



A STUDY ON COMPARATIVE ANALYSIS OF RISK AND RETURN WITH REFERENCE TO STOCKS OF CNX BANK NIFTY

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Abstract:

India is one of the emerging economies, which has witnessed significant developments in the stock markets during the liberalization policy initiated by the government. However, investing in banking shares include high risks which can be guided but not controlled. Most of these risks affect the market or the economy and require investors to adjust portfolios or ride out the storm. This paper analyzes the risk and return in banking sector taking Nifty Bank Index as the benchmark. The study compares the performance of the 12 listed banks in the NSE. Indian banking industry, the backbone of the country's economy has always played a positive key role in prevention the economic disaster from reaching horrible volume in the country. Risk is a concept that denotes a potential negative impact to an asset or some characteristic of value that may arise from some present process or future event. It has achieved enormous appreciation for its strength, particularly in the wake of some of the worldwide economic disasters. Banking sector funds have proved to be more volatile than the pure diversified equity funds which make some of them a high risk proposition. The study evaluates the performance of banking stocks mainly to identify the required rate of return and risk of a particular stock based upon different risk elements prevailing in the market and other economic factors.

Index Terms: Risk, Return, Benchmark, Nifty & Performance

Introduction:

Indian banking industry, the backbone of the country's economy, has always played a positive key role in prevention the economic disaster from reaching horrible volume in the country. Risk is a concept that denotes a potential negative impact to an asset or some characteristic of value that may arise from some present process or future event. It has achieved enormous appreciation for its strength, particularly in the wake of the latest worldwide economic disasters, which pressed its worldwide counterparts to the edge of fall down. The Equity market in India is extremely volatile. Equity Markets across the world are volatile but India has a higher level of volatility. Stock market risk is the tendency of stock prices to decrease due to the change in value of the market risk factors. Value of units or shares is directly related to the market value of those investments held by the stock market. Though banking and financial services sector funds have accelerated on generating superior risk adjusted returns until now, they suffer from the risk of portfolio concentration as a single stock accounts for equity portfolio in some gear. The market value of those investments will go up and down depending on the financial performance of the issuers and general economic, political, tax and market conditions. Standard market risk factors are stock prices, interest rates, foreign exchange rates, and commodity prices

Banks play an important role in supporting economic growth and have proved to be more volatile than the pure diversified equity funds which make some of them a high risk proposition. Equity investment includes high risk at the same time it earns higher return unusually high returns may not be sustainable. Since the banking industry is

under the control of Reserve Bank of India (RBI), it is adversely used as the tool to control the external problems like inflation, interest rate, and money supply. Because of this, there is a high instability in the share price that reduces the real investor's interest. This study is structured to analyse the performance of the selected shares in the banking industry to reveal the risk and return in a particular period of time and the investor's perception towards the Banking industry.

Bank Nifty represents the 12 most liquid and large capitalized stocks from the banking sector which trade on the National Stock Exchange (NSE). It provides investors and market intermediaries a benchmark that captures the capital market performance of Indian banking sector. The 12 banks which are considered for this study are:

- ✓ Federal Bank
- ✓ IndusInd Bank
- ✓ Yes Bank
- ✓ Axis Bank
- ✓ Bank of Baroda
- ✓ Bank of India
- ✓ Canara Bank
- ✓ HDFC
- ✓ ICICI
- ✓ Kotak Mahindra Bank
- ✓ Punjab National Bank
- ✓ State Bank of India

Need of the Study:

The study was conducted to analyze the nifty movement behavior towards the banking stocks. It also evaluates the performance of banking share stock mainly the identification of required rate of return and risk of a particular stock based upon different risk elements prevailing in the market and other economic factors. This study is structured to analyse the performance of the selected shares in the banking industry to reveal the risk and return in a particular period of time.

Objectives of the Study:

- ✓ To analyze the risk and return of the 12 banks listed in Bank Nifty .
- ✓ To compare the performance of banks with their benchmark index.
- ✓ To study volatility of banks in comparison with the market.

Literature Review:

Raghavan. R. S (2000) commented on the risk perceptions and the risk measure parameters. He opined that risk measures are related to the return measurements. While risks can only be contained and cannot be eliminated altogether, there is no doubt that some risks have to be taken to get adequate returns. Returns can be increased or made quicker by taking more financial and operating risks. But the environmental risks typically do not increase returns but serve as constraints on return and risk decisions. He concluded that the process of retaining the levels of risks within the desirable levels must be practiced in the daily operations. Vijay Soodd (2000) revealed the risks faced by banks and financial institutions and the degree of risk faced by them. According to him, risk management is gathering momentum at a time when there is increasing pressure on banks and financial institutions to better manage their assets and improve their balance sheet. He opined that the greater the volatility of expected returns, the higher is the risk. The essence of risk management is to reduce the volatility.

Scope of the Study:

The sample for the study is 12 banks listed under CNX Bank Nifty. The study is limited to only these selected banks and covers the year wise performance of the stocks for the study for the period of 5 years i.e from 2011 to 2015.

