An Examination of Estimate the Expected Return on Specific Banking Stock

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ABSTRACT

This study examines the risk and volatility of bank stocks in the current market. Every investment is a mix of risk and reward. Investment may be viewed from a variety of perspectives, including economic, layman, and financial. A real investor is looking for consistent and strong profits over a long period of time. Any investment involves some level of risk. Risk is associated with a loss of capital or a delay in capital return. Before making an investment, every investor is concerned about the expected return. The larger the profit, the higher the risk. The investor wants to receive the initial investment back as soon as feasible after maturity, with no losses or delays. Knowing how recent changes in politics, economic growth, and other national and international issues have influenced trading volume, causing volatility in the Indian stock market.

Keywords: Return, Risk, Volatility, economic, investment*.*

I. INTRODUCTION

In simple terms, risk may be defined as the possibility of suffering injury or loss it is presenting in any field or situation. In the context of business or financial world it represents the uncertainly associated with an investment

In other words risk possibility that the actual return on an investment may be different from the expected return. The idea that an investment with a higher risk has the potential for a higher yield is an essential concept in this regard.

Higher risk is linked to a higher chance of a higher return, whereas lower risk is

linked to a higher probability of a lower return. The risk return trade off is the trade-off that an investor must make between risk and profit while making investment decisions.

The probability weighted average of all potential returns is the expected return of the investment. The anticipated return is f(Xi) if the potential returns are indicated by X and the associated probability are f(Xi).

$$E[X] = \sum_i x_i f(x_i)$$

It's the total of all conceivable returns multiplied by their individual probabilities. The variability in security returns induced by changes in the economy or market is known as sytematic risk. Market movements impact all assets to some extent, although certain securities respond to market changes with more variety. Such substances are thought to pose a greater systemic risk. The stock market index may be used to represent the average effect of changes in the economy.

Expected Return= Risk Free Rate + Risk Premium

II. OBJECTIVES
General Objectives
The general objective of this research is to find the impact of volatility of stocks. A comparative study on selected public sector banks from BSE India.
Specific Objectives of study
- To identify the banking company script for investment.
- To evaluate the risk involved in stock of bank companies.

- To calculate the expected return and to know the past and current movements in price of stock (selected bank scripts)

III. NEED FOR THE STUDY
From past decades it has been observed reforms in the Indian stock market. The process of reforms in the stock market needs to be extending to speedier conclusion of transactions, greater transparency in operations, improved services to investors and greater investor protection while at the same time encouraging banking sector to raise resource directly from the market on an increasing scale. Modernization of the stock exchanges to bring them equal to world standards in terms of transparency and reliability are also necessary if foreign capital is to be attracted in significant scale.

IV. SCOPE OF THE STUDY
The notion that the corporate announcement might have strong implications on share prices and investor behaviour is in general accepted by practitioners.

V. RESEARCH METHODOLOGY
This study is based on secondary data, internet and scholarly articles. To develop this study in literature review has been used, to present in chronologically order which is collected from websites, i.e. For the period of 01-09-2016 to 31-08-2017 the stock prices of trading day at NSE India. Source of the data is www.nseindia.com historical price data.

What is Beta?

A beta of less than one indicates that the security is less volatile than the market in theory. A beta larger than one suggests that the price of the investment is more variable than the market. A stock with a beta of 1.2, for example, is potentially 20% more volatile than the market.

What is Standard Deviation?

The standard deviation is a measure of how much a collection of data deviates from its mean. By calculating the difference between each data point relative to the mean, it is determined as the square root of variance. There is more variance within the data collection if the data points are farther from the mean.

In finance, standard deviation is a statistical measurement; when applied to the annual rate of return of an investment, it sheds light on the historical volatility of that investment. The bigger a security's standard deviation, the greater the difference between each price and the mean, implying a wider price range. A volatile stock, for example, has a high standard deviation, whereas a steady blue-chip stock has a low standard deviation.

Sampling Procedure & Sample Size

Bombay Stock Exchange is chosen for this research because this is the main stock exchange of India and Standard & Poor's company has joined hands with it. The data collected from stock exchange market consisting of many banking companies but selected companies for the study are randomly picked. Data that is used for this research is gathered from website bseindia.com and chosen few major players in publicand private sector banks [11] like HDFC BANK, ICICI Bank, INDIAN Bank, Oriental Bank of Commerce, Punjab National Bank, State Bank of India, Syndicate Bank. Data is ranging from 01-09-2016 to 31-08-2017 (247 days) is used for analysis. In this study BETA, Expected Return, Variance and Standard Deviation is used for analysis.

Andhra Bank

As of March 31, 2016, Andhra Bank was India's moderate public sector bank, with 2803 branches, 4 extension counters, 38 satellite offices, and 3636 atms. (As of 15 November, the close price was Rs. 62.90).
Headquarters: Hyderabad
CEO: Shri Suresh N Patel (2 Nov 2015–)
Founder: BhogarajuPattabhiSitaramayya
Founded: 20 November 1923, Machilipatnam

Bank of Baroda

Bank of Baroda is a Gujarat-based Indian state-owned international banking and financial services firm with headquarters in Vadodara. Its headquarters are in Mumbai. It is placed 1145 on Forbes' Global 2000 list as of 2017. (As of 15 November, the close price was Rs. 175.05)
Headquarters: Vadodara
CEO: P. S. Jayakumar (13 Oct 2015–)
Founder: SayajiraoGaekwad III
Founded: 20 July 1908

Canara Bank

Canara Bank is one of the largest public sector banks owned by the Government of India. Its headquarters is in Bengaluru. It was established at Mangalore in 1906,

making it one of the oldest public sector banks in the country. (Close Price Rs. 370.80 as on 15 Nov).
Headquarters: Bengaluru
CEO: Shri. Rakesh Sharma
Founder: AmmembalSubbaRaoPai
Founded: 1 July 1906
Capital ratio: 12.86% (2017)
Subsidiaries: Canara HSBC Oriental Bank of Commerce Life Insurance Company Limited,

Corporation Bank

Corporation Bank is a public-sector banking company headquartered in Mangalore, India. The bank has a pan-Indian presence. (Close Price Rs. 42.55 as on 22 Nov).
Headquarters: Mangalore
CEO: Jai Kumar Garg (1 Feb 2016–)
Founder: Khan Bahadur Haji Abdullah Haji KasimSahebBahadur
Founded: 12 March 1906, Udupi

HDFC Bank

HDFC Bank Limited, based in Mumbai, Maharashtra, is an Indian banking and financial services firm. It employs 84,325 people and operates in Bahrain, Hong Kong, and Dubai. By assets, HDFC Bank is India's largest private sector lender. (As of November 22, the close price was Rs. 1,855.50.)
CEO: AdityaPuri (Sep 1994–)
Headquarters: Mumbai
Founded: August 1994, India
Number of employees: 84,325
Profit: □12,817 crore (US$2.0 billion) (2016)

ICICI Bank

ICICI Bank, stands for Industrial Credit and Investment Corporation of India, is an Indian multinational banking and financial services company headquartered in Mumbai, Maharashtra, India, with its registered office in Vadodara. . (Close Price Rs. 318.95 as on 22 Nov).
CEO: ChandaKochhar (1 May 2009–)
Headquarters: Mumbai
Founder: Industrial Credit and Investment Corporation of India
Founded: June 1994, Vadodara
Profit: US$1.5 billion (2017

Indian Bank

Indian Bank is an Indian state-owned financial services company established in 1907 and headquartered in Chennai, India. . (Close Price Rs.408.90 as on 22 Nov).
Headquarters: Chennai
CEO: KishorKharat (18 Mar 2017–)
Founded: 15 August 1907
Subsidiaries: Indbank Merchant Banking Svc, Ind Bank Housing

Oriental Bank of Commerce

Oriental Bank of Commerce is an India-based bank established in Lahore, is one of the public sector banks in India .(Close Price Rs. 126.00 as on 22 Nov).
Headquarters: Gurugram
CEO: AnimeshChauhan (31 Dec 2014–)
Founded: 19 February 1943
Owner: Government of India
Revenue: 200.6 billion INR (US$3.0 billion)

Punjab National Bank

Punjab National Bank is a worldwide banking and financial services corporation

headquartered in India. It is an Indian state-owned corporation headquartered in New Delhi. The bank was established in 1894. (As of November 22, the close price was Rs. 184.65.)

Headquarters: New Delhi
CEO: Sunil Mehta (6 May 2017–)
Founder: LalaLajpatRai
Founded: 19 May 1894, Lahore, Pakistan
Subsidiaries: PNB Housing Finance Limited, PNB Gilts

State Bank of India

State Bank of India is an Indian multinational, public sector banking and financial services company. It is a government-owned corporation with its headquarters in Mumbai, Maharashtra. . (Close Price Rs.328.90 as on 22 Nov).

Chairperson: Rajnish Kumar
Headquarters: Mumbai
Founded: 1 July 1955
Capital ratio: 13.12% (2016)
Subsidiaries: SBI Cards, State Bank of Hyderabad

Syndicate Bank

Syndicate Bank is one of the oldest and major commercial banks of India. It was founded by T M APai, UpendraPai and VamanKudva. At the time of its establishment, the bank was known as Canara Industrial and Banking Syndicate

Limited .(Close Price Rs.85.50 as on 22 Nov).

Headquarters: Manipal
CEO: ArunShrivastava (15 May 2015–)
Founded: 1925, Udupi
Capital ratio: 12.03% (2017)
Owner: Government of India
Founders: T. M. A. Pai, Vaman Srinivas Kudva

VI. DATA ANALYSIS

Data analysis, also known as data analysis or data analytics, is the act of analysing, cleaning, converting, and modelling data with the objective of uncovering usable information, recommending conclusions, and assisting decision-making. Data analysis encompasses a wide range of techniques and methodologies, referred to by a number of titles in various business and social science disciplines.

Data mining is a type of data analysis that focuses on modelling and knowledge discovery for predictive rather than just descriptive purposes, whereas business intelligence is a type of data analysis that mainly depends on aggregation and is focused on business data. Data analysis may be separated into descriptive statistics, exploratory data analysis (EDA), and confirmatory data analysis in statistical applications (CDA).

Anova: Single Factor Analysis

SUMMARY

Groups	Count	Sum	Average	Variance
Nifty Daily Return %	247	21.7	0.1	0.8
ANDHRA BANK	247	-5.9	0.0	4.1
BANK of BARODA	247	-9.4	0.0	5.1
CANBK	247	25.5	0.1	4.3
CORPBANK	247	11.9	0.0	6.3

HDFC BANK	247	33.4	0.1	0.8
ICICI BANK	247	17.5	0.1	3.5
INDIANB	247	35.3	0.1	8.8
ORIENT BANK	247	11.7	0.0	6.6
PNB	247	20.6	0.1	5.9
SBIN	247	12.9	0.1	2.6
SYNDI BANK	247	-7.4	0.0	5.0

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	10.07464	11	0.915876	0.204763	0.997381	1.791884704
Within Groups	13203.85	2952	4.472849			
Total	13213.93	2,963				

ANOVA SUGGESTIONS :-

- Andhra bank, Bank of baroda , and syndicate bank in the investing is not good because the risk is very high.
- The HDFC bank returns are very high so better to invest in that bank.
- In indianbank , sum , avg , varience returns are the positive returns showing.

Bank Name	Standard Deviation	Expected Return	Variance	Beta
Andhra Bank	0.92	-0.024	0.85	1.393
Bank of Baroda	2.03	-0.038	4.11	1.512
Canara Bank	2.26	0.104	5.11	1.364
Corporation Bank	2.07	0.049	4.28	1.078
HDFC BANK	2.52	0.136	6.35	0.619
ICICI Bank	0.87	0.071	0.76	1.443
INDIAN Bank	1.87	0.143	3.49	1.860
Oriental Bank of Commerce	2.97	0.047	8.8	1.850
Punjab National Bank	2.58	0.084	6.65	1.820
State Bank of India	2.42	0.053	5.88	1.299
Syndicate Bank	1.62	-0.03	2.62	1.585

Interpretation:

- In beta is a measure of the risk of the data.

Beta = Volatility stock market.

- The HDFC bank is[0.62] this volatile is very small and it moves very slow and stable.
- In Indian bank is [1.86] is higher than the market in 86% and more upsides and movements in the market. So we want higher movements we just to choose in Indian bank.

Interpretation:

It is the rate of return, calculated based on assignment of probability distribution with respect to various possible outcomes in the future.

In the given scenario,

The expected rate of Indian bank is 0.143 which high in the given data so the investors would prefer for Indian bank and next preference will be HDFC ,Canara bank like.

Expected Return :

The expected return(0) expected gain on a financial investment is the expected value of its return (of the profit fort the investment). It is measure of the canter of the distribution of the random variable that is the return.

It is calculated by using the following formula:

$$E[R] = \sum_{i=1}^{n} Ri\, Pi$$

Interpretation:

Variance is usually denoted by π ,it is calculated by finding squared deviation of each data value from the mean of the given data, dividing it by number of observations and then determining its square root. The formula or equation of variance are illustrated   below.

Population variance is calculated by the following formula :

$$\pi^2 = \frac{\sum_{i=1}^{n}(xi-x)}{n}$$

Interpretation:

Standard deviation is used to measure the risk of a security standard deviation . It is calculated as a square root of variance in the given scenario.

Standard deviation is variance for Oriental bank of commerce is 2.97 and 8.80 respectively which is more risky security. Whereas the standard deviation & variance for ICICI bank is 0.70 & 0.87 respectively which are risky security

- Source From www.nseindia.com
- Taken 1 year data 01-09-2016 to 31-08-2017 (when paper was started)
- Referred few papers related to volatility from web site.

VII. CONCLUSION

The Stock market has equal opportunity to every investor but, one succeeds and other may lose. To get successful in investment one must learn from failures. For this investor will search for good performing company in the market. Obesely the established company stock will price high but for this companies also have return and risk factor when it comes to investment . So this paper study the return and risk of 11 bank stock for one year and give a brief idea towards investment. In this process expected return, variance and standard deviation are calculated for more clarity.

From Table 1. We can concluded that ICICI Bank is the optimum choose of investment apart other with respect to long term investment. PNB, SBI ,Canara Bank &HdfcBank are found to be low volatility and price increases leads to profitable portfolio for investor.

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