

RETURN AND RISK ANALYSIS OF PUBLIC AND PRIVATE SECTOR BANKS: A COMPARATIVE STUDY

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Introduction:

Banking sector plays a vital role in the development of the economy. Investing in banking securities is very common among investors, but the banking sector securities tend to be volatile in nature, so if the market value of the banking securities drops, the asset shrinks. Investment is an activity that commits funds in any financial or physical form with an expectation of receiving some return in the future. All investments are characterized by the expectation of return. In fact, investments are made with the primary objective of deriving a return. The expectation of a return may be from income (yield) as well as through capital appreciation. Capital appreciation is the difference between the sale price and purchase price of investment. The dividend or interest from the investment is yield. Different types of investments promise different rate of return. The expectation of return from an investment depends upon the nature of investment, maturity period, and market demand and so on. The longer the maturity period longer is the duration for which the investor parts with the value of investment. Hence, the investor would expect a higher return from such investments. Risk is inherent in any investment. Risk may relate to loss of capital, delay in repayment of capital, non-payment of interest or variability of returns. While some investments such as government securities and bank deposits are almost without risk, others are more risky. The risk of an investment is determined by the investment's maturity period, repayment capacity, and nature of return commitment. The longer the maturity period greater is the risk. When the expected time in which the investment has to be returned is a long duration, say ten years instead of five years, the uncertainty surrounding the return flow from investment increases. This uncertainty leads to a higher risk level for the investment with longer maturity rather than an investment with shorter maturity.

The study mainly focuses to analyze the Bank Nifty movement behaviour towards the listed stocks of public and private banks. The object of this study is to evaluate the

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performance of banking stock, with prime focus towards identification of return and risks associated with each stock and also evaluate the portfolio return and risk of selected public and private banks.

Review of Literature:

Suresh A.S and Sai Prakash L (2018) study is an attempt to evaluate the returns of banking stocks listed on Bank Nifty and to identify the best stocks to invest and the worst stocks to be ignored. For study data collected based on the monthly prices of the banking stocks listed in Bank Nifty. The study concentrated on analysing the performance of twelve nationalised banks listed in NSE in terms of return, risk and beta for the period 1st January 2016 to 31st December 2016. It is found that the shares of Yes bank and Federal bank have given positive returns during the study period. Whereas the return of Axis Bank, Bank of Baroda and Bank of India were negative during the same period. And Bank of India, Canara Bank, Punjab National Bank, State Bank of India, Axis Bank, ICICI Bank and Yes Bank stocks carry a higher market risk.

Ms. M. GiriKumari and Prof. G.L. Narayanappa (2019) conducted a comparative study on risk return analysis of selected banks listed in BSE. For the study data was collected from five public and five private banks to compare risk and return analysis of selected public and private banks. An attempt was made to compare statistical tools like mean, standard deviation and beta were used to analyse the data. The study reveals volatility of the selected securities based on market benchmark and public sector banks are highly volatile when compared with the private sector banks.

Dr.PravinChoudhary and Dr.BhanuSahu (2020) conducted a comparative study on risk-return analysis of public and private sector banks. In this paper they concentrated on analyzing the performance of six nationalized banks listed in NSE in terms of return, risk and beta for the period 1st January 2020 to 31st December 2020. The study analysed the performance of banking sector taking Bank Nifty Index as benchmark. The study revealed that the shares of ICICI Bank, IndusInd Bank, HDFC Bank and Punjab National Bank have given positive returns but return of State Bank of India and Bank of Baroda were negative. Punjab National Bank, State Bank of India and ICICI Bank stocks carry a higher market risk.

Dr.MedaSrinivasaRao, Dr.Venkateswararao.Podile, Dr.DurgaprasadNavvula (2020) conducted a study on risk and return analysis of selected nifty banking stocks between United Progressive Alliance (UPA) and National Democratic Alliance (NDA) governments. For the study data was collected from top twelve banks listed in NSE for 10 years and analysed by using return, variance, standard deviation and beta. It is found that as a

whole the best performer of UPA period was IndusInd Bank and the least performer of the same period was Punjab National bank. During NDA period HDFC Bank with highest rate of return and union bank with lowest rate of return. From the analysis it is to found that comparison of returns on both the periods, UPA government has highest returns and NDA government possess' negative values of returns. IndusInd bank got higher returns and Union bank got lower returns during the study period. And comparing risk, the period of UPA government possess more risk than the period of NDA government. Yes bank has higher risk and HDFC bank has lower risk and in terms of maximum return and minimum risk Kotak and HDFC banks performed well during the study period.

Mehta VaniJoghee, Kanagatharani B, Gayathri S, Yazhini Devi R (2021) the study makes an attempt to conduct a risk & return analysis of selected banking securities. For the study data was collected seven banks for the period of seven years by random sampling and for analysing the data they used statistical tools are return, standard deviation, variance, deviations, correlation and beta. It is to found that Kotak Bank has experienced higher returns, IndusInd Bank has higher risk and Kotak Bank has the lower risk compared to seven banks.

Objectives of the study

1. To understand the Investment pattern of Banks.
2. To analyze the return and risk of selected public and private sector banks.
3. To compare the return and risk of selected public and private sector banks.

Need for the study

This study is to evaluate the performance of banking stocks with return and risk analysis. This helps to identify the fluctuations faced by the banks during particular period of time. To give a clear view to the investors how to invest in right banks which gives better returns with less risk. Hence, the study aims to conduct return and risk analysis of select banking securities in National Stock Exchange.

Scope of the study

The study is based on securities of 8 banks (4 Public and 4 Private sector) listed in National Stock Exchange. The study covers a period of 12 months, i.e. starting from 1st April 2020 to 31st March 2021.

Research Methodology

Sources of Data

The present study was conducted based on secondary data. Data was collected

from the NSE website, Journals and magazines etc.

Sample

Data was collected from four Public sectors banks listed in NSE namely Bank of Baroda, Indian Bank, UCO Bank and Union Bank of India. In the same manner data was collected from four private sectors Banks namely Axis Bank, Housing Development Finance Corporation, Industrial Credit and Investment Corporation of India and YES Bank to compare return and risk analysis between public sector and private sector banks.

Tools used in the Study

Statistical tools:

1. Return or Mean: It is used to calculate the average returns of stocks by using the formula.

$$HPR = \frac{(P1 - P0) + D1}{P0} \times 100$$

HPR = Holding Period Return

P1 = Price is at the end of the period

P0 = Price is at the beginning of the period

D1= Dividend at the end of the holding period

$$X = \sum_{i=1}^n Xi P(Xi)$$

X = Expected Return

Xi = Possible Return

P(Xi) = Probability of getting possible return

2. Variance

$$Variance(\sigma^2) = \sum_{i=1}^n (Xi - \bar{X})^2 P(Xi)$$

Standard Deviation (SD): It provides the measure of the total risk associated with a security. If standard deviation is more, then the risk is also more in the security.

$$StandardDeviation(\sigma) = \sqrt{Variance}$$

Limitation of the study

1. The study is confined to secondary data only.
2. The study is limited to only 8 banks.

Investment Pattern/Avenues

1. Bank Deposits

It is the simplest investment avenue open for the investors. He has to open an account and deposit the money. The savings account is more liquid and convenient to handle. The fixed account carries high interest rate and money is locked up for a fixed period.

2. Mutual fund

Investor can go for investing in financial assets indirectly through mutual fund. A mutual fund is a trust that pools savings of a number of investors who share a common financial goal.

3. Insurance

Life insurance is a contract for payment of sum of money to the person assured on the happening of event insured against. Usually, the contract provides for payment of an amount on the date of maturity or at a specified date or if unfortunate death occurs.

4. Shares

Equities are type of security that represents the ownership in a company. Equities are traded (bought and sold) in stock market. Investing in equities is a long-term investment option as the returns on equities over a long-term horizon are generally higher than most other investment avenues. However, along with the possibility of greater returns comes greater risk.

Preference shares refer to a form that par takes some characteristics of equity shares and some attributes of debentures. Investors though enjoy the assurance of a stable dividend but generally receive modest returns.

5. Debentures

Bond is debt instrument issued for a period of more than one year with the purpose of raising capital by borrowing. It is certificates acknowledging the money lend by a bond holder to the company. It states maturity date, interest rate. When an investor buys a bond, he/she becomes a creditor of the issuer.

6. Gold

Of all the precious metals is the most popular as an investment. Investors generally buy gold as a hedge against economic, political, social fiat currency crisis. Gold prices are soaring to the new highs in the recent years comparing to the previous decades because whenever the signs of an economic crisis arise in the world market may find shelter in gold as safest asset class for investors all around the world.

7. Real Estate

The real estate market offers a high return to the investors. The word real estate means land and buildings. Real estate investments cannot be encashed quickly. Liquidity is a problem. Real estate investment involves high transaction cost. The asset must be managed i.e., painting, repair, maintenance etc.

8. Money Market Instruments

Debt instruments which have a maturity period of less than one year at the time of issue are called money market instruments. The important money market instruments are as follows,

- a) Treasury bills
- b) Commercial papers
- c) Certificate of deposits

9. Post office

Post office also offers fixed deposits and savings account facility and monthly income scheme. Monthly income scheme is a popular scheme for retired.

Data Analysis:

Table 1: Showing Mean Return and Risk of Public and Private Sector Banks

Sl. No.	Bank	Mean Return (%)	Variance (%)	Risk (SD) (%)
1.	Bank of Baroda	0.01	11.08	3.26
2.	Indian Bank	0.03	20.75	3.90
3.	UCO Bank	0.01	10.67	2.84
4.	Union Bank of India	0.005	6.75	2.38
5.	Axis Bank	0.01	12.17	3.21
6.	HDFC Bank	0.02	5.25	2.19
7.	ICICI Bank	0.01	9.42	2.86
8.	YES Bank	-0.002	12.5	3.23

Source: www.nseindia.com

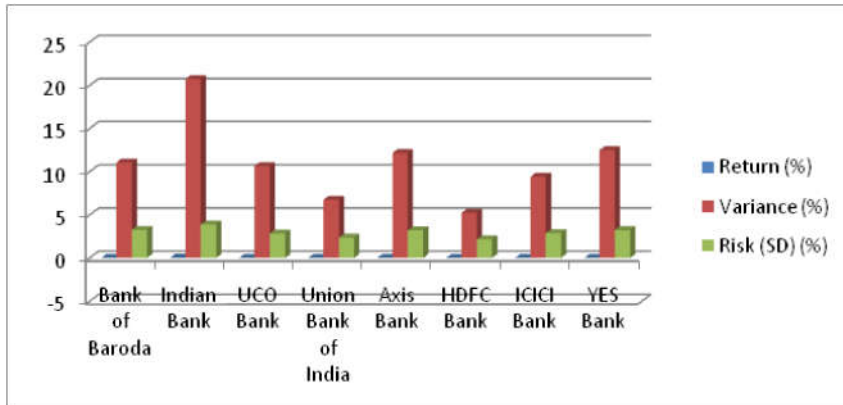
a) $X = \sum_{i=1}^n Xi P(Xi)$

c) $Variance(\sigma^2) = \sum_{i=1}^n (Xi - \bar{X})^2 P(Xi)$

b) $Mean\ Return = \frac{Total\ Return}{No.\ of\ mont\ s\ in\ a\ year}$

d) $SD(\sigma) = \sqrt{Variance}$

Chart 1: Showing Mean Return and Risk of Public and Private Sector Banks



Analysis 1:

From the above table and chart standard deviation is 3.90%, with mean value of 0.03% and variance is 20.75% of Indian Bank indicates higher risk. Whereas low standard deviation is 2.19% with mean value of 0.02% and variance is 5.25% which is comparatively less risk.

Stock Return and Risk:

An attempt has been made to compare the performance of Bank Nifty Index (Stock) against public and private sector banks to identify which sector is performing well during the study period. In order to check performance at first stock return and risk of public and private sector banks calculated separately. Then the stock return and risk of both public and private sector banks calculate as combined. For the purpose of calculation equal weights are assigned for each stock.

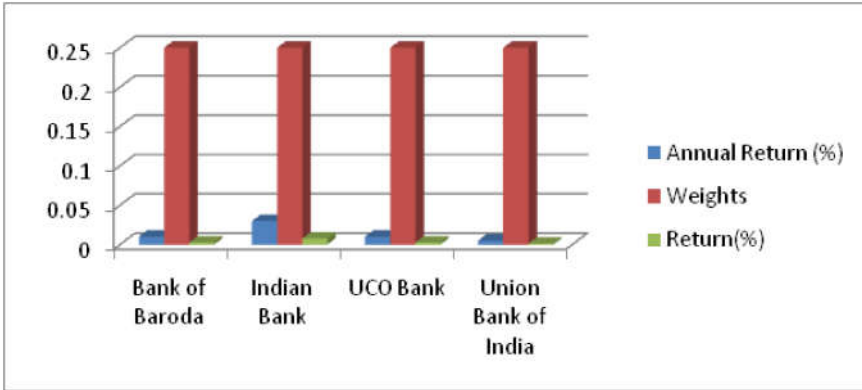
Table 2: Showing Stock Return of Public Sector Banks

Sl. No.	Bank	Annual Return (%)	Weights	Return (%)
1.	Bank of Baroda	0.01	0.25	0.0025
2.	Indian Bank	0.03	0.25	0.0075
3.	UCO Bank	0.01	0.25	0.0025
4.	Union Bank of India	0.005	0.25	0.00125
Stock Return of Public Sector Banks				0.01

Source: www.nseindia.com

$$\text{Stock Return} = \text{Annual Return} \times \text{Weights}$$

Chart 2: Showing Stock Return of Public Sector Banks



Analysis 2:

The above table reveals that Stock Return of Public Sector Banks is 0.01% when individual bank return compared with Stock Return. Annual Return of Union Bank of India is less than the Stock Return of Public Sector Banks.

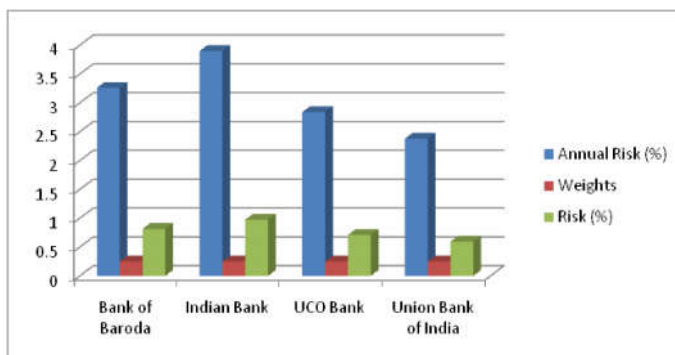
Table 3: Showing Stock Risk of Public Sector Banks

Sl. No.	Bank	Annual Risk (%)	Weights	Risk (%)
1.	Bank of Baroda	3.26	0.25	0.815
2.	Indian Bank	3.9	0.25	0.975
3.	UCO Bank	2.84	0.25	0.71
4.	Union Bank of India	2.38	0.25	0.595
Stock Risk of Public Sector Banks				3.10

Source: www.nseindia.com

$$\text{Stock Risk} = \text{Annual Risk} \times \text{Weights}$$

Chart 3: Showing Stock Risk of Public Sector Banks



Analysis 3:

The above table reveals that Stock Risk of Public Sector Banks is 3.10% when individual bank risk compared with Stock Risk. Annual Risk of individual banks i.e., UCO Bank and Union Bank of India is less than the Stock Risk of Public Sector Banks.

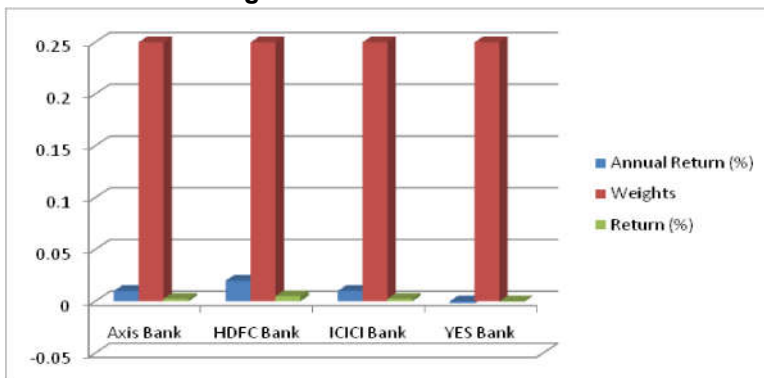
Table 4: Showing Stock Return of Private Sector Banks

Sl. No.	Bank	Annual Return (%)	Weights	Return (%)
1.	Axis Bank	0.01	0.25	0.0025
2.	HDFC Bank	0.02	0.25	0.005
3.	ICICI Bank	0.01	0.25	0.0025
4.	YES Bank	-0.002	0.25	-0.0005
Stock Return of Private Sector Banks				0.01

Source: www.nseindia.com

$$\text{Stock Return} = \text{Annual Return} \times \text{Weights}$$

Chart 4: Showing Stock Return of Private Sector Banks



Analysis 4:

The above table shows that Stock Return of Private Sector Banks is 0.01% when individual bank return compared with Stock Return. Annual Return of YES Bank is less than the Stock Return of Private Sector Banks.

