A Study on Risk and Return Analysis on Indian Banking Sector

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ABSTRACT

Indian companies play an important role in the country's economy and serve as an i mportant defense against economic crisis. Risk is defined as the possibility of a neg ative impact on assets or value resulting from current processes or future events an d is praised for business recovery, especially since the recent global economic crisispushed other countries' companies to the point of collapse. .

The Indian market is known for its high volatility, exceeding other global markets. Ma rket risk reflects the tendency for stock prices to decline due to changes in market ris

k. Although banking and financial services funds have historically provided good risk

adjusted returns, there is risk in the portfolio as some funds invest heavily in one pro duct. The market value of these investments will vary depending on the business ow ner's financial and economic performance and political, tax and market conditions.

Business risks include market prices, interest rates, exchange rates and commodity prices. Banks are important for supporting economic growth, but they have proven to be more volatile than other sources of investment, making them riskier capital. Altho ugh stock investments generally provide higher returns, unusually high returns may not be sustainable, resulting in price instability and thus lower interest rates.

This study aims to analyze the performance of selected banks in the Indian banking sector in measuring risk and return over a specific period of time.

Sections:

The report titled "Risk Analysis and Analysis of Indian Market" is divided into six sections.
Chapter 1: Introduction
- Introduction to Research
- Business Process
- Company Profile
- Research Background
-            Research Requirements Chapter
2: Book Review Chapter 3 : Research Design

- Research Design
- Data Collection
- Sample Size
- Study Duration

Chapter 4: Data Analysis and Interpretation

Chapter 5: Concepts, Recommendations and Recommendations Chapter 6: Book List/Description

Chapter 1 Introduction

Investment risks in the banking sector are still high, bank rates are highly vari able and changes do not regularly boost business. An important risk is the ba nk's beta, which takes into account the volatility of a bank stock and its correl ation with the overall stock market; This is important to determine the bank's cost of capital and return target.

Despite financial reform and management of international banks, the expecte d decrease did not occur. Events such as the crisis in the Eurozone and the o ngoing economic crisis have led to a period of increased risks. It is worth noti ng that stock beta outpaces risk, so it takes time for risk reduction to be reflec ted in empirical data.

Future risk of the banking sector is important for banks, business owners and policy makers. While some consider low-risk, low-

return banking, others believe credit, interest and currency risks make this impossible.

The effectiveness of banking reforms and the impact of leverage on banks' c osts of capital will be significant. Increasing equity should reduce risk and cos ts, but issues such as taxes and government intervention can hinder this.

According to PwC's latest report "Financial Reforms: The New Challenge", th e post-crisis bank balance value is expected to drop from 12% to 8%-

10%. This decrease will result from the regulation aimed at reducing the amo unt of money in the bank and the gradual return to normal of the financial market. Short-

term challenges such as overcapacity, tough competition, weak markets and price compliance will have an impact on performance, limiting returns to 1- 2% of fairness cost. This is a departure from the rules before the crisis, when investors in the bank took advantage of the youth, so the affairs of both the b ank managers and the boys needed to be fixed.

The report suggests that this new balance should not cause concern. While the price-to-

book ratio currently hovers around 0.5x, a return to investment profitability wil l also bring profit to the bank. It is assessed that the 9-

11% return on equity target will be achieved by a small adjustment in the com pany's stock prices and the reopening of debt and business activities to enabl e banks to work on more business. With the cost of capital falling by 8-

10%, investors should welcome the returns from the lower-than-expected profile of the business.

To achieve this, banks need to make themselves more attractive to investors by announcing reliable and effective procedures, providing information and a voiding negative publicity. However, the report acknowledged that risks in the euro area are unlikely to be resolved in the short term and that economic we akness will continue to affect banking activities. Therefore, although this new balance will take time to complete, it is important for the business and its inve

stors to consider a long-term strategy based on the long-term aspect of the business.

INDUSTRY PROFILE

NSE

The National Stock Exchange of India (NSE) is the country's largest stock exchange and operates in many cities and towns across the country. It was created by leading t rading companies with the aim of providing a variety of modern, fully automated, screen-
based trading systems. NSE promotes transparency, speed, efficiency, security and f air trade. He implemented government offices that set an example for occupational s afety in terms of method, practice and procedure. NSE has played a significant role i n reforming the Indian securities market, influencing the microstructure, market activi ty and trading volume. The market now uses information technology to provide efficie nt and transparent business, clearing and settlement processes. The transformation of business management has witnessed many product and service innovations, including analytics-
based business, telecommunications, dematerialization and securities exchange, len ding, private trading, risk management, emerging markets, and others.

Vision

- To move forward, create global impact and increase people's financial well-being.

Price
Honesty.
Customer-focused culture.
Faith, respect and care for people. Passion for
excellence.
Teamwork.

Logo

Organization:

National Stock Exchange of India Limited (NSE) was established in response to the proposal for a new stock exchange that would provide fair opportunities to investors across the country. Unlike other stock exchanges in India, NSE is a tax-
paying company established by a financial institution in November 1992. Taste. Its n etwork covers more than 1,500 locations and supports more than 2,30,000 terminals.

