**ANALYTICAL STUDY ON THE VOLATILITY OF SECURITIES TRADED ON BSE SENSEX**

by

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Under the guidance of

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A PROJECT REPORT
submitted

In partial fulfillment of the requirements
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**Department of Management Studies**

**Kumaraguru College of Technology**
(An autonomous institution affiliated to Anna University, Chennai)
**Coimbatore - 641 049**

**May, 2013**

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**BONAFIDE CERTIFICATE**

Certified that this project report titled **"ANALYTICAL STUDY ON THE VOLATILITY OF SECURITIES TRADED ON BSE SENSEX"** is the bonafide work of Ms.T.SANGEETHA, who carried out the project under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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Submitted for the Project Viva-Voce examination held on _____

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External Examiner

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**DECLARATION**

I, hereby declare that this project report entitled as **"ANALYTICAL STUDY ON THE VOLATILITY OF SECURITIES TRADED ON BSE SENSEX"**, has undertaken for academic purpose submitted to Anna University in partial fulfillment of requirement for the award of degree of Master of Business Administration. The project report is the record of the original work done by me under the guidance of Mr.S.Swaminathan, Professor during the academic year 2012-2013.

I, also declare hereby, that the information given in this report is correct to the best of my knowledge and behalf.

**Place: Coimbatore**                    **.………………………**
**Date:**                                  **(T.SANGEETHA)**

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I express my gratitude to our beloved chairman **Arutchelvar Dr. N. MAHALINGAM and Management** for the prime guiding spirit of **Kumaraguru College of Technology** for giving me an opportunity to undergo the MBA Degree course and to undertake this project work.

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I wholeheartedly thank **Mr.R.Madanlal** for her support to complete the project successfully.

At the outset, I wish to record my sincere gratitude to my beloved parents and my friends, who gave me the courage and strength for the successful completion of this project.

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**CHAPTER 1: INTRODUCTION**

**1.1 INTRODUCTION TO THE STUDY**

Bombay Stock Exchange has been highly volatility in recent years. Volatility brings opportunity and risk to traders and investors. There are many reasons for Volatility to occur in share markets. Changes in demand and supply for the product of an industry that uses Bombay stock Exchange as an input may lead to fluctuations in prices of Bombay stock Exchange.

The introduction of the study is the Indian stock market is one of the oldest stock markets in Asia with a glorious past that caters to the huge population of India and gives them investment opportunities.

BSE also provides a host of other services to capital market participants including risk management, clearing, settlement, market data services and education. It has a global reach with customers around the world and a nation-wide presence. BSE systems and processes are designed to safeguard market integrity, drive the growth of the Indian capital market and Stimulate innovation and competition across all market segments.

The major activities of these reforms have been to improve market efficiency, enhancing transparency and bringing the Indian capital market up to international standards. With over 25 million shareholders, India has the third largest investor base in the world after USA and Japan. Over 7500 companies are listed on the Indian stock exchanges (more than the number of companies listed in developed markets of Japan, UK, Germany, France, Australia, Switzerland, Canada and Hong Kong.).The Indian capital market is significant in terms of the degree of development, volume of trading, transparency and its tremendous growth potential. India's market capitalization was the highest among the emerging markets**.**

**THEORITICAL BACKGROUND OF THE STUDY:**

**VOLATILITY**

Volatility refers to the amount of uncertainty or risk about the size of changes in a security's value. Stock market volatility indicates the degree of price variation between the share prices during a particular period and it is a symptom of a highly liquid stock market.

indication of leveling off, you can expect to see the stock price rise as investors bid up this attractive company.

On the other hand, if the profit picture is flat or, worse, declining with no change in sight, look for investors to abandon the stock and the price to fall.

These are simple examples of changes in fundamentals. Other, more complex and subtle changes can occur that may not dramatically affect the stock price immediately (increased debt, a poor acquisition and so on can also trigger price changes).The changes in the underlying business have a direct impact on the stock's price. Smart investors spot the subtle changes before they become price-movers and take the appropriate action.

**Sector Changes**

Changes in the stock's sector can have positive or negative impact on price too. Some sectors or industries are cyclical in nature and you should know that would affect price. However, when whole sectors catch of fire or burn up , even those companies that have solid fundamentals are pulled along with the rest of the sector.

**Market Swings**

The market goes up and the market goes down. That's about all you can say with certainty concerning the stock market .As the market moves up and down, your stock may move with or against it. Most large-cap stocks will follow the market to some degree, but smaller companies may not get the same push every time.

In general, a strong market move either up or down will carry more stocks with it than not, so your stock may be up or down for no other reason than the market was up or down.

➢ Price volatility presents opportunities to buy assets cheaply and sell when overpriced.

➢ When certain cash flows from selling a security are needed at a specific future date, higher volatility means a greater chance of a shortfall.

➢ Higher volatility of returns while saving for retirement results in a wider distribution of possible final portfolio values.

Pricing of securities depends on volatility of each asset. An increase in stock market volatility brings a large stock price change of advances or declines. It has an impact on business investment spending and economic growth through a number of channels. Changes in local or global economic and political environment influence the share price movements and show the state of stock market to the general public.

