# A Study onMarket Risk Analyses of selected Banking Stocks (Nationalized Banks) in Indian Context

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## Abstract

Banking sector is the backbone of country's economy. This sector has given very good return to the investors in the past. But the recent financial crisis, has proved, that the Banking stocks tend to be more volatile than other stocks. This paper studies the Market risk analysis of five Nationalized Banks in terms of Beta coefficient for the period from 1st July 2013 to 31st June 2014. The betas of State Sank of India, Industrial Development Bank of India,& Syndicate Bank were negative which implies that these stocks moved against the marketand less affected by market risk. On the other hand the betas of Punjab National Bank & Bank of Baroda were more than one. It indicates that these stocks were exposed to high market risk; i.e., any small changes in the market will directly impact on these stocks.

*Keywords: Banks, Beta,India, Market Risk, Systematic Risk.*

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## 1. Introduction:

The Risk and Return are the two faces of the Investment coin. The ultimate goal of any investment is to maximize returns and minimize risk. The attitude of investors is they wanted to earn maximum return but they are not willing to take risk. But practically risk and return goes hand in hand. Higher the risk, higher the expected return and vice versa. Risk in inherent in every investment decision; even safe investments like treasury bills, government securities and post office deposits are not free from risk. The risk is more in certain investments like equity stock. What is Risk? It means earning less than what you expected from a given Investment or losing part of what you invested. In other words Risk means "variability of returns." It is the probability of having adverse or low returns as compared to the expected returns. Risk can be broadly classified into systematic risk (Market risk) and unsystematic risk (company risk). Systematic risk is that portion of total variability which is attributed to economy wide factors like Interest rate, Inflation, GDP growth rate, Business cycles, Balance of payment positions, exchange rate of currency, Government policies etc. The unsystematic risk is that portion of total risk which is attributed to Industry or company specific factors like inefficient management, low quality product, new product failure, emergence of competitor, labor strike etc. the unsystematic risk can be eliminated through proper diversification of investment. But unsystematic risk is non-diversifiable in nature. It has to be borne by all the investors. Asit affect all the company's stocks to a greater or lesser extent. That's why it is said that equity investments are subjected to market risk.

In Finance literature Beta is considered as the main measurement statistic of systematic risk. Beta is the stock's sensitivity to the market index movement. In simple words Beta shows how a stock's return changes with respect to movement in stock index. by definition the stock market has a beta of 1. Individual stock's risk is measured through their Beta values. Beta measurement shows changes in the returns from the security for every 1% change in the returns of market index. (Market portfolio).for example, if beta of a security is 1.25, then it means for every 1% change in the returns of index, returns of this security will change by 1.25%. A stock that swings more than the market over a time has beta above 1.0 and they are known as aggressive stocks. If a stock moves less than the market, the stock's beta is less than 1.0 and they are known as defensive stocks. High beta stocks are comparatively more risky than low beta stocks. Beta is calculated as follows:

$$\beta_i = \frac{covariance\ _{i,m}}{\sigma_m^2}$$

$\beta_i$ = Beta of the security
i = Individual security
m = market index or market portfolio
$\sigma_m^2$ = variance of market portfolio.

**2. Review of Literature:**

In a research by Manickaraj&Loganathan, (2004) Beta's relevance as a measure of risk in Indian context was done. They analyzed the betas of eight equity shares listed in BSE between 1990 &1996, they found that no security has negative beta and betas have the regression tendency of moving towards the mean beta of 1.[1]

Guha&Roonith, (2007) invested the analyst's perception on Indian bank stocks as a result of global crisis of 2007; they found that the government restriction on Indian company's overseas loans was the driving factor for bank earnings.[2]

According to Rudra&Jaydev (2009), sensitivity of bank stocks to Risk management has been analyzed. The general inference from their analysis is that the returns of Indian bank stocks appear to be sensitive to the risk management capability of banks. They suggested the banks to focus on risk management techniques to enhance their shareholder value.[3]

Sinha (2013) studied a comparison was made between Risk and Return of Banking sector equity with non-banking sector equity, and she concluded that investing in Banking stocks include high risk because this sector is highly affected by market risk factors like global recession. She suggested the investors to hold the shares for long term to earn good returns in banking sector.[4]

[1] *Manikkaraj.M &Loganathan.P (2004).Relevance of Beta as a measure of risk in India.*
[2] *Guha&Romot, (2007). Indian Banks; the sector is a Buy.*
[3] *Rudra, Sensarma, &Jayadev, M. (2009). Is Bank Stocks Sensitive to Risk Management?*
[4] *Sinha, Dr. Ratna, (2013). "An analysis of Risk and Return in equity investment in banking sector.*

## 3. Statement of the Problem:

Post liberalization of Indian economy, the financial arena of banking sector has led to a great transformation of over the past two decades. Asset quality and profitability have improved significantly. Banking industry plays a vital role in the economic growth of a country. It is the backbone of country's economy. Making investment in equity stocks of banking sector is very common among investors. But the recent global financial crisis has proved that the banking and financial sector stocks tend to be more volatile than ever.In this present situation risk analysis of selected banking stocks in India is felt highly relevant.