NSE introduces instruments like Mini Nifty, Long Term Options and Mutual Funds to promote the securities market. It has also launched services such as DMA, FIX functi onality, co-location facilities and mobile trading to meet changing market conditions.

NSE is expanding its global reach through merger with CME Group and Memorandu m of Understanding (MOU) with Singapore Exchange (SGX) to develop products an d services related to SGX trading services in India. They are also investigating bilater al securities trading links to facilitate trading disputes between the two exchanges.

NSE is committed to a transparent business ecosystem with high levels of security, i ntegrity and business governance that delivers business growth and investments to investors.

COMPANY PROFILE

Indian Bank

Bank of India is a national bank established on 15 August 1907 as part of the Swade shi movement. As of March

31, 2020, the company has over 19,429 employees and a total business turnover of over Rs 20,000 Cr. 2,86,633 crore on the same day. Thebank uses Core Banking Solutions (CBS) in all 2,250 branches.

Internationally, Indian Bank has branches in Singapore and Colombo, including forei gn banks in Colombo and Jaffna. Additionally, there are 240 foreign media companie s in 70 countries. The bank is involved in various banking activities and is a subsidiar y of Indian Bank Commercial Banking Services Ltd. It has subsidiaries such as. and Indian Bank Housing Ltd. and Indian Bank Mutual Funds.

Indian Bank is known for its banking services and has 97 foreign exchange authorize d offices and 73 branches dedicated to small and medium-
sized businesses. It has also set up MSME CPUs at key locations and signed an Mo U with the National Small Industries Corporation (NSIC) to target the MSME sector.

In terms of rural development, Indian Bank has provided banking services to 1,523 vi llages with a population of 2,000 or more and has won the best award in the Rural D evelopment Awards and Best Practices in Microfinance category. The bank has also established special microfinance centers called "Microsate" and Microfinance Kendras.

Indian Bank, 100% Core Banking Solutions (CBS) branches, 100% business comput ers, 2172 ATMs, internet and phone service etc. It is the center of technology in the b anking sector. IB credit card, IB gold coin, IB prepaid card and other products were launched.

South Indian Bank

South India Bank is a historical financial institution that emerged from the Swadeshi
movement in India. It was founded in Thriss ur, Kerala, with the vision of providing a

safe place for people to save money and provide affordable loans to businesses, thus relieving them from the burden of taking out loans. The bank has achieved many milestones such as becoming the first private ba nk to receive bank status in Kerala in 1946. It was the first bank to open vaults, open NRI branches and implement banking syst ems in the name of the Reserve Bank of India. South India Bank has established a strong presence across India with 824 branc hes, 4 service branches, 25 subscribers and 1233 ATMs.

Today the bank is known for its good behavior and commitment to providing good service and good customer service. It continu es to develop by using technology and its professional team to meet the needs of its customers with its new logo and image.

Indian Overseas Bank Profile

Indian Overseas Bank has set itself the ambitious target of becoming one of India's t op five banks in terms of business volume and profitability by 2020. Worldwide development.

Their core values

revolve around putting customers at the center of everything they do, aiming to grow with their customers and create great experiences. They also emphasize honesty, int egrity, fairness and transparency in all interactions. The bank is committed to develo ping business leaders, building a pipeline of talented and committed employees, fostering innovation and promoting environmental stewardship through green business practices.

The 2019-

2020 mission outlines several key objectives. These include offering competitive pro ducts in terms of product quality, variety, performance and cost effectiveness. They al so focus on developing human resources through education, exposure, training, and empowerment, emphasizing support over punishment. The bank is committed to cre ating good companies that will become leaders in the future and contributing to the e conomic development of the country through its efforts towards customers.

The bank plans to update its delivery process to meet customer needs, resolve custo mer complaints quickly and implement policies and procedures that comply with the l aw. They are also focusing on using customer relationship management (CRM) insig hts to improve product and service quality, expanding their IT infrastructure to deliver entire department services with one click, and adopting more "growth in the bank" m ethods to drive future growth.

ICICI Bank

ICICI Bank is a wholly owned subsidiary of Indian financial institution ICICI Limited, established in 1994. Over the years, ICICI has evolved from a financial development company to a multinational financial services group. In 1999, it became the first non
-Indian and non-Japanese Asian bank to be listed on the New York Stock Exchange.

In 2002, ICICI and its subsidiaries merged with ICICI Bank to create a global financial institution. The merger is intended to deliver value to the shareholders of ICICI and ICICI Bank by offering lower interest rates, increasing revenue and expanding into new markets. The merger was approved by shareholders and regulators.

Today, ICICI Bank is India's leading private bank offering a wide range of financial products and services. It focuses on business management, as evidenced by its principles of business conduct and ethics for its managers and employees.
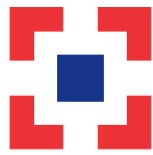
HDFC Bank

Housing Development Finance Corporation Limited (HDFC) is one of the first institut ions to receive "in principle" approval from the Reserve Bank of India (RBI) to set up a private sector bank as part of the RBI's drive for India's independence. Financial s ector. Business. World Class Indian Bank. Its aim is to establish strong customer rel ationships in different business lines, to become the preferred banking service of its target stores and customers, and at the same time to achieve health profitably accor ding to risk. The bank is committed to maintaining the highest standards of ethics, in tegrity, corporate governance and compliance. HDFC Bank's business strategy is ba sed on five core principles: operational excellence, customer excellence, product lea dership, people and sustainability.

As on March 31, 2020, HDFC Bank's authorized capital is Rs. 5.5 billion and paid- up capital of Rs. 501,29,90,634 (2506495317 shares of Rs 2 each). HDFC Group ho lds 21.67% of the bank's equity capital, of which around 18.87% is held by ADS/GD R depository institutions. Foreign investors (FII) shares are 32.57% and the total nu mber of shareholders is 4,41,457.

Reason for this study:

Studying risk and return analysis of Indian banking sector is important due to many mistakes.

1. **Understanding Business Dynamics:** This study is important to understand the nature of Indian banking system. This understanding is important for investors to ma ke informed decisions about their financial activities. Risk assessment: An important aspect of assessing the risk associated with breaking a beta bank. This parameter c ombines the volatility of banking stocks with their correlation with the Indian stock market. Understanding this interaction helps determine the bank's cost of capital and t herefore the appropriate amount of return the bank should earn.

3. Market Research: Research can provide insight into historical return patterns acro ss different banking sectors, compare risk and return patterns across sectors, and c ompare beta divisions across corporate markets by showing trends and patterns (ris k) present across all sectors. Such analyzes are important in making investment dec isions. Compliance with Laws: Given the constant changes affecting the banking ind ustry, understanding these changes is important for investors and shareholders rega rding skills related to the complexity of the business. Research Findings This resear ch may reveal different beneficial results for companies. Analyzing Indicators:: Can help

evaluate the impact of internal decision making and external stimuli on busines s performance in an Indian company. Regulators and regulatory bodies to facilitate i nformed decision-making and policy development.

OBJECTIVES OF THE STUDY

PRIMARY OBJECTIVE

The main purpose of this study is to examine the risk and return characteristics of ba nking companies focused on ICICI Bank, HDFC Bank, Indian Overseas Bank, SouthIndian Bank and Bank of India.

SECONDARY OBJECTIVE

1. Check out the five-year returns of various banking companies.
2. Determine the variance and standard deviation (risk) for each company over a five
   -year period.
3. Compare the risk and return rates of different companies.
4. Compare coefficient of variation and beta for the banking industry.
5. Determine the best investment among the selected banks.

CHAPTER - II

REVIEW OF LITERATURE

Dr. Sudarsana Reddy G (2013) analyzed the factors related to the turnover of NS E FMCG companies' products and compared them with the market. They collected data from three FMCG companies over a year and used tools such as mean, stan dard deviation, alpha, covariance and beta. Their analysis shows that HUL is perfo rming better than ITC and Britannia but analyzing the performance of FMCG comp anies is difficult due to volatility. They also noted that market indices are outperfor ming the company.

Nagarajan and Prabhakaran (2013) conducted a study analyzing the risks and ret urns of 10 major FMCG companies listed on NSE and their market price volatility. They collected stock price data over a year and used tools such as standard deviation, correlation, beta and variance. Their analysis shows that the share prices of H UL and ITC are more volatile than other companies and the prices show a similar tr end to the market. They also found that share prices of Dabur companies were mo re volatile due to the difference between high and weak standards, highlighting the importance of analyzing the financial mix and costs before investing. The volatility of stock returns in the Nigerian banking sector was examined. They focus on most investment and liquid banks listed on the Nigerian Stock Exchange, including Acce ssbank Plc, ETI Plc, Diamondbank Plc, Fidelitybank Plc and GTB Plc. Their study was based on data from January 3, 2006 to December 31, 2012 using the ARMA- GARCH model. The research shows that stock returns in the Nigerian banking sect or

exhibit clusterlike fluctuations and fluctuations remained high over the sample p eriod. They also find that the distribution of returns in the banking sector exhibits ku rtosis and that signals of innovation have a negative impact on stock turnover.

Dr. Krishnaprabha S and Mr. Vijayakumar M (2015) investigated the risk and ret urn analysis of selected stocks in India including sectors like IT, Automobile, Pharm aceuticals and Fast Moving Consumer Goods (FMCG). They combined at least fiv e companies from each industry and analyzed data from January 1, 2010, to Dece mber 31, 2014, using beta coefficients, standard deviation, and differences. Their r esearch showed that banking and automotive industries have high risk and low ret urn, while IT, FMCG and pharmaceutical industry have low risk and high return.

Dr. Daily returns, beta and standard deviation were analyzed as volatility and correl ation measures in the study. Research shows that all banks except HDFC Bank ar e more volatile than the market and have beta values

greater than 1. The association selects 10 automotive and IT trading companies lis ted on NSE. They are evaluated over 3 years using tools such as mean reversion, standard deviation, CAPM model. Their analysis helps investors choose stocks acc ording to their preferences and recommends Maruti Suzuki and Bosch in the auto motive sector and HCL Technologies in the IT sector. They concluded that the auto motive industry has recorded better economic growth than the IT industry.

Dr. Subramanyam P and Dr. Nalla Bala Kalyan (2018) analyzed the return and ri sk of buying shares of 10 different companies from the secondary market in 1 mont h. They use tools such as beta, expected return, and coefficient of variation. Their work shows market movements associated with stock prices; suggests that using a combination of context and analysis provides some assistance in interpreting patte rns. They concluded that although there is no single method sufficient to identify and explain trends, these tools can help traders interpret patterns.

Andrew Worthington and Helen Higgs (2018) examine the risks, returns and pro spects of diversification across major art and financial markets from 1976 to 2001. These include U.S. Treasury bonds, corporate and government bonds, and small a nd large companies. Their research shows that although the arts present lower cos ts and higher risks than traditional businesses, there are diversification opportunitie s between arts and finance. But they found that documents that combined art with f inancial assets did not yield different results than documents containing only art, an d that some aspects of the drawings made work time more efficient.

Kumar and Madan (2019) investigate the relationship between risk and reward in th e Indian banking sector and find that higher risk is associated with higher rewards b ut too much risk can lead to financial instability. Gupta and Sehgal (2020) focused on the impact of macroeconomic variables on the

risk and return of Indian banks, with an emphasis on the interaction of the banking s ector with the overall economy.

Theoretical Study

Risk Management

Risk Management is primarily the identification, analysis and monitoring of risk, and then th e coordination and use of resources within the business to reduce, monitor and control the likelihood or impact of adverse events, or to reduce the likelihood or impact of adverse eve nts, It is an actual process to monitor and control. Complete the risk situation. Risk management strategies may include transferring the risk to another person, avoiding the risk, reduc ing the downsides of the risk, or accepting some or all of the benefits of the risk.

Definition of "Risk"

This is a description of investment risk. It is important for investors to understand that risk i s not just the possibility of losing money but also the variability of returns. As you said, stan dard deviation is a measure of this change, it shows how much the investment returns from its average return. Risk assessment is an important part of risk management because it h elps identify and prioritize, allowing companies to develop effective risk mitigation strategie s.

Definition of "Return"

Yes! In the case of investing, return is the profit or loss on an investment over a period of ti me, usually expressed as a percentage. It includes income from investments (such as divid ends or interest) as well as capital gains or losses. Understanding investment returns is im portant for investors to evaluate the performance of their portfolios and make informed decisions.

Risk Type:

1.   **Systemic Risk:** Also known as business risk, risk refers to the risk inherent in the entire business or industry. It cannot be excluded from diversification because it affects all investments.
Examples of risk include interest rate risk, financial risk, and business risk.

2.   **Unsystematic risk**: Systematic risk, also called systematic risk, is the risk specific to a c ompany or business. It can be reduced by different methods. Examples of negative risk inc lude business risk, financial risk, and regulatory risk.

By understanding and managing these different risks, investors and organizations can mak e more informed decisions to protect their assets and operations.

A. **Systematic Risk:**

Systematic risk, also known as business risk or undifferentiated risk, is the risk that exis ts in all or all businesses. It cannot be removed by different methods as it affects all sec urity in the market. Physical risks arise from events outside the organization or busines s and therefore beyond the organization's control. Examples of risk factors include:

1.   **Interest rate risk**: It is the risk arising from changes in interest rates. It affects the a mount of fixed income and affects the company's borrowing costs.

2.   **Market risk**: Market risk refers to the risk of business loss due to changes in market prices. This includes risks related to commodity prices, commodity prices and exchange rates.

3.   **Purchasing Power or Inflation Risk**: This risk arises from the possibility that inflatio n will reduce the purchasing power of money, causing the real value of the investment to decrease.

Risk is very important in investment decisions because it exists in all businesses and ca nnot be diversified. Investors compensate for exposure through the risk premium, which is the expected return the investor needs to keep the riskier asset risk-free.

1. **Interest Rate Risk**

Interest rate risk is a major concern for fixed income investors. It is caused by changes i n interest rates over time, which affects the value of securities. There are two types of i nterest rate risk:

1.   **Price Risk:** Price risk, also known as market risk, is the risk that the price of a securit y will decline due to changes in interest rates. When interest rates rise, the value of exis ting bonds falls because investors can make more money from new bonds issued with higher interest rates. Conversely, when interest rates fall, the value of existing bonds in creases.

2.   **Investment return risk:** Investment return risk is the risk that capital gains or interes t income from an investment will not provide a return at the same rate of return as the o riginal investment. This risk is especially important for investors who rely on the reinvestment of income from their investments at similar rates to recover.

Both risk ratio and return on investment are important to fixed income investors becaus e they affect the total return and value of their information. Investors often use strategie s such as diversification and trading to manage interest rate risk and reduce its impact on the portfolio.

2. **Market Risk**:

 Market risk is a major concern for investors and traders in financial markets. Regarding the risk of business loss due to changes in market value. Below is the division of business risk:

1.   **Unrealized risk**: This refers to the risk associated with an investment or business an d not with anything else. This is like risking heads or tails when flipping a coin.

2.   **Relative Risk:** Relative risk describes the risk at various levels of business activity or when compared to other investments. For example, foreign exchange risk may be high er for companies that make most of their sales through exports.

3.   **Directional risk:** This is the risk resulting from exposure to a particular product. For example, if the market price of the stock falls, investors holding the stock will suffer losses.

4. **Non-directional risk**: Non-
directional risk occurs when a business strategy deviates from the same path. For exa mple, investors can buy and sell stocks simultaneously to reduce risk regardless of themarket.

5.   **Basis risk:** Risk arises from bad matching risk and usually affects a position in the same business but not the same. An example would be maintaining a position in a business that uses a related but different technology.

6.   **Volatility Risk:** This risk relates to changes in the price of the security due to changes in the volatility of the underlying risk. This is especially important for derivatives because changes in the value of the asset can affect the price.

Understanding these business risks is important for investors and traders to manage their portfolios and reduce potential losses.

3. Purchasing Power or Inflation Risk:

Purchasing power risk, also known as inflation risk, is a major concern for investors because it can affect the real price of their resources over time. The classification of financial risk type is as follows:

1.   **Demand inflation risk**: This type of inflation risk occurs when prices rise due to excess supply. This occurs when the capacity is exhausted and cannot be expanded any further. Financial demand risk reflects the impact of consumer demand on price.

2. **Inflation risk:** Inflation risk arises from the increase in production costs leading to an

increase in the prices of goods and services. When the cost of producing a good product increases, manufacturers often pass these costs on to consumers, causing the cost of the final product to increase.

Two types of inflation risks can reduce the purchasing power of investments over time, especially if the inflation rate exceeds the return on the investment. Investors need to consider these risks when making investment decisions to ensure that their portfolios areprotected from the effects of inflation.

B. Unsystematic Risk:

Unsystematic risk, also known as specific risk or variable risk, is a risk specific to a company or business. Unlike risk that affects all or a large portion of the business, negative risk canbe reduced through diversification.

Such risks arise from situations such as performance management in a company or business, high competition, management change or even natural disaster in a particular area.

Investors can reduce downside risk by diversifying their portfolios across different companies, sectors or asset classes. By spreading investments across multiple assets, any losses in one investment will be offset by gains in another, thus reducing the overall risk of the portfolio.

1. Business or Liquidity Risk

Business risk, also known as financial risk, is the risk that the company will not be able to meet its financial obligations due to its business or other reasons related to its business. It involves the risk associated with the company's ability to

generate sufficient cash to pay its operating expenses and debts.

Business risks can arise from many sources, including changes in customer needs, competit ion, management changes, and changes in repair technology. It will also be influenced by co mpany-specific factors such as marketing, management team and financial structure.

Business or financial risks are identified and listed below:

1.   Asset liquidity risk: This risk occurs when the company cannot sell its assets quickly and a t a fair price to meet its short-

term financial obligations. If the company is forced to sell the asset at a discount or cannot s ell it at all, a loss will occur.

2.   Financial Risk: This risk occurs if the company eventually fails to receive enough money t o meet its payment obligations. It can lead to nonpayment, unemployment, or financial problems.

Business risk involves managing the balance sheet, diversifying the portfolio and implementing sound financial management. By understanding and mitigating business risks, companie s can improve their financial stability and become resilient to business losses.

2. Financial or Credit Risk

Financial risk, also known as credit risk, arises from changes in an organization's resources with three primary sources of capital: personal money (e.g. equity), loans (e.g. loans) and ret ained earnings (e.g. savings and redundancy). Types of financial or credit risk include excha nge rate risk, yield risk, credit risk, non-directional risk, sovereignty risk and risk.

Foreign exchange risk, also known as exposure risk, arises from the potential exchange bet ween two currencies. Investors or businesses are exposed to this risk when they have assets, businesses, loans or foreign loans.

Rate of return risk is often overlooked but is an important factor in credit risk analysis. Frombanks, non-banking financial companies (NBFCs), etc. It involves evaluating the expected return on loans given to consumers.

There will be a risk if the candidate does not deliver the insurance or cash as required by theemployment contract or job.

3. Operational risk

Operational risk results from failures in business processes, often due to human error. Thes e risks may vary by business and may arise from errors in internal processes, people, polici es and systems. Types of operational risk include structural risk, human risk, legal risk and political risk.

Risk model arises from the use of various models to value financial securities. It includes pot ential losses resulting from weaknesses in the financial models used to measure and manage risk.

Human risk occurs when an individual fails to follow the organization's procedures, practices or policies and is adversely affected by the desired behavior.

Legal risk occurs when the parties cannot reach an agreement or the transaction involves g overnment regulations or laws that could reinstate the repair.

Political risk arises from changes in government policies and can have a negative impact on investors. This risk is especially high in the third world.

C. Conclusion

Comments on the three main elements of risk management:

1.   Classification of risks: Organizations should classify risks into two broad categories: downside risks and downside risks.

2.   Nature of the risk: The risk is beyond the organization's control, but its impact can be reduced through effective planning.

3. Management of non-physical risks:
Nonphysical risks can be controlled and organizations should aim to minimize their neg ative impact through careful planning and implementation.

Understanding Risk and Reward:

Different investments have different levels of risk and potential rewards. For example, Can adian Savings Bonds and GICs are considered less risky because they are backed by trust ed institutions such as the government or major financial institutions. These investments are safe but often provide lower returns than risky options and may not keep up with inflation.

On the other hand, bonds will provide higher returns than CSBs and GICs but are also riski er. Prices may vary depending on factors such as the credibility of the supplier and change s in interest rates. If these conditions change negatively, investors' bonds will suffer losses.

Stocks have the potential to provide higher returns in the long run, but they are also the ris kiest option. Bond investors are debtors and receive the principal as well as interest and th e balance of the principal during bankruptcy. However, shareholders own the company and face the risk of losing all their capital if the company fails. For example, successful compa nies can provide shareholders with dividends and rising stock prices.

Investing in the stock market is known for its volatility, is very risky and should only be cons idered by investors who are ready to completely lose their entire investment.

CHAPTER - 3

RESEARCH METHODOLOGY

A research method is a method of solving a research problem. It covers the entire research process, from research design to data collection and analysis. Key elements of the study include research design, sample design, data collection procedures, and data analysis procedures. These elements are important to ensure that the research is conducted and that it is effe ctive and valid.

Research Design:

The research design adopted in this study is descriptive research. Descriptive research aimsto describe current situations.

Data collection:

In this study the researcher uses secondary data for method research here. This means that they are not collecting new data per se, but using existing data from different sources. Thes e sources include websites, magazines, newspapers, books, and similar sources. The use of secondary sources can be very useful because it provides access to a variety of informatio n collected and analyzed by others, allowing the researcher to tap into the pressure of infor mation and insight that already exists.

Data Source:

The data for this study was obtained from the National Stock Exchange of India (NSE India Ltd.). This shows that the researcher uses NSE India Ltd. Financial information about the stock market becomes important in terms of analysis.

Sample Size:

The sample size of this study consists of the top five banks in terms of capital. These banks are Indian Bank, South Indian Bank, Indian Overseas Bank, ICICI Bank and HDFC Bank.

Study Period:

This study will last five years, from 2018-2019 to 2022- 2023, and is designed as a risk reward.

Statistical tools to use:Return value

Sample definitionVariation

Sample variance Coefficient of variationBeta

Return:

Annual return represents the investment or loss over a period of time and is usually express ed as a percentage of the

initial investment. It is calculated by the following formula:
Annual Return = (Amount Invested / Initial Amount) * (1 / Number of Years)

This formula shows that the final and initial value of the capital is calculated by the number o f years in which the investment was made. Results are presented as a percentage to represent the annual return.

Sample Mean:

The sample mean in a security analysis represents the expected value or average of the returns of all resources in the database. This is also called expected return or average return
. The formula for calculating the sample mean is as follows:
Sample mean = (total annual return / total number of years) * 100

This formula calculates the annual average return for a specific time, providing an understan ding of: what is happening in the portfolio? Need for investment.

Variation:

Variation is a statistical measure used to measure the dispersion or dispersion of a series of data points. It shows the distance of each number in the data set to the center of the data se
t. The formula for calculating the change has three main steps:

1. Find the mean of the data set.
2. Subtract the average of each point to find the difference.
3. Square up any differences so they become positive results.
4. Add all square differences.
5. Divide the number by the total number of data points to get the variable.

The formula for calculating the variance is: 1
$n (x − x)2$ Variance=n Σi=1
Where:
- n is the number of data points,
- xi is each individual data point,
- x is the mean of the dataset

Standard Deviation:

Standard deviation is a statistical measure of the dispersion of a dataset relative to its mean. It is a widely used

indicator of the volatility, or risk, of an investment. The standard deviation is calculated as the square root of the variance.

In finance, standard deviation is often used to measure the volatility of the returns of an investment. Higher standard deviation implies greater volatility and therefore higher risk. Investors use standard deviation to assess the risk associated with an investment and to compare the risk of different investments.

The formula for calculating standard deviation is:

Standard deviation $=\sqrt{var}$

Where var = variance (the variance is calculated as explained earlier)

Coefficient of Variation:

The coefficient of variation (CV) is a measure used to compare the degree of variation or dispersion of a set of data points relative to the mean. It is calculated by dividing the standard deviation of the data by the mean and is often expressed as a percentage. The coefficient of variation is useful in comparing the risk or volatility of different investments orassets, especially when their means are different.

The formula for calculating the coefficient of variation is:

Coefficient of Variation = (Standard Deviation / Mean) * 100

A higher coefficient of variation indicates greater volatility or risk relative to the expected return. Conversely, a lower coefficient of variation suggests lower risk for agiven return.

Beta:

Beta is a measure of a stock's volatility in relation to the market. It indicates how the stock's price moves in relation to the market as a whole. A beta of 1 means the stock tends to move with the market. A beta greater than 1 indicates the stock is more volatile than the market, and a beta less than 1 indicates it's less volatile. Beta is usedin the Capital Asset Pricing Model (CAPM) to calculate expected return based on risk.

CHAPTER – IV

ANALYSIS OF DATA AND INTERPRETATION

INDIAN BANK

Table 4.1 Annual Rate of Return of Indian Bank

YEAR	OPENING PRICE	CLOSING PRICE	NUAL RATE OF RETURN	rowth Rate of Indian Bank
2018-2019	312.84	261.61	0.167	1.167
2019-2020	269.64	55.05	0.041	1.041
2020-2021	44.80	118.25	0.527	1.527
2021-2022	118.10	148.95	0.252	1. 252
2022-2023	160.10	288.55	0.360	1.360
TOTAL			1.34	6.34
Mean(Total Annual Rate of Return / No of Years)				0.26

Source: Annual Report of Indian Bank 2018-2019 to 2022-2023 from NSE India Ltd.

Interpretation

If an investor invested Rs 1 at the end of 2019, the investor will receive Rs 6.34 at t he end of 2023, meaning the total return to the investor will be Rs 5.34.

Table 4.2 Standard Deviation of Indian Bank

YEAR	ANNUAL RETURN (P)	Q = P – AVERAGE ANNUAL RETURN	Q²
2018-2019	16.7	-9.3	86.49
2019-2020	4.1	-21.9	479.61
2020-2021	52.7	26.7	712.89
2021-2022	25.2	-0.8	0.64
2022-2023	36	10	100
TOTAL	134.7		1379.63
Variance ($\sum Q^2$/ n-1)	344.90		
Standard Deviation	18.57		

Interpretation

Indian Bank's return varies from the average return by around 18.57%. Therefore, it is difficu lt to evaluate future returns based on past returns.

SOUTH INDIAN BANK

Table 4.3 Annual Rate of Return of South Indian Bank

Year	Opening price	Closing price	Annual rate of return	Growth Rate

2018-2019	25.61	15.47	0.121	1.121
2019-2020	17.09	6.70	0.078	1.078
2020-2021	5.90	8.25	0.279	1.279
2021-2022	7.95	7.50	0.188	1.188
2022-2023	7.95	14.65	0.368	1.368
Total			1.03	6.03
Mean(Total Annual Rate of Return/ No of years)				0.20

Source: Annual Report of South Indian Bank 2018-2019 to 2022-2023 from NSE India Ltd.

Interpretation:

If an investor invested Rs 1 at the end of 2019, the investor will receive Rs 6.03 at the end of 2023, meaning the total return to the investor will be Rs 5.03.

Table 4.4 Standard Deviation of South Indian Bank

Year	Annual return (P)	Q = P- Average annual return	Q2
2018-2019	12.1	-7.9	62.41
2019-2020	7.8	-12.2	148.84
2020-2021	27.9	7.9	62.41
2021-2022	18.8	-1.2	1.44
2022-2023	36.8	16.8	282.24
TOTAL			557.34
Variance ($\sum Q^2$/ n-1)		139.335	

Standard Deviation	11.80

Interpretation

South Indian Bank gives an average return of 11.80%. Therefore, it is difficult to evaluate fu ture returns based on past returns.

Indian Overseas Bank

Table 4.5 Annual Rate of Return of INDIAN OVERSEAS BANK

Year	Opening price	Closing price	ıal rate ofreturn	Growth Rate
2018-2019	17.95	14.7	0.164	1.164
2019-2020	14.86	7.65	0.103	1.103
2020-2021	7.70	16.00	0.415	1.415
2021-2022	15.70	18.15	0.231	1.231
2022-2023	18.25	22.45	0.246	1.246
Total			1.15	6.15
Mean(Total Annual Rate of Return / No of Years)				0.23

Source: Annual Report of INDIAN OVERSEAS BANK 2018-2019 to 2022-2023 from NSEIndia Ltd.

Interpretation

If an investor invested Rs 1 crore at the end of 2019, the investor will receive Rs 6. 15 crore by the end of 2023, meaning the total return to the investor will be Rs 5.15crore.

Table 4.6 Standard Deviation of INDIAN OVERSEAS BANK

Year	Annual return (P)	Q = P- Average annual return	Q2
2018-2019	16.4	-6.6	43.56
2019-2020	10.3	-12.7	161.29
2020-2021	41.5	18.5	342.25
2021-2022	23.1	0.1	0.01
2022-2023	24.6	1.6	2.56
TOTAL			549.67
Variance	137.41		
Standard Deviation	11.72		

Interpretation:

The average return of Indian Overseas Bank is around 11.72%.
It is therefore difficult to evaluate future payments relative to past payments.

ICICI BANK

4.7 Annual Rate of Return of ICICI Bank

Year	Opening price	Closing price	nual rate ofreturn %	Growth Rate
2018-2019	281.06	282.07	0.201	1.201
2019-2020	397.49	396.69	1.99	2.99
2020-2021	380.15	582.10	0.306	1.306
2021-2022	600.50	730.30	0.243	1.243
2022-2023	743.30	877.25	0.236	1.236
Total			2.97	7.97
Mean(Total Annual Rate of Return / No of Years)				0.59

Source: Annual Report of ICICI Bank 2018-2019 to 2022-2023 from NSE India Ltd.

Interpretation:

If an investor invested Rs 1 at the end of 2019, the investor will receive Rs 7.97 at the end of 2023, meaning the total return to the investor will be Rs 6.97.

Table 4.8 Standard Deviation of ICICI Bank

Year	Annual return (P)	Q = P- Average annual return	Q2
2018-2019	20.1	-38.9	1513.21
2019-2020	199	140	19600
2020-2021	30.6	-28.4	806.56
2021-2022	24.3	-34.7	1204.09
2022-2023	23.6	-35.4	1253.16
TOTAL			24377.02
Variance		6094.255	
Standard Deviation		78.06	

Interpretation:

ICICI Bank's average return is around 78.06%. Therefore, it is difficult to evaluate future returns based on past returns.

HDFC Bank

Table 4.9 Annual Rate of Return of HDFC Bank

Year	Opening price	Closing price	Annual rateof return	Growth Rate
2018-2019	1927.61	2219.54	0.230	1.230
2019-2020	2284.42	982.56	0.860	1.860
2020-2021	1001.80	1493.65	0.298	1.298
2021-2022	1412.30	1470.35	0.208	1.208
2022-2023	1384.60	1609.55	0.232	1.232
Total			1.82	6.82
Mean (Total Annual Rate of Return / No of Years)				0.36

Source: Annual Report of HDFC Bank 2018-2019 to 2022-2023 from NSE India Ltd.

Interpretation

The report explains that if an investor invests Rs 1 crore at the end of 2019, he will receive Rs 6.82 crore by the end of 2023, meaning his total return will be Rs 5.82 crore.

Table 4.10 Standard deviation of HDFC Bank

Year	Annual return (P)	Q = P- Average annual return	Q2
2018-2019	23	-13	169
2019-2020	86	50	2500
2020-2021	29.8	-6.2	38.44

2021-2022	20.8	-15.2	231.04
2022-2023	23.2	-12.8	163.84
TOTAL			3102.32
Variance		775.58	
Standard Deviation		27.8	

Interpretation:

HDFC Bank's average return is 27.8%. Therefore, it is difficult to evaluate future returns based on past returns.

CHAPTER-V

LIMITATIONS, SUGGESTIONS AND CONCLUSION

CONCLUSION

This study on the relationship between risk and reward in the Indian stock market reveals several important findings. First, it recognizes that there is a return on investment risk in India, especially in terms of distribution risk such as diversification and distribution. Second, there is a positive relationship between the stock market's return and the average return over the study period.
The analysis also shows the importance of beta as a measure of risk; It shows

that the beta value of the sample companies remained constant throughout the study period, which is useful for investment decisions. It also shows the relatio nship between risk and return in India.

Moreover, studies have shown that the Indian stock market is less efficient, as evidenced by the stochastic nature of monthly market returns and security return series. Overall, the findings reveal the risk-return relationship in the Indian capital market and provide valuable informatio n to investors and policy makers.

SUGGESTIONS

1. **Awareness:** Investors should be aware of the risks of investing in the stock market as the stock market is volatile and subject to volatile markets.

2. **Potential:** Compared to other investment methods, the stock market has the potential to grow and expand with more and more businesses and fast-growing businesses.

3. **Benefits:** Investing in the stock market has many benefits that can attract more investors, including low market capitalization, attractive incentives, cash payouts, and low interest rate s.

4. **Investment Suggestion**: In terms of rate of return, it is recommended to invest in ICICI B ank and HDFC Bank because their rate of return is higher than other banks.

5. **Risk Considerations**: HDFC Bank is preferred over ICICI Bank due to its lower risk profil e, making it a safer investment.

The purpose of these recommendations is to guide investors in making informed decisions when considering the risks and rewards of investing in the stock market.

LIMITATIONS OF THE STUDY

The limitations of this study are as follows:

1. The study is based on data over a five-year period only and therefore does not include changes that occurred before or after that period.

2. The research is limited to selected companies and therefore cannot identify all the risks a nd rewards of all businesses.

FUTURE RESEARCH DIRECTIONS

Based on the results of this study, future research may use the following:

1.   Investigate different types of risks: While this study focused on different type s of risks, future research may investigate other types of risks such as financial risk, credit risk, or political risk and their impact on risk. .

2.   Longterm analysis: This study is limited to a specific time period. Future res earch could extend the analysis to a longer period to observe the evolution of r isk-return relationships over time and across different markets.

3.   Comparative Analysis: Comparisons with other emerging or developed econ omies can provide insight into the unique characteristics and risk-
adjusted good spirit of the Indian stock market.

4.   Impact of regulatory change: Given the ongoing regulatory impact on the ba nking industry, future research could investigate the impact of regulatory change on business transaction risk returns.

5.   Behavioral implications: Examining the role of an investor's behavior and em otions in influencing the risk-
taking relationship can improve the understanding of business in India. 6. Mark et Performance: Further research can explore the performance of Indian mark ets beyond the weaknesses of the paper mentioned in this study. This can hel p understand how information is incorporated into market prices and its impact on risk and return.

Together, pursuing these future research directions can benefit investors, polic y makers, and researchers by providing a better understanding of the risk return of the Indian market.

CHAPTER-VI

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