**TYPES OF VOLATILITY:**

There are two main types of stock volatility including **historical volatility** and **implied volatility** that are used in the options markets.

➢ **Historical volatility**

Historical volatility, often referred to as actual volatility and realized volatility, is the measure of a stock's price movement based on historical prices (stock price history) and it is used to measure how active a stock price typically is over time. It measures the fluctuations in the share price, and more specifically it is measured by taking the daily percentage price changes in a stock and calculating the average over a specific time frame.

➢ **Implied volatility**

Implied volatility is the current volatility of a stock and is estimated by its option price. In other words, the implied stock price volatility is that level of volatility that will calculate a fair value that is equal to the current trading option price.

**Fundamentals**

Clearly, the most direct influence on a stock's price is a change in the economic fundamentals of the business. If revenues and profits are on a steep upward trend with no

➢ Higher volatility of return when retired gives withdrawals a larger permanent impact on the portfolio's value.

**Stock Exchange:**

A stock exchange is an institution, organization or association that serves as a market for trading financial instruments such as stocks, bonds and their related derivatives. The stock exchange provide a trading platform, where buyers and sellers can meet to transact their securities .Stock exchanges in India, under the overall supervision of the regulatory authority, the Securities and Exchange Board of India (SEBI). Exchanges make money in several different areas. Listings, sales, and selling market statistics are some of the various ways that they produce revenue. There are the 2 important markets in stock exchange

➢ **Primary market**
➢ **Secondary Market**

**Bombay Stock Exchange (BSE):**

The Bombay Stock Exchange is the oldest exchange in Asia. In 1956, the BSE became the first stock exchange to be recognized by the Indian Government under the Securities Contracts Regulation Act. The Bombay Stock Exchange developed the BSE SENSEX in 1986, giving the BSE a means to measure overall performance of the exchange.

In 2000 the BSE used this index to open its derivatives market, trading SENSEX futures contracts. The development of SENSEX options along with equity derivatives followed in 2001 and 2002, expanding the BSE's trading platform. Historically an open outcry floor trading exchange, the Bombay Stock Exchange switched to an electronic trading system in 1995. It took the exchange only fifty days to make this transition. This automated, screen-based trading platform called BSE On-line trading (BOLT) currently has a capacity of 8 million orders per day. The BSE has also introduced the world's first centralized exchange-based internet trading system, BSEWEBx.co.in to enable investors anywhere in the world to trade on the BSE platform.

The equity market capitalization of the companies listed on the BSE was US$1 trillion as of December 2011, making it the 6th largest stock exchange in Asia and the 14th largest in the world. The BSE has the largest number of listed companies in the world.

**National Stock Exchange (NSE):**

The National Stock Exchange of India was set up by Government of India on the recommendation of Pherwani Committee in 1991.Promoted by leading financial institutions essentially led by IDBI at the behest of the Government of India; it was incorporated in November 1992 as a tax-paying company. In April 1993, it was recognized as a stock exchange under the Securities Contracts Regulation, 1956. NSE commenced operations in the Wholesale Debt Market segment in June 1994. The Capital market (Equities) segment of the NSE commenced operations in November 1994, while operations in the Derivatives segment commenced in June 2000. NSE has a market capitalization of around US$985 billion and over 1,646 listings as of December 2011.

The NSE's key index is the S&P CNX Nifty, known as the NSE NIFTY, an index of fifty major stocks weighted by market capitalization. NSE is mutually owned by a set of leading financial institutions, banks, insurance companies and other financial intermediaries in India but its ownership and management operate as separate entities. NSE is the third largest Stock Exchange in the world in terms of the number of trades in equities. It is the second fastest growing stock exchange in the world with a recorded growth of 16.6%. NSE also set up as index services firm known as India Index Services & Products Limited (IISL) and has launched several stock indices.

**Index**

An index is a basket of identified stocks, and its value is computed by taking the weighted average of the prices of the constituent stocks of the index. A market index for example consists of a group of top stocks traded in the market and its value changes as the prices of its constituent stocks change. In India, Nifty Index is the most popular stock index and it is based on the top 50 stocks traded in the market.

The **S&P CNX Nifty**, also called the Nifty 50 or simply the Nifty, is a stock market index and one of several leading indices for large companies which are listed on National Stock Exchange of India. Index based derivatives and index funds. Nifty is owned and managed by India Index Services and Products Ltd. (IISL), which is a joint venture between NSE and CRISIL (Credit Rating and Information Services of India Ltd) (IISL) is India's first specialized company focused upon the index as a core product. IISL has marketing and licensing agreement with Standard & Poor's for co-branding equity indices. 'CNX' in its name stands for 'CRISIL NSE Index'. The S&P CNX Nifty currently consists of 50 major Indian companies.