## 4. Objectives of the study:

1. To analyze the Market Risk of selected banking stocks in terms of Beta.
2. To compare the Market Risk of selected banking stocks.
3. To study the bank's stock movement with respect to Bank Nifty.

## 5. Scope of the study:

The study covers market risk analysis of five selected nationalized banks in the Indian context. The Bank's stock prices and Bank Nifty movements for a period of 1st July 2013 to 30th June 2014 has been considered for calculation of Beta's of banks. The betas were compared in terms of periodicity and among the banks to analyze their market risk.

## 6. Limitations of the study:

1. The data collected from NSE website on daily basis of price movements.
2. The study is restricted to a sample of five nationalized banks.
3. This study is limited to one fiscal year (from 1stJuly 2013 to 30thJune 2014)

## 7. Research Methodology:

To address the objectives of the study, the Indian Banking industry was taken as the universe and a sample of five nationalized banks were selected purposefully based on top five ranking in terms of revenue generation in fiscal year 2013-14. The study was based on secondary data which was taken from NSE website.

## 8. Data Analysis & Findings:

**Beta of State Bank of India**

| SBI | |
|---|---|
| **MONTH** | **BETA** |
| Jul-13 | -0.16 |
| Aug-13 | -0.26 |
| Sep-13 | -0.01 |
| Oct-13 | -0.33 |
| Nov-13 | 0.20 |
| Dec-13 | -0.30 |
| Jan-14 | 0.00 |
| Feb-14 | -0.27 |
| Mar-14 | -0.09 |
| Apr-14 | 0.06 |
| May-14 | -0.15 |
| Jun-14 | -0.43 |


**Analysis:**

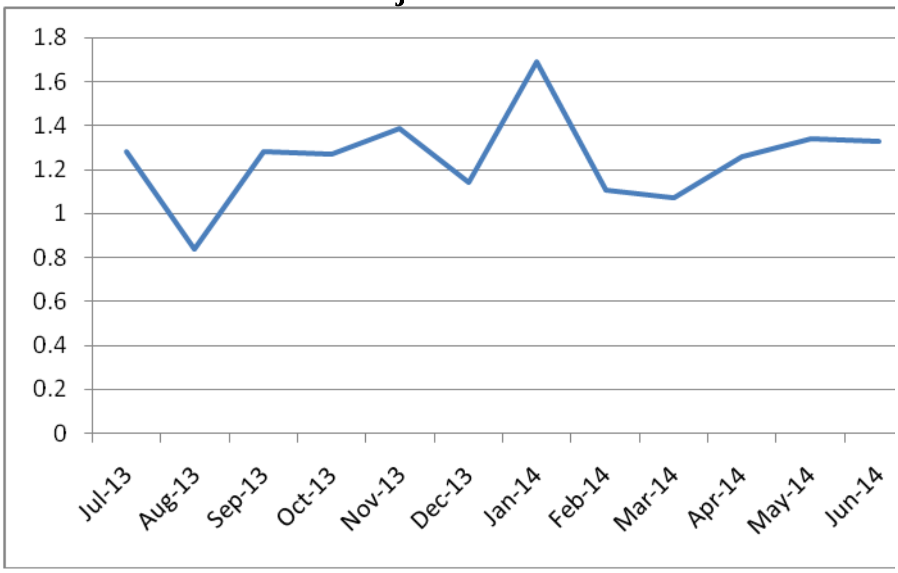
The beta of the State Bank of India was moved opposite to the market returns for last one year. The stock of SBI has been moved negative to the Bank NIFTY.

**Interpretation:**

The performance of SBI stock was totally opposite to the Bank NIFTY except in the month of November 2013 and April 2014, which was parallel to the Bank NIFTY. But, in January, 2014 the risk was almost zero.

| PNB | |
|---|---|
| MONTH | BETA |
| Jul-13 | 1.28 |
| Aug-13 | 0.84 |
| Sep-13 | 1.28 |
| Oct-13 | 1.27 |
| Nov-13 | 1.39 |
| Dec-13 | 1.14 |
| Jan-14 | 1.69 |
| Feb-14 | 1.11 |
| Mar-14 | 1.07 |
| Apr-14 | 1.26 |
| May-14 | 1.34 |
| Jun-14 | 1.33 |

**Beta of Punjab National Bank**



**Analysis:**

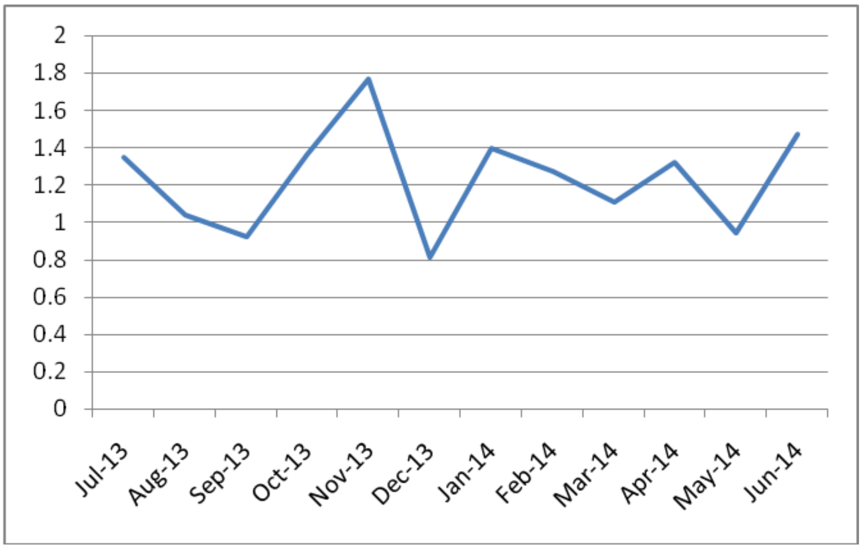
The risk of the stock was very high except on the month of August 2013 and March 2014, in these months the risk closes one and remaining were more than one. the average beta for the year is 1.25 which is higher compared to other stocks.

**Interpretation:**

If Bank NIFTY was increased by 1 per cent, Punjab National Bank's price also increased by 1.25 per cent in throughout the year. It means that PNB was moved parallel to the Bank NIFTY from July 2013 to June 2014.

**Beta of Bank of Baroda**

| BOB | |
|---|---|
| MONTH | **BETA** |
| Jul-13 | 1.35 |
| Aug-13 | 1.04 |
| Sep-13 | 0.92 |
| Oct-13 | 1.36 |
| Nov-13 | 1.77 |
| Dec-13 | 0.81 |
| Jan-14 | 1.40 |
| Feb-14 | 1.27 |
| Mar-14 | 1.11 |
| Apr-14 | 1.32 |
| May-14 | 0.94 |
| Jun-14 | 1.47 |




**Analysis:**

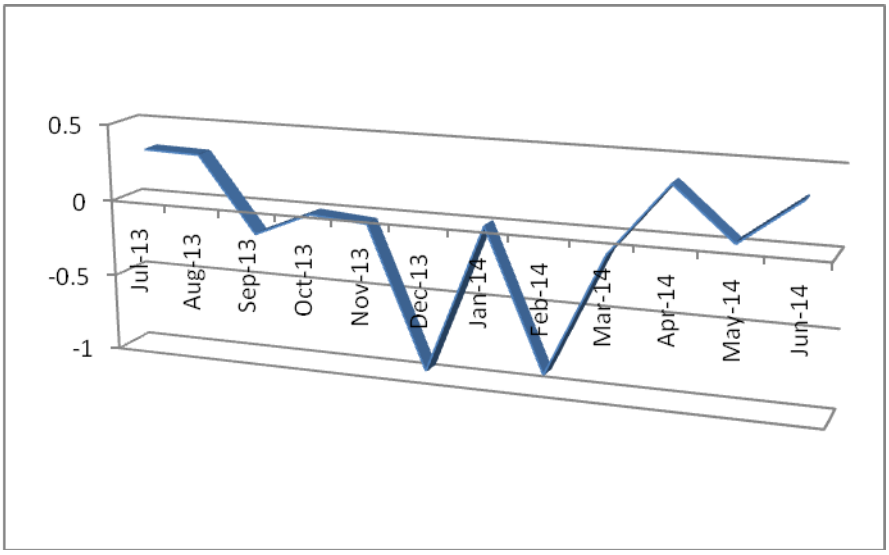
Stock risk of Bank of Baroda was very flexible throughout the year. It was very high beta compared any other top five nationalized banks in India. The market risk of this stock is little bit high. The average beta for year was 1.23.

**Interpretation:**

Investment in the Bank of Baroda was extremely good in the point of view of growth factor is concerned. It has been given good returns to investors in terms of capital appreciation and dividend as well. It was very good investment in terms of growth aspects.