Research Methodology:

The risk and return relationship is a fundamental concept in not only financial analysis, but in every aspect of life. 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/cost. The requirement that expected return/benefit is commensurate with risk/ cost is known as the “risk return trade-off” in finance.

A company which has a higher market price is not necessarily the best stock to buy. It may have no growth prospects or it may be overpriced. Similarly, a company that performs well during any one year may not be the best to buy. On the contrary, a company which has been badly for some time might turn the corner and it may be the best to buy, as its shares may be underpriced and it has good prospects of growth, hence an analysis of risk or return guides an investor in proper profitable investment.

The risk and return trade off says that the potential return rises with an increase in risk. It is important for an investor to decide on a balance between the desire for the lowest possible risk and highest possible return.

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 period 't' is,

$$k_t = \frac{P_t - P_{t-1}}{P_{t-1}}$$

k_t = expected rate of return during period 't'

P_t = price of asset at time t

P_{t-1} = price of asset at time t-1

Risk Measurement:

The risk of an asset is measured quantitatively using statistics- the standard deviation and also beta is analysed to measure the variability of returns. The most common indicator of risk is standard deviation, σ , which measures the dispersion around the expected value of returns.

$$\sigma_k = \sqrt{\{ \sum (k - \bar{k})^2 / n \}}$$

Beta and alpha are calculated using simple linear regression statistics which is used to study the volatility of stocks.

$$\hat{\beta} = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y}) / n}{(x_i - \bar{x})^2}$$

Correlation analysis is used to find the relationship between stocks of individual banks with the index. The following formula is used.

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

Where x= returns of individual stocks

y= returns of the index

Sample Design:

The present study based on secondary data collected from National Stock Exchange. It is aimed at finding out the randomness in successive share price changes. All 12 Banking Companies listed on the Index, CNX Bank Nifty are taken for the study.

Limitations of the Study:

- ✓ The area of study is limited to the stocks of 12 banks from Bank Nifty Index.
- ✓ The study includes data of last five years only.

Analysis:

The degree to which different portfolios are affected by these systematic risks as compared to the effect on the market as a whole, is different and is measured by Beta. To put it differently, the systematic risks of various securities differ due to their relationships with the market. The Beta factor describes the movement in a stock's or a portfolio's return in relation to that of the market returns. For all practical purposes, the market returns are measured by the returns on the index (Bank Nifty), since the index is a good reflector of the market.

In order to find out the movement in the stock return in relation to the Bank Nifty Index, mean returns, standard deviation and Beta's of 12 companies are calculated and analyzed along with the correlated coefficients.

Table 1

Company	Beta (β)	Mean	Std. Deviation	Correlation
Federal Bank	1.104	14.91	44.28231	0.955
IndusInd Bank	1.104	36.11	45.02791	0.988
Yes Bank	1.465	29.968	52.63951	0.985
Axis Bank	1.298	20.782	47.76212	0.995
Canara Bank	1.146	-8.55	46.32667	0.970
ICICI Bank	1.11	10.91	43.68841	0.983
Punjab National Bank	1.02	-5.396	45.19174	0.888
State Bank Of India	1.198	4.975	45.80078	0.986
Bank of India	0.866	-15.702	42.6457	0.921
HDFC	0.635	20.426	35.07248	0.946
Bank of Baroda	0.937	3.414	41.16752	0.944
Kotak Mahindra	0.725	28.428	36.83966	0.983

The above table shows that the bank's individual returns are highly correlated with the Nifty index. Among all, Yes bank is highly correlated with the coefficient value of 0.995 and also highly risky due to high standard deviation. Compared to all, Yes bank is highly volatile but has earned handsome returns in the market.

Table 2: Total Returns for 5 years of companies whose Beta Value is above 1.00

S.No	Company	Beta (β)	Returns
1	Federal Bank	1.104	14.91
2	IndusInd Bank	1.104	36.11
3	Yes Bank	1.465	29.968
4	Axis Bank	1.298	20.782
5	Canara Bank	1.146	-8.55
6	ICICI Bank	1.11	10.91
7	Punjab National Bank	1.02	-5.396
8	State Bank Of India	1.198	4.975

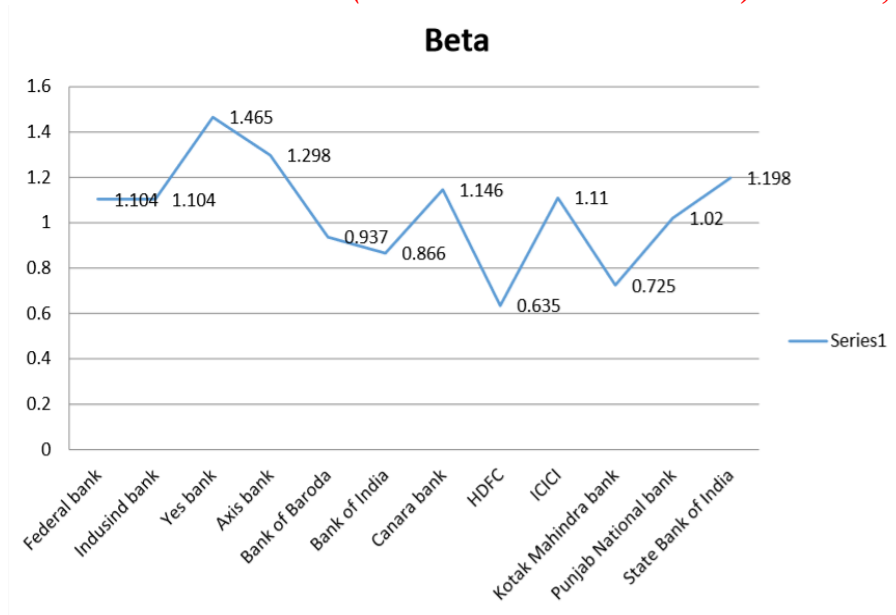


Figure 1: Beta Values of the Stocks

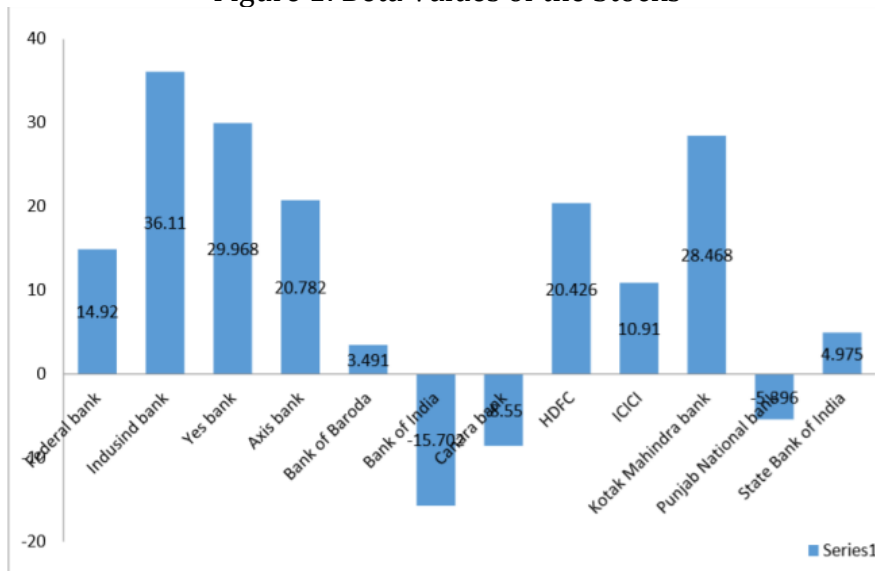


Figure 2: Returns of the Stocks

Above table and charts represent the beta values of the individual banks and the average returns as against the Bank Nifty Index. All the banks have positive beta values showing the movement along the market. Axis bank and Yes bank are highly volatile compared to the market. Some banks have been able to achieve good or moderate returns whereas some others have earned negative return as well. This is mainly due to the individual alpha and the sensitivity of the stocks to the market. Highest return is earned by Indusind Bank whereas Bank of India has earned the lowest return of all.

Findings:

Beta describes the relationship between the stock returns and the index returns. From the Betas of 12 banks, it is found that some stocks move in the opposite direction to the 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.

From the study following major findings are made:

- ✓ All the banks have a positive beta values according to which the stock values move as per the movement of the market index.

- ✓ The stocks of Bank of India, HDFC bank, Kotak Mahindra bank are less volatile in nature. This is mainly because their beta values are comparatively lesser than the markets beta value.
- ✓ The stocks of Federal bank, IndusInd bank, Bank of Baroda, Canara bank, ICICI bank, Punjab National bank, State Bank of India are moderately volatile in nature. This is because their values are comparatively closer to the markets beta value.
- ✓ The stocks of Yes bank and Axis bank have high volatility. This is because of the fact that their beta values are more than the markets beta value.
- ✓ It is found that all the stocks have earned positive returns except Canara bank, Bank of India and Punjab National Bank, which has negative α as well.
- ✓ The moderate volatile stocks have earned high returns except Canara bank and Punjab National bank which has earned negative returns. This is because of the negative alpha value. Even though Federal bank and Bank of Baroda has a negative alpha value it has earned good returns.
- ✓ The stocks with high volatility have earned higher returns even though the alpha value is positive.

From the findings of the study, the Investor is suggested the following:

- ✓ 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 less than +1.00. Stocks having a Beta of less than +1.00 would be considered as more conservative investments.
- ✓ From the study it is suggested that investment in Federal bank, IndusInd bank, Yes bank, Axis bank, Bank of India, HDFC bank, ICICI bank, Kotak Mahindra bank, State Bank of India would be feasible because they have a positive returns compared to others who have negative returns.

Conclusion:

As a whole the stock market is sometimes highly volatile. It depends upon the investors how he can make use of this in order to get the money which he has put in the market. An investor should be in a position to analyze the various investment options available to him and thus minimize the risk and maximize the returns.

Beta is useful for comparing the relative systematic risk of different stocks & in practice; it is used by investors to judge a stock's riskiness. The investor should keep the risk associated with the return proportional as 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 of return, each security has a different degree of risk.

Based on the calculations the investor can come to a conclusion that investors should analyze the market on a continuous basis which will help them to pick the right companies to invest their funds.

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