**AN OVERVIEW OF THE BSE SENSEX**

Established in 1875, BSE Ltd. (Bombay Stock Exchange Ltd.) Asia is first Stock Exchange and one of India's leading exchange groups. Over the past 137 years, BSE has facilitated the growth of the Indian corporate sector by providing it an efficient capital-raising platform. Popularly known as BSE, the bourse was established as The Native Share & Stock Brokers' Association in 1875. BSE is a corporatized and demutualised entity, with a broad shareholder-base which includes two leading global exchanges, Deutsche Bourse and Singapore Exchange as strategic partners. BSE provides an efficient and transparent market for trading in equity, debt instruments, derivatives, mutual funds. It also has a platform for trading in equities of small-and medium enterprises (SME).

More than 5000 companies are listed on BSE making it world's No. 1 exchange in terms of listed members. The companies listed on BSE Ltd command a total market capitalization of USD 1.32 Trillion as of January 2013. It is also one of the world's leading exchanges (3rd largest in December 2012) for Index options trading.

BSE systems and processes are designed to safeguard market integrity, drive the growth of the Indian capital market and stimulate innovation and competition across all market segments. BSE is the first exchange in India and second in the world to obtain an ISO

9001:2000 certifications. It is also the first Exchange in the country and second in the world to receive Information Security Management System Standard BSE 7799-2-2002 certification for its On-Line trading System. It operates one of the most respected capital market educational institutes in the country (the BSE Institute Ltd.). BSE also provides depository services through its Central Depository Services Ltd. (CDSL) arm.

BSE is popular equity index the S&P BSE SENSEX - is India's most widely tracked stock market benchmark index. Its recent milestones include the launching of BRICSMART indices derivatives, BSE-SME Exchange platform, S&P BSE GREENEX to promote investments in Green India.

**1.2 INDUSTRY PROFILE:**
**COMPANY DESCRIPTION**
Sharekhan Limited offers online security broking and portfolio services to institutions and large corporate houses as well as individual investors. Sharekhan Limited was formerly known as SSKI Investor Services Private Limited. The company is based in Mumbai, India.

**INDIAN STOCK MARKET OVERVIEW**

The Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) are the two primary exchanges in India. In addition there are 22 region Stock exchanges. However the BSE and NSE have established themselves as the two lending exchange and account for about 90% of the equity volume trade in India.

The Securities and Exchange Board of India (SEBI) is the authorized body, which regulates the operations of stock exchanges. The primary index of BSE is SENSEX comprising 30 stocks and for the NSE is NIFTY which comprising 50 stocks.

The BSE Sensex is the older and more widely followed index. Both these are calculated on the basis of market capitalization and contain the heavily traded share from key sectors. The market is closed on Saturdays and Sundays. Both the exchange has Switched over from the open outcry trading system to a fully automated computerized mode of trading known as BOLT (BSE Online Trading) and NEAT (National Exchange Automated Trading) system.

IT facilitates more efficient processing, automatic order machine, faster execution of trader and transparency.

**TYPES OF INVESTMENT**
Investing is the act of committing money to an endeavor with the expectation of obtaining an additional income. Simply, it means putting the money to work for you and maximizing the earning potential. The more time you give your investments, the more you are able to accelerate the income potential of the original investment.

**Bonds**: They are called fixed-income securities and refer to any securities that are founded on debt. When you purchase a bond, you are lending out your money to a company or government. In return, they agree to give you interest on your money and eventually pay you back the amount you lent out. Bonds are relatively safety but the rate of return is lower.

**Stocks**: When you purchase stocks or equities you become a part owner of the business. This entitles you to vote at the shareholders' meeting and allows you to receive any profits that the company allocates to its owners. Stocks are volatile and they fluctuate in value on a daily basis. When you buy a stock, you aren't guaranteed anything. But compared to bonds, stocks provide relatively high potential returns.

**Mutual Funds**: A mutual fund is a collection of stocks and bonds. When you buy a mutual fund, you are pooling your money with a number of other investors which enables you to pay a professional manager to select specific securities for you. The major advantage of a mutual fund is that you can invest your money without the time or the experience that are often needed to choose a sound investment.

**Futures:** A futures contract is just what it's called a contract. It is not equity in a stock or commodity. It is a contract to make or take delivery of a product in the future, at a price set in the present. In formalized trading of futures contracts on exchanges, agreements specify price, quantity and the month of delivery. Futures can be used either to hedge or to speculate on the price movement of the underlying asset (Futures).
.
**Options**: It is a financial derivative that represents a contract sold by one party (option writer) to another party option holder. The contract offers the buyer the right, but not the obligation, to buy (call) or sell (put) a security or other financial asset at an agreed-upon price during a certain period of time or on a specific date (Option).
There are also other alternative investment opportunities such as: Forex, Gold, Real estate etc.

**STOCK TRADING**
In simple words, stock is a share in the ownership of a company. Holding a company's stock means that you are one of the many owners (shareholders) of a company and you have a claim to everything the company owns. As an owner, you are entitled to your share of the company's earnings as well as any voting rights attached to the stock (Stocks basics: what).

Earlier days a stock was represented by a stock certificate which was a piece of paper that was proof of your ownership. But in today's computer age, your stock is stