and perceived behavioural control. Attitudes can be expressed as the degree to which an individual derives a positive or negative valuation from performing a specific behaviour (Ajzen, 1991).

As Nadeem et al., 2020 stated the money attitude of investors considering financial literacy and self-efficacy makes them decide whether to trade in the stock market or not. The TPB has been used in several studies to forecast investors' financial attitudes and provided a basis to apply the TPB while trading stocks. The intention of an individual to carry out a certain behaviour is the subject of the theory of planned behaviour (TPB). According to this theory, perceptions of behavioural control, subjective norms, and attitudes are the main factors that determine intentions. There are several reasons to believe that one's decision to invest in stocks may be influenced by money attitudes, which are formed through social interaction, education, and experience. Money attitudes significantly influence a person's investing choices. Using the

theory of planned behaviour (TPB), Akhtar and Das (2019) concluded that attitude partially modifies the connection between financial knowledge and investment intentions.

The level of financial literacy a person holds affects their ability to make sound financial decisions because they are less likely to participate in the stock market because they are less likely to invest in stocks (Van Rooij et al., 2011). Studies have shown that the association between behavioural biases and investing decisions is moderated by financial knowledge in both positive and negative ways (Hayat and Anwar, 2016). Financial self-efficacy (FSE) is the perception of one's capacity to manage one's finances. The association between personality qualities and investing intention is moderated and mediated by financial self-efficacy (Akhtar and Das, 2019). Investors with higher financial self-efficacy tend to feel more in control of their financial situation over the long run than investors with lower FSE. According to Cheng et al., (2018), an individual's subjective risk attitude has a positive influence on stock investing. More risk-takers invest in stocks more frequently than less risk-takers. Participation in the stock market and risk tolerance are highly correlated (Cole et al., 2012). Therefore, the investment of investors is mostly influenced by attributes like Attitude, Financial literacy and Financial self-efficacy.



Source: Nadeem et al., 2020

Figure 2.1 Model of Stock Market Participation

Akhter and Hoque (2022) revealed that financial planning skills, financial satisfaction, and risk perceptions were moderating on the link between attitude and behavioural intentions when they thought about making investment-related decisions in the stock market. Individuals' attitudes and behavioural intents are associated with financial decision-making (Hoque et al.,

2.2.1 Attitude Towards Investment Decision

- Investing is considered one of the most significant methods for reducing poverty. The dimensions of investors' attitudes affect the investors' decisions in the stock market. The objective of the study was to investigate the attitude of women towards stock market investment decisions. The study was based on primary data by considering 225 samples from women investors. The results revealed that modern women are more educated and informed than women in the past. Women nowadays who are financially independent, are expected to be safety-focused, return-driven, and risk-averse. Women gradually participate in risky investment portfolios and formalise their investing practises as their general knowledge and awareness increase. The stock market is less familiar to women as a means of investing, and there are comparably few female investors in the stock market (**Benny, 2021**)
- Investment in the cash market, derivative market or any other instruments traded on the exchange have different elements of risk. The derivative market is not seen to be a good opportunity for someone with little experience, little investment capital, or poor risk tolerance. This study aims to figure out the relationship between demographic variables with the awareness of investors for the derivative market and the risk opinion of investors for equity derivatives in the stock market. Primary data was collected from 137 derivative traders. One-way ANOVA was used to analyse the collected data. The study showed that the primary consideration when choosing a financial investment is risk. Investor style and decision-making are influenced by their level of risk tolerance. Investors are aware of derivative trading and understand their investment risk and return, but their desire to obtain a larger return led them to accept the significant risk associated with trading in derivatives (**Mehta and Uprety, 2021**)
- Investors now find the stock market to be a desirable and profitable investment. Investors have limited understanding and regard the stock market as a dangerous investment choice. Another factor contributing to some people's hesitation to engage in the stock market is a lack of knowledge. This study aimed to identify the perspectives among investors towards the stock market in Asia. The primary data was to analyse investors' perspectives on the stock market by collecting 100 responses from the investors. The study concluded that investors often choose short-term investments, and they make their choices on the level of risk factors. People are ready to take risks to invest in the stock market if they have sufficient knowledge about it (**Teoh et al., 2021**)

- Risk and return are the profound phenomenon in choosing the investment instruments. Investments with higher levels of systematic risk can also provide higher levels of return. The main objective of this research paper is to study the impact of financial literacy on investment performance, with the mediating effects of risk tolerance. Data was collected using a standardised questionnaire from 203 individual investors in Chennai and was analysed using PLS-SEM. The study concluded that higher financial literacy levels are associated with better risk tolerance for individuals. They will not be motivated to take a financial risk after suffering a loss but after securing a profitable position, investors often go for risky stocks. Investors may choose their portfolios intelligently by recognising the value of risk tolerance and financial literacy **(Kanagasabai and Aggarwal, 2020)**
- The stock market has become an attractive investment avenue for most investors, and the stock market has enormously grown over the years. However, a lot of investors fear investing in the stock market due to the volatility often seen in the share market. Investors frequently take on significant risks while investing in the stock market, and they are nervous about losing their carefully saved money. Even when stock market returns are high, investors still have to accept a similar degree of risk. This study was undertaken to understand the different personal factors affecting their investment decision and the different factors influencing various categories of investment. Chi-square was used to analyse the collected primary data. Thus, it concluded that risk return, tax advantages, maturity duration, capital appreciation, and principal safety are some of the factors that affect an investor's choice. However, the majority of investors thought that the most significant element determining their choice was returned **(Hawaldar and Rahiman, 2019)**
- Risk perception is a subjective process of interpretation. Risk perception of an individual can be controlled provided that a person is aware of the different aspects of his/her risk perception, as well as the reason for the given risk perception. The purpose of this paper is to find out the risk perception level of equity investors and to identify the factors influencing their risk perception. The study was conducted using a stratified random sampling design of 358 investors. Descriptive analysis and Factor analysis tools were used. The results revealed that employees' perception of risk for their own company's shares is often less negative than their view of risk for shares of other firms. People from economically underdeveloped areas tend to see risk as being less serious

than those from economically secure areas. Investors' perception of risk might be significantly decreased by high-quality information disclosure (**Singh and Bhattacharjee, 2019**)

- Investors' financial attitudes have changed significantly between before and after the global financial crisis. Investors switched from investing in the stock market, where the prices of their securities were falling, to the money market, which offered short-term profits that were guaranteed. To examine the relationship between dimensions of investor behaviour and perceptions towards stock indices performances. Relevant data was collected from 416 equity investors indulged in the stock market. A structural equation model was used to analyse the data. The results of the study reveal that the investors were more risk-averse and building their portfolios using a risk-based strategy as a result of the financial crisis. Investors with little knowledge tend to be overconfident (**Kinslin and Velmurugan, 2018**)
- Risk attributes are a fundamental issue in creating monetary choices. This research examines various financial risk tolerance and investment orientations of investors in Jordan, where this study investigates whether demographic factors influence financial risk tolerance and investment orientations. The study employed a path analysis technique using Partial Least Square (PLS). It is understood from the study that people must evaluate and take into account the risks and influences associated with any type of investment, especially with financial investments, where risk tends to be of a larger degree. Risk is a difficult issue, and it must be taken into account, presumed, and acknowledged in investment procedures (**Alhammouri and Alkhalidi, 2017**)
- Investors' attitudes towards risk are consistently influenced by factors such as fundamental information, demographics, investor lifestyle features, psychological factors, and risk tolerance. The study aims to find out the determinant of investors' attitudes towards risk. This study also correlates the attitudes towards risk with investment confirmation. Secondary data was used for this study. The study revealed that investors take a shorter time to engage in investing activity when they have a strong and positive attitude towards risk, which increases the intensity of investment confirmation. Investors' views about risk and investment depend on their level of financial risk tolerance and risk-taking behaviour. Those with more investment experience take more risk (**Behera et al., 2017**)

- Investment in the stock market earns investors some return with some levels of risks too. Risk is an important uncertainty, which means that it may have both a positive and a negative impact on one or more investment objectives. The study aims to analyse the risk attitude level of individual investors using primary data. The study concluded that each investors perceive risk in varying ways, which significantly affects how they allocate their assets. The best investment choice for one investor could not be the best choice for another investor because of the differences in their features brought on by various demographic factors. It further reveals that each individual has unique investing goals, risk tolerance levels, and other limitations. This risk factor depends on a variety of variables, including psychological as well as demographic profile of investors **(Bhardwaj and Garg, 2017)**
- The Indian derivative market is mainly dominated by male investors and is mostly young. The investors are a little more educated, aware of the nature and risks of derivatives, and satisfied with the results. This present study is an attempt to understand the investors' perceptions, attitudes and behaviour in the Indian derivative market. Primary data was used and was analysed using descriptive statistics, Cross-tabulation and Chi-Square Tests. The study found that investors have a high level of risk tolerance, and anticipate maximum gains from the derivative. It is clear from the study that investors' behaviour in the market is greatly influenced by aspects including past performance, degree of knowledge, adequate levels of returns, and level of risk tolerance. These elements also help investors become more confident and risk-tolerant over time. Investors behave irrationally in the market and experience terrible losses as a result of the fast price fluctuations, negative perception of the derivative market, and lack of knowledge **(Mamtha and Srinivasan, 2017)**
- The key to understanding people is to know their risk tolerance. Investor behaviour is found to be substantially correlated with risk. The study has also attempted to find the relationship between risk tolerance level and the trading behaviour of the investors. To analyse the collected primary data, descriptive statistics (mean, frequency and percentage), Chi-Square, and ANOVA were applied. The results revealed that the age of the investors leads to a greater capacity for financial risk. Different people are comfortable with different levels of risk. Females are less risk-averse than males. An individual's trading frequency increases as their risk tolerance increases. The study also stated that investors who trade more regularly tend to be more aggressive. The risk

aversion of moderate investors is lower than that of an aggressive investor (**Ramya and Bhuvaneshwari, 2017**)

- The investor plays an important role in the stock market because overall development in terms of GDP growth, employment etc is closely associated with investors' attitudes and perceptions regarding investment. The secret to a successful financial plan is to set aside more money for savings and invest it wisely. Research has been done to identify the factors influencing the investor's attitude towards investment. Primary data was collected through a questionnaire from 100 respondents and data was analyzed through descriptive statistics and the Chi-square test. The study concluded that the most important elements for investing are the company's nature, profitability, history, earnings projection, and business model very highly influence the investor's attitude towards investing in equity stocks (**Raju and Patra, 2016**)
- Risk can be also considered as a deviation from an expected outcome. Investors' investing decisions may be greatly influenced by psychological aspects of risk perception. Risk perception may be controlled, if investors are aware of how much risk they are willing to take. The purpose of this study is to examine the impact of investors' perception of risk on portfolio management. This study analysed 151 questionnaire surveys of investors in Bahrain. The data were analyzed using linear stepwise regression and factor analysis with varimax rotation. The results revealed that risk-averse persons have a high-risk perception, which affects their investing behaviour, whereas risk-seekers who are worried about big returns are likely to have a low-risk perception (**Abdeldayem, 2015**)
- The stock market is now one of the most profitable areas of investing. Many investors assume that risk-free investments will be profitable. The main objective of this research is to know how awareness and perceived risk attitude influence investor behaviour while trading in the stock market. A total of 100 samples were selected randomly to analyse data by using bi-serial correlation and State Street's approach. The results reveal that although stock market investors in Bangladesh are growing, they are attacked by a lack of knowledge and experience in the stock market. When making decisions with uncertain outcomes, a person's perception of risk affects whether they decide to take or avoid that risk. Most stock market participants in Bangladesh lack a basic understanding of the market and only follow the herd. They concluded that a

trader's capacity to survive in the financial markets is significantly influenced by emotion (**Islam and Chowdhury, 2015**)

- Academicians may select various options to plug their surplus funds to generate returns. The stock market can be one of the options while framing an investment portfolio. The objective of the present paper may be bracketed as exploring the awareness level of academicians towards the stock market and their preference variations according to gender, age, qualification etc. while investing. The study used a questionnaire to collect primary data from a set of academicians working in various educational institutes in Delhi-NCR. The statistical interpretation has been done with the help of mean average analysis and chi-square. Academicians' stock market knowledge and investing behaviour are more influenced by gender and qualification than by age and marital status. It is understood from the study that the nature of one's profession significantly influences whether academicians are aware of stock market investing. Academicians are a group of investors who may not be risk lovers due to their sophisticated profession. They are playing it safe is how they think is the conclusion of the study (**Patel and Bhatia, 2015**)

2.2.2 Influence of Behavioural Biases of Investors

- The several anomalies in stock markets can be attributed to behavioural predispositions. Regarding their investment results and market anomalies, investors either underreact or overreact to them. This is especially true when it comes to the role of the investor's prejudices and partialities that affect their investment selections. Some people imitate herd behaviour to boost earnings while lowering losses. The study aims to understand the impact of loss aversion and herding on the investment decisions of retail investors. The study further evaluates the mediating role of fear of missing out (FOMO) in retail investors in these relationships. The study employed a questionnaire survey to collect data from 323 retail investors in the Indian stock market. The collected data were examined using Smart PLS. Factor analysis and partial least square structural equation. The results of the study revealed that investors who experience loss aversion are more upset about possible losses than they are satisfied with the returns on their investments. Investors who are not well-informed feel safe when they mimic the investment patterns of other investors. Depending on the type of investors, herding has been shown to predominate; in particular, retail individuals who invest on their own frequently show greater herd behaviour than institutional investors. Biases and their impact are not

confined to a single nation or market. It is clear from the study that behavioural biases are prevalent throughout the world, individual investors should remain vigilant about them to make sure their investment decisions are free of them (**Gupta and Shrivastava, 2022**)

- Biases or mental traps come in various forms. Behavioural biases are known as systematic errors in judgements and decisions. Investors make decisions based on a variety of behavioural biases when selecting their investment strategies and guiding ideas. The present study presents a model for mass behaviour in the decision-making of investors in investment companies on the Tehran Stock Exchange. The statistical population of the present study in the qualitative phase includes experts of the Tehran Stock Exchange. Eleven experts collaborated with the researcher in conducting specialized interviews. The study concludes that mass behaviour is done in emergency exit selection (**Rajabi et al., 2020**)
- Individual investors make rational decisions because they take into account all relevant information while making investing decisions. The purpose of this paper is to investigate the effect of heuristic biases, namely, availability bias and representativeness bias on investors' investment decisions in the Pakistan stock exchange, as well as the moderating role of long-term orientation. Using a structured questionnaire, a total of 374 responses have been collected from individual investors trading in Pakistan Stock Exchange Limited. The relationship was tested by applying the partial least-squared structural equation model using Smart PLS. The study reveals that the heuristics bias significantly and directly affects how investors make investing decisions. This proves that different psychological and heuristic-driven biases also affect investors' behaviour in Pakistan. Investors who are eager for a quick return place a focus on the short term and act on new information (**Khan et al., 2021**)
- Sentiment biases like overconfidence and loss aversion may affect how well Chinese listed companies perform. The performance of listed firms in China suffered as a result of investors' pessimism, which indicates loss aversion. This paper examines how the loss aversion of investors influences the companies' performance and how the overconfidence of investors impacts the companies' performance. The sample consists of 100 non-financial public listed companies in China's share market from the year 2000 to the year 2020. Investors who have experienced gains rather than losses are more likely to experience loss aversion and wish to sell their shares quickly to avoid market

volatility. Increased stock returns from overconfidence would be good for shareholders. Overconfident investors are more likely to earn abnormal returns by exceeding the market through the anticipation of market volatility. Further, overconfident investors are effectively caused to trust their understanding of the market and its fluctuation on a blind basis (**Yiwen, 2021**)

- Behavioural finance is a new area that blends knowledge of behavioural and cognitive psychology with financial decision-making. The study aims to investigate whether behavioural biases are evident among Indian risk-seeking investors or not and which bias is most prominent among risk-seeking investors. Primary data was collected from 385 respondents. The data was analysed using the factor analysis technique. The results reveal that confidence is the most prominent bias among risk-seeking investors, then herding bias, cognitive dissonance regret aversion, then loss aversion (**Mohapatra and Samal, 2021**)
- Investors can herd and get free knowledge when the cost of information search is minimal. The Google search volume index can be used as a free information source and to measure how much attention and information retail investors require, positively connecting it with their herding tendency. The Google search volume index can be used as a useful investor attention proxy for individual investors who have few other informational resources but easy access to the internet. The attention-grabbing effect of the stock restriction strengthens the link between investor attention and individual investor herding behaviour. Consequently, it is proven that the phenomena of individual investor buying are more pronounced in bull markets, particularly for small capitalization enterprises (**Hsieh et al., 2020**)
- Investors are subject to psychological biases, and these biases might manifest as irrational investment behaviour, which will again result in poor decisions. The objective of this paper is to study and describe various biases in investment decision-making through the review of research papers in the area of behavioural finance. The study was based on secondary data. The study concluded that traders who are too confident do not appropriately manage and control risk. Overconfidence bias is unrelated to financial literacy. Herding is more common when the financial market is bearish. Compared to online investors, investors offline exhibit more herding behaviour. Herding bias is a risk element that is priced in for large-cap companies but is absent from small-cap equities due to reduced trading volume. Loss aversion bias influences the investors'

investing decisions because loss aversion bias is strongly influenced by the gender of the investors. Investors can segregate their holdings into different distinct accounts using mental accounting (**Shukla et al., 2020**)

- The futures trading is both effective and acceptable for growing the underlying derivative market, particularly in India where the market for commodities futures derivative is one of the nascent ones from the perspective of investors. The study analyzed the behaviour myths of retail investors in the Commodity derivative market in Coimbatore City. The study included primary data and exploratory factor analysis was used to reduce the dimensions and explore the latent variables of the study. The results revealed that investors needed a higher level of trading knowledge because it is often believed that derivatives are highly difficult to grasp and are not practicable to invest in. In the commodity derivative market, herding behaviour impacts retail investors more. Investors are acting rationally by mimicking the return pattern and familiarity with the instruments of the prior investors in the commodity futures market (**Anbukarasi et al., 2020**)
- The study tries to explore the existence of the mental accounting (MA) phenomenon among investors and to test its influences on stock investment decisions. This study uses simple linear regression analysis to test the hypothesis. The results show that investors do have the MA. Investors at GI UNIB are significantly impacted by mental accounting and GIS IAIN Bengkulu's stock investing choice (**Santi, 2019**)
- The emerging field of behavioural finance has identified numerous biases that significantly impact individual investors' behaviour. When making decisions, people are either partially rational or irrational. Different cognitive biases frequently restrict people from thinking rationally. Overconfidence is a psychological characteristic that significantly influences how each investor makes investing decisions. Overconfidence is reflected as a prevalent psychological bias that leads to mispricing in the form of high volatility and returns variability, rendering financial markets inefficient. Human nature frequently refers to, analyses, and imitates the behaviour of others during unpredictable conditions in the financial markets. Herding has been described as a cluster of movements caused by collective imitation. Individuals' investment decisions are significantly influenced by overconfidence and herd behaviour. As a result, the participants in the financial markets do not make rational decisions, and even they have limited choices (**Madaan and Singh, 2019**)

- The study stated that behavioural finance macro describes anomalies in the efficient market, while behavioural finance micro explores the actions or biases of investors. The idea of behavioural finance is not new today; behavioural biases exist and have a significant influence on investment behaviour and human judgement. All sorts of decision-making can be impacted by bias, but financial and investment decisions are particularly affected. The study was done using secondary data by reviewing various literatures. The results revealed that overconfident investors exaggerate the likelihood that their evaluations of a security's value are more correct than those made by others. Further, overconfidence leads people to exaggerate their control over events, overestimate their expertise, and underestimate risks. Investors may make unreasonable distinctions between returns from income and those from capital appreciation due to mental accounting bias. Mutual imitation that results in a convergence of action is what is referred to as herding in the financial markets (**Gill and Bajwa, 2018**)
- Behavioural finance studies how the psychology of the investor affects investment decisions. The primary emotions that determine the risk-taking of an investor are hope and fear. This study aims to find out the existence of loss aversion and its impact on investment decision-making of individual investors, who invest in Indian stock markets, through brokerage firms. The study was based on the primary data, which were collected, by using a structured questionnaire and data were analysed through independent t-test, ANOVA and Linear Regression. Results of the study indicated that the gender of the respondents has a significant impact on loss aversion and investment decisions by the investors are influenced by loss aversion bias (**Kumar and Babu, 2018**)
- Short-term and long-term investment intents are the two main categories of investment intentions. The major aim of the research is to identify the impact of behavioural factors on investment intentions, more specifically on short-term intention as well as long-term intention. Questionnaires were used to collect data from 200 equity investors. Regression was used for analysis and it was identified that behavioural factors impact short-term investment intention as well as long-term investment intention of equity investors. The results revealed that long-term investment intention was more influenced by prospect factors and market factors than short-term investment intention was by prospect factors and herding elements. Both the intention to make long-term and short-term investments were not significantly impacted by heuristic factors. It is clear from

the study that when looking at how behavioural factors affect investing intention these elements have an impact on investors' short- and long-term intents (**Sashikala and Chitramani, 2018**)

- Behavioural biases usually influence the actions of investors, causing them to deviate from logical or rational investment judgments. Making illogical investment decisions may involve cognitive and emotional factors. The study aims to bring a clear understanding of behavioural finance and the various psychological factors that affect the investment decisions of female investors. Primary data was used to collect the data from the respondents. It is concluded that the herd mentality has an impact on Indian women. As a result, females are not overconfident while making decisions, but they do mental accounting and keep a small amount for investment due to various liquidity motives (**Singh, 2018**)
- Cognitive psychological science deals with how people think. Psychologists have described investor behaviour by highlighting the unique attributes that influence each investor's choices. Individuals' conduct differs depending on the situation. Understanding an investor's psychology is essential to understanding their decision-making processes. Biases have an impact on investors' perceptions rather than directly affecting investing performance or decisions. The main purpose of this study was to investigate the herding effects, overconfidence, availability bias and representativeness in the case of the Pakistan stock exchange. The study was done by using primary data. The study concludes that the imitation behaviour, social influence, and pressure from family or friends while making investing decisions, individual investors are more susceptible to behavioural biases in collectivist cultures (**Javed et al., 2017**)
- Several circumstances can cause investors to act irrationally. Investors frequently exhibit overconfidence, herding behaviour, and disposition effects because they lack literacy and are unable to make independent decisions. This study focuses on checking the influence of behavioural biases in investment decision-making with the moderating role of financial literacy in Pakistan. A simple survey questionnaire is used to collect data from 158 investors trading in Pakistan stock market. As a result, they behave similarly to other investors when they sell stocks because they seek a small profit and don't wait for a price increase. They also exhibit overconfidence when selecting stocks and make poor decisions. Bias has an impact on investment decisions because, often, when an investor is overconfident about selecting a stock, he makes the wrong choice.

Of course, the majority of investors in Pakistan are financially illiterate. Financial literacy likewise has a statistically insignificant relationship with investing decisions **(Hayat and Anwar, 2016)**

- Decision-making is a versatile action. In reality, the decision-making of investors is not completely rational. The area around investing decisions is where investors face their most significant hurdle. The study aims to know the influence of behavioural factors on the investment decisions of retail investors. A structured questionnaire was designed to elucidate respondents. The study revealed that investors should take into account their financial and investing goals, level of risk tolerance, and other limits while creating their investment portfolio. For institutional investors, the output return-risk optimization works well; for individual investors, who are more susceptible to heuristic and behavioural biases, it frequently fails. Comparatively, the investor group was more likely than the other to experience behavioural biases as a whole. The biases had an identical impact on both novice and seasoned investors **(Shabarisha, 2015)**
- Sentiment biases like overconfidence and loss aversion may affect how well Chinese listed companies perform. The performance of listed firms in China will suffer as a result of investors' pessimism, which indicates loss aversion. Investors who have experienced gains rather than losses are more likely to experience loss aversion and wish to sell their shares quickly to avoid market volatility. Increased stock returns from overconfidence would be good for shareholders. Overconfident investors are more likely to earn abnormal returns by exceeding the market through the anticipation of market volatility. Further, overconfident investors are effectively caused to trust their understanding of the market and its fluctuation on a blind basis. Overcoming the unwillingness to accept losses is a prerequisite for disciplined investing. Investors can reduce the negative consequences of biases even though they cannot completely prevent them. Many seasoned and experienced investors have discovered that controlling emotions and getting rid of prejudices are often necessary for success; as a result, they frequently steer clear of the errors that many novice investors make **(Baker et al., 2014)**

2.2.3 Influence of Personality Traits of Investors

- Investor personalities play a significant role in the emerging field of behavioural finance. The study aimed to verify the effect of personality traits on investors' investment decision-making power. A convenient sampling technique was used to collect the data from 350 individual and institutional investors. Regression and

correlation tools were used to analyse the collected data. The study concluded that investors with a high degree of openness tend to be independent and make wise decisions in challenging circumstances. Conscious people conduct thorough research, gather enough data, and use their expertise to make informed investing judgements. It is understood from the study that a person with a high level of agreeability may occasionally reveal immature conduct, misleading others in the process. Investment decisions alter in response to changes in neuroticism both up and down (**Awan and Sahar, 2021**)

- Emotions are pervasive and predictable drivers of decision-making. The examination of how emotional influences on decision-making are influenced is necessary due to the dynamic character of human beings. A person's personality traits are the result of a variety of circumstances, including the environment in which they were raised, their moral principles, their religious views, and social conditioning elements that apply to different social groupings. The study aims to analyse the behavioural aspects of retail investors through the identification of personality traits such as openness, agreeableness, extraversion, conscientiousness and neuroticism. The study includes both primary and secondary data. The structural equation model was used to analyse the data. The research demonstrates that extraversion, followed by conscientiousness, has the greatest influence on investing decisions. It is understood from the study that the other three personality qualities, neuroticism, agreeableness, and openness, do not have an impact on the investment decision (**Priyadharshini, 2020**)
- The study stated that investing decisions are still difficult since there are many variables to take into account when deciding which asset to buy or sell. Humans have a limited capacity for processing information because they have a limited working memory, limited computing abilities, a limited capacity for attention, and a limited capacity for performing numerous activities at once. The present study has attempted to analyse the investment decision-making behaviour and its determinants among investors and to evaluate the overall attitude towards investment in the stock market and its determinants among investors. Primary data was collected from 360 women investors. One-way ANOVA was used to find the association of the determinants of the investor's behaviour. The present study concluded that the investment behaviour in the stock market among executives is only at a moderate level. There is a high impact of the

personality traits among the experienced investors than among the lesser experienced investors (**Ramanujam and Aiswarya, 2020**)

- Behavioural finance proposes that a blend of affective and cognitive dimensions is involved in human decision-making. Investors' perceptions of their capacity for sound financial decision-making are influenced by their personalities, values, emotions, and social environment. People's investing behaviour is significantly influenced by their psychographic circumstances, and their choices contain intertwined risks. A person's sense of risk is influenced by several factors, but personality qualities are the most crucial. The study aims to test the relationship between the five-factor theory and risk aversion with the investment intention of individual investors. Primary data was collected from 397 active individual investors. Partial Least Square was used to analyse the collected data. The study found that an individual's preferences for their investment decision are influenced by their personality attributes (**Sarwar et al., 2020**)
- Personality is a motivator of human behaviour. Personality traits influence an individual's financial decisions. After their involvement in stock, mutual fund, or real estate investments, people's investing habits are influenced by their personalities. It is unknown to people who have never invested in the stock market how a person's personality influences their decision to do so. Personality traits, or innate qualities of an individual, may operate as the precursors of perceptual constructs in forecasting a person's behavioural intention. This study extends the theory of planned behaviour incorporating the big five personality taxonomies to investigate the effects of the personality traits of individual investors on stock investment intention. Utilizing partial least squares based on structural equation modelling techniques with a sample of 385 subjects, empirical results indicate that the stock investment intentions of individuals are significantly affected by subjective norm, attitude, and perceived behavioural control, and subjective norm significantly affects attitude. An individual's attitude towards stock investments is proven to be considerably and negatively impacted by neuroticism. Extroversion, conscientiousness, and openness to new experiences all have positive and substantial benefits on subjective norms (**Lai, 2019**)
- The personality trait of the individual can be determined by the Big 5 personality model. This paper investigates one of the behavioural factors i.e., Personality which influences the intention to adopt Online trading in the stock market. The rapid growth of online trading is widely attributed to the fact that it offers investors a combination of low costs,

convenience, and control over their investments. Data was collected which was further subjected to structured equation modelling in SPSS AMOS. Results show that Extraversion is positively associated with Intention to adopt Online Trading but Agreeableness is negatively associated with Intention to adopt online trading. Moreover, Neuroticism, Openness and Conscientiousness are not significantly associated with adopting online trading (**Malhotra, 2019**)

- Personality signifies the way an individual interacts, reacts and behaves with others and is often exhibited through measurable traits. The present study aims were to explore the role of risk behaviour between the association of personality traits and investment intention and by providing financial literacy on the individual's risk behaviour and investment intention. It says that cognitive, motivating, and emotional aspects that influence decisions are included in personality traits. Investors' personalities are related to their investing choices and outcomes. Personality qualities affect how people spend, manage their investments, and take risks. Regression analyses were executed in a series to test the impact of independent variables on dependent variables and also separate models for the mediator and the moderator were appraised to get more vibrant results using primary data. Results suggest that active individuals, sympathy toward others, determined, and well-organized are more willing to invest (**Sadiq and Khan, 2019**)
- The personalities of investors greatly influence their behaviour. The investor's decision was influenced by his or her personality. The paper aims to assess the influence of the personality of the stock market investors on their investment behaviour. The decision-making processes of investors were also moderately influenced by investor personality. Investors with any personality trait will learn about the particular bias that plays a crucial role in their decision-making. Secondary data was used in this study. The study found that the investors were majorly extroverts, emotional, and moral while making decisions, focusing on more returns, concrete on their ideas of decision making, risk lovers and sceptical in their views. The paper concludes that when the behavioural factors expressed by each investor personality type are known, financial advisors would be well equipped to guide the investors in making the right investment decisions thereby helping them avoid financial blunders (**Isidore and Christie, 2017**)
- Personality is a key psychological factor that may affect investors' information-seeking and trading techniques. The study aims to investigate the impact of sources of information on trading behaviour by analysing the influence of investor personality in

the Chinese futures market. Confirmatory factor analysis was conducted to assess the fitness of the model. Structural Equation Modelling was used to evaluate the moderating influence of investor personality traits on the association between source of information and trading behaviour. The study concludes that the primary sources of market information that investors choose to use while making investment decisions are influenced by investor personality factors. Investments in risky assets cover the cost of the investors' information gathering, and as a result, they expect higher returns. Investors with higher knowledge and high-risk investments can be anticipated to make portfolio adjustments more regularly, which means they will probably trade more. As a result, personality may be seen as a major influence on how people behave. It has been discovered that differences in risk tolerance and self-confidence psychological traits may influence how people look for investing information (Tauni et al., 2016)