**Beta of Industrial Development Bank of India.**

| IDBI | |
|---|---|
| MONTH | **BETA** |
| Jul-13 | 0.33 |
| Aug-13 | 0.32 |
| Sep-13 | -0.17 |
| Oct-13 | -0.01 |
| Nov-13 | -0.04 |
| Dec-13 | -0.96 |
| Jan-14 | 0.01 |
| Feb-14 | -0.90 |
| Mar-14 | -0.10 |
| Apr-14 | 0.36 |
| May-14 | 0.03 |
| Jun-14 | 0.32 |




**Analysis:**

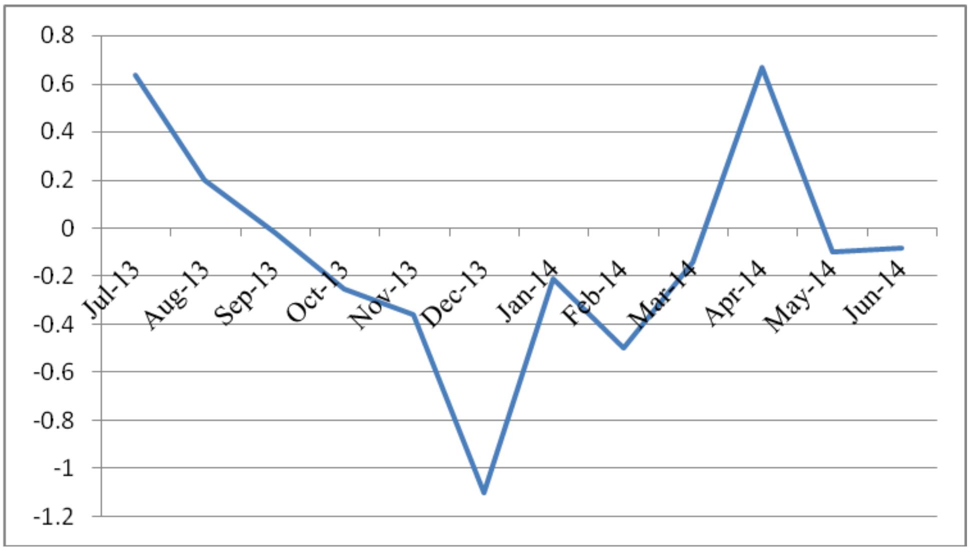
The beta of the IDBI was between 0.36 and -0.96. It has close to the Bank NIFTY throughout the year. It had moved with the Bank NIFTY. The growth of security was not good, when compared with any other bank securities.

**Interpretation:**

The return of the stock was half positive and half negative for a year. It was moved equally negative and positive for the year. There was no difference between beginning and end of the investment day.

**Beta of Syndicate Bank**

| **SYND** | |
|---|---|
| **MONTH** | **BETA** |
| Jul-13 | 0.64 |
| Aug-13 | 0.2 |
| Sep-13 | -0.02 |
| Oct-13 | -0.25 |
| Nov-13 | -0.36 |
| Dec-13 | -1.10 |
| Jan-14 | -0.21 |
| Feb-14 | -0.50 |
| Mar-14 | -0.14 |
| Apr-14 | 0.67 |
| May-14 | -0.10 |
| Jun-14 | -0.08 |



**Analysis:**

Stock risk of the Syndicate Bank was almost negative beta; it moves the opposite to the Bank NIFTY in the open market, except on July, August 2013, and April 2014. The average risk of the Syndicate Bank was almost close to Bank NIFTY.

**Interpretation:**

The investment in Syndicate Bank was below the average, if capital appreciation and dividend aspects were concern. It does not give the returns to the investors in public sector banks were concern.

## 9. Findings:

1) The systematic risk(beta) of the securities were -0.15, 1.25, 1.23, -0.07 and -0.10 of State Bank of India, Punjab National Bank, Bank of Baroda, Industrial Development Bank of India, and Syndicate Bank respectively.
2) The systematic risk of Punjab National Bank and Bank of Baroda were moved equivalent to the Bank NIFTY. But, other three were moved opposite of the Bank NIFTY.
3) The Market risk of Punjab National Bank and Bank of Baroda were higher compared to other selected banks.

## 10. Conclusion:

The market risk of the selected nationalized banks was analyzed and compared by the Beta coefficient. The data comprised of five top nationalized banks in terms of revenue generation for the period from july2013 to June 2014.

The beta values of banks for different period varied from -0.96 to 1.77. The beta's of state bank of India, Industrial development bank & Syndicate bank is negative which implies that these stocks moved against the market and less affected by market risk. On the other hand the betas of Punjab national bank & Bank of Baroda are more than one. It indicates that these stocks are exposed to high market risk;i.e.any small changes in the market will greatly impact these stocks.

## 11. References

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