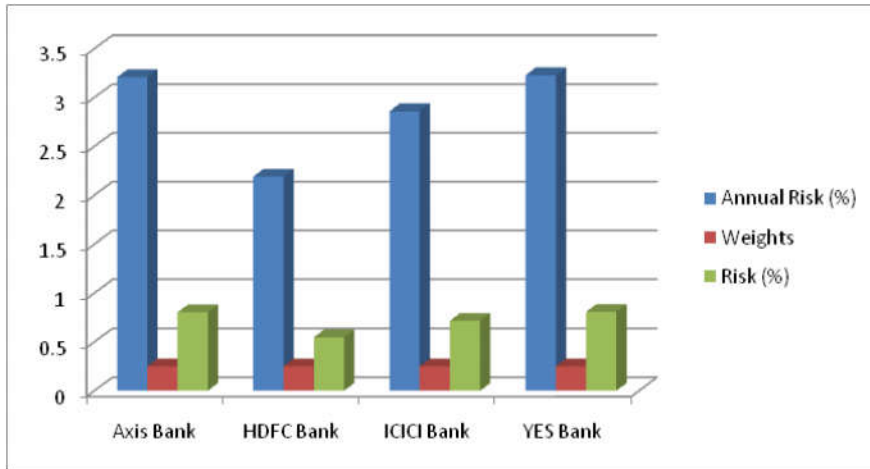
Table 5: Showing Stock Risk of Private Sector Banks

Sl. No.	Bank	Annual Risk (%)	Weights	Risk (%)
1.	Axis Bank	3.21	0.25	0.8025
2.	HDFC Bank	2.19	0.25	0.5475
3.	ICICI Bank	2.86	0.25	0.715
4.	YES Bank	3.23	0.25	0.8075
Stock Risk of Private Sector Banks				2.87

Source: www.nseindia.com

$$\text{Stock Risk} = \text{Annual Risk} \times \text{Weights}$$

Chart 5: Showing Stock Risk of Private Sector Banks



Analysis 5:

The above table shows that Stock Risk of Private Sector Banks is 2.87% when individual bank risk compared with Stock Risk. Annual Risk of HDFC and ICICI Bank is less than the Stock Risk of Private Sector Banks.

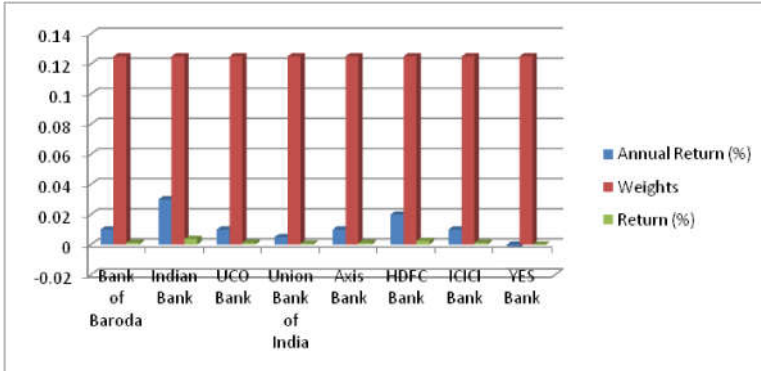
Table 6: Showing Combined Stock Return of Public and Private Sector Banks

Sl. No.	Bank	Annual Return (%)	Weights	Return (%)
1.	Bank of Baroda	0.01	0.125	0.00125
2.	Indian Bank	0.03	0.125	0.00375
3.	UCO Bank	0.01	0.125	0.00125
4.	Union Bank of India	0.005	0.125	0.00063
5.	Axis Bank	0.01	0.125	0.00125
6.	HDFC Bank	0.02	0.125	0.00250
7.	ICICI Bank	0.01	0.125	0.00125
8.	YES Bank	-0.002	0.125	-0.00025
			Stock Return	0.01

Source: www.nseindia.com

$$\text{Stock Return} = \text{Annual Return} \times \text{Weights}$$

Chart 6: Showing Combined Stock Return of Public and Private Sector Banks



Analysis 6:

From the above table it is clear that Stock Return is 0.01% when individual bank return compared with Stock Return. Annual Return of individual banks i.e., Union Bank of India and YES Bank is less than the Bank Nifty Return (Stock Return).

