

A STUDY AND COMPARATIVE ANALYSIS OF BSE AND NSE WITH SPECIAL REFERENCE TO RISK AND RETURNS

Submitted in partial fulfillment of the requirements for the award of

Master of Business Administration

by

UNICE JECINTH. B
Register No. 42410137



SCHOOL OF BUSINESS ADMINISTRATION

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

**Accredited with Grade "A++" by NAAC | Category – 1 University by UGC
Approved by AICTE | Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119**

DECEMBER - 2023



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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **UNICE JECINTH B (42410137)** who have done the Project work entitled **"A Study and comparative analysis of BSE And NSE with special reference to risk and returns"** under my supervision from October 2023 to December 2023.

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DECLARATION

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DATE: 22.12.2023

PLACE: Chennai



SIGNATURE OF THE CANDIDATE

ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **SATHYABAMA** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey my sincere thanks to **Dr. BHUVANESWARI G.**, Dean, School of Business Administration and **Dr. PALANI A.**, Head, School of Business Administration for providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my Project Guide **Dr. MOLI GHOSH** for her valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work.

I wish to express my thanks to all Teaching and Non-teaching staff members of the School of Business Administration who were helpful in many ways for the completion of the project.

UNICE JECINTH B

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ABSTRACT

In decision-making across various life domains, the analysis of risk and return holds significant importance. The Stock Exchange serves as a marketplace for the trading of diverse securities, including equity shares, mutual funds, debentures, bonds, insurance products, and other financial instruments. This market primarily deals with the exchange of current securities. The Indian financial sector plays a pivotal role in the nation's economic development and holds a substantial share in stock trading activities. It's essential to recognize that risk and returns are interlinked aspects of investment, where one influences the other. Consequently, a comprehensive understanding of the associated risks can contribute to optimizing investment returns.

The focus of this study is to conduct a risk and return analysis specifically on banking stocks within the Sensex index listed on the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). The stock market's performance often mirrors the health of the overall economy. This research paper presents a comparative analysis spanning from 2013 to 2023, covering 10 years of share price fluctuations between these two prominent stock exchanges. Its primary aim is to aid investors in evaluating and contrasting the performance metrics of these exchanges, thus enabling them to make informed investment decisions based on their returns and risk tolerance.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

The stock markets serve as crucial indicators of a country's economic health, reflecting its monetary conditions. They encompass various markets and exchanges where the buying, selling, and issuance of publicly traded company shares take place. In India, the primary focus lies on two major stock exchanges: the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). The primary market is where companies offer shares to the public through Initial Public Offerings (IPOs) to raise capital. Subsequently, once these securities are issued in the primary market, they are traded in the secondary market, where investors buy and sell shares at prevailing market prices or agreed-upon prices. The oversight and regulation of these secondary and primary markets in India fall under the jurisdiction of the Securities and Exchange Board of India (SEBI).

In the mid-1990s, the conventional portfolio of assets for investors in India primarily comprised bank interest, gold, real estate, and similar broad assets. However, the Indian financial sector has since become the backbone of the nation's economic development, playing a pivotal role in overall growth. Now, the stock market has emerged as a prevailing trend, with a growing number of individuals actively engaging in buying and selling activities. Notably, the banking sector serves as a crucial bridge between various segments of the Indian stock market. Participating in the stock market involves embracing uncertainties, as investors must be prepared to endure risks in pursuit of potential returns. Therefore, investing in the stock market entails a trade-off between risks and rewards, and investors need to have a keen awareness of the risks associated with their investment decisions.

Investors in the stock market face various inherent uncertainties, requiring them to navigate risks in pursuit of potential returns. This research paper aims to analyze the performance of banking stocks on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) over a 10-year period, spanning from January 1st, 2013, to January 31st, 2023. By evaluating the risk and returns associated with year-end share prices, this study aims to empower investors with the information needed to compare and make informed investment decisions based on their risk tolerance.

To achieve this, the study will assess parameters such as beta and correlation coefficients to understand each stock's relationship with market indices and its potential for generating returns. Recognizing the importance of the risk-return relationship for both investors and firms, this research seeks to provide valuable insights for making optimized investment choices across different industries. Ultimately, this analysis will assist investors in identifying the minimum risk and maximum profit potential within their investment portfolios.

1.2 INVESTMENT

An investment refers to the allocation of resources or assets with the primary goal of generating income or experiencing appreciation over time. From a financial standpoint, an investment involves acquiring assets that are not intended for immediate consumption but rather serve as a means to build wealth in the future. In the field of economics, an investment represents the purchase of a financial asset with the expectation that it will yield returns in the future or be sold at a higher price to generate profit.

The act of investing entails committing funds towards a particular endeavor, project expansion, or the acquisition of assets or interests, with the objective of generating income and enhancing their value over an extended period. These investment funds can originate from pre-existing assets, borrowed capital, or personal savings. Generally, investments can be categorized into two main types: real investments and financial investments.

Real investments primarily involve tangible assets such as real estate, machinery, factories, and equipment. In contrast, financial investments take the form of paper or electronic assets like stocks, bonds, and debentures. Investments entail the conversion of cash into financial assets or a commitment of future funds with the expectation of generating a return.

This return represents savings and involves a level of risk, including uncertainty regarding the actual return, the duration of the investment, cost of accessing funds, asset security, and the potential for return volatility. Investors can evaluate these factors by comparing the intrinsic value of the assets to their current market prices. When the market price is lower than the intrinsic value, it is advisable to make a purchase, and conversely, a sale is recommended when the opposite scenario holds true. An individual investor's decision-making process is influenced by their assessment of the potential return and associated risks associated with the investment.

The evaluation and management of investments involve a comprehensive analysis of various factors, including asset valuation, market conditions, individual financial objectives, and risk preferences. A well-informed and balanced approach to investment decision-making can help investors optimize their returns while safeguarding their financial security.

1.2.1 ELEMENTS OF INVESTMENTS

The basic elements of investment to be understood in terms of risk, return, liquidity, safety and diversification. These terms can be utilised for the purpose of investing in securities and ascertaining the fundamental prerequisites in the stock market.

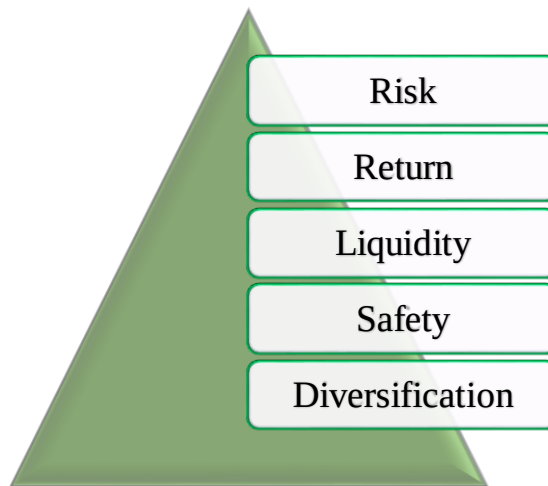


Fig 1.1 refers to the elements of investments

❖ Risk

Risk management in investment is the process of identifying, assessing, and controlling threats to a company's capital and income. The level of risk associated with an investment is determined by various factors such as the type of investment, its growth prospects, repayment capacity, and the nature of the expected returns.

Risk and expected return in an investment are interconnected. In theory, higher risk is associated with higher expected returns, as investors seek compensation for bearing greater uncertainty. The essence of risk in an investment lies in the variability of its returns, which can be influenced by various factors.

$$\text{Total risk} = \text{Systematic Risk} + \text{Unsystematic Risk}$$

Total risk can be divided into systematic risk and unsystematic risk. When making an investment, individuals anticipate future returns, but as the future is uncertain. It is this uncertainty surrounding investment returns that introduces risk into an investment. Investors distinguish between expected and realized returns. The expected return is the uncertain future return that an investor anticipates from their investment, while the realized return is the definite return obtained at the end of the holding period.

Investors make decisions on investments that offer lower risk and higher profitability. Investment decisions are made by considering the expected return from the investment. The potential for variation between the actual return and the expected return is termed risk. Risk occurs when there is a possibility of deviation between expectations and the actual performance of an investment. Risk can be defined in terms of fluctuations in returns, where "Risk is the potential for volatility in returns." An investment with consistent returns is considered low-risk, while one with significant variations in returns is regarded as high-risk.

1.2.2 COMPONENTS OF RISK

Systematic risk and unsystematic risk are two fundamental components of investment risk. Understanding the differences between them is crucial for managing risk in the investment portfolio.

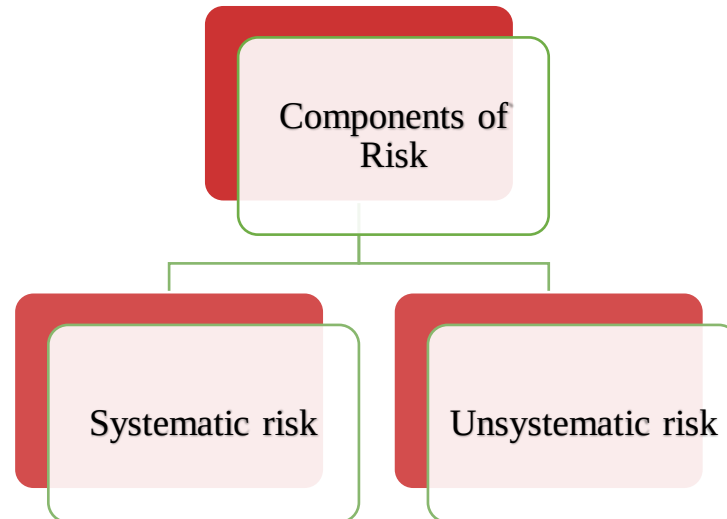


Fig 1.2 refers to the components of risk

1. Systematic risk

Systematic risk, also known as market risk or undiversifiable risk, is the risk that is inherent to the entire market or a specific segment of the market. It cannot be eliminated through diversification because it affects all assets in the market. Systematic risk is caused by external factors that are beyond an individual company's control. This systematic risk includes market risk, inflation risk, interest rate risk, exchange rate risk, political and regulatory risk and systemic risk.

➤ **Market risk**

Market risk is the risk associated with general economic and market conditions. Factors such as inflation, interest rates, political instability, and economic recessions can impact the overall market, affecting the prices of all securities.

➤ **Inflation risk**

Inflation creates the impact on purchasing power of money over time. It can impact the real returns on investments, especially fixed-income securities, as the nominal returns may not keep pace with rising prices.

➤ **Interest rate risk**

Changes in interest rates can impact the value of investments. For example, when interest rates rise, the value of existing bonds tends to fall, affecting both bondholders and the broader market.

➤ **Exchange rate risk**

When the investment in assets denominated in foreign currencies, fluctuations in exchange rates can affect the returns on those investments when converted back to the domestic currency.

➤ **Political and regulatory risk**

Political instability, changes in government policies, and regulatory shifts can have a significant impact on market performance, especially in sectors that are heavily regulated.

➤ **Systemic risk**

Systemic risk is the risk that an event or shock in one part of the financial system can lead to a widespread crisis. Examples include the global financial crisis of 2008 and the covid-19 pandemic's impact on global financial markets.

2. Unsystematic risk

Unsystematic risk, also known as specific risk. This risk is specific to a particular company or industry. It can be diversified away by holding a diversified portfolio of assets. This type of risk is associated with factors that are unique to individual companies or sectors and is not related to broader market movements. This Unsystematic risk includes business risk, financial risk, management risk, competitive risk, industry risk.

➤ **Business risk**

Business risk is associated with the operations and financial health of a specific company. Factors such as competition, management decisions, and changes in market demand can affect a company's overall performance.

➤ **Financial risk**

Financial risk arises from a company's capital structure and financial decisions, such as debt levels, interest rate exposure, and liquidity management.

➤ **Industry risk**

Certain industries may be more susceptible to specific risks. For example, technology companies may face rapid obsolescence risk, while energy companies may be sensitive to fluctuations in commodity prices.

➤ **Management risk**

Management decisions and actions can impact a company's profitability and stability. Poor management decisions can lead to operational issues and financial distress.

➤ **Competitive risk**

The risk associated with changes in the competitive landscape of an industry, including the entry of new competitors or disruptive technologies is known as competitive risk.

In summary, systematic risk affects the entire market and cannot be eliminated through diversification, while unsystematic risk is specific to individual companies or sectors and can be reduced through diversification.

❖ **Return**

All investments are fundamentally driven by the expectation of a financial return. In fact, investments are undertaken primarily with the goal of realizing a return on the invested capital. This expected return can materialize in the form of income, commonly referred to as yield, as well as through capital appreciation, which is the difference between the purchase price and the sale price of the asset.

The anticipated returns on an investment are contingent on several factors, including the type of investment, the duration of the investment horizon, prevailing market conditions, and various other variables. Returns is the essence, which serves as the core incentive that motivates individuals and organizations to undertake investments. It signifies the reward for bearing financial risk and uncertainty.

Therefore, evaluating the potential return on an investment is of paramount importance for overall profitability and performance of a business or investment portfolio.

1. Current return

The fragment routinely hits home when one is contemplating return in periodic pay as isolated or premium delivered by the endeavour. Current return is estimated as the discontinuous return in association with the beginning expense of the endeavour.

2. Capital return

The second basic piece of return is reflected in the worth change called the capital return. It is essentially the expense of gratefulness (or crumbling) divided by the beginning expense of advantage.

$$\text{Total return} = \text{Capital return} + \text{Current return}$$

❖ **Liquidity**

Liquidity in investment refers to the ease with which an asset or investment can be converted into cash or sold in the market without significantly affecting its market price. In other words, it measures how quickly you can access your money invested in a particular asset. High liquidity assets, such as stocks and government bonds, can be readily bought or sold in the market, typically with minimal price fluctuations. On the other hand, investments with low liquidity, like real estate or certain types of private equity, may require more time and effort to sell, and their sale price may be subject to greater fluctuations. Investors often consider liquidity when making investment decisions, as it impacts their ability to respond to financial needs or take advantage of new investment opportunities. Balancing liquidity with other investment objectives, such as risk and return, is crucial in constructing a well-rounded investment portfolio.

❖ **Safety**

Safety in investment refers to the degree of protection and assurance that an investor has regarding the preservation of their capital and the avoidance of significant losses. In a professional context, safety is often associated with low-risk investment options, such as government bonds or blue-chip stocks from established companies, which are less prone to volatility and market fluctuations. Diversification, spreading investments across different asset classes, also plays a key role in enhancing safety by reducing exposure to individual risks. Furthermore, conducting thorough research and due diligence before making investment decisions, along with staying informed about market trends and economic conditions, are essential practices for ensuring the safety of one's investments. Ultimately, the level of safety in an investment portfolio should align with an investor's risk tolerance and financial goals.

❖ **Diversification**

Diversification in investment is a fundamental strategy that involves spreading your investment capital across a variety of assets or asset classes. The primary goal of diversification is to reduce risk by not putting all your eggs in one basket. By holding a mix of investments, such as stocks, bonds, real estate, and possibly others, you can potentially offset losses in one area with gains in another. This approach helps safeguard your portfolio against the volatility and uncertainties of financial markets, ensuring that you're not overly exposed to the performance of a single investment. Diversification is a key principle of risk management, and it can help investors achieve a more balanced and stable long-term financial outcome.

1.3 RELATIONSHIP BETWEEN RISK AND RETURN

There is a direct connection between the amount of risk an investor assumes and the expected level of profits. When investors decide to take on more risk, they usually anticipate greater returns, but this also comes with a higher chance of significant losses. The primary

goal of an investor is to reduce risk to some extent and only embrace it when there is a sufficient potential for reward to offset the risk taken.

The accompanying graph illustrates how the level of risk taken relates to the expected returns.

