CHAPTER – I

INTRODUCTION

Financial market is an expansive ecosystem comprising various institutions, instruments, participants and mechanisms which interact with each other to facilitate economic development. Exhibiting the underlying economic situation financial markets are essential for capital formation, risk management liquidity and ensuring the smooth functioning of various economic activities to maximise return on investment (Chikwira and Mohammed, 2023). The financial market is open for trading financial products such as stocks, bonds, and warrants by individuals, corporations, and governments (Sandjong Nantchouang, 2018). Capital raising, risk transfer in derivative markets, and international trade in foreign currency markets are all made possible by financial markets (Tewari, 2023). The market offers unique instruments to later the needs of individual investors, who want to grow their wealth to businesses, who need capital for progressive activities. The effective functions of financial markets lead to economicstability on the national and global landscape.

Capital market serves as a structured platform facilitating the lending and borrowing of long-term funds through established institutional mechanisms (Genberg, 2016). It is an organized system designed to enable the efficient and effective transfer of financial resources, including funds, from investors—whether individuals, institutions, or entrepreneurs—operating within the private or public sectors of an economy (Stosic-Mihajlovic, 2016). Selling bonds and selling stocks are two strategies to raise money as well as long-term funds. It gives businesses and the government a new way to raise money in the long run. Capital markets increase the variety of assets accessible in the nation and also attract international portfolio investments (Joy, 2017).

Due to economic globalisation over the past years, many enterprises have been subjected to currency rate fluctuations. Many firms are being forced to handle financial risks including foreign exchange risk, interest rate risk, and other financial risks effectively as a result of the increasing exposure. The importance of business hedging has increased the need for ground-breaking advancements in the field of financial engineering as well as innovative risk management techniques (Blommestein, 2012). The growing liberalisation of the Indian economy has led to an important flow of foreign capital into India. Simultaneously the removal of trade barriers has made it easier for national economies to become more integrated with the

global economy (Alkhateeb et al., 2017). In India as well as other developed and emerging nations, risk management through derivative products has become essential due to the globalisation of trade and the relatively free movement of financial assets. The financial market's path of liberalisation and deregulation resulted in the integration of international financial markets. The development of information technology aided in the unprecedented magnitude of integration. The integration of financial markets and the unrestricted movement of capital heightened risks, resulting in the centralization of risk diversification strategies (Olibe et al., 2008). As a result, derivative markets are evolving as an essential segment in risk management, speculation and price discovery.

1.1 Derivative Market

A derivative is a financial instrument or contract having its value derived from the value of an underlying asset. These underlying assets can include a wide range of categories, such as:

- Metals: Assets like gold, silver, aluminium, copper, zinc, nickel, tin, and lead.
- Energy resources: Commodities such as coal, electricity, natural gas, crude oil, and its by-products or derivatives.
- Financial assets include shares, bonds, and foreign exchange in addition to
- Agricultural commodities like wheat, sugar, coffee, cotton, and pulses.

The history of derivatives can be traced back several centuries. Key milestones in the evolution of the global derivative market include:

Table 1.1 Development of the Derivative Market – Global Scenario

Year	Development
2nd Century	Contracts for future delivery arose during European trade fairs.
13th Century	The English Cistercian Monasteries made contracts to sell wool to foreign merchants as much as 20 years in advance.
16th Century	Tulip Mania in Holland: A speculative boom in tulip futures with heavy financial losses when it collapsed.
17th Century	A futures system was adopted by Japan's Dojima rice market near Osaka to protect producers against losses due to bad weather or wartime destruction.
18th Century	The Chicago Board of Trade (CBOT) was established, allowing the trading of several commodities in the form of forward contracts (1848). The establishment of exchange-traded futures contracts by CBOT was a watershed moment in derivative trading (1865).
1919	The Chicago Butter and Egg Board converted from a division of the CBOT to a full futures exchange and was renamed the Chicago

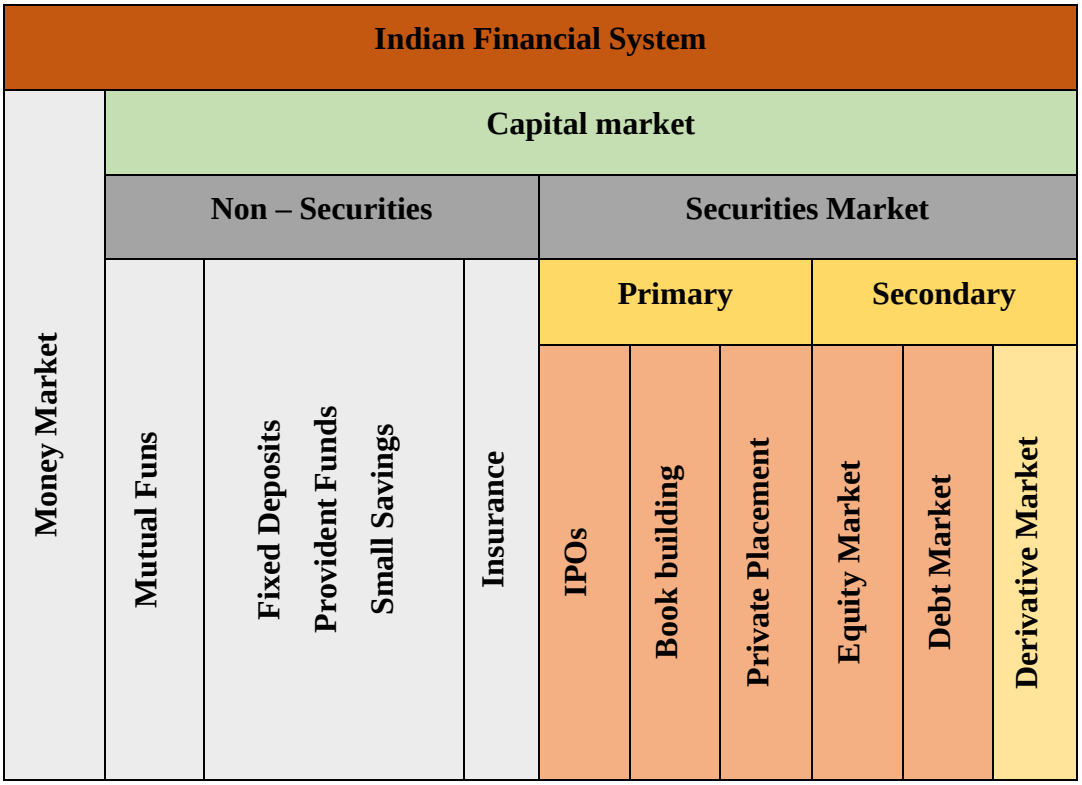
Year	Development
	Mercantile Exchange (CME).
1970s	CME started the International Monetary Market (IMM), the first market for currency futures. "The Chicago Board Options Exchange (CBOE)" became the first exchange for listed options trading. Introduction of "Treasury bill futures", being the first successful pure interest rate futures by CBOT. Establishment of Treasury bond (T-bond) futures contracts by CBOT.
1980s	"CME introduced Eurodollar futures contracts and the Kansas City Board of Trade" initialized stock index futures. CBOE began options on stock indices with "S&P 100® (OEX) and S&P 500® (SPXSM)" indices. The stock market crash proved the significance of derivatives for risk management and hedging.
1990s	OTC derivatives gained traction as electronic trading systems flourished.
2000s	The Commodity Futures Modernization Act (2000) expanded the opportunities for OTC derivatives trading. Many sparked by the global financial crisis were about the risks of complex derivatives, such as credit default swaps (CDS), and regulations such as the Dodd-Frank Act in the U.S. (2008).
2010s	The derivatives market expanded globally with an eye on digital trading. Environmental derivatives, for example, carbon credits, gained new stature.
2020s	Derivatives such as Bitcoin futures and options have gained momentum recently. AI and blockchain technologies have redefined derivatives trading. ESG-linked derivatives emerged as tools for sustainable investment.
Present Day	The derivatives market continues to be innovation-driven, technology-enabled, and regulatory-reformed. It encompasses a wide range of asset classes as commodities, currencies, equities, interest rates, and, recently, digital assets.

Source: Vashishtha and Kumar, 2010

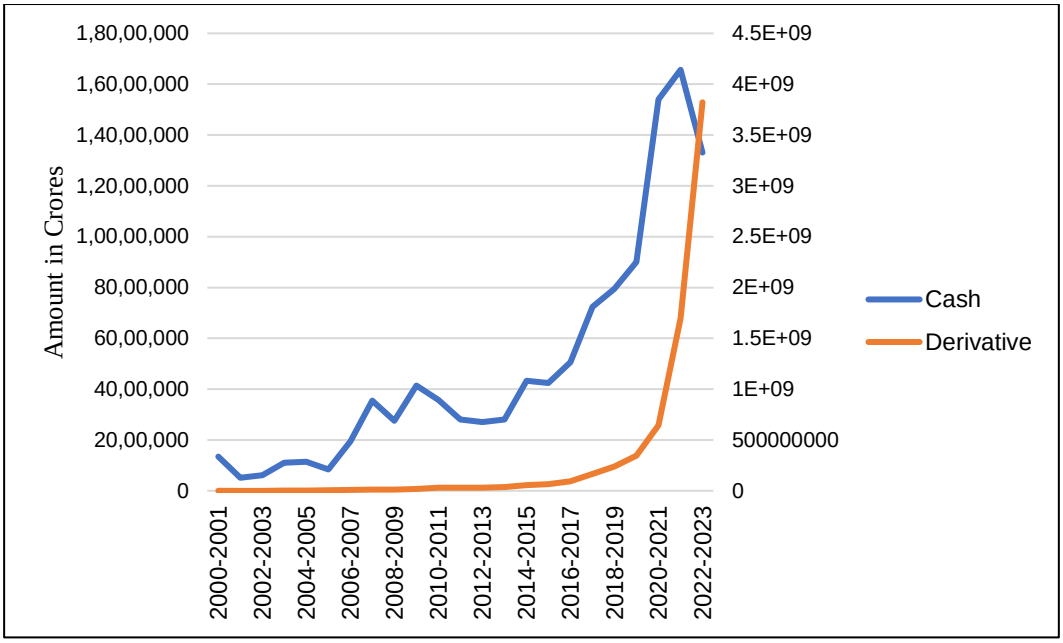
1.2 Indian Derivative Market

Derivative trading in India began with the establishment of a 24-member SEBI committee, chaired by "Dr. L. C. Gupta, on November 18, 1996", to create a regulatory framework (Toopalli and Kalyan, 2019). The committee's March 17, 1998, report recommended classifying derivatives as securities to align their regulation with that of securities trading. In June 1998, SEBI formed another committee, led by "Prof. J. R. Varma", to address risk mitigation in the derivative market. This committee's October 1998 report outlined key operational aspects, including margining systems, membership and net worth criteria, deposit

requirements, and real-time position monitoring. The Securities Contract Regulation Act (SCRA) was amended in 1999 to classify derivatives as securities, creating a regulatory framework (Varghese, 2017). In March 2000, the government lifted a three-decade-old ban on forward trading in securities. India's journey with derivatives began in the year 2000 when the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE) commenced trading in derivatives (Gakhar, 2015). The derivative market represents a relatively new segment within India's secondary market operations. Since its introduction, it has experienced remarkable growth, both in trading volume and the number of contracts executed (Tanmay Sarker, 2024). Various factors have played a significant role in driving this rapid expansion.



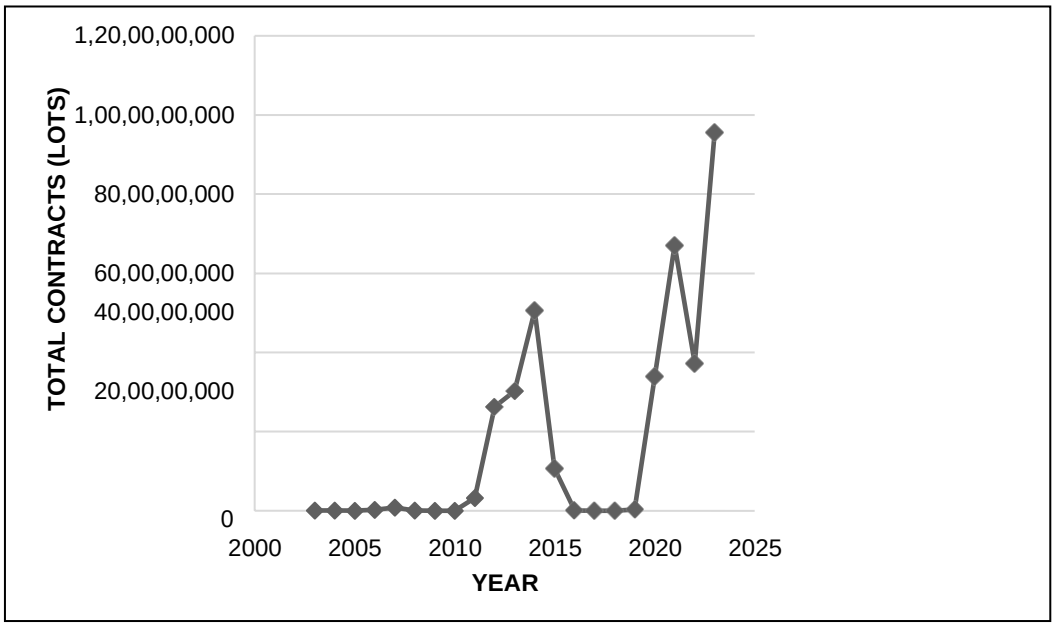
Trading in index options began in June 2001, followed by options on specific equities in July 2001 and futures contracts in November 2001 (Singh and Kansal, 2010). In February 2013, the Metropolitan Stock Exchange of India Limited (MSEI) introduced derivative trading.



Source: Complied Data NSE, 2023

Figure 1.1 NSE Average Daily Transaction in the Cash and Derivative Segments

The daily turnover in the derivative market in India reached around eleven crores in 2023 (NSE, Aug 2023). The market turnover of derivatives on the NSE and BSE has witnessed significant growth, increasing from ₹438 crore in 2000–2001 to ₹4,700 crore in 2022–2023.



Source: Complied Data BSE, 2023

Figure 1.2 Derivative Trading in BSE

India stands out as one of the most prosperous emerging economies, with a robust market for exchange-traded derivatives (Saroha and Yadav, 2013). This expresses the benefits brought by a modern Indian securities market, which offers wide market access, anonymous and secure

electronic trading, and a predominantly retail investor base. It is becoming ever stronger that equity derivatives form a pipeline to price discovery. In a relatively short period, derivative trading in India has surpassed the cash segment in both turnover and the number of contracts traded (Shalini and Raveendra, 2014).

Table 1.2 Business Growth of Derivative at BSE

Year	Total contracts (Numbers)	Total turnover (Crores)	Contracts (Lots)	Value (Crores)	Avg. Daily turnover	Trading days
2023-2024	95,61,53,999	6,30,39,189.54	64,648	4,370.00	6,30,391.90	100
2022-2023	37,25,85,103	3,43,15,313.02	-	-	1,37,812.50	249
2021-2022	67,05,21,024	6,60,78,327.85	104	9.52	2,66,444.87	248
2020-2021	33,81,60,958	3,50,60,169.07	1,895	218.48	1,41,371.65	248
2019-2020	26,81,883	2,62,268.62	515	37.94	1,061.82	247
2018-2019	31,167	2,250.11	9	0.67	9.07	248
2017-2018	44,701	3,262.66	2	0.12	13.26	246
2016-2017	1,23,538	6,939.29	107	7.71	27.98	248
2015-2016	10,62,09,394	44,75,008.32	68	3.47	18,117.44	247
2014-2015	50,54,78,869	2,03,62,741.42	26,719	1,001.25	83,797.29	243
2013-2014	30,19,42,441	92,19,434.32	18,692	602.61	36,730.81	251
2012-2013	26,24,40,691	71,63,576.66	90,076	2,299.16	28,654.31	250
2011-2012	3,22,22,825	8,08,475.99	28,176	735.68	3,246.89	249
2010-2011	5,623	154.33	4	0.12	0.61	255
2009-2010	9,028	234.06	-	0.11	0.96	244
2008-2009	4,96,502	11,774.83	22	0.31	48.46	243
2007-2008	74,53,371	2,42,308.41	3,175	52.02	965.37	251
2006-2007	17,81,220	59,006.62	408	-	236.97	249
2005-2006	203	8.78	-	-	0.03	251
2004-2005	5,31,719	16,112.32	22	-	63.69	253
2003-2004	1,43,224	5,021.81	35	-	19.77	254

Source: BSE, 2023

India's experience with derivatives has been highly positive, with the derivative market experiencing remarkable growth in recent years, evolving into a multi-trillion-dollar market. By enabling the partial or full transfer of risk through the locking of asset prices, derivatives

are gaining increasing popularity among investors (Gautam and Kavidayal, 2016). Since the economic reforms of 1991, regulators have worked diligently to enhance investor confidence by making the trading process more user-friendly, while also implementing robust measures to strengthen trust in the derivative market (Kargeti, 2018).