- Personality traits act as a viable approach for examining the economic behaviour of individual investors. It is essential to conclude by conceptualizing the antecedents of psychological biases because nothing has been said about the function of personality in determining psychological prejudice. The objective of the study is to analyse the role of personality in determining psychological bias. The methodology of the study is based on primary data collected from the retail investors in the share market using simple random sampling. Correlation analysis and factor analysis were used to study the behaviour. The findings revealed that three distinct personalities exhibit a significant relationship with unique psychological biases Extraverts and neurotics investors participate in short-term investment, according to research. Being open to new experiences predicted long-term investing but not short-term investing. Also, those who are risk-averse avoid long-term investments. Further, the results of the study have demonstrated that psychological biases are related to personality traits and thus knowledge of personality traits may assist in preventive counselling to minimise the influence of psychological biases on retail investors (Rajagopalan and Gurusamy, 2015)

2.2.4 Financial Literacy in Investment Decision

- The study investigates the mediating role of access to financial services (AFS) in the effect of financial literacy (FL) on household income using survey data collected from four regions in Ghana. Using the multi-stage sampling technique, 572 respondents were randomly selected for the study. Household income is directly impacted by financial

literacy. People's inability to make informed investment decisions is caused by their lack of financial literacy, which hurts their income. Knowing someone in the financial market may increase the confidence level of a financially literate person to participate in the financial market. Access to and proper use of financial services are influenced by financial literacy, which in turn has an impact on how much money is available. The findings of this study reveal that financial literacy has a robust, increasing effect on household income. Again, the results depict that AFS mediates the positive effect of FL on household income (**Twumasi et al., 2022**)

- Financial literacy and investing decisions are positively correlated, which means that the more financially literate a person is, the more likely they are to invest and choose the right investment opportunity. Thus, this study aims to test the effect of financial socialization and financial experience on investment intention through financial literacy in college students. Social agents become one of the places where someone may obtain financial literacy information that might affect their financial management behaviour. A purposive sampling method was used to collect the data from 130 respondents. The theory used in this research is the theory of planned behaviour and social learning theory. PLS–SEM was used to analyse the collected data. The study revealed that financial literacy cannot mediate the financial socialisation of investing intentions. Financial socializing can influence financial literacy since it is possible to learn good financial principles from social agents through conversation or brief exchanges, which can improve one's level of financial literacy (**Tanuwijaya and Setyawan, 2021**).
- The study stated that investment is a sacrifice made now to reap larger rewards later on. A wise investment choice will yield welfare. Financial behaviour is the way that people process and respond to information while making investing decisions. The choice to invest is significantly influenced by financial knowledge. Financial knowledge to create prosperity is referred to as financial literacy. The investor's choice was impacted by their financial behaviour and literacy. Knowledge is power and when the power is in the financial sphere it will be a tool that can generate returns and minimize financial risk. The purpose of this research is to examine the influences of financial literacy and financial attitudes on individual investment decisions. Using questionnaires data was collected from 96 respondents. This study used multiple regression analysis, using SPSS IBM 22 to analyse the data. The analysis results showed that financial literacy and financial attitude influenced individual investment decisions. Simultaneously

financial literacy and financial attitude influence individual investment decisions **(Hasanuh and Putra, 2020)**

- Financial literacy is seen as a crucial skill that people should possess to improve their financial well-being. Poor financial decisions made as a result of financial illiteracy hurt both individuals and society as a whole. This paper elucidates the impact of financial literacy on the investment behaviour of individual investors by employing a systematic literature review method. The study concludes that 76% of adults in India are ignorant of fundamental financial concepts including inflation, risk diversification, and compound interest. In addition, there is a significant difference in financial literacy between men and women across all nations. Further, financial literacy is still not given much importance because of how it affects investor behaviour on a wide scale. Investors must take advantage of social media and digital tools to spread financial literacy **(Kanagasabai and Aggarwal, 2019)**.
- The study stated that financial literacy increases a person's awareness of financial concepts, enabling them to use investment opportunities and services effectively by evaluating the risks and rewards before selecting those opportunities that are most appropriate for them. Financial decision-making would be influenced by people's financial literacy. Financial behaviour towards various investment options is influenced by an individual's level of financial knowledge. The objective of the study is to identify the level of financial literacy and examine the relationship between the financial literacy of salaried employees and their preference towards various investment avenues in Ethiopia. Primary data were collected using covenant sampling technique from 209 employees, and wide-ranging effects on household saving and investing behaviour result from financial literacy. The chi-square test was used to examine the relationship between financial literacy and investment preference. The results of the study concluded that the financial literacy level of individuals is very low. It does not influence the investment preference of salaried employees towards various investment avenues, except for government bonds. Both groups, strong financial literacy and poor financial literacy evaluate all investment options in the same order of preference. **(Assefa and Rao, 2018)**
- Investors' fundamental problem is a lack of acceptable financial literacy, which leads them to misread data and what the figures imply. Without financial literacy, investors may not be able to make wise judgements when buying financial products and services.