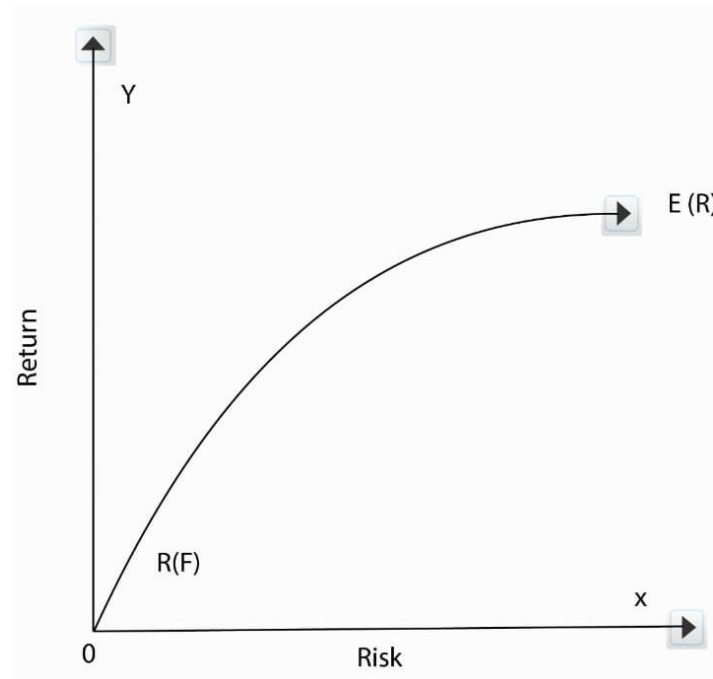


Fig 1.3 refers to the relationship of Risk and Return

The comparison between the terms states about the risk involved in every situation. Risk is estimated along x-axis and return along y-axis. Risk increments from left to right and return ascends from base to top. The line 0 to R(f) shows rate of return from hazard less investments. The diagonal curve from R(f) to E(R) represents the idea of expected pace of return expanding shows a straight connection among risk and return.

The financial division in India has encountered numerous changes, particularly in the capital market Segment, since 1990s. The share price fluctuations in the market can affect the economy of the country. A variance happens in the price level of stock in view of changes in a few elements, as monetary, social and political.

A section from these elements data delivered by the corporate bodies causes unstable nature sin the offer costs anyway the corporate declaration impressively affects the impact on the share price movements. Additionally, the individual investors change their investment design depending upon the arrival of data by the corporate bodies. At the end of the day the corporate declarations reflect wide varieties in the offer costs and financial backer's standard of conduct. This reality is brought into the organizations consistently making critical declaration with positive also, negative data which will reflect in their costs. At the point when corporate declaration contains uplifting news this stock costs go up, though declarations

containing awful news push the stock's price down. Given this reality the financial backers can respond negatively or positively depending upon whether it is positive or negative data. Henceforth the market responses show that the realized data is promptly examined by all investors and it reflects in the stock prices in stock market.

The data that influences the costs of securities is strikes, lockouts, joint endeavour arrangements, dispatching of the new items, monetary reports incorporate yearly and quarterly deliveries, public statements, declaration of dividend including interim announcement of profit including interval profit, outcome of board of directors meeting, outcome of annual general meeting, right issues, bonus issues, allotment of equity shares including allocation of offers under employee investment stock option scheme, amalgamation, acquisition, obtaining, repurchase offer and sale of shares and so on. Among these different corporate declarations giving data, some are probably going to have most critical effect on the share price fluctuation.

1.4 INDUSTRY PROFILE

1.4.1 BOMBAY STOCK EXCHANGE (BSE)

The Bombay Stock Exchange (BSE) is one of the oldest and most prominent stock exchanges in India. It was established in 1875, Bombay Stock Exchange is Asia's first stock exchange and one of the oldest in the world. It has played a pivotal role in the development of the Indian capital market. The BSE is headquartered in Mumbai, Maharashtra, and is often referred to as the "Dalal Street" due to its location on Dalal Street in Mumbai's financial district. The BSE is a private sector exchange with a diversified ownership structure. It is regulated by the Securities and Exchange Board of India (SEBI) and operates under the framework of the Securities Contracts (Regulation) Act, 1956.

BSE provides a platform for trading a wide range of financial instruments, including equities, derivatives, mutual funds, and debt securities. It operates on an electronic trading system known as BOLT (BSE On-Line Trading). It is the home to several key market indices, including the S&P BSE Sensex, which is often considered the benchmark index for the Indian stock market. The BSE Sensex tracks the performance of 30 of the largest and most actively traded stocks on the exchange. BSE is globally recognized and has established strategic alliances with international exchanges to promote cross-border trading and investment. It has also introduced trading in global indices and commodities. The BSE has a diverse investor base, including retail investors, institutional investors, and foreign investors. It plays a crucial role in distributing capital into the Indian economy. Over the years, BSE has embraced technological advancements to enhance its trading infrastructure and investor services. It has also launched initiatives to promote financial literacy and inclusion. BSE is committed to maintaining market integrity and transparency. It enforces strict market regulations and surveillance mechanisms to prevent fraudulent activities.

The BSE has significantly contributed to the growth and development of the Indian economy by providing a platform for companies to raise capital and for investors to participate in

wealth creation. In summary, the Bombay Stock Exchange (BSE) is a historic and vital institution within the Indian financial landscape, serving as a key platform for capital market activities and investment opportunities. It has evolved with the times, adapting to technology and regulatory changes while maintaining its position as one of India's premier stock exchanges.

1.4.2 NATIONAL STOCK EXCHANGE (NSE)

The National Stock Exchange of India Limited (NSE) is one of the leading and largest stock exchanges in India. NSE was established in 1992 and began its operations in 1994. It was founded as a response to the need for a more advanced and technologically-driven stock exchange in India. The NSE is headquartered in Mumbai, Maharashtra, and has multiple offices and data centers across India.

The National Stock Exchange of India Limited (NSE) is India's largest financial market and the fourth largest market by trading volume. The basic purpose of this exchange was to bring the transparency in the stock markets. The National Stock Exchange of India Limited was the first exchange in India to provide modern, fully automated electronic trading. It is the largest private wide-area network in India. NSE provides a marketplace where buyers and sellers can easily find each other. This liquidity is crucial for smooth trading and ensures that you can easily buy or sell shares when you want to.

NSE is home to the Nifty family of indices, with the Nifty 50 being the most well-known. The Nifty 50 represents the performance of the 50 largest and most liquid stocks listed on the exchange and is widely used as a benchmark for the Indian stock market. It has been at the forefront of technological advancements in the Indian financial markets. NSE has consistently maintained a dominant market share in trading volumes in India, often surpassing its competitors. It has played a significant role in increasing liquidity and transparency in the Indian stock market. NSE caters to a wide range of investors, including retail investors, institutional investors, and foreign portfolio investors. It has also implemented measures to enhance investor protection and education. Companies can also raise funds by selling shares to the public through NSE. This is often a critical source of capital for businesses to expand and create new opportunities. NSE has introduced innovative financial products and services, such as exchange-traded funds (ETFs), interest rate futures, and currency futures, providing investors with diverse investment options. This exchange places a strong emphasis on corporate governance and compliance standards, contributing to the overall integrity of India's financial markets.

Thus, The National Stock Exchange (NSE) has played a pivotal role in modernizing and revolutionizing the Indian capital market. Its advanced technology, diversified product offerings, and commitment to transparency have made it a key player in the Indian financial ecosystem, attracting both domestic and international investors.

1.4.3 FINANCIAL SERVICE SECTORS

The financial services sector plays a pivotal role in the economy by facilitating the flow of funds and providing essential services to individuals, businesses, and governments. It encompasses a wide range of activities and institutions, including banks, insurance companies, investment firms, and payment processors. Financial institutions act as intermediaries between savers and borrowers. They collect funds from savers and channel them to borrowers in the form of loans, thereby promoting economic growth. It helps allocate capital efficiently by assessing the creditworthiness of borrowers and directing investments to projects and businesses with the greatest potential for returns.

Financial institutions provide various risk management products such as insurance and derivatives to mitigate financial risks, ensuring stability in the face of unexpected events. This enables the smooth transfer of funds, making transactions between individuals and businesses more efficient. Electronic payment systems have revolutionized this aspect of the sector.

Fintech companies are rapidly transforming the financial services landscape, introducing innovative digital solutions such as mobile banking apps, peer-to-peer lending platforms, and blockchain-based systems. The financial services sector is increasingly globalized, with institutions operating across borders. They also serve people who may not have access to traditional bank loans, providing them with financial options. These institutions specialize in offering personal loans, auto loans, and credit cards to individuals. Consumer finance companies serve people who may not have access to traditional bank loans, providing them with financial options.

According to the finance and development department of the International Monetary Fund (IMF), financial services are the processes by which consumers or businesses acquire financial goods. For example, a payment system provider offers a financial service when it accepts and transfers funds between payers and recipients. This includes accounts settled through credit and debit cards, checks, and electronic funds transfers. They operate with a member-centric focus, offering savings accounts, loans, and other financial products.

Thus, the financial services sector also plays a vital role in facilitating economic activities, managing risks, and promoting financial well-being for individuals and businesses and continuous evolution, driven by technology and regulatory changes, underscores its importance in the modern economy.

1.4.4 BROKERAGE FIRMS

A broker is an individual or firm that acts as an intermediary between an investor and a securities exchange. Broker-aging company is firm which serves buying and selling of financial assets or securities linking buyer and seller. Broker-aging company facilitates a customer of investors who buy or sell public stocks or other securities the members of this kind of firms are trusted with the duty of market research to provide proper communication.

A brokerage firm is a brokerage firm that provides a range of financial services in addition to allowing you to buy and sell securities. These firms can provide customers with financial planning services as well as consulting services. They can also provide trust services and wealth management services. Of course, the level of service you receive is reflected in the commissions the brokerage firm will charge on your orders. This is the most expensive type of brokerage firm. Also, with this type of brokerage firm, you will be able to place your buy and sell orders over the internet or over the phone.

However, if it's over the phone, the brokerage firm may charge an extra service fee for the additional assistance. Brokerage firms are financial institutions that help you buy and sell securities. They act as the middle man between the buyer and the seller. Depending on the brokerage firm type you choose, you can either make your buys and sales via telephone, internet, or smartphone.

1.4.5 PORTFOLIO MANAGERS

Portfolio managers are financial professionals responsible for making investment decisions on behalf of their clients or organizations. Their primary goal is to maximize returns while managing risk within the context of a specific investment portfolio. Portfolio managers choose a mix of assets such as stocks, bonds, real estate, and other securities to create a diversified portfolio that aligns with their client's financial goals and risk tolerance. They assess and manage risk by monitoring market conditions, conducting research, and adjusting the portfolio as needed to mitigate potential losses.

Portfolio managers work closely with clients to understand their investment objectives, time horizon, and risk tolerance. They tailor investment strategies accordingly and provide regular updates and performance reports. They conduct extensive research, analyse financial data, and stay informed about economic trends and industry developments to make informed investment decisions. They must adhere to ethical and legal standards, including fiduciary duties to act in the best interests of their clients. Portfolio managers need to stay updated on changing market dynamics, regulations, and investment strategies to adapt to evolving financial landscapes. Thus, portfolio managers play a crucial role in helping individuals and organizations grow and manage their investments effectively, making informed decisions to achieve financial goals while navigating the complexities of financial markets.

1.5 STATEMENT OF THE PROBLEM

Indian monetary area is the foundation of the country economy advancement, the Banking sector place a critical part in strengthening, everything being equal. The financial area draws in significant divide between different areas in Indian stock trading scenario.

Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) is a market where number of securities are traded which have been already Issued and recorded in a stock trade. The current number of investors suffer due to lack awareness about how to invest

their money in profitable stocks. This points to an information gap that could potentially hinder individuals from participating effectively in the stock market.

This current investigation is to analyse the Risk and Return examination of the Sensex Banking stocks of BSE and NSE. Furthermore, the Fluctuations in Share prices of these organizations. This investigation causes the financial backers to inspect and contrast the appraisals along and the market and to recognize the organization which would be desirable over contribute dependent on their risk-taking capacity. This underscores the importance of helping investors make well-informed choices in the complex world of stock market investments.

1.6 SIGNIFICANCE OF THE STUDY

The term Return means how much money a person makes from their investment over a certain time. It's like the profit they get. Whereas, Risk is the chance that an investment might not make the money they expected. It's like a gamble. Sometimes you win, sometimes you lose. By analysing the risk and return profiles of eight prominent financial services corporations, it provides valuable insights into the financial performance of these key players, which can be used by market analysts and policymakers.

The Risk and Return Trade-off say that if you're willing to take more risk, you might make more money. But if you want to be safe, you might not make as much money. Return and risk analysis helps the investor to create positive impacts and does not commit any mistake by stepping into a wrong investment. The capitalist will use varied tools and techniques to analyse them. This research study helps in analysing the risk and returns related to eight monetary services corporations listed within the Bombay stock exchange (BSE) and National Stock Exchange (NSE) by utilizing varied tools and techniques.

1.7 NEED FOR THE STUDY

The need for this study arises from the imperative to comprehensively evaluate and compare the performance of stocks listed on the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE), specifically within the banking sector. Such an analysis is vital to understand the risk and return dynamics that prevail in these exchanges. By delving into the fluctuations of risk and returns, particularly within the Sensex Banking stocks, this study aims to provide investors with valuable insights into the performance of these stocks.

Furthermore, in a dynamic stock market environment, it is crucial to identify and comprehend the performance of banking stocks in relation to their share prices. This knowledge empowers investors to make informed decisions about allocating their capital, mitigating risks, and optimizing returns.

This study underscores the importance of equipping investors with the necessary knowledge and data to make sound investment decisions, aligning with the latest market scenarios. Ultimately, the study serves as a vital tool for investors, regulators, and financial service

providers alike, ensuring that informed decisions drive profitable investments in the banking stocks within the BSE and NSE.

1.8 SCOPE OF THE STUDY

This study is estimates about the Banking equity analysis of Indian stock market for the investors to invest in best securities. It equips investors with the tools to assess risk and allocate funds wisely for investment in the best securities. This helps the Investors to make smart choices.

In this study, there are six banking stocks out of which 3 from Bombay Stock Exchange (BSE) and another 3 from National stock exchange (NSE).

- This study analysis the correlation between the different securities.
- It covers the risk of beta value with banking returns and Sensex returns.
- It involves in the calculation of individual Standard Deviation securities with the Mean values and the total returns of each banking stocks.
- It also calculates the covariance coefficient of the stocks to analyse the risking ability of each investment.
- Various percentage calculations help in allocating the funds available for investment based on risky portfolios.

1.9 OBJECTIVES OF THE STUDY

The main objectives of this study, is to capture the risk and return analysis of sample Banking stock invested in Bombay Stock Exchange (BSE) and National Stock Exchange (NSE). This study aims to help the investors understand the risk return trade off of banking stock at Bombay Stock Exchange and National Stock Exchange.

Primary Objective

- To examine the relationship between the risk and returns of Sensex Banking stocks.

Secondary Objective

- To analyse the constancy of Beta for the Banking stocks of BSE & NSE Sensex with respect to Sensex.
- To identify the best investment of the banking Equities on selected banks.
- To study the risk involved in the securities of the selected companies.

1.10 LIMITATIONS OF THE STUDY

This present study, while offering valuable insights into the risk assessment of financial services companies listed on the Bombay Stock Exchange (BSE) and National Stock

Exchange (NSE), is subject to several inherent limitations too.

- This research study is limited to data collected for a period of 10 years i.e, from January 2013 to January 2023 (for the purpose of calculating beta, standard deviation, correlation and covariance).
- This study is limited to data collected from six companies listed under Financial Services of Bombay stock exchange (BSE) and National stock exchange (NSE)
- The prediction of the risk cannot be accurate since the fluctuations in the market is based on other External factors and it is uncertain.
- This study is limited to a smaller sample size of number.

CHAPTER 2

REVIEW OF LITERATURE

2.1 REVIEW OF LITERATURE

Philippe Jorion (1991) revealed about the pricing of exchange rate risk in the stock market. He made an effort to study the stock returns and the value of the dollar that differs across the countries by using two factor and multifactor arbitrage pricing models.

Jawahar Lal (1992) presents a profile of Indian Investors and evaluates their investment decisions the main objective of the company is to focus on the requirements of the general people. He put forth an attempt to examine their experience with and perception of monetary data, and the degree to which this is put to utilize. The data that the organizations gave by and large neglects to address the issues of an assortment of individual financial backers and there is an overall impression that the organization's Annual report and all other process of statements are not generally welcomed.

Raghavan. R. et.al, (2000) commented on the risk perceptions and the risk measure parameters. This process would vary from different methods of using the tool. As indicated by him, hazard the board is building up speed when there is expanding tension on banks and monetary foundations to more readily deal with their resources and improve their asset report. The more prominent unpredictability of anticipated returns, the higher is the danger. The substance of danger the board is to diminish the instability.

Phillipe Gergoorie et.al, (2001) conducted a study on Predictive Power of Technical Analysis: the moving average rules of European According to him simple forms of technical analysis possessed significant forecast power on various market indexes. He shows that these results can be replicated on selected European indexes, which almost completely eliminates any influences from data snooping.