1.2.1 Types of Derivative Market

In the current world, there are many different derivative products are readily available. They are either exchange-traded derivatives, which are traded on established exchanges, or over-the-counter (OTC) derivatives, which are agreements made directly over the phone or by electronic means between the contracting counterparties (Popova and Simkins, 2015). To satisfy the unique needs of consumers, a few complicated products are built like forwards, futures, options, and swaps. The over-the-counter market is a group of broker-dealers situated around the nation rather than a physical marketplace. The market's central concept is more of a method of conducting business than it is of a physical location (Rojek, 2019). An OTC market entails a trading mechanism allowing for the purchase and sale of a contract through a negotiated bidding methodology across a network of telephone or electronic channels that connect several intermediaries. Recent advancements in information technology have played a crucial role in the growth of OTC derivative markets. The markets are mainly driven by banks, financial institutions and other professional players like hedge funds, corporations, and high-net-worth individuals. This kind of contract is less regulated because
the contracts are made privately between qualified counterparties who manage their risks (Setiawan, 2022).

Contracts are exchanged on a standard basis through registered stock exchanges, with their values determined through negotiations occurring between an anonymous bidder on a platform where buyers and sellers bid and cross bids. The settlement of these transactions is guaranteed by a clearing organization, which ensures contract fulfilment (Bliss and Papathanassiou, 2006).

1.2.2 Derivative Products

- **Futures**

A futures contract is arranged through a centralised exchange that is subject to regulation. For futures contracts to be traded on the market, they must be standardized in terms of key features such as lot size, maturity date, and other contract specifications. Futures are exchange-traded forward contracts (Stosic-Mihajlovic and Zdravkovic, 2016).

- **Options**

An option is defined as a contract which gives the holder a right but not any obligation to buy or sell the underlying asset, going by an agreed price at or before a designated date (Yang, 2023). The buyer pays a premium for this right; the seller, or the option writer, receives the premium and assumes an obligation to buy or sell the underlying asset in the event of an exercise of the option by the buyer.

- **Forwards**

A forward contract is a legally binding agreement that obligates two parties to buy or sell an underlying asset for a certain price on a specific future date. The two parties must perform the trade regardless of the market value of that asset at the time of delivery. A forward contract is a contract that all parties can negotiate, thus giving the agreement an over-the-counter status.

- **Swaps**

A swap is a contract entered into by two parties to exchange cash flows in the future according to a predetermined formula. In a way, swaps can be likened to a series of forward contracts. Traders use swaps chiefly as a means of hedging important risks associated with shifts in interest rates, currency exchange rates, and commodities prices (Yang and Onur 2018).

1.2.3 Players in the Derivative Market

Participants in the derivative market can typically be categorized into three groups: hedgers, traders (or speculators), and arbitrageurs. In various market environments, a person may play several roles.

- **Hedgers**

Hedgers use derivatives to reduce their exposure to risk-taking because they are exposed to price risks related to the underlying assets (Garg and Sharma, 2024). Firms, financial institutions, and banks use derivative products to protect themselves against market risks: interest rate fluctuation, changes in share and bond prices, foreign currency exchange rates, or commodity prices.

- **Speculators**

Traders, or speculators, aim to anticipate future price movements of the underlying assets and take positions on such derivative contracts according to their forecasts (Islam and Chakraborti, 2015). Derivatives are also used for trading since they are leveraged, less expensive (due to transaction costs being lower than that of their underlying), and often allow for faster execution owing to the liquidity and high volume of trading on the derivative markets.

- **Arbitrageurs**

Arbitrage involves exploiting price differences of a product between two markets to generate profit. It happens when a trader treats the purchase of an asset at a lesser price in one market while simultaneously having a plan to sell it at a higher price in another market (Misra et al., 2006). These opportunities are typically short-lived, as arbitrageurs act quickly to execute these transactions, thereby closing the price gap between the markets (Burgess, 2023).