Investors and decision-makers are not taught how to categorise financial transactions as part of financial literacy; instead, it leaves this to the accounting and finance professionals, who are familiar with all the steps. To assist individuals, in making better decisions, financial literacy tries to teach people how to use and analyse the information provided to them in financial reports. **(Madi and Yusof, 2018)**

- Financial literacy is the capacity to analyse economic data and make wise choices on debt, pensions, asset growth, and financial planning. This research aims to know the influence of demographic factors towards financial literacy and its impact towards financial behaviour. Financial literacy has to develop since those without it are more likely to make mistakes with their money. Understanding, confidence, and willingness to make wise financial decisions are all enhanced by financial literacy. Convenience sampling technique was used for sample selection. The sample of this research is 83 respondents and used the OLS as the model estimation. The results reveal that financial literacy level does not affect the financial behaviour level, because most of the respondents can apply good financial behaviour such as savings, paying bills or other good financial behaviour activities because they are considered about their actions, not just because they are having a high level of financial literacy **(Reswari et al., 2018)**
- Financial literacy is the ability to understand financial concepts that are necessary to know to make wise financial decisions. It also includes knowledge about financial products that have an impact on an individual's financial well-being. Investors' financial knowledge is insufficient for what is required. The study attempted to examine the association between the financial literacy of salaried individuals in Delhi and their awareness index related to various products of finance. The data was collected through the structured questionnaire from the 180 salaried individuals. The data was analysed by using the T-test and Chi-square test. The results revealed that salaried individuals' level of financial literacy of individuals affects their financial product awareness as well as their investment preference. Gender, level of education, income, kind of employment, and place of employment all have an impact on financial literacy. Hence, it takes a lot of work to educate people about finance and provide them with the skills necessary to engage in the financial markets **(Gupta, 2016)**
- Financial literacy is the degree to which a person is knowledgeable about basic financial concepts and how the financial markets operate. This study intends to examine whether financial literacy moderates the relationship between risk averseness in general and

risky investment intention. The majority of people lack the financial literacy that would enable them to make safe financial decisions. The data set comprised 112 participants through the survey method. Women, those with minimal job experience, and people under 30 tend to be more financially illiterate. Results showed that risk aversion in general had a significant and negative impact on risky investment behaviour. Financial literacy changed the relationship between risk averseness in general, locus of control and risky investment intention. Less financially aware individuals are less likely to participate in the stock market, which is a riskier kind of investment (**Aren and Aydemir, 2015**)

- Individuals' well-being and financial literacy are directly related. Financially educated people may utilise these financial goods and services effectively by evaluating the risks and rewards before selecting. Low financial literacy tends to invest mostly in conventional and secure financial goods and does not invest heavily in those financial products that are somewhat riskier and can offer better returns. Both knowledge of financial goods and investment choices towards financial items are influenced by financial literacy level. To examine the relationship between the financial literacy of salaried individuals and their awareness regarding financial products. Data was collected from 516 salaried individuals. T-test and Chi-square was used for analysing the data and testing the hypothesis. The results of the study suggest that the financial literacy level of individuals affects the awareness as well as investment preferences of salaried individuals towards financial products (**Bhushan, 2014**)

2.2.5 Self-Efficacy of the Investors

- Financial self-efficacy is a subjective evaluation of one's knowledge, abilities, and management of household finances. Financial Self-Efficacy (FSE) has a significant influence on behaviour and resembles the capacity to manage one's finances. A person with high self-efficacy is more likely to analyse, access, and use financial products and services. An individual with high self-efficacy is likely to analyse, access and use financial products and services and this kind of individual with FSE is also likely to invest. Financial Self-Efficacy assists customers in choosing how to divide their savings and consumption because most people will decide to consume more as their income rises. The study investigates the effect of financial knowledge, basic individual traits and compound traits towards intention to invest of pre-retirees with the intervening variable of financial self-efficacy. Primary data from 160 respondents of 45 years old

and older was taken for the study. The result showed that financial knowledge is positively associated with intention to invest. Financial Self-Efficacy is inversely correlated with financial knowledge since people with financial expertise might make large sums of money without investing it (**Handoko and Sembel, 2020**)

- Self-efficacy and financial literacy are two factors that influence financial behaviour. Self-efficacy is the belief in one's capacity to plan and carry out a set of steps to attain desired objectives. Self-efficacy is a significant self-variable. Financial efficacy is a factor that may be determined by looking at financial literacy. High financial self-efficacy is a result of high literacy. The study aimed to analyse the effect of financial literacy and parental socioeconomic status on the financial behaviour of undergraduate students with students' financial self-efficacy serving as a mediator. The sample consisted of 180 undergraduate students. The results showed that financial literacy directly influenced financial efficacy, but the parents' socio-economic status did not have any direct influence. Financial literacy and self-efficacy are two things that enable financial behaviour transformation. (**Herawati et al., 2020**)
- High self-efficacy motivates a person to achieve their goals with a positive approach, due to this a person can handle low self-efficacy becomes the reason to focus on potential losses. Personal financial behaviour can be explained in part by one's level of financial self-efficacy. Consumers' financial self-efficacy can assist educators and counsellors in guiding people in making financial decisions that are good for both the person and the economy. People's motivation, behaviour, and feelings are all influenced by their level of self-efficacy. The objective is to examine the impact of financial self-efficacy on the financial behaviour of working women, along with the different personal attitudes including financial anxiety, self-esteem, self-control and financial stress. Data was collected using a well-structured questionnaire from 300 respondents. The collected data was analysed through different statistical techniques including, descriptive statistics, correlation and OLS regression analysis. It was found that women who had greater levels of self-efficacy tended to invest in riskier items as opposed to risk-free savings programmes. Financial self-efficacy is strongly correlated with both gender and risk-taking behaviour in people (**Montford and Goldsmith, 2015**)
- From the study the financial self-efficacy could be understood as an individual's self-perceived ability in managing their finances. Challenges are typically seen as something that can be overcome and mastered by those with strong self-efficacy. Financial help-

seeking was more frequent among those with strong financial self-efficacy compared to those with low financial self-efficacy. Higher degrees of financial self-efficacy make people more willing to act on their knowledge. This study aims to develop a self-administered scale that measures financial self-efficacy for women over the age of 18. Primary data was collected for the study. Factor analysis and Correlation were used to analyse the data using SPSS version 22 and jMetrik. The criterion-related validity showed that the WFSES was positively correlated with the New General Self-Efficacy Scale (NGSES). Factor analysis showed four factors to be consistent with the common categories in financial management curricula (Nguyen, 2019)

- Self-efficacy beliefs are fundamental to personal agency. Savings behaviour is influenced by ideas about financial self-efficacy. Women with greater FSE views were less likely to own debt-related items. Higher financial self-efficacy belief holders tend to set aspirational objectives for themselves when faced with challenges and can deal with failures in a way that makes them less prone to stress, anxiety, and despair. Greater financial self-efficacy beliefs may enable people to better handle the stress caused by financial failures and difficulties that arise during the financial planning process. When compared to self-efficacy beliefs in other life domains, financial self-efficacy beliefs tend to be the least likely to deteriorate for older persons (Asebedo et al, 2018)
- The study focuses on the knowledge and self-efficacy that were the foundation for behaviour change to occur. Understanding that behaviour change is necessary requires an assessment of knowledge deficiency, and self-efficacy is the perception of being able to deal with a problem successfully. Financial self-efficacy is successful in explaining how it affects individual financial behaviour. The objective of the study is to examine the role of financial attitude as a mediator for a relationship between financial self-efficacy and financial behaviour. WARP – PLS was used to test the model and the hypotheses using primary data. The results of the study are individuals find it harder to undertake certain activities if they have poor self-efficacy, and they may even acquire negative attitudes about such behaviours. Those who have a high level of self-efficacy are confident in their capacity to manage money and make wise and responsible judgements (Faique et al., 2017)
- This study examines the potential influence of financial self-efficacy on school academic measures, and how these academic outcomes may impact financial stress levels in college students. From the study, self-efficacy is best understood as self-

referent thought that exists when knowledge and action intersect. An individual's action (such as asking for help and advocating for themselves, among other things) that improves their capacity to manage a variety of challenging circumstances is ensured by the presence of self-efficacy. A high degree of perceived self-efficacy represents a person's demonstrated self-confidence and achievement potential. The study used primary data. The OLS model was adopted to analyse the data. The study concluded that those who have a high level of self-efficacy may feel better equipped to handle difficult financial circumstances and may be much more optimistic about their future endeavours (**Fosnacht and Calderone, 2017**)

- The paper examines the significance of an individual's financial self-efficacy in explaining their financial behaviour, through the application of a psychometric instrument. Financial self-efficacy emerges as one of the strongest predictors that a woman holds. Women who have stronger financial self-efficacy are more likely to own investment and savings goods and less likely to own debt-related products. The study reveals that financial self-efficacy emerges as one of the strongest predictors of the type and number of financial products that a woman holds. Women with a greater sense of self-assuredness in their financial management capacities are more likely to approach any financial difficulties they encounter as 'challenges to be mastered, rather than threats to be avoided. Further, a woman's personal finance behaviour can be explained by her financial self-efficacy (**Farrell et al., 2016**)
- The study explains that self-efficacy belief provides the foundation for human motivation, well-being and personal accomplishment. Self-efficacy is the term describing an individual's confidence and conviction in his capacity to carry out a specific activity effectively. Self-efficacy beliefs are a critical component of human motivation and behaviour because they have an impact on behaviour and by consistent achievement, a strong efficacy belief is formed. The self-regulation of motivation is greatly influenced by perceived self-efficacy. The objective is to address the influence and interrelationship of self-efficacy as a motivator and as a contributor to the academic performance of the individual. The study was purely based on secondary data. The study concluded that self-efficacy was and has been the strongest single predictor of student's academic achievement and performance (**Vanhaltren, 2016**)
- The study focused the self-efficacy, a crucial social psychology concept, is the belief that one can handle a given situation successfully. High levels of self-efficacy are

predicted to improve people's well-being, particularly their physical and mental health, by changing their behaviour. Stress and stress-related adaptive actions are mediated cognitively by self-efficacy. Lower debt, fewer financial issues, less financial stress, better savings, and financial satisfaction were all linked to increased financial self-efficacy. The purpose of the study is to identify factors related to the financial help-seeking behaviour of college students. Primary data was used in this study. For the multivariate analysis, a series of logistic regressions were conducted. Increasing financial self-efficacy may be a useful strategy for enhancing students' financial well-being. The study concludes higher financial self-efficacy customers are more likely to identify their need for help and initiate contact, whereas lower self-efficacy clients may respond better to advisor-initiated contact (**Lim et al., 2014**)

- The study aims to determine the level of knowledge-sharing awareness and to identify whether the approach is associated with demographic factors. Self-efficacy is one of the established motivation theories that can be used to understand the reason why people only share knowledge within a certain context. Self-efficacy might prevent someone from intending to share information. Primary data was collected from 725 academics from 20 public Universities. In this study, analysis of variance (ANOVA) and t-test are used to test research hypotheses whether there are significant differences of tested variables with demographic profiles of academics. The results revealed that high self-efficacy is associated with strong work performance. Self-efficacy and self-esteem both represent a behaviour change that comes from learning from mistakes. A person with great self-efficacy also has good perceptions of themselves (**Shaari et al., 2014**)

2.3 Research Gap

Presently, there are a whole lot of retail investors migrating from the cash market to the derivative market where it has immense growth and the investors spot that it is a place where risk can be eliminated at a greater level with higher return. As derivative markets become more 'peopled' their behaviour, actions, reactions and perceptions have a continuous impact on their investment decisions. However, how an investor settles on the investment choices and decisions is of critical concern, especially the role of investors' personalities, biases and emotional perceptions that come into effect when they are making their investing decisions. Different studies have examined the influence of various psychological factors and behavioural biases in the derivative market. These studies either focused on the direct effect of variables of

attitude or personality traits or behavioural biases of retail investors in association with the moderating role of financial literacy and self-efficacy on intention to invest. In the majority of the studies, only one set of variables is being concentrated which influences an individual's investment behaviour, but investors' behaviour cannot be adequately described by measuring a single trait or attribute because while trading in the financial market investors show their most multifaceted behaviour that traditional models cannot explain. A comprehensive multidimensional investigation has not yet been conducted in a combination of psychological (attitude, personality traits, behavioural biases), financial (financial literacy, self-efficacy) and social dimensions (intention to invest, trading behaviour). Thus, a study has been proposed to understand the combined effect of risk and money attitude, personality traits and behavioural biases in line with financial literacy and self-efficacy as a key moderator towards intention to invest in the derivative market. By integrating these multidimensional aspects—risk and money attitudes, personality traits, behavioural biases, financial literacy, and self-efficacy as key moderators—the study aims to provide a holistic framework for understanding the complex drivers of investor behaviour. Therefore, it is imperative to conduct a multidimensional study by covering the factors that affect the behaviour of retail investors in the derivative market.