S. Hakim (2002), directed a paper about Risk and Return of Islamic Stock Market Indexes. An equal and unlimited partner of DJIMI is the Wilshire 5000 Index (W5000) which tracks the value execution of the biggest 5000 US organizations. In this investigation it talks about the Dow Jones Islamic market record US (DJIMI) tracks the supplies of organizations viable with Islamic law. Of that list, roughly 75% of the organizations neglect to meet the Islamic measures, leaving just around 700 organizations as possible contender for incorporation in the DJIMI. Utilizing cointegration methods we place the DJIMI under logical examination and ask (1) how has this determination limitation influenced the presentation of Islamic ventures addressed by the DJIM list? (2) is the DJIM record less broadened than the DJW file? (3) provided that this is true, how much has the restricted enhancement influenced its danger and return? (4) lastly, what dynamic connection and long-haul relationship exist between the two files over the long run.

Rodriguez, Michael Hardleand Wolfgang (2002) they investigate. They built up two phases

computation that first checks the associations among stocks and document in a flexible manner and furthermore calculates the ideal loads that limit the accompanying slip. Finally, the procedure is associated to the DAX-Index and an assessment with a guileless model that thinks about the certified loads of each stock in the rundown is given. It gives that the framework prevails with regards to decreasing the following slip. Introduction of flexible relationship assessors doesn't upgrade generally the accompanying bungle; eventually it obtains another dispersal of loads that is exploitable on the decision business in order to create flightiness exchanges.

DG Praveen and Nihar Ranajn Panda (2002) had conducted a study on "Beat the market with hammer ", Japanese candlestick analysis is one of most popular and oldest forms of technical analysis. Candlestick charting studies the records of the market movements in the past to identify the future patterns. It identifies exuberant buying and panic selling, enabling the trader to pocket a great deal of profits from the stock market. Compared to traditional bar charts, many traders consider candlestick charts more visually appearing and easier to interpret. Each candlestick provides an easy to decipher picture of price action. Immediately a trader can see and compare the relationship between the open and close as well as the high and low.

Nath and Verma (2003) look at the relationship of the three significant financial exchanges in south Asia financial exchange lists specifically India (NSE-Nifty), Taiwan (Taiex) and Singapore (STI) by utilizing bivariate and multivariate to co incorporation investigation to show the linkages among the securities exchanges, No, co-joining was found for the whole time frame (every day information from January 1994 to November 2002). They presumed that there is no since a long time ago run balance. By using different kinds of methods and techniques.

Dwivedi sunny Dmello Bosco (2004) conducted a study with the purpose of comparing the effect of the change in indices of Bombay stock exchange (BSE) and National stock exchange (NSE) which are the two nationalized stock exchange of India on various sectors of India. Researcher done the study with the objectives to show that what the effect was on oil and gas indices when there was the change in the nifty and USD/INR indices, and to find out whether the average returns in both the indices (Oil and gas and I.T) are same or not.

Cheol-ho Park and scott H. Irwin (2004) The purpose of this report is to review the evidence on the profitability of technical analysis. To achieve this purpose, the report comprehensively reviews survey, theoretical and empirical studies regarding technical trading strategies. We begin by over viewing survey studies that have directly investigated market participants' experience and views on technical analysis. Foreign exchange markets, and that about 30% to 40% of practitioners appear to believe that technical analysis is an important factor in determining price movement at shorter time horizons up to 6 months.

Stephen Sault (2006) had led an investigation on principal and specialized examination written works put impressive exertion in evaluating their individual capacity to clarify share costs, they perpetually do as such without reference to one another. In this setting we

propose a value when valuation model coordinating both major and specialized investigation. That is the integrating models both fundamental and technical analysis. Furthermore, in doing as such, perceive their potential commendations instead of as substitutes.

Sensarma R Jayadev (2009) demonstrates about the financial Stocks are touchy to chance management. This paper endeavours to sum up the data contained in bank budget reports on the danger the board capacities of banks and afterward learns the affectability of bank stocks to chance management. The paper deciphers the chose book keeping proportions as risk the executive's factors and endeavours to measure the general danger the executive's ability of banks by summing up these bookkeeping proportions as scores through the use of multivariate factual procedures. At long last, the paper dissects the effect of these hazards the board scores on stock returns through relapse examination. And furthermore, tracks down that the outcomes dependent on information for Indian banks uncover that banks' danger the executive's capacities have been improving after some time aside from over the most recent two years.

Surrender S. Yadav (2010), The inspiration driving this paper is to review the illuminating profitability of S&P CNX Nifty record decisions in Indian protections promote. The S&P CNX Nifty record is a principle of stock document of India, involves 50 most as frequently as could really be expected traded protections recorded on NSE and to give the all, out list on securities exchange mix and to isolate the disclosures what's more, possible results of the overviews pondered for survey toward the requirement for more cautious agreement of administrative meanings of risk and return.

Gupta and Yang (2011) explored the weak form efficiency or random walk hypothesis for the two major equity markets (BSE and NSE) in India. Stock Exchange as the inefficient in the weak form therefore, investors may make better returns on the basis of historical data. This study found that the market efficiency was mixed.

Geetha and Ramesh (2011) studied the Indian's behaviour about investment preferences. The data for their study was collected with the help of questionnaire and their total sample size was 210 respondents. They studied the effect of demographic variables on investment preferences. The study found that people were not aware about all the investment options available to them and they lack knowledge about securities.

Sharma et.al, (2012) talks about the performance of Risk return trade off of the stocks listed in the stock exchanges of Asia. This study found that expected return and risk connected over time by using the descriptive statistics. And also, high returns and rational risk complicated in those Asian countries.

Nitin Sethi & Sonia Gupta (2012) conducted the study with the objective of to measure the nature of correlation of nifty and Sensex. This research paper was an attempt to consider the moving trend of Nifty and Sensex are correlated or not. The research design of the paper was casual in nature. For 24 months the data was collected and monitored by the

researcher. Data was collected from different journals, magazines, and websites. Thus, the data analysis proved that there was positive correlation between Nifty and Sensex.

Chaturvedi and Khare (2012) examined the investment pattern and awareness of the Indian investors about different investment instruments. The results suggest that age, education, occupation and income level of the individual affects their investment behaviour. Awareness of respondents towards traditional investment options is much higher than that for corporate securities, mutual funds, equity shares and preference shares. They also identified the factors which contribute to investor awareness. They found that occupation, education and income level affect the awareness level of investors towards various investment avenues.

Zarei. F Fathi. S (2012) endeavoured considering the job of Financial Risk Management on Return on Equity. These days hazard plays an indispensable altogether nations, and its administration is significant for banks to the degree that they distribute their applying strategies about hazard the board and their activities and results in a planned request toward client direction to acquire investors' certainty. In this article, three instruments of bank hazard the board are addressed by methods for monetary proportions comprising of loan cost hazard, capital risk and risk of regular supporting. Along these lines, the fundamental issue in this paper is the effect of danger the board on investors' wealth. Stockholders' abundance is estimated by Return on Equity (ROE). Results show that loan cost risk and broadening hazard have huge relationship with ROE, however there is no huge connection between credit risk and ROE.

Debasish & Khan, (2012) the study undertook analyses and selection of an optimal portfolio of selected stocks in manufacturing sectors of India. The daily data of fourteen stock of NSE Nifty Index have been considered from January 2003 to November 2012. The weight age of investment under each security is determined based on respective beta values, Stock movement variance, unsystematic risk, return on Stock and risk-free return. Out of 14 manufacturing sector stocks only 3 stocks namely Hero Motors Corp., Tata Motors and Asian paints constitute an optimal portfolio with Hero Motor, showing a highest proportion of investment of around 58.22%.

S. Kevin (2013), made an attempt to examine the degree of instability of the chosen stocks share costs across various nations for various time-frames. The examination depended on the information which is gathered for a time of year and a half. The month-to-month Co-fluctuation esteems were determined for every one of the stock trades of various chose nations and geographic districts to perform t-test. By using the technique, they reasoned that there was no significant contrast in the instability between the stock trades.

Chandran setiwan (2013), uncovered about the Syariah and Conventional Stocks Performance of Public Companies Listed on Indonesia Stock Exchange. In light of the qualities of the targets he utilized is that to discover two issues. Right off the bat, regardless of whether there is a huge contrast in risk and returns between Syariah stocks and customary loads of chosen public organizations recorded on Indonesia Stock Exchange (IDX) during the time of 2009-2011; and also, whether there are critical connections between

stock returns and monetary proportions of both chose Syariah and traditional stocks. Since moving in the venture inclinations from traditional to Syariah account has been an arising pattern during the previous twenty years.

The analyst utilized free examples T-test and Mann Whitney U-test, the outcome shows no proof of critical factual contrasts in total returns, standard deviation and beta among Syariah and regular stocks. Also, this examination utilizes hazard changed return estimation comprising of Sharpe proportion, Treynor proportion and Jensen's Alpha to survey the exhibition of Syariah and customary stocks portfolios. The outcome demonstrates that hazard changed return of the two stocks' portfolio is acted likewise.

Swarna Lakshmi, (2013) examined the instability design in various Sectoral Indices Stock market using Autoregressive Conditional Heteroskedasticity, a financial model. This examination was directed for the time frame beginning from 2008 till 2012 of eleven sectoral Indices from NSE. Specialist decided the truth area has highest instability than other area, anyway the financial area has bottommost unpredictability for the time frame.

Niranjan Mandal (2013) in the examination of Sharpe's single list model and its application to build ideal portfolio: an experimental study found that there was a noteworthy contrast between the aggregate danger of the ideal portfolio figured under two distinct instruments viz., Sharpe Index Model and Markowitz's model. The aggregate danger of the ideal portfolio was 2.87% (as far as SD) under Sharpe Index Model and the aggregate danger of the portfolio was observed to be 1.79% (as far as SD) in Markowitz's model.

Nagarajan and Prabhakaran (2013), the authors conducted the study in order to analyse the risk and return aspects associated with the selected 10 major FMCG companies listed on NSE and also the fluctuations of their stock prices. The stock prices data was being collected for a period of one year. The tools such as standard deviation, correlation, beta, covariation was being used. They concluded that the stock prices of the companies HUL & ITC were comparatively more volatile than other companies under the study period, and that the companies had a positive movement in the prices in relation to the market. Beta of all the selected companies

were below 1. They also analysed that Dabur company's share prices were more variable compared to other companies due to high SD & Variation. They explained as to it is very important to always analyse the financial mix, the benefits and the costs of debts should be analysed before making an investment.

Mr. K. O Emenike and Mr. W. U. Ani (2014), conducted a study on Volatility of banking sector stock returns in Nigeria. The study was based on most capitalized and liquid banks listed on the Nigerian stock exchange, and it include Access bank Plc, ETI Plc, Diamond bank Plc, Fidelity bank Plc, and GTB Plc. Others are: Skye bank Plc, Sterling bank Plc, United Bank for Africa, Union bank Plc, and Zenith bank Plc. The period of study begins from 3rd January 2006 and ends on 31st December 2012. And the tool used for analysis is ARMA GARCH Model, and the study suggest that stock returns volatility of the Nigerian banking sector

move in cluster and that volatility persistence is high for the sample period. The results also indicate that stock returns distribution of the banking sector is leptokurtic and that sign of the innovations have insignificant influence on the volatility of stock returns of the banks.

Mr. Sunil M Rashinkar and Mrs. Divya U (2014), conducted a study on Market Risk Analysis of selected Banking Stock in India, the study was limited to five nationalized banks in India. And it includes State Bank of India, Industrial Development Bank of India, Syndicate Bank, Punjab National Bank, Bank of Baroda. And the duration of study was 1 year (1 July 2013-31 march 2014), and the tool used for analysis was Beta Coefficient. The study reveals that the betas of State Bank of India, Industrial Development Bank of India, & syndicate bank were negative which implies that these stocks are moved against the market and less affected by market risk. On the other hands the betas of Punjab National Bank & Bank of Baroda were more than one. It indicates that these stocks were exposed to high market risk

Nalini, (2014) the researcher of this study stated about an approach to portfolio selection using Single index Model. The main objective of this study was to create investors awareness about the applicability and benefits of SIM approach. The yearly data of fifteen companies S & P BSE Sensex index was utilized. From the results it was revealed that four securities comprise an optimum portfolio.

Dr. Krishnaprabha and Vijayakumar (2015) talks about a study on Risk and Return Analysis of Selected stocks in India. He found that the Risk and Return analysis plays a key role in most individual decision-making process. Based on the topic he used Banking and Automobile sectors for calculating the Risk and return analysis of the Daily basis. He also states that Alpha stock is positive and the companies are independent to market return and have a profitable return.

Rajesh Ramkumar et.al, (2015) reveals about the Efficiency of Sectoral Indices: A Comparative study on BSE and NSE Ltd. This research is for investors who plan to select better stocks to invest. This could provide useful input to the investors to identify the efficient sectors and to channel the available resources into the profitable sectors. This study measured random distribution and weak form of efficiency in BSE and NSE sectoral Indices.

Anita Tripathi (2015); This study concludes that some individual characteristics, such as risk preference, are transmitted to investment decision behaviour through the mediating effects of risk propensity and risk perception, affecting investors' expected returns and construction of portfolios.

Bedanta Bora, Anindita Adhikary (2015) has led an investigation on' Risk and Return Relationship – an Empirical Study of BSE Sensex Companies in India'. The essential structure of the examination was investigation of connection among danger and benefits based on beta of 30 organizations recorded at BSE Sensex. It presumed that 99% of variety in the Sensex is clarified by variety in contents.

Narayan Gaonkar and Dr. Kushalappa (2015), made an attempt to analyse the risk and the

returns assessments of the selected 30 companies which are listed on NSE and to find out the extent of the variation of the stock of the selected companies for a period of one year. They also analysed the portfolio of these companies. They used tools such as beta and CAPM model. They found out that Axis Bank had the highest CAPM returns, HCL had highest abnormal and actual returns, whereas Asian Paints had the least actual returns. They concluded that thirteen companies have less returns than the portfolio returns and also concluded that the stocks which has high systematic risk would not be preferable for an investor due to the high risk involved.

Shubham Kiran Kumar (2016) stated that comparative study between BSE and NSE during five years. He talks about the economy is reflected by the growth of stock market and the impact of important happenings on the Indian Stock Exchange. It represents out which one is performing better financially on various basis, which would help in different countries to take investment decisions while investing in different markets.

Dr. Pramod Kumar Patjoshi (2016), analysed the risk and return assessments for four selected stocks which are listed on BSE for a period of Fifteen years. The study was based on the relationship between the risk and returns of the bank stocks and Sensex. Tools and techniques like correlation, t-test & regression was used for the study. From the study they found that the Sensex had high returns when compared to the selected stocks apart from few stocks. Few stocks had positive correlation and few stocks had negative correlation with the Sensex returns. They concluded that the banking stocks and the Sensex change in the similar trend.

Prathibha and Dinakar (2016) The creator dissected the risk of 12 banks recorded in bank nifty for a period beginning from seventh December 2015 till eighth February 2016. The creator found from their examination that, every one of the stocks had negative returns during the investigation time frame with the exception of Yes bank and Kotak Mahindra bank. The creator established that Yes Bank had given the best yield and the most minimal return was given by Punjab National Bank. It was additionally tracked down that deliberate danger was most elevated for SBI and least for Yes bank. The author came to a conclusion that the Punjab National bank and Bank of Baroda had the highest market risk while Bank of India and Syndicate Bank where less affected by market risk due the negative beta.

T. Mallikarjunappa and Shaini Naveen (2016) conducted a study on Comparative Analysis of Risk and Return with Reference to Stocks of CNX Bank Nifty. This study analyzes the risk and returns in the banking sector. The researchers compare the 12 listed banks in the Nifty through analyses of the performance of banking stocks mainly to understand the required rate of return and risk. In this analysis found some stocks move in the opposite direction to the Stock market, some stocks move along with the market, some stocks are less volatile compared to the market and some stocks are more volatile compared to the market.

Dr. M. Muthu Gopalakrishnan & Amal Vijay A K (2017), attempted to analyse the risk return aspects of ten selected pharmaceutical companies which are listed on NSE. The tools which were used to perform the analysis were mean, beta, standard deviation, alpha, correlation

and covariance. The data collected was for a period of five years, from 2012 to 2015. By analysing these companies, they understood that if the investor has to get high returns it is very important to consider the risk and return factors of the stocks.

E. Kamali (2017), addressed a paper on Investors' Perception of Bank Risk Management: Multivariate Analysis Techniques. Danger the board is at the core of monetary organizations the executives, banks are presented to different sorts of risks. In this examination, the analyst planned to sum up the data substance of bank fiscal reports on assorted dangers looked by banks and afterward decide how securities exchanges respond to bank's danger the executives conduct. The technique utilized in this investigation is the Principal Component Analysis (PCA) and Discriminant Analysis (DA). In this examination, we assess the situation with hazard the board in recorded banks on Tehran Stock Exchange through budget summaries investigation and afterward explore its relationship with banks' stock re-visitations of decide if capital market members consider the situation with hazard the executives in their valuing choices or not.

Dr. S Poornima and Swathiga (2017), examined by selected stocks with the relationship between risk and returns. These companies are selected from 2 different sectors i.e., automobile and IT sector, which are listed on NSE. The tools like average return, SD, and CAPM model are used to perform the analysis. the comparative analysis played a vital role in this research. Analysis is done for a period of 3 years. They concluded that the analysis helps the investors to select based on their own choice. And automobile sector had better market than the IT sector.

Dr. P. Subramanyam and Dr. Nalla Bala Kalyan (2018), analysed the return and risk assessments of the equity purchased from the secondary market for ten different companies for a period of one month. The tools and techniques used in this research are beta, expected return and co-efficient of variation. This paper emphasizes on the market fluctuations relations to the prices of Scrip's though it is difficult to observe a pattern for the price movements but efforts have been taken using fundamental analysis and technical analysis. They concluded that one method is not sufficient to analyse and interpret the fluctuations. However, suggested that these tools help the investor to define the trends to some extent. They also concluded from the research that, the month February 2017 was not favorable to invest in the infrastructure companies.

Juhi Ahuja (2018) presents a review of Indian Capital Market & its structure. In last decade or so, it has been observed that there has been a paradigm shift in Indian capital market. The application of many reforms & developments in Indian capital market has made the Indian capital market comparable with the international capital markets. Now, the market features a developed regulatory mechanism and a modern market infrastructure with growing market capitalization, market liquidity, and mobilization of resources. The emergence of Private Corporate Debt market is also a good innovation replacing the banking mode of corporate finance. However, the market has witnessed its worst time with the recent global financial crisis that originated from the US sub-prime mortgage market and spread

over to the entire world as a contagion. The capital market of India delivered a sluggish performance.

Lakshman Raj Kandel (2018), the author made an attempt to analyse the risk and return relationship of two selected commercial banks which are listed on the Nepal stock exchange. The data was collected for a period five years and tools such as correlation, SD, covariance, and also portfolio analysis & t-test were used for the purpose of analysis. They analysed that both the banks had high proportions of unsystematic risk, and the prices of the stocks were overpriced. So, they concluded that it was preferable for the investors to go for short selling.

Hariharan Cr (2018), Conducted a paper on Volatility Behaviour of Indian Stock Market: A study with special reference to sectoral indices of BSE. In India, various sectors play a vital role in the growth and development of the economy. These sectors obtain their money from the public via stock markets. Share price of various sectors are influenced by various factors like economic, social, political, etc, From the BSE, twelve sectoral indices were selected, on the basis of turnover, during the study period, January 2012 to December 2016. Hence this study suggests that investors of the Indian stock markets may focus on these indices for better return in future. Further, investors should watch the market movement before investing their money in stock markets.

Shumbhamkumar Kirankumar (2019), revealed about the comparative study between BSE and NSE for a period of Five years. Entrepreneurs needed money for long term whereas investors demanded liquidity the facility to convert their investments into cash at any given time. To light with this research paper is a comparative study of Bombay Stock Exchange and National Stock Exchange during 2013 – 2018. The present study is to find out that out of these two stock exchanges which one is performing better financially on various basis. The study of the stock exchanges in countries would definitely help the future investors to take investment decisions while investing in different markets.

Sarada Angaraju (2020), attempted a paper on risk and return analysis of selected banks in NSE Market. In this study he talks about the Indian financial sector is the back bone of the country economy development, the banking sector place a key role in empowerment of all areas. In the capital market equity market is playing economic development of nation but banking sector equity market have volatility and less returns on investment in some of the banks and some of the banks have more volatility and capital loss in investment also. The investors identify the minimum risk and maximum return on investment decisions through portfolio analysis. This is helpful to the investors to take best decision on investment based on market volatility.

Fabiano O. Drozoda (2020), indicated about the Computational Intelligence Techniques used for stock market prediction: A systematic Review. With the advancement of various computational techniques and the growing search for assertive predictive models, computational intelligence methods have attracted much attention. In this context, the objective of this paper is to present a systematic review of the literature on recent research involving forecasting techniques in the stock market, and the computational intelligence

were the ones that stood out. To define these techniques, articles were collected from four large databases and a keyword filter was applied, which reduced the initial volume.

Manamani Sahoo (2021), researched about the day-of-the-week effect was empirically investigated using daily closing data for various Nifty indices, both before and during the COVID-19 health crisis from April 1, 2005, to May 14, 2020. The research employed dummy variable regression and the Generalized Autoregressive Conditional Heteroscedasticity (GARCH) model. Results indicate a negative return on Mondays during the COVID-19 crisis, while it was positive before the pandemic. Additionally, Tuesdays exhibited a statistically significant and positive effect on index returns during the COVID-19 crisis.

Dr. M. Kondala Rao and Dr. Anand J (2022), This states that, the pivotal role of stock markets as platforms facilitating the exchange of various financial instruments like shares, bonds, securities, and mutual funds in India. They emphasize the significance of these markets in driving the country's economic growth, with a primary focus on the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE), both integral components of the Indian stock trading landscape. It also states that, The Indian banking system comprises a diverse array of institutions, including public sector banks, private sector banks, regional and rural banks, urban cooperative banks, foreign banks, and rural cooperative banks. In their study, the authors narrow their focus to five prominent banks traded on the HDFC, State Bank of India, ICICI, Kotak Mahindra, and Axis bank. Their primary objective is to conduct a comprehensive Risk & Return analysis of these selected bank stocks, where risk is defined as the possibility of deviating from expected returns, and return on investment is evaluated as a key metric to assess financial performance.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

This Research paper employs various Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) indices, specifically Sensex and banking stocks, to ascertain the risk-return trade-off. These analyses offer valuable insights into the selection of bank equity for inclusion in the stock market investment portfolio. The methodology employed encompasses diverse research techniques such as literature review, observations, surveys, and other pertinent research methodologies, providing a comprehensive examination of both contemporary and historical data.

3.2 SAMPLING TECHNIQUE

Observation Technique has been used in this present research paper. It is tested the performance of Banking stocks listed in both Bombay Stock Exchange (BSE) and National Stock Exchange (NSE). The Turnover values of indices were wanted to decide the sample size for this study. This approach acknowledges the fact that different exchanges may have varying market dynamics, allowing for a more balanced representation of the banking sector in India. It provides insights into the trends and strategies of market leaders in the banking sector. The choice to focus on the top leading companies with growth in market standards. For the analysis of stocks in the securities market are taken for 6 banking stocks. Out of which 3 from Bombay stock exchange (BSE) and another 3 from National stock exchange (NSE). Based on the turnover values, the top leading companies which has growth in market standards, where selected taken for analysis purpose.

3.3 SOURCE OF DATA

This study relies exclusively on secondary data, specifically the year opening and closing values of stock returns and the returns of the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE). The details and the information on sample return values obtained from Google finance and Money control website. Additionally, pertinent data and information were sourced from a various books, websites, and academic journals.

3.4 PERIOD OF THE STUDY

This research paper is an attempt to compare the relative difference between Bombay stock exchange (BSE) and National stock exchange (NSE) by analysing the share price returns of Banking stocks from the Indian stock market. The Data is collected for a period of 10 years of the 6 selected stocks of the financial services sector listed in BSE and NSE for the purpose of calculating the risk and returns during the period from January 2013 to January 2023.

3.5 SAMPLE SIZE

Based on the turnover values, the 6 top leading companies which has growth in market standards, where selected taken for analysis purpose.

3.5.1 AXIS BANK LTD

Axis Bank is the third largest private sector bank in India. The Bank offers the entire spectrum of financial services to customer segments covering Large and Mid-Corporates, MSME, Agriculture and Retail Businesses. As of 30 June 2022, 30.81% shares are owned by the promoters. The remaining 69.19% shares are owned by mutual funds, FIIS, banks, insurance companies, corporate bodies and individual investors. With a balance sheet size of Rs. 1,317,325 crores as on 31st March 2023. Axis Bank has achieved consistent growth in its field.

3.5.2 ICICI BANK LTD

ICICI Bank Limited is an Indian multinational banking and financial services company with its registered office in Vadodara, Gujarat and corporate office in Mumbai, Maharashtra. It offers a wide range of banking products and financial services for corporate and retail customers through a variety of delivery channels and specialised subsidiaries in the areas of investment banking. Life, non-life insurance, venture capital, and asset management. The bank has a network of 5,275 branches and 15,589 ATMs across India and has a presence in 17 countries.

3.5.3 STATE BANK OF INDIA

State bank of India (SBI) is an Indian multination, public sector banking and financial services statutory body headquartered in Mumbai, Maharashtra. SBI is the 48th largest bank in the world and ranked 235th in the Fortune Global 500 list of the world's biggest corporations of 2022, being the only Indian bank on the list. A nationalised bank, it is the largest in India with a 23% market share by assets and a 25% share of the total loan and deposits market.

3.5.4 YES BANK LTD

Yes Bank Limited is an Indian private sector bank headquartered in Mumbai, India and was founded by Rana Kapoor and Ashok Kapur in 2004. It offers wide range of banking and financial products for corporate and retail customers through retail banking and asset management services. After a 30% fall of its share price, Yes Bank gets very high beta stock for day traders and hence could be very dreadful for some and fruitful for some. As the market sentiment is weak and bearish, more fall could be possible. Now, a waiting game would be more advisable than running for investment in the stock.

3.5.5 INDUSIND BANK LTD

IndusInd Bank Limited is a new-generation Indian bank headquartered in Pune. The bank offers commercial, transactional and electronic banking products and services. IndusInd Bank was inaugurated in April 1994 by then Union Finance Minister Manmohan Singh. IndusInd Bank is the first among the new-generation private banks in India. At net NPA levels of 1.5 percent, the bank does not seem to have a high risk from bad loans. Promoter quality is average, so investing in fixed deposits of IndusInd is fine.

3.5.6 HDFC BANK LTD

HDFC Bank Limited is an Indian banking and financial services company headquartered in Mumbai. It is the largest bank in India by market capitalisation as of March 2023. HDFC Bank stock is placed well on the technical charts. The downside risks are low. If the markets do well, this counter is poised well to outperform. Market analysts and investors have observed that the bank's stock is well-placed to capitalize on the current economic landscape. This positive sentiment is supported by the fact that the downside risks for HDFC Bank are relatively low, thanks to its prudent risk management practices and a well-diversified portfolio. As India's economy continues to evolve, HDFC Bank remains a beacon of strength and resilience, ready to navigate the ever-changing financial landscape and deliver exceptional value to its customers and investors alike.

3.6 HYPOTHESIS

The hypothesis for this research project is framed to investigate the risk-return trade-off in the Indian stock market, specifically focusing on Banking stocks listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE).

This research will employ various financial analysis tools such as total returns, mean, risk, correlation coefficient, to evaluate the risk and returns associated with these stocks. The hypothesis will provide insights into the comparative performance of Banking stocks on the BSE and NSE and their suitability for inclusion in investment portfolios, helping investors make informed decisions in the Indian stock market.

HYPOTHESIS – 1

Null Hypothesis (H0):

- There is no significant difference in the risk-return trade-off between Banking stocks listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) over a ten-year period from January 2013 to January 2023.

Alternative Hypothesis (H1):

- There is a significant difference in the risk-return trade-off between the Banking stock

listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) over a ten-year period from January 2013 to January 2023.

HYPOTHESIS – 2

Null Hypothesis (H0):

- The performance of Banking stocks listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) does not significantly differ from each other over the ten-year period from January 2013 to January 2023

Alternative Hypothesis (H1):

- The performance of Banking stocks listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) significantly differs from each other over the ten-year period from January 2013 to January 2023.

3.7 TOOLS USED FOR ANALYSIS

3.7.1 TOTAL RETURNS

Any rational investor, before investing his or her investible wealth in the stock, analyses the risk associated with the particular stock. The actual return he receives from a stock may vary from his expected return and the risk is expressed in terms of variability of return.

Expression for calculating the rate of return earned on any asset over time period is,

$$R = \frac{p1 - p0}{P0}$$

R = expected rate of return during time period

P1 = Closing price

P0 = Opening price

3.7.2 MEAN

Mean is the average value of the series, obtained by adding up the series and dividing by the number of observations. It is the most common measure of central tendency.

$$\text{Average returns or mean } (\bar{x}) = \frac{\sum x_i}{n} \text{ (or) } R/N$$

3.7.3 RISK

Investment is a measure of the risk arising from exposure to general market movements. The process involves identifying and analysing the amount of risk involved in an investment, and either accepting that risk or mitigating it.

3.7.4 STANDARD DEVIATION

The standard deviation is often used by investors to measure the risk of a stock or a stock portfolio. The basic idea is that the standard deviation is a measure of volatility the more a stock's returns vary from the stock's average return, the more volatile the stock.

$$\text{Standard deviation} = \sqrt{\text{variance}}$$

$$\text{Variance} = 1/n-1(\sum d^2)$$

3.7.5 BETA INTERPRETATION

The beta (β) of an investment security (i.e, a stock) is a measurement of its volatility of returns relative to the entire market. It is used as a measure of risk and is an integral part of the Capital Asset Pricing Model (CAPM). A company with a higher beta has greater risk and also greater expected returns.

The beta coefficient can be interpreted as follows:

- $\beta = 1$ exactly as volatile as the market
- $\beta > 1$ more volatile than the market
- $\beta < 1 > 0$ less volatile than the market
- $\beta = 0$ uncorrelated to the market
- $\beta < 0$ negatively correlated to the market

$$\beta = \frac{\text{cov}(r_i, r_m)}{\text{var}(r_m)}$$

3.7.6 CORRELATION COEFFICIENT

The correlation coefficient is a measure of the association between two variables. It is used to find the relationship is between data and a measure to check how strong it is. The formulas return a value between -1 and 1,

- 1 indicates a strong positive relationship
- -1 indicates a strong negative relationship.
- A result of zero indicates no relationship at all

$$R = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{\sqrt{(n\Sigma x^2 - (\Sigma x)^2)(n\Sigma y^2 - (\Sigma y)^2)}}$$

3.7.7 COVARIANCE COEFFICIENT

The covariance coefficient is a measure of the relationship between two random Variables. The metric evaluates how much - to what extent the variables change together. The term covariance coefficient is measured in units. The units are computed by multiplying the units of the two variables. The variance can take any positive or negative values. The values are analysed as follows:

Positive covariance: This states that two variables tend to move in the same direction.

Negative Covariance: Reveals about the two variables tend to move in inverse directions.

$$COVA(X,Y) = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{N-1}$$

- x_i = data value of x
- y_i = data value of y
- $\bar{x}$ = mean of x
- $\bar{y}$ = mean of y
- N = number of data values.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

In every aspect of life, risk and return relationship is not only for financial analysis, but also for fundamental concepts. If a decision has to lead to benefit maximization, it is necessary that individuals/institutions consider the combined influence on expected (future) return or benefit as well as on risk. The requirement that expected return is commensurate with risk is known as the “risk return trade-off” in finance.

For the purpose of carrying out the data analysis and calculation of Mean Returns, Standard Deviation, Beta, Correlation and Covariance, yearly closing prices of the selected six financial services company stocks from the year 2013 to 2023 have been collected. Correlation and covariance of these companies were calculated in comparison with the financial services market.

Below are the analysis of Risk and Returns of the six Banking stocks of which first three are from Bombay Stock Exchange (BSE) and another three from National Stock exchange (NSE).

4.1 CALCULATIONS OF AVERAGE STOCK RETURNS OF THE SELECTED BANKING STOCKS

$$\text{Average returns (R)} = (R)/N$$

(P0) = Opening price of the share

(P1) = Closing price of the share

Expression for calculating the rate of return earned on any asset over time period is,

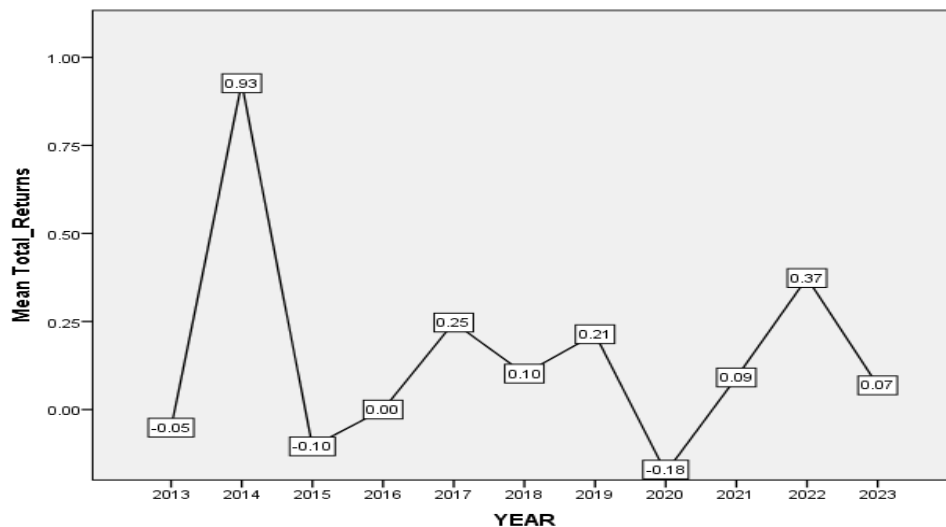
$$R = \frac{p1 - p0}{p0}$$

4.1.1 AXIS BANK LTD

Average Returns on Axis Bank Ltd from Jan 2013 to Jan 2023

YEAR	OPENING PRICE (P0)	CLOSING PRICE (P1)	RETURNS (P1-P0)/P0
2013	274	259.93	-0.051
2014	260.61	502.05	0.926
2015	502	449.5	-0.105
2016	450	450	0.000
2017	451	562.4	0.247
2018	562.4	619.8	0.102
2019	621.2	754	0.214
2020	755	620.35	-0.178
2021	621.9	678.55	0.091
2022	680	933.85	0.373
2023	930.05	993.95	0.069
TOTAL RETURNS			1.688
AVERAGE RETURNS			0.153

Table 4.1 Calculation of total return of Axis Bank Ltd



Graph 1: Representing Returns of Axis Bank Ltd

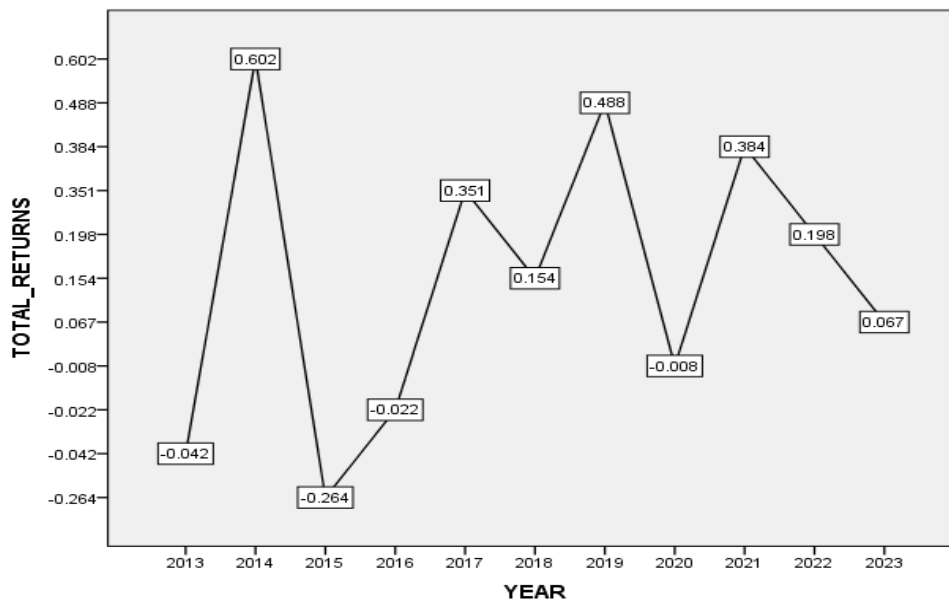
Interpretation: In the year 2013 the returns were -5% and in the year 2023 the returns were 7%. The average return of the Axis Bank Ltd is 15.3%. This was analysed using Mean variation. And this process shows that the company has relatively high values of returns.

4.1.2 ICICI Bank Ltd

Average Returns on ICICI Bank Ltd from Jan 2013 to Jan 2023

YEAR	OPENING PRICE (P0)	CLOSING PRICE (P1)	RETURNS (P1-P0)/P0
2013	208.55	199.72	-0.042
2014	200.36	320.91	0.602
2015	323.14	237.68	-0.264
2016	237.27	232.09	-0.022
2017	232.45	314	0.351
2018	312	360	0.154
2019	362	538.75	0.488
2020	539.2	534.8	-0.008
2021	534.8	740.25	0.384
2022	743.9	890.95	0.198
2023	892.3	951.75	0.067
TOTAL RETURNS			1.906
AVERAGE RETURNS			0.173

Table 4.2 Calculation of total return values of ICICI Bank Ltd



Graph 2: Representing Returns of ICICI Bank Ltd

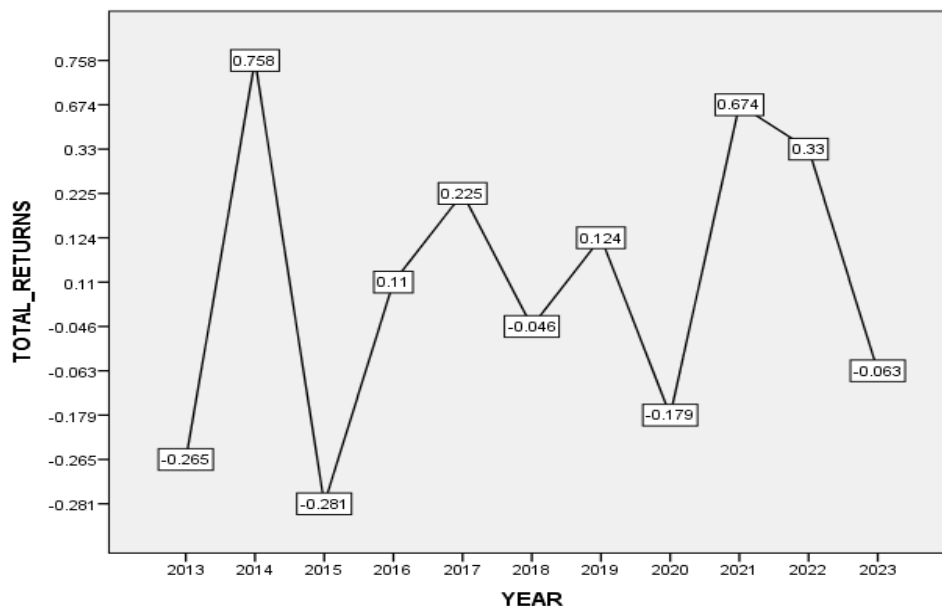
Interpretation: In the year 2013 the returns were -4% and in the year 2023 the returns were 6%. The average return of the ICICI Bank Ltd is 17.3%. And this process shows that the company has relatively high values of returns. In this study period, the returns were slightly ups and downs of share prices.

4.1.3 STATE BANK OF INDIA LTD

Average Returns on State Bank Ltd from Jan 2013 to Jan 2023

YEAR	OPENING PRICE (P0)	CLOSING PRICE (P1)	RETURNS (P1-P0)/P0
2013	240.1	176.55	-0.265
2014	177.4	311.85	0.758
2015	312	224.4	-0.281
2016	225	249.75	0.110
2017	252.75	309.5	0.225
2018	310	295.65	-0.046
2019	297	333.7	0.124
2020	334.5	274.75	-0.179
2021	275	460.45	0.674
2022	461	613.2	0.330
2023	615	576.15	-0.063
TOTAL RETURNS			1.387
AVERAGE RETURNS			0.126

Table 4.3 Calculation of total return values of State Bank of India Ltd



Graph 3: Representing Returns of State Bank of India Ltd

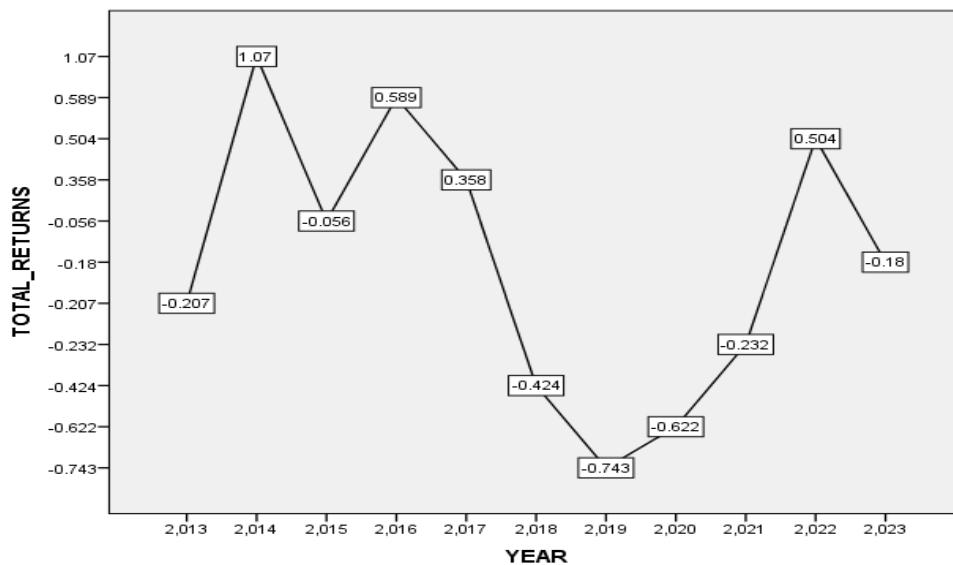
Interpretation: In the year 2013 the returns were -27% and in the year 2023 the returns were -6%. The average return of the State Bank of India Ltd is 12.6%. This was analysed by using Mean variation. And this process shows that the company has relatively lower of returns.

4.1.4 YES BANK LTD

Average Returns on Yes Bank Ltd from Jan 2013 to Jan 2023

YEAR	OPENING PRICE (P0)	CLOSING PRICE (P1)	RETURNS (P1-P0)/P0
2013	93.35	74.04	-0.207
2014	74.6	154.41	1.070
2015	153.8	145.16	-0.056
2016	145.53	231.29	0.589
2017	232.12	315.15	0.358
2018	315.5	181.8	-0.424
2019	182.6	46.95	-0.743
2020	46.95	17.75	-0.622
2021	17.85	13.7	-0.232
2022	13.7	20.6	0.504
2023	20.85	17.1	-0.180
TOTAL RETURNS			0.057
AVERAGE RETURNS			0.005

Table 4.4 Calculation of total return values of Yes Bank Ltd



Graph 4: Representing Returns of Yes Bank Ltd

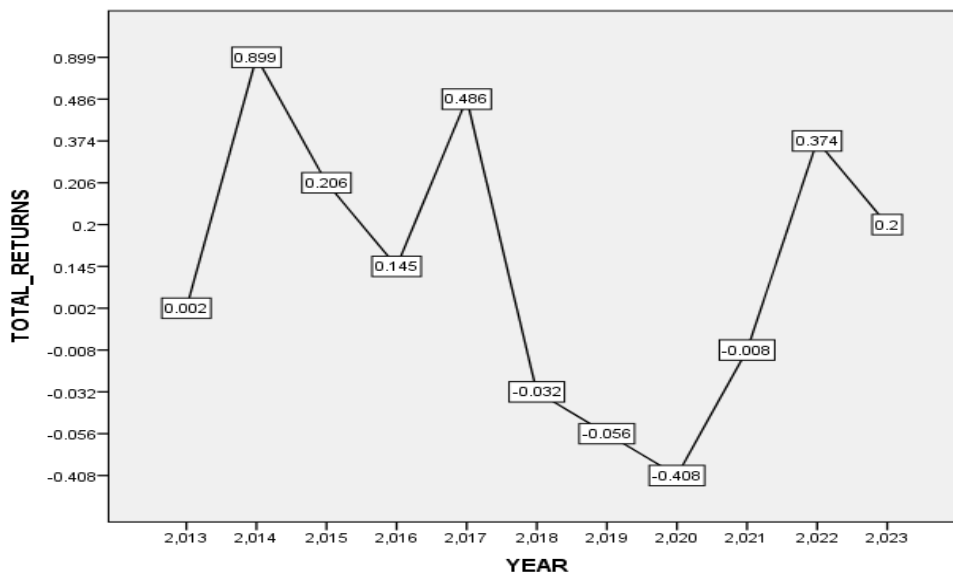
Interpretation: In the year 2013 the returns were -21% and in the year 2023 the returns were -18%. The average return of the Yes Bank Ltd is 0.5%. This was analysed by using Mean variation. And this process shows that the company has relatively lower returns.

4.1.5 INDUSIND BANK LTD

Average Returns on IndusInd Bank Ltd from Jan 2013 to Jan 2023

YEAR	OPENING PRICE (P0)	CLOSING PRICE (P1)	RETURNS (P1-P0)/P0
2013	419.95	420.7	0.002
2014	422.6	802.45	0.899
2015	803.4	968.95	0.206
2016	968	1107.9	0.145
2017	1109.95	1648.9	0.486
2018	1652	1599.3	-0.032
2019	1600	1510	-0.056
2020	1512	894.95	-0.408
2021	895	888.15	-0.008
2022	888.2	1220.1	0.374
2023	1220.1	1463.7	0.200
TOTAL RETURNS			1.806
AVERAGE RETURNS			0.164

Table 4.5 Calculation of total return values of IndusInd Bank Ltd



Graph 5: Representing Returns of IndusInd Bank Ltd

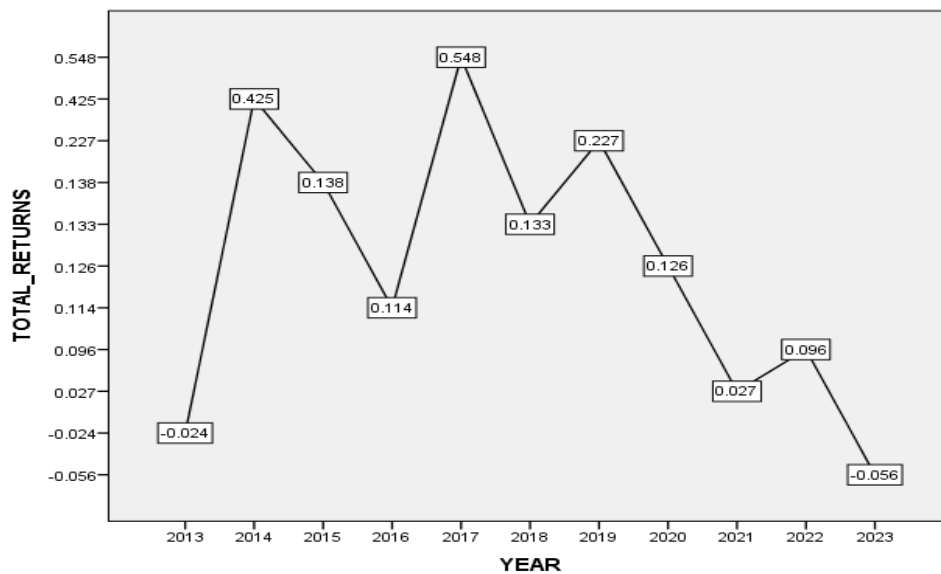
Interpretation: In the year 2013 the returns were 0.002 and in the year 2023 the returns were 20%. The average return of the IndusInd Bank Ltd is 16.4%. This was analysed by using Mean variation.

4.1.6 HDFC BANK LTD

Average Returns on HDFC Bank Ltd from Jan 2013 to Jan 2023

YEAR	OPENING PRICE (P0)	CLOSING PRICE (P1)	RETURNS (P1-P0)/P0
2013	341.05	332.92	-0.024
2014	334	475.8	0.425
2015	475.5	541.08	0.138
2016	541.2	603.1	0.114
2017	604.72	936.2	0.548
2018	936.35	1060.85	0.133
2019	1036.82	1272.1	0.227
2020	1276.1	1436.3	0.126
2021	1440	1479.4	0.027
2022	1485	1628.15	0.096
2023	1627	1535.75	-0.056
TOTAL RETURNS			1.754
AVERAGE RETURNS			0.159

Table 4.6 Calculation of total return values of HDFC Bank Ltd



Graph 6: Representing Returns of HDFC Bank Ltd

Interpretation: In the year 2013 the returns were -2% and in the year 2023 the returns were -6%. The average return of the HDFC Bank Ltd is 15.9%. This was analysed by using Mean variation. And this process shows that the company has higher positive values of returns.

4.2 CALCULATIONS OF RISK OF THE SELECTED BANKING STOCKS

Expression for calculating the Risk with the relationship of Total returns and Average returns

$$\text{Standard deviation} = \sqrt{\text{variance}}$$

$$\text{Variance} = 1/n-1(\sum d^2)$$

4.2.1 AXIS BANK LTD

YEAR	RETURNS	AVERAGE RETURNS	D(R-R")	D ²
2013	-0.051	0.153	-0.204	0.042
2014	0.926	0.153	0.773	0.598
2015	-0.105	0.153	-0.258	0.067
2016	0	0.153	-0.153	0.023
2017	0.247	0.153	0.094	0.009
2018	0.102	0.153	-0.051	0.003
2019	0.214	0.153	0.061	0.004
2020	-0.178	0.153	-0.331	0.110
2021	0.091	0.153	-0.062	0.004
2022	0.373	0.153	0.22	0.048
2023	0.069	0.153	-0.084	0.007
TOTAL				0.913

Table 4.7 Calculation of Standard deviation of Axis Bank Ltd

Calculation

$$\text{Variance} = 1/n-1(\sum d^2) = 1/10(0.913) = 0.0913 (9.13\%)$$

$$\text{Standard deviation} = \sqrt{\text{variance}} = \sqrt{0.0913} = 0.302 (30.21\%)$$

Descriptive Statistics				
	N	Mean	Std. Deviation	Variance
RETURNS	11	.1535	.30218	.091
Valid N (listwise)	11			

Interpretation: The above table states about the risk involved in a particular banking stock with the relationship of Total Stock Returns and the Average returns of the Axis Bank Ltd. With the help of the Standard Deviation tool, it can be observed that the Axis Bank Ltd has higher risk involved during the study period. This can be easily seen with the variations that has happened through variance. In the year, 2018 it has shown a very low risk with a value

of 0.003, while in the year 2014 it has a very high risk 0.598, and the deviation of the stock return is 30.21%

4.2.2 ICICI Bank Ltd

YEAR	RETURNS	AVERAGE RETURNS	D(R-R'')	D ²
2013	-0.042	0.173	-0.215	0.046
2014	0.602	0.173	0.429	0.184
2015	-0.264	0.173	-0.437	0.191
2016	-0.022	0.173	-0.195	0.038
2017	0.351	0.173	0.178	0.032
2018	0.154	0.173	-0.019	0.000
2019	0.488	0.173	0.315	0.099
2020	-0.008	0.173	-0.181	0.033
2021	0.384	0.173	0.211	0.045
2022	0.198	0.173	0.025	0.001
2023	0.067	0.173	-0.106	0.011
TOTAL				0.680

Table 4.8 Calculation of Standard deviation of ICICI Bank Ltd

Calculation

$$\text{Variance} = 1/n-1(\Sigma d^2) = 1/10(0.680) = 0.068 (6.8\%)$$

$$\text{Standard deviation} = \sqrt{\text{variance}} = \sqrt{0.068} = 0.260 (26.07\%)$$

Descriptive Statistics				
	N	Mean	Std. Deviation	Variance
RETURNS	11	.1735	.26070	.068
Valid N (listwise)	11			

Interpretation: The above table indicates about the risk involved in a particular banking stock with the relationship of Total Stock Returns and the Average returns of the ICICI Bank Ltd. With the help of the Standard Deviation tool, it can be observed that the ICICI Bank Ltd has a very high risk involved during the study period. This can be easily seen with the variations that has happened through variance. In this it is slightly ups and downs of share prices in the study period. And In the year, 2018 it has shown no risk as the deviation has nil balance, while in the year 2015 it has a very high risk with a value 0.191, and the deviation of the stock return is 26.07%.

4.2.3 STATE BANK OF INDIA LTD

YEAR	RETURNS	AVERAGE RETURNS	D(R-R")	D ²
2013	-0.265	0.126	-0.391	0.153
2014	0.758	0.126	0.632	0.399
2015	-0.281	0.126	-0.407	0.166
2016	0.11	0.126	-0.016	0.000
2017	0.225	0.126	0.099	0.010
2018	-0.046	0.126	-0.172	0.030
2019	0.124	0.126	-0.002	0.000
2020	-0.179	0.126	-0.305	0.093
2021	0.674	0.126	0.548	0.300
2022	0.33	0.126	0.204	0.042
2023	-0.063	0.126	-0.189	0.036
TOTAL				1.228

Table 4.9 Calculation of Standard deviation of State Bank of India Ltd

Calculation

$$\text{Variance} = 1/n-1(\Sigma d^2) = 1/10(1.228) = 0.1228 (12.28\%)$$

$$\text{Standard deviation} = \sqrt{\text{variance}} = \sqrt{0.1228} = 0.350 (35.04\%)$$

Descriptive Statistics

	N	Mean	Std. Deviation	Variance
RETURNS	11	.1261	.35047	.123
Valid N (listwise)	11			

Interpretation: Out of the Total returns and the Average returns of the Banking stock that is the State Bank of India, the risk involved is shown during the study period. With the help of the Standard Deviation tool, it can be observed that the State Bank of India Ltd is started with the high level of risk and then reduced and In the year, 2019 it has shown very low risk as the deviation has 0 balance, while in the year 2014 it has a very high risk with a value 0.399, and the deviation of the stock return is 35.04%.

4.2.4 YES BANK LTD

YEAR	RETURNS	AVERAGE RETURNS	D(R-R")	D ²
2013	-0.207	0.005	-0.212	0.045
2014	1.07	0.005	1.065	1.134
2015	-0.056	0.005	-0.061	0.004
2016	0.589	0.005	0.584	0.341
2017	0.358	0.005	0.353	0.125
2018	-0.424	0.005	-0.429	0.184
2019	-0.743	0.005	-0.748	0.560
2020	-0.622	0.005	-0.627	0.393
2021	-0.232	0.005	-0.237	0.056
2022	0.504	0.005	0.499	0.249
2023	-0.18	0.005	-0.185	0.034
TOTAL				3.125

Table 4.10 Calculation of Standard deviation of Yes Bank Ltd

Calculation

$$\text{Variance} = 1/n-1(\sum d^2) = 1/10(3.125) = 0.3125 \text{ (31.25\%)}$$

$$\text{Standard deviation} = \sqrt{\text{variance}} = \sqrt{0.3125} = 0.5590 \text{ (59.90\%)}$$

Descriptive Statistics				
	N	Mean	Std. Deviation	Variance
RETURNS	11	.0052	.55898	.312
Valid N (listwise)	11			

Interpretation: Out of the Total returns and the Average returns of the Banking stock that is the Yes Bank Ltd, the higher risk involved is shown during the research period. With the help of the Standard Deviation tool, it can be observed that the Yes Bank Ltd has a very high risk involved during the research period. This can be easily seen with the variations that were occurred through the variance. In this it is started with the low level of risk and then increased. And In the year, 2015 it has shown very low risk as the deviation has 0.004 balance, while in the year 2014 it has a very high risk with the value 1.134, and the deviation of the stock return is 59.90%. The investor has to compare both the risk and returns before investing in the security.

4.2.5 INDUSIND BANK LTD

YEAR	RETURNS	AVERAGE RETURNS	D(R-R")	D ²
2013	0.002	0.164	-0.162	0.026
2014	0.899	0.164	0.735	0.540
2015	0.206	0.164	0.042	0.002
2016	0.145	0.164	-0.019	0.000
2017	0.486	0.164	0.322	0.104
2018	-0.032	0.164	-0.196	0.038
2019	-0.056	0.164	-0.22	0.048
2020	-0.408	0.164	-0.572	0.327
2021	-0.008	0.164	-0.172	0.030
2022	0.374	0.164	0.21	0.044
2023	0.2	0.164	0.036	0.001
TOTAL				1.161

Table 4.11 Calculation of Standard deviation of IndusInd Bank Ltd

Calculation

$$\text{Variance} = 1/n-1(\sum d^2) = 1/10(1.161) = 0.1161 (11.61\%)$$

$$\text{Standard deviation} = \sqrt{\text{variance}} = \sqrt{0.1161} = 0.340 (34.07\%)$$

Descriptive Statistics

	N	Mean	Std. Deviation	Variance
RETURNS	11	.1644	.34077	.116
Valid N (listwise)	11			

Interpretation: Out of the Total returns and the Average returns of the Banking stock that is the IndusInd Bank Ltd, the higher risk involved is shown during the research period. With the help of the Standard Deviation tool, it can be observed that the IndusInd Bank Ltd has a very high risk involved during the research period. This can be easily seen with the variations that were occurred through the variance. In this it is started with the low level of risk and then increased. And In the year, 2023 it has shown very low risk, while in the year 2014 it has a very high risk with the value 0.540, and the deviation of the stock return is 34.07%. The investor has to compare both the risk and returns before investing in the security.

4.2.6 HDFC BANK LTD

YEAR	RETURNS	AVERAGE RETURNS	D(R-R")	D ²
2013	-0.024	0.159	-0.183	0.033
2014	0.425	0.159	0.266	0.071
2015	0.138	0.159	-0.021	0.000
2016	0.114	0.159	-0.045	0.002
2017	0.548	0.159	0.389	0.151
2018	0.133	0.159	-0.026	0.001
2019	0.227	0.159	0.068	0.005
2020	0.126	0.159	-0.033	0.001
2021	0.027	0.159	-0.132	0.017
2022	0.096	0.159	-0.063	0.004
2023	-0.056	0.159	-0.215	0.046
TOTAL				0.332

Table 4.12 Calculation of Standard deviation of HDFC Bank Ltd

Calculation

$$\text{Variance} = 1/n-1(\sum d^2) = 1/10(0.332) = 0.0332 \text{ (3.32\%)}$$

$$\text{Standard deviation} = \sqrt{\text{variance}} = \sqrt{0.0332} = 0.1830 \text{ (18.30\%)}$$

Descriptive Statistics				
	N	Mean	Std. Deviation	Variance
RETURNS	11	.1595	.18222	.033
Valid N (listwise)	11			

Interpretation: The above table indicates about the risk involved in a particular banking stock with the relationship of Total Stock Returns and the Average returns of the HDFC Bank Ltd. With the help of the Standard Deviation tool, it can be observed that the HDFC Bank Ltd has comparatively Low risk involved during the study period. This can be easily seen with the variations that has happened through variance. In this it is started higher risk to lower of the share prices in the study period. And In the year, 2019 it has shown no risk as the deviation has 0.001 balance, while in the year 2017 it has a very high risk with a value of 0.151, and the deviation of the stock return is 18.30%.

4.3 RISK ANALYSIS OF BETA, CORRELATION COEFFICIENT, COVARIANCE

Analysing the Risk Variations of the Selected Banking Stocks with returns of BSE Sensex and NSE Nifty using Beta, Correlation coefficient, and Covariance.

4.3.1 AXIS BANK LTD

YEAR	RETURNS	BSE RETURNS
2013	-0.051	0.085
2014	0.926	0.296
2015	-0.105	-0.05
2016	0	0.02
2017	0.247	0.275
2018	0.102	0.059
2019	0.214	0.141
2020	-0.178	0.155
2021	0.091	0.063
2022	0.373	0.164
2023	0.069	0.174

Table 4.13 Calculation of risk analysis of Axis Bank Ltd

With reference to the above table, the variations of the stocks are analysed.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.695 ^a	.482	.425	.22917

a. Predictors: (Constant), BSE_RETURNS

Coefficients^a

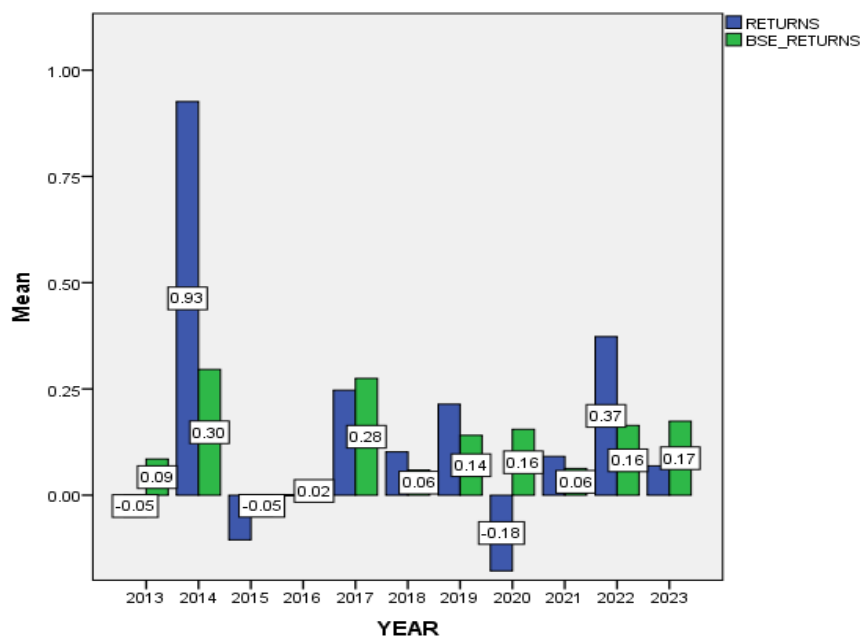
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.100	.111		-.897	.393
BSE_RETURNS	2.017	.696	.695	2.896	.018

a. Dependent Variable: RETURNS

Correlations

		RETURNS	BSE RETURNS
RETURNS	Pearson Correlation	1	.695*
	Sig. (2-tailed)		.018
	Sum of Squares and Cross-products	.913	.218
	Covariance	.091	.022
	N	11	11
BSE_RETURNS	Pearson Correlation	.695*	1
	Sig. (2-tailed)	.018	
	Sum of Squares and Cross-products	.218	.108
	Covariance	.022	.011
	N	11	11

*. Correlation is significant at the 0.05 level (2-tailed).



Graph 7: Representing risk analysis of Axis Bank Ltd

Interpretation: From the above table and graph, it shows that in the years 2015 and 2020 are of negative returns in Axis Bank Ltd. And in BSE Returns there are 1 negative returns in the year 2015. Other than that, all the other returns have positive values with good returns both in Axis Bank Ltd and Sensex Returns. In the Year 2016, there is no Negative or positive Returns in Axis Bank Ltd which has a Nil Balance during at that time. We can analyse that a time change in market returns leads to 2.017 change in stock returns. So, here we used the statistical tool called beta. This stock has a high in beta level. But which is more than 1, so it is risky to invest. And the correlation coefficient is to measure the relationship between the securities. The value correlation is 0.695 and the covariance is 0.022.

4.3.2 ICICI BANK LTD

YEAR	RETURNS	BSE RETURNS
2013	-0.042	0.085
2014	0.602	0.296
2015	-0.264	-0.05
2016	-0.022	0.02
2017	0.351	0.275
2018	0.154	0.059
2019	0.488	0.141
2020	-0.008	0.155
2021	0.384	0.063
2022	0.198	0.164
2023	0.067	0.174

Table 4.14 Calculation of risk analysis of ICICI Bank Ltd

With reference to the above table, the variations of the stocks are analysed.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.697 ^a	.486	.429	.19696

a. Predictors: (Constant), BSE_RETURNS

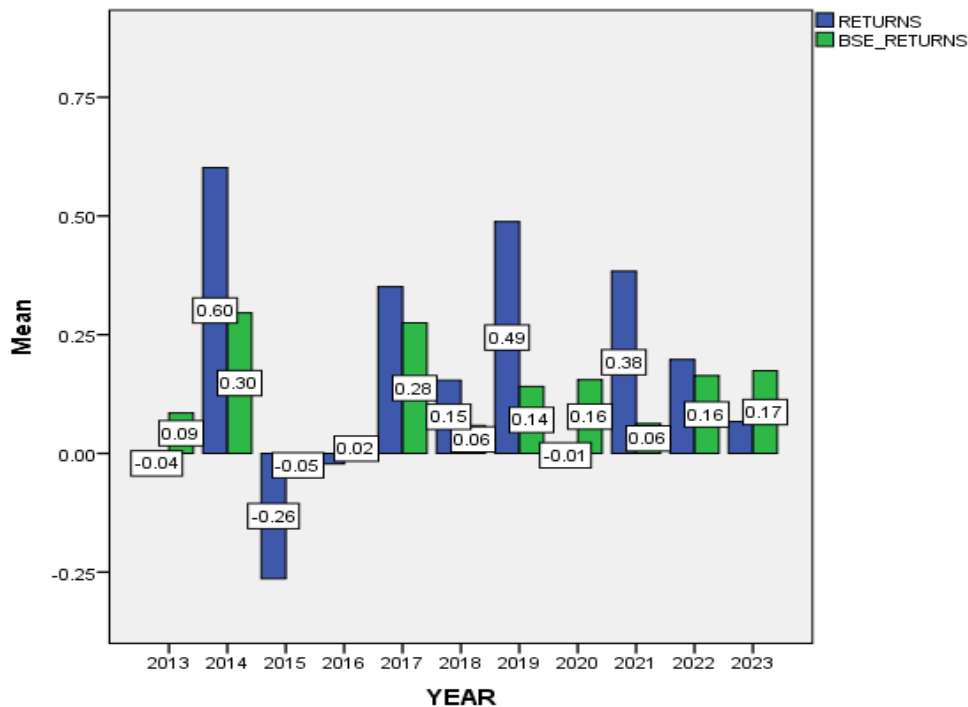
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.046	.096		-.481	.642
BSE_RETURNS	1.747	.599	.697	2.919	.017

a. Dependent Variable: RETURNS

Correlations		RETURNS	BSE RETURNS
RETURNS	Pearson Correlation	1	.697*
	Sig. (2-tailed)		.017
	Sum of Squares and Cross-products	.680	.189
	Covariance	.068	.019
	N	11	11
BSE_RETURNS	Pearson Correlation	.697*	1
	Sig. (2-tailed)	.017	
	Sum of Squares and Cross-products	.189	.108
	Covariance	.019	.011
	N	11	11

*. Correlation is significant at the 0.05 level (2-tailed).



Graph 8: Representing risk analysis of ICICI Bank Ltd

Interpretation: From the above table and graph, it shows that in the years 2013, 2015, 2016 and 2020 are of negative returns in ICICI Bank Ltd. And in BSE Returns there are one negative returns in the 2015. Other than that, all the other returns have positive values with relatively good returns both in ICICI Bank Ltd and Sensex Returns. We can analyse that a time change in market returns leads to 1.747 change in stock returns. So, here we used the statistical tool called beta. This stock has relatively high value in beta level. But which is

more than 1, so it is riskier to invest. And also gives moderate returns during the study period. And the correlation coefficient is to measure the relationship between the securities. The value correlation is 0.697 and the covariance is 0.019.

4.3.3 STATE BANK OF INDIA LTD

YEAR	RETURNS	BSE RETURNS
2013	-0.265	0.085
2014	0.758	0.296
2015	-0.281	-0.05
2016	0.11	0.02
2017	0.225	0.275
2018	-0.046	0.059
2019	0.124	0.141
2020	-0.179	0.155
2021	0.674	0.063
2022	0.33	0.164
2023	-0.063	0.174

Table 4.15 Calculation of risk analysis of State Bank of India Ltd

With reference to the above table, the variations of the stocks are analysed.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.489 ^a	.239	.155	.32222

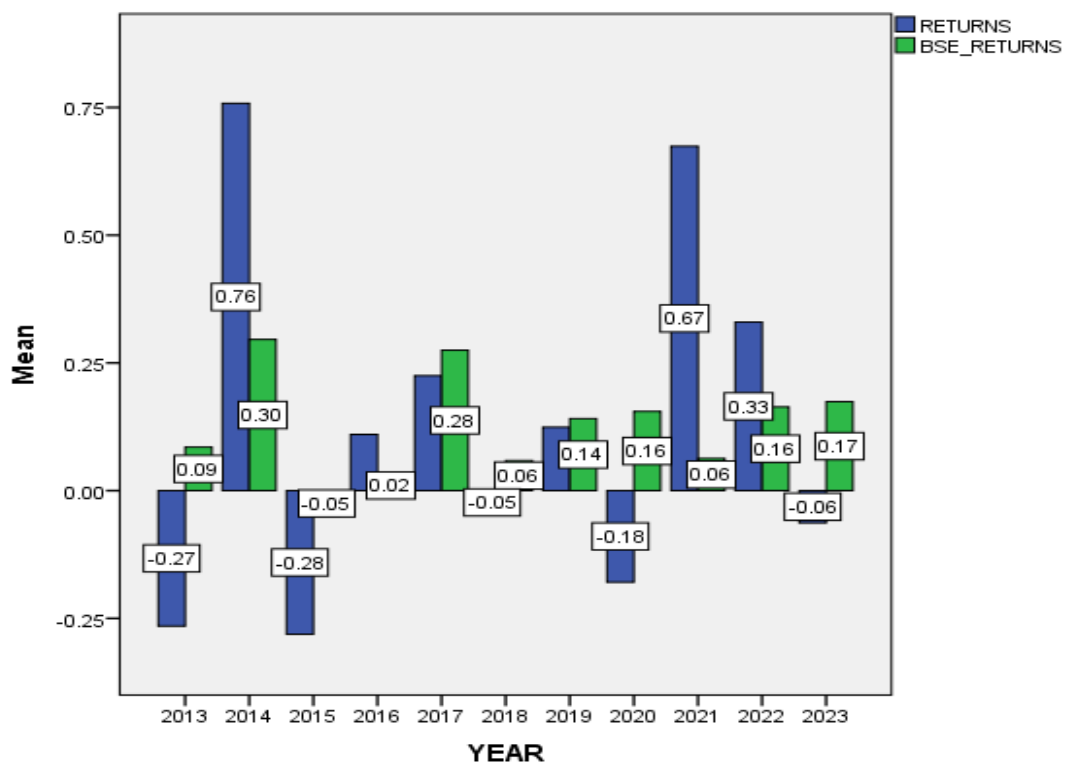
a. Predictors: (Constant), BSE_RETURNS

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.081	.157		-.516	.618
BSE_RETURNS	1.647	.979	.489	1.682	.127

a. Dependent Variable: RETURNS

Correlations		RETURNS	BSE_RETURNS
RETURNS	Pearson Correlation	1	.489
	Sig. (2-tailed)		.127
	Sum of Squares and Cross-products	1.228	.178
	Covariance	.123	.018
	N	11	11
BSE_RETURNS	Pearson Correlation	.489	1
	Sig. (2-tailed)	.127	
	Sum of Squares and Cross-products	.178	.108
	Covariance	.018	.011
	N	11	11



Graph 9: Representing risk analysis of State Bank of India Ltd

Interpretation: From the above table and graph, this gives the lower investment returns. It shows that in the years 2013, 2015, 2018 & 2020 are of with negative returns in State Bank of India Ltd. And in BSE Returns there are one negative returns in the year 2015. Other than that, all the other returns have positive returns both in State Bank of India Ltd and BSE Returns. We can analyse that a time change in market returns leads to 1.647 change in stock returns. So, here we used the statistical tool called beta. This stock has a Relatively high value in beta level. But which is more than 1, so it is more risk to invest with lower returns. So, it is better to suggest that not to invest in this security which has more risk. And the correlation coefficient is to measure the relationship between the securities. The value correlation is 0.489 and the covariance is 0.018.

4.3.4 YES BANK LTD

YEAR	RETURNS	NSE RETURNS
2013	-0.207	0.031
2014	1.07	0.283
2015	-0.056	0.031
2016	0.589	-0.039
2017	0.358	0.31
2018	-0.424	0.062
2019	-0.743	0.273
2020	-0.622	-0.251
2021	-0.232	0.18
2022	0.504	0.186
2023	-0.18	0.174

Table 4.16 Calculation of risk analysis of Yes Bank Ltd

With reference to the above table, the variations of the stocks are analysed,

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.347 ^a	.121	.023	.55256

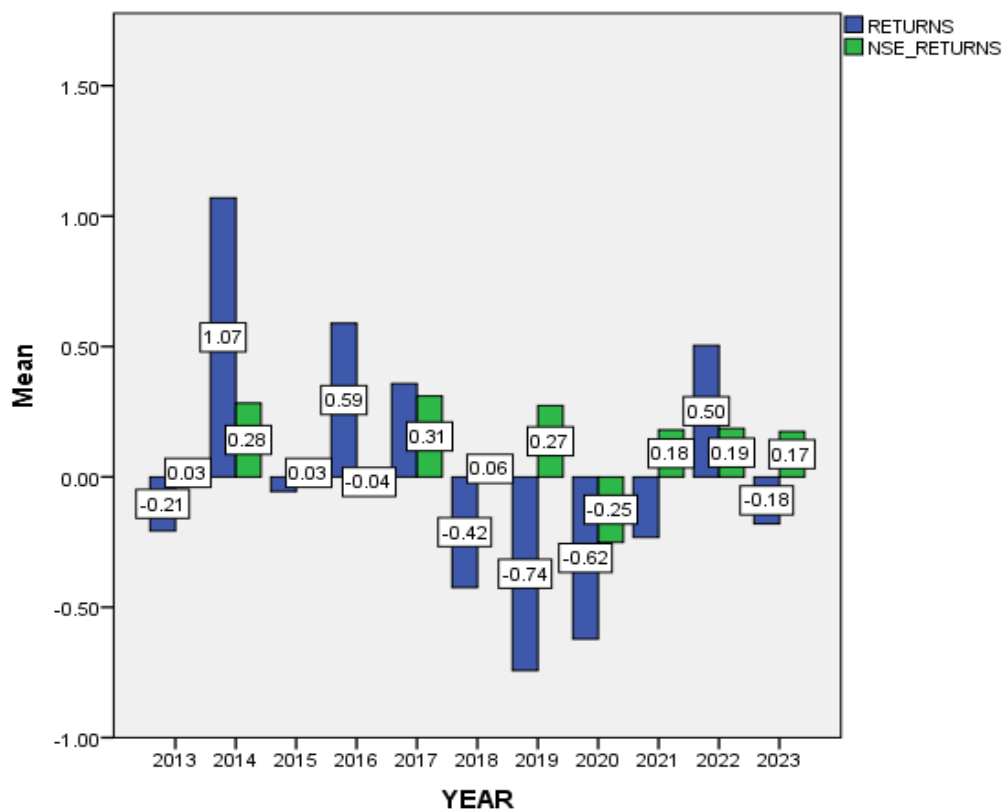
a. Predictors: (Constant), NSE_RETURNS

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.126	.204		-.617	.553
NSE_RETURNS	1.163	1.047	.347	1.111	.295

a. Dependent Variable: RETURNS

Correlations		RETURNS	NSE_RETURNS
RETURNS	Pearson Correlation	1	.347
	Sig. (2-tailed)		.295
	Sum of Squares and Cross-products	3.125	.324
	Covariance	.312	.032
	N	11	11
NSE_RETURNS	Pearson Correlation	.347	1
	Sig. (2-tailed)	.295	
	Sum of Squares and Cross-products	.324	.278
	Covariance	.032	.028
	N	11	11



Graph 10: Representing risk analysis of Yes Bank Ltd

Interpretation: From the above table and graph, this gives the lower investment returns. It shows that in the years 2013, 2015, 2018, 2019, 2020, 2021 and 2023 are of with negative

returns in Yes Bank Ltd. And in NSE Returns there are two negative returns in the year 2016 and 2020. Other than that, all the other returns have positive returns both in Yes Bank Ltd and Nifty Returns. We can analyse that a time change in market returns leads to 1.163 change in stock returns. So, here we used the statistical tool called beta. This stock has a moderately high value in beta level. But which is more than 1, so it is risky to invest with lower returns. So, it is better to suggest that not to invest in this security which has more risk. And the correlation coefficient is to measure the relationship between the securities. The value correlation is 0.347 and the covariance is 0.032 which has no negative returns.

4.3.6 INDUSIND BANK LTD

YEAR	RETURNS	NSE RETURNS
2013	0.002	0.031
2014	0.899	0.283
2015	0.206	0.031
2016	0.145	-0.039
2017	0.486	0.31
2018	-0.032	0.062
2019	-0.056	0.273
2020	-0.408	-0.251
2021	-0.008	0.18
2022	0.374	0.186
2023	0.2	0.174

Table 4.17 Calculation of risk analysis of IndusInd Bank Ltd

With reference to the above table, the variations of the stocks are analysed.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.686 ^a	.471	.412	.26136

a. Predictors: (Constant), NSE_RETURNS

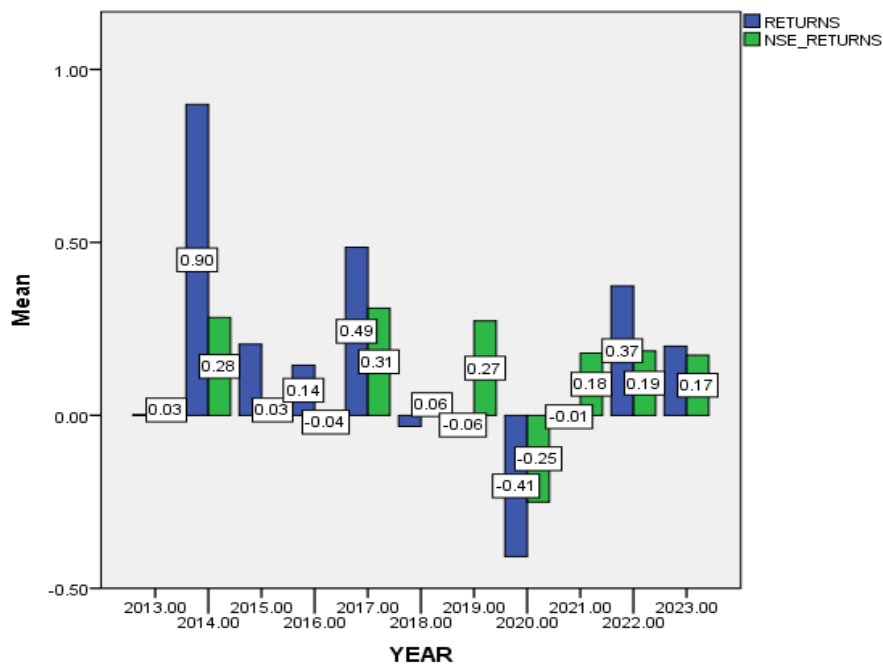
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	.006	.097		.067	.948
NSE_RETURNS	1.401	.495	.686	2.828	.020

a. Dependent Variable: RETURNS

Correlations		RETURNS	NSE_RETURNS
RETURNS	Pearson Correlation	1	.686*
	Sig. (2-tailed)		.020
	Sum of Squares and Cross-products	1.161	.390
	Covariance	.116	.039
	N	11	11
NSE_RETURNS	Pearson Correlation	.686*	1
	Sig. (2-tailed)	.020	
	Sum of Squares and Cross-products	.390	.278
	Covariance	.039	.028
	N	11	11

*. Correlation is significant at the 0.05 level (2-tailed).



Interpretation: From the above table and graph, this gives the lower investment returns. It shows that in the years 2018 to 2021 are of with negative returns in IndusInd Bank Ltd. And in NSE Returns there are two negative returns in the year 2016 and 2020. Other than that, all the other returns have positive returns both in IndusInd Bank Ltd and Nifty Returns. In the Year 2014, there is high Returns in the IndusInd Bank Ltd. We can analyse that a time change in market returns leads to 1.401 change in stock returns. So, here we used the statistical tool called beta. This stock has a moderately high value in beta level. But which

is more than 1, so it is risky to invest with lower returns. So, it is better to suggest that not to invest in this security which has more risk.

4.3.6 HDFC BANK LTD

YEAR	RETURNS	NSE RETURNS
2013	-0.024	0.031
2014	0.425	0.283
2015	0.138	0.031
2016	0.114	-0.039
2017	0.548	0.31
2018	0.133	0.062
2019	0.227	0.273
2020	0.126	-0.251
2021	0.027	0.18
2022	0.096	0.186
2023	-0.056	0.174

Table 4.18 Calculation of risk analysis of HDFC Bank Ltd

With reference to the above table, the variations of the stocks are analysed,

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.471 ^a	.221	.135	.16948

a. Predictors: (Constant), NSE_RETURNS

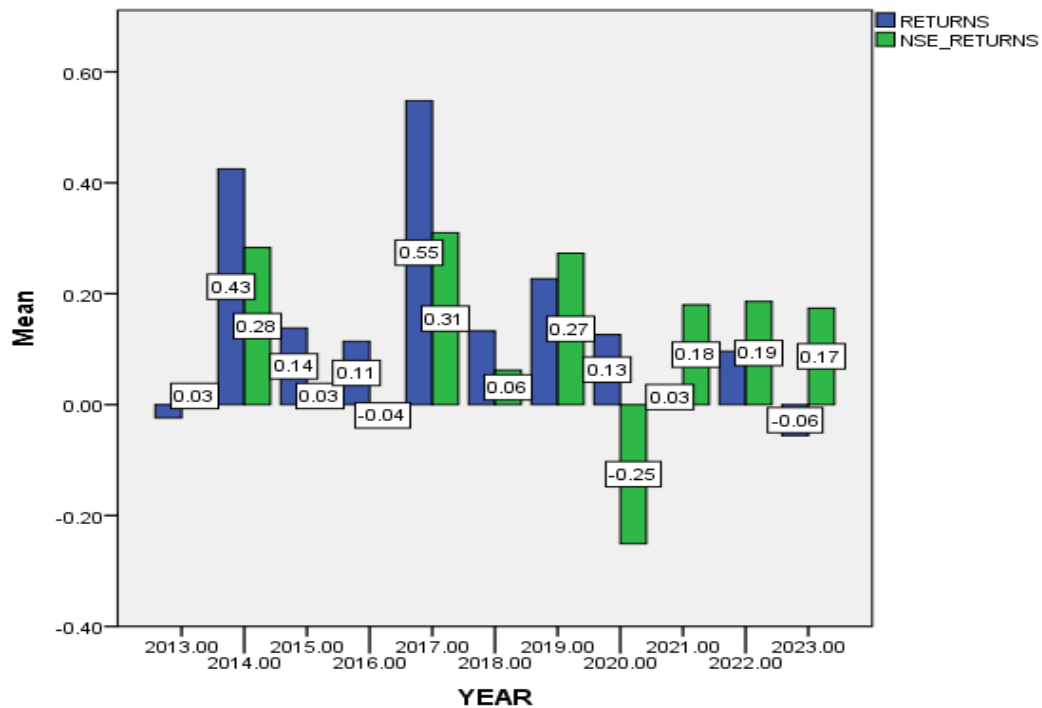
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.102	.063		1.621	.139
NSE_RETURNS	.514	.321	.471	1.600	.144

a. Dependent Variable: RETURNS

Correlations

		RETURNS	NSE_RETURNS
RETURNS	Pearson Correlation	1	.471
	Sig. (2-tailed)		.144
	Sum of Squares and Cross-products	.332	.143
	Covariance	.033	.014
	N	11	11
NSE_RETURNS	Pearson Correlation	.471	1
	Sig. (2-tailed)	.144	
	Sum of Squares and Cross-products	.143	.278
	Covariance	.014	.028
	N	11	11



Graph 12: Representing risk analysis of HDFC Bank Ltd

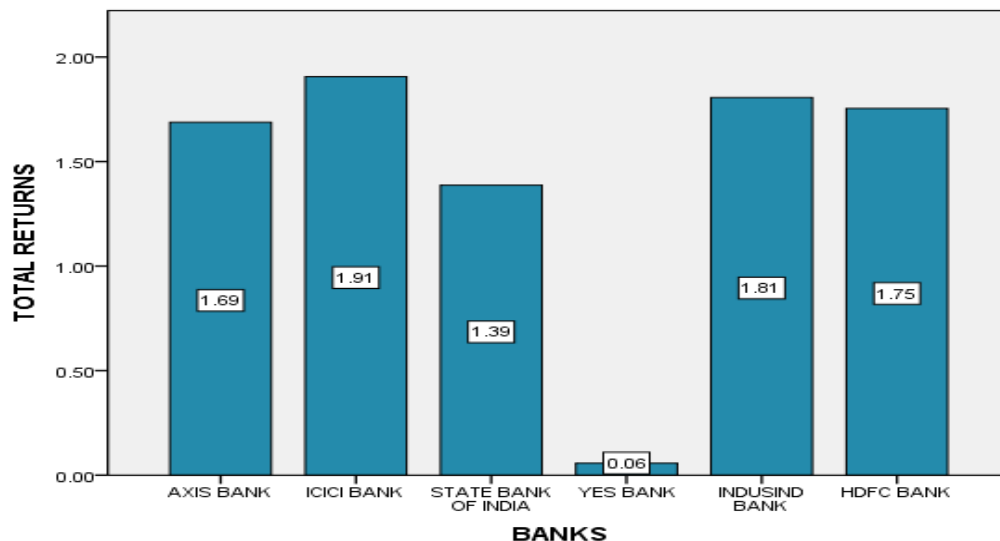
Interpretation: From the above table and graph, this gives the best investment returns. It shows that in the years 2013 and 2021 are of with the negative returns in HDFC Bank Ltd. And in NSE Returns there are two negative returns in the year 2016 and 2020. Hence, all the other returns have positive values with good returns. We can analyse that a time change in market returns leads to 0.514 change in stock returns. So, here we used the statistical tool called beta. This stock has a moderately high value in beta level. But which is less than 1, so it is less risky to invest. And also, it gives the best returns so, it can be considered as a best investment decision.

4.4 DEPICTING ALL CALCULATED VALUES

Showing the Returns and risk variations of Banking Stocks Listed in BSE &NSE

COMPANY	TOTAL RETURNS	MEAN	STANDARD DEVIATION	BETA
BSE				
Axis Bank Ltd	1.688	0.153	0.302	2.017
ICICI Bank Ltd	1.906	0.173	0.26	1.747
State Bank of India Ltd	1.387	0.126	0.35	1.647
NSE				
Yes Bank Ltd	0.057	0.0052	0.559	1.163
IndusInd Bank Ltd	1.806	0.164	0.34	1.401
HDFC Bank Ltd	1.754	0.159	0.182	0.514

Table 4.19 Relationship to risk and returns analysis



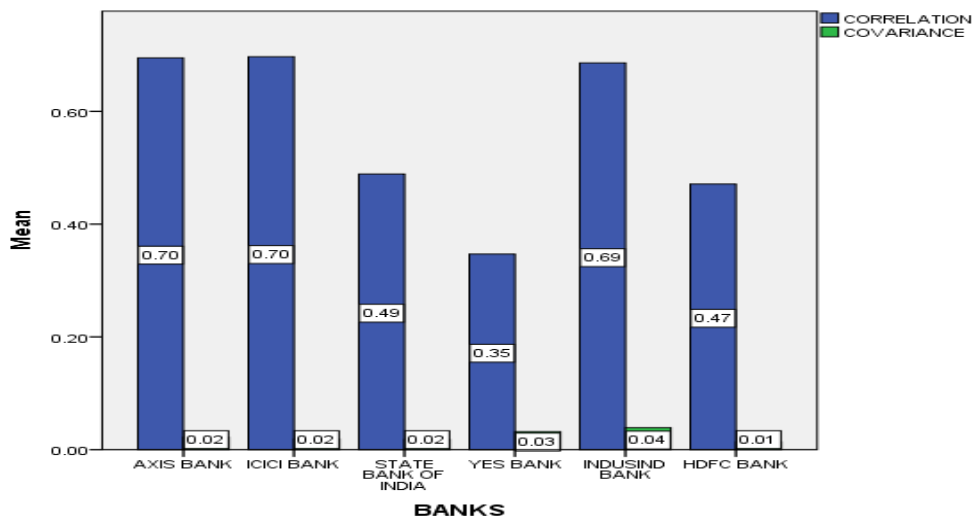
Graph 13: Representing the total returns of the banking stocks

Interpretation: It has observed from the above table during the study period, from Jan 2013 to Jan 2023, all the Stocks showed positive average daily returns. The above table clearly indicates that ICICI Bank of Bombay Stock Exchange (BSE) and IndusInd Bank of National Stock Exchange (NSE) were top performers which have higher returns, when compared to all other companies. HDFC Bank of NSE would be the Second option for an investor who wants lower risk with good returns, has comparatively less volatility. Axis Bank of BSE have positive returns as well as high beta level of 2.017, so the investor should be careful while investing in this security. The HDFC bank has Beta value within the value 1, and also provides positive returns. While the Lowest returns would be Yes Bank and State Bank of India in NSE and BSE with high levels of Risk involved with beta level, so it is not preferable for an investor to choose these companies as the investment would definitely give them low returns and they are highly volatile stocks.

Showing the correlation and covariance of the selected Six Banking stocks Listed in BSE & NSE

COMPANY	CORRELATION	COVARIANCE
BSE		
Axis Bank Ltd	0.695	0.022
ICICI Bank Ltd	0.697	0.019
State Bank of India Ltd	0.489	0.018
NSE		
Yes Bank Ltd	0.347	0.032
IndusInd Bank Ltd	0.686	0.039
HDFC Bank Ltd	0.471	0.014

Table 4.20 Relationship of risk and returns analysis



Interpretation: The correlation and the covariance of these companies are calculated in comparison with the market returns. ICICI Bank returns had a very strong correlation with the BSE Returns and HDFC Bank and IndusInd Bank has a very strong correlation with the National Stock Exchange (NSE) returns out of these banks, all other banks had moderately high correlation with the market returns.

4.5 CALCULATION OF HYPOTHESIS

Hypothesis – 1

Null Hypothesis (H0): There is no significant difference in the risk-return trade-off between Banking stocks listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) over a ten-year period from January 2013 to January 2023

Alternative Hypothesis (H1): There is a significant difference in the risk-return trade-off between Banking stocks listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) over a ten-year period from January 2013 to January 2023

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 BSE	1.4290	6	.69349	.28312
NSE	1.4312	6	.69549	.28393

Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 BSE & NSE	6	1.000	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	BSE - NSE	-.00217	.01169	.00477	-.01443	.01010	-.454	5	.669

Interpretation: The hypothesis aims to assess whether there's a noticeable distinction in the risk-return trade-off among Banking stocks listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) from January 2013 to January 2023. The null

hypothesis (H0) suggests that there isn't a significant difference in this trade-off between the two exchanges during this period. Meanwhile, the alternative hypothesis (H1) contends that there indeed exists a significant difference in the risk-return trade-off between these Banking stocks on BSE and NSE over the specified ten-year period.

Given the significance value of 0.669, this means that the hypothesis test does not reach the commonly accepted threshold (usually 0.05 or lower) for establishing statistical significance. Consequently, based on this result, we do not have enough evidence to reject the null hypothesis. Therefore, according to this analysis, there is no statistically significant difference in the risk-return trade-off between Banking stocks listed on BSE and NSE during the stated time frame.

Hypothesis – 2

Null Hypothesis (H0): The performance of Banking stocks listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) does not significantly differ from each other over the ten-year period from January 2013 to January 2023

Alternative Hypothesis (H1): The performance of Banking stocks listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) significantly differs from each other over the ten-year period from January 2013 to January 2023.

Independent Samples Test									
	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
AXIS_RETURNS Equal variances assumed	3.740	.067	.289	20	.776	.02782	.09636	-.17319	.22882
AXIS_RETURNS Equal variances not assumed			.289	12.338	.778	.02782	.09636	-.18150	.23713

Interpretation: Since the significance value 0.776 is greater than the conventional significance level of 0.05, we fail to reject the null hypothesis. This implies that there is no significant difference in the performance of Axis Bank stocks between BSE and NSE over the specified period.

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
ICICI_RETURNS Equal variances assumed	7.910	.011	.565	20	.578	.04782	.08463	- .12873	.22436
Equal variances not assumed			.565	13.107	.582	.04782	.08463	- .13487	.23051

Interpretation: Similar to Axis Bank, the significance value for ICICI Bank is 0.578 greater than 0.05. Therefore, we fail to reject the null hypothesis, indicating no significant difference in the performance of ICICI Bank stocks between the two stock exchanges.

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
SBI_RETURNS Equal variances assumed	8.353	.009	.004	20	.997	.00045	.11023	-.22948	.23039
Equal variances not assumed			.004	11.749	.997	.00045	.11023	-.24028	.24119

Interpretation: With a significance value of 0.997, we again fail to reject the null hypothesis for SBI. There is no significant difference in the performance of State Bank of India stocks between BSE and NSE.

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
YES_RETURNS Equal variances assumed	12.176	.002	.611	20	.548	.10755	.17589	-.25936	.47445
Equal variances not assumed			.611	11.769	.553	.10755	.17589	-.27652	.49162

Interpretation: Similar to the previous cases, the significance value for Yes Bank is greater than 0.05. Therefore, we fail to reject the null hypothesis, suggesting no significant difference in the performance of Yes Bank stocks between the two exchanges.

Independent Samples Test

	Levene's Test for Equality of Variances	t-test for Equality of Means								
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
INDUSIND_RETURNS Equal variances assumed	2.320	.143	-.451	20	.657	-.05164	.11441	-.29028	.18701	
Equal variances not assumed			-.451	14.536	.658	-.05164	.11441	-.29617	.19289	

Interpretation: The significance value for IndusInd Bank is greater than 0.05, leading us to fail to reject the null hypothesis. There is no significant difference in the performance of IndusInd Bank stocks between BSE and NSE.

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
HDFC_RETRUNS Equal variances assumed	.001	.975	- .627	20	.538	-.04673	.07450	-.20213	.10868
HDFC_RETRUNS Equal variances not assumed			- .627	19.847	.538	-.04673	.07450	-.20221	.10875

Interpretation: The significance value for HDFC Bank is greater than 0.05, indicating that we fail to reject the null hypothesis. There is no significant difference in the performance of HDFC Bank stocks between BSE and NSE.

In summary, based on the given significance values, we do not have enough evidence to reject the null hypothesis for any of the banks. Therefore, we conclude that, over the specified ten-year period, the performance of Banking stocks listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) does not significantly differ for the mentioned banks.

CHAPTER 5

FINDINGS AND SUGGESTIONS

5.1 FINDINGS

Based on the Objectives, the following were found in this research paper:

- Here we have taken 6 Banking stocks out of which 3 from BSE and another 3 from NSE to calculate the risk and returns for the period of Jan 2013 to Jan 2023.
- As per the requirements for analysis, here we calculated the average returns of the selected stocks and standard deviation for identifying the risk levels of the stocks.
- Beta describes the relationship between the stock returns and the index returns. From the Betas of banks, it is found that all the banks have a positive Beta value according to which the stock values move as per the movement of the market index.
- Out of BSE Stock returns ICICI Bank Ltd earned the highest returns Followed by the other banks in BSE which is Axis Bank Ltd and State Bank of India Ltd has earned returns.
- Out of NSE Stock returns IndusInd Bank Ltd earned the highest returns Followed by the other banks in NSE which is HDFC Bank Ltd and YES Bank Ltd.
- ICICI Bank Ltd and Axis Bank Ltd had a high beta level i.e 1.747 and 2.017, but the company was earning very good returns. So, if an investor is ready to take high risk levels to get good returns, it is preferable to invest in ICICI Bank Ltd and Axis Bank Ltd.
- IndusInd Bank Ltd has higher returns with the beta value 1.401, so this would be considered as the better performer to invest Moderate risk compared to all other Banking stocks.
- Companies Such as YES Bank Ltd and State Bank of India had high levels of beta in the study period which is more volatile in nature, but the returns were low.
- HDFC Bank had a beta of 0.514 and returns of 1.754 Amongst the six companies, HDFC Bank was the only company which had the combination of comparatively low beta with good returns.
- Historical data of both the market is measurable of the banking stocks because both BSE & NSE has same functioning with the little difference in price in both the market. There are many companies which are listed in both the markets so similar type of fluctuations can be seen.
- Both the market has shown great results in recent times. As BSE has higher number of returns than that of NSE it can be visible that the fluctuation in BSE is more than NSE.

5.2 SUGGESTIONS

1. As the average returns of the Banking stocks, ICICI Bank Ltd, IndusInd Bank Ltd, Axis Bank Ltd and HDFC Bank Ltd were high, the investors who are willing to earn more returns, can invest in these stocks.
2. The banking stocks SBI Bank and Yes Bank are risky in investing because of high volatility, it is suggested that the investors should be careful while investing in these securities as they are having low returns.
3. The comparison between the risk and returns of the selected stocks in BSE and NSE, reveals that BSE recorded the highest return as well as the second highest risk. It is advisable for the investors to invest in BSE.
4. According to the analysis both BSE and NSE Stocks were not weak form efficient during the study period. It is required to know the complete knowledge of investments before investing in securities.
5. If the Investor wants to invest in the stocks with lower risks and positive returns, he is suggested to invest in those securities whose Beta is moderately low.
6. Don't put your entire investment in one security. It is like "putting all the eggs in one basket". This will make high risk in the long term.
7. Investors are always diversifying their investments in different sectors stocks to overcome the risk of drastic fall of stocks due to fundamental weakness of company.
8. Good advisory body always gives proper suggestions to investors which will help to get higher returns with lower risk.

5.3 CONCLUSION

Therefore, after by studying and comparing both the Bombay stock exchange and National Stock exchange, we can conclude that both BSE and NSE are the pillars of Indian Stock Market. As a whole stock market is sometimes highly volatile and has lot of fluctuations. It depends upon the investors how he can make use of this to get the money which he has put in the market. Risk and returns analysis are very essential, because it helps to calculate future predictable returns and risk of the stock. From this study, during the period Jan 2013 to Jan 2023 with the selected stocks it is clear that investment in ICICI Bank Ltd, IndusInd Bank Ltd and HDFC has higher returns with moderately high risk also. While compared to other banks have high risk with low returns in variations.

An investor should be in a position to analyse the various investment options available to him and thus minimize the risk and maximize the returns. Beta is useful to tool for comparing the relative systematic risk of different stocks, as such the risk is directly correlated with return. It is generally believed that higher the risk, the greater the reward but seeking excessive risk does not ensure excessive return. At a given level, each Investment has a degree of risk. It is therefore important for an investor to analyse the continuous volatility of bank stock while constructing a profitable portfolio.

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