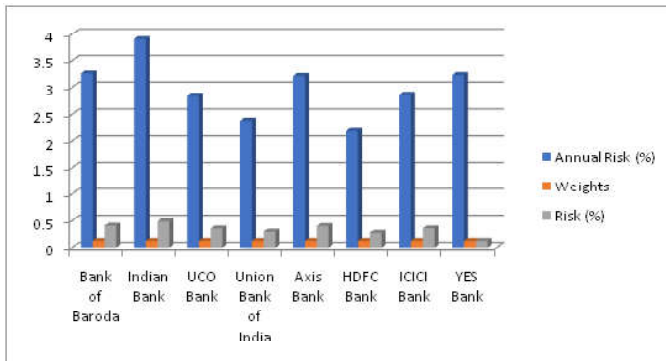
Table 7: Showing Combined Stock Risk of Public and Private Sector Banks

Sl. No.	Bank	Annual Risk (%)	Weights	Risk (%)
1.	Bank of Baroda	3.26	0.125	0.4075
2.	Indian Bank	3.9	0.125	0.4875
3.	UCO Bank	2.84	0.125	0.355
4.	Union Bank of India	2.38	0.125	0.2975
5.	Axis Bank	3.21	0.125	0.40125
6.	HDFC Bank	2.19	0.125	0.27375
7.	ICICI Bank	2.86	0.125	0.3575
8.	YES Bank	3.23	0.125	0.125
Stock Risk				2.71

Source: www.nseindia.com

Stock Risk = Annual Risk X Weights

Chart 7: Showing Combined Stock Risk of Public and Private Sector Banks



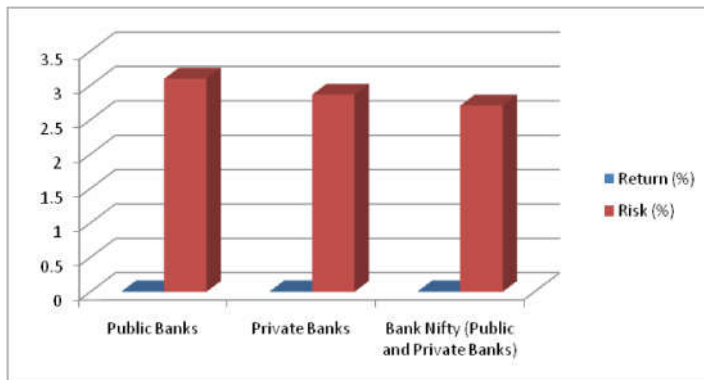
Analysis 7:

From the above table it is clear that Stock Risk is 2.71% when individual bank risk compared with Stock Risk. Annual Risk of individual banks i.e., Union Bank of India and HDFC Bank is less than the Bank Nifty Risk (Stock Risk).

Table 8: Showing Summary of All Possible Stock Return and Risk

Stock	Return (%)	Risk (%)
Public Banks	0.01	3.10
Private Banks	0.01	2.87
Bank Nifty (Public and Private Banks)	0.01	2.71

Chart 8: Showing Summary of All Possible Stock Return and Risk



Analysis 8:

From the above table it is clear that stock return is same in all possible stock combination. Stock risk of private sector banks (2.87%) is lower compare to Stock risk of public sector banks. But combination of public and private sector banks Stock risk (2.71%) is lowest compared to other possible stocks.

Findings:

1. It is found that return of YES Bank is lowest (-0.002%) with negative as compared to all other banks in the study:
2. found that Indian Bank has highest mean return (0.03%) among public and private sector banks.
3. found that annual return of Union Bank of India (0.005%) is less than the stock return of public sector banks (0.01%).
4. found that annual risk of Bank of Baroda (3.26%) and Indian Bank (3.9%) are more than stock risk of public sector banks (3.10%).

5. found that annual return of YES Bank (-0.002%) is less than the stock return of private sector banks (0.01%).
6. found that annual risk of Axis Bank (3.21%) and YES Bank (3.23%) are more than the stock risk of private sector banks (2.87%).
7. found that stock return of public and private sector banks (0.01%) are same and equal to Bank Nifty (0.01%).
8. found that stock risk of public (3.10%) and private (2.87%) sector banks is more than the risk of Bank Nifty (2.71%).

Suggestions:

1. The investor can invest in securities of HDFC and Indian Bank which gives good return compared to other banking securities.
2. Investors should hold the securities which gives high return with less risk.
3. Investors should give importance to fundamental analysis before investing.
4. Holding two or more securities by the investor will reduce the unsystematic risk.
5. Investors do not completely rely on technical analysis.

Conclusion:

This study is based on analysis of securities public and private sector banks listed in national stock exchange. This study gives an idea to investors whether they can invest in securities of public or private sector banks which are associated with return and risk factors. An investor always prefers securities like higher return with low risk. This study is an attempt to evaluate the return and risk of banking stocks listed in NSE and to identify the banking stock which provides good return with less risk.

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