1.3 Derivative Market: Indian Investors' Perspective

Financial markets are highly innovative in enhancing the popularity of derivative instruments, demonstrating how effectively markets can package and manage risk (Perveen et al., 2018). All regulatory measures have a common theme that small investors lack the sophistication to understand how derivative markets operate (Pasha, 2013). As a result, when they engage in reckless noise trading in derivatives, these investors not only lose money but also impact market fundamentals by increasing volatility and reducing the informativeness of prices as a result of derivative lot size split the trading by retail investors have increased (Jain et al., 2016). Currently, derivatives have reinforced the crucial connections between global markets by enhancing market liquidity and efficiency. (Aali-Bujari et al., 2016). Derivatives attract a large number of individual investors with an entrepreneurial spirit (Thomas, 2017). Higher levels of retail participation in the derivative market result in higher shareholder value, pricing efficiency, and liquidity (Narasimhan and Kalra 2014). Investors all over the world are interested in mainly one important thing which is maximising their returns and minimising the risks associated with the investment (Lindner et al., 2021). Thus, derivative offers a platform to manage risk while investing their funds. Despite the institutional investors, more retail investors are entering the derivative market. Thus, enhancing the liquidity and efficiency of the derivative market development results in productive investments and economic growth (Chikwira and Mohammed, 2023). Investment choices and decisions are of paramount importance, particularly in understanding how investors' preferences and biases can influence their decision-making process (Zahera and Bansal, 2018) also, the changes in economic policies, such as demonetization and the introduction of GST, have significantly altered the financial behaviour of the people in the country. This new era of transformation has become an essential component of the modern financial system, emerging less than three decades after its inception (Lyons and Kass-Hanna, 2022).

Behavioural factors affect retail investors to decide the percentage of investment while selecting the instrument in the derivative market (Umamaheswari et al., 2022). The

demand and supply lead to price discovery; apart from economic factors, psychological factors influence their investment decision positively and negatively. (Sinha, 2015). Various new theories in behavioural finance suggest that cognitive biases and psychological errors can significantly impact the investment decisions of retail investors. (Chandrakala and Raja Kamal, 2024).

Behavioural finance bases its theory on the irrationality of behavioural Finance investors. Under behavioural finance, the emotions of the investors are measured based on different approaches, underlying theories, behavioural factors, and variables. Investors' behaviour discloses that trading decisions are influenced by psychological factors (Ige and Adebayo, 2024). Regardless of evaluating the fundamental analysis of the company, the investor is still concerned about certain emotional items such as attitudes, personality traits, behavioural biases, financial literacy and self-efficacy and not many investors are aware of howto handle the financial activities and their investment decisions (Jain et al., 2019).

Investors are highly affected by various factors while trading in the derivative market. Investors' behaviour discloses that trading decisions are influenced by psychological factors (Quang et al., 2023). Regardless of evaluating the fundamental analysis of the company, the investor is still concerned about certain emotional items such as attitudes and the familiarity of that particular stock and not many investors are aware of how to handle the financial activities and their investment decisions (Chandu et al, 2023) It is significant to understand the characteristics which motivate the investor to trade in the derivative market with the aspects of money and risk attitudes, personality traits, behavioural biases, financial literacy and self-efficacy.

1.4 Statement of the Problem

The derivative market plays a pivotal role in the global financial system by enabling participants to manage risks, diversify portfolios, and engage in speculative activities. There was little participation from individual investors in the Indian derivative market, due to a lack of awareness and comprehension of the product (Cirappa and Tejashwini, 2022). In 2021, there was an explosive growth in retail investor activity, as over 4.5 million new accounts were opened. These numbers clearly show the era of Indian retail investors (Khandal, 2022). The entry of small investors is likely to increase valuations in the derivative market. Retail investors are taking over the derivative market and building wealth for themselves and the country (Upputuri et al., 2021). Retail investors are integral to this market, contributing significantly to liquidity and influencing market dynamics. However, understanding their trading behaviour

remains a complex challenge due to the interplay of psychological, financial, and social factors. Globally, the increasing complexity of financial products and the growing participation of retail investors highlight the need to analyse the motivations and decision-making processes driving their engagement (Hemrajani et al., 2021). In the Indian context, the derivatives market has witnessed exponential growth, with retail investors comprising a substantial portion of participants (Tewari and Singh, 2023). This growth is catalysed by technological advancements, regulatory reforms, and a growing awareness of financial markets among individual investors. Despite this progress, limited financial knowledge about the product and the market, the influence of biases, and varying levels of self-efficacy among retail investors pose significant challenges to informed investor's decision-making and market stability. Traditional studies often adopt single-dimensional approaches to study investors' behaviour, focusing narrowly on financial or demographic factors (Kamoune and Ibenrissoul, 2022). The behavioural finance theory, which explores deviations from rational decision-making due to psychological biases, financial literacy and self-efficacy that emphasize individuals' confidence in their ability to perform tasks, provides critical frameworks for understanding these complexities (Leković, 2020). Moreover, the Theory of Planned Behaviour highlights the role of attitudes, subjective norms, and perceived behavioural control in shaping investment intentions and decisions. These approaches fail to capture the interconnected influences that shape retail investors' trading decisions, such as personality traits, attitudes, behavioural biases, financial literacy and self-efficacy. The study incorporates multidimensional factors such as attitude, behavioural biases and personality traits from the psychological dimension; financial literacy and self–efficacy from the financial dimension and the social dimension includes satisfaction, intention to invest and trading behaviour. The study is particularly significant in India where retail investor participation is crucial for deepening market penetration and achieving inclusive economic growth. A comprehensive understanding of retail investors' behaviour, encompassing psychological, financial, and social dimensions, is essential to support market development and foster investor's investment decision and their behaviour.

1.5 Research Questions

- What are the products and sectors preferred by the retail investors in the derivative market?
- Are retail investors aware of the features of the Derivative market?
- Are retail investors satisfied with the derivative market and what are the problems encountered?

- What are the factors influencing the trading behaviour of retail investors in the derivative market?
- Are multidimensional attributes affecting the trading behaviour of retail investors in the derivative market?

1.6 Objectives of the Study

- To know the preferences of retail investors in Derivative Market
- To analyse the awareness of retail investors in derivative trading
- To evaluate the satisfaction gained and challenges faced by retail investors in derivative trading
- To assess the Attitude, Personality Traits, Behavioural Biases, Financial Literacy and Self – Efficacy of the retail investors on the trading behaviour and
- To examine the effect of Attitude, Personality Traits and Behavioural Biases on the derivative trading of retail investors with the moderating role of Financial Literacy and Self-Efficacy

1.7 Hypotheses of the Study

- **H_{a1}** - There is a significant impact of Attitude on satisfaction in derivative trading
- **H_{a2}** - Behavioural biases significantly affect the satisfaction in derivative trading
- **H_{a3}** - Personality Traits affect satisfaction in derivative trading through Financial Literacy
- **H_{a4}** - Financial Literacy moderates the relationship between Attitude and Behavioural Biases and satisfaction in derivative trading
- **H_{a5}** - Self – Efficacy moderates the relationship between Attitude and Behavioural Biases and satisfaction in derivative trading
- **H_{a6}** – Satisfaction in derivative trading significantly affects the Intention to Invest
- **H_{a7}** - Intention to Invest significantly affects the Trading Behaviour of retail investors

1.8 Limitations of the Study

The study confines retail investors in the derivative market and excludes other types of market participants. This identification of derivative investors was only possible by consulting stockbroking companies, thus prone to bias since investment decisions by the respondents were influenced by these companies. Thus, the findings might not reflect market trends.

1.9 Chapter Scheme

The present study has been carried out in five different chapters.

Chapter I - Introduction

Chapter I provides an introduction to the derivative market, tracing its evolution and highlighting the role of retail investors in this market. It also discusses the factors influencing the trading behaviour of retail investors, presents the statement of the problem, outlines the objectives and scope of the study, and identifies the limitations of the study, followed by the construction of the study.

Chapter II – Review of Literature

Chapter II contains a review of the literature covering the theoretical background and the previous reviews related to the present study.

Chapter III – Research Methodology

Chapter III describes the research methodology of the present study by including the research design, area and period of study, method and size of sampling, sources of data and tools used for analysis in the study.

Chapter IV – Results and Discussions

Chapter IV presents the results and discussions of the study. It includes an analysis of the socio-economic profile of retail investors, their investment objectives, and their awareness of various derivative market terminologies. The chapter also evaluates their satisfaction levels and the challenges they encounter while trading in derivatives. The final aspect considered by the study relates to determining the effects of attitudes, personality traits, and behavioural biases on the derivative trading behaviour of retail investors.

Chapter V – Findings, Conclusion and Suggestions

Chapter V provides a summary of the key findings, offers further suggestions, and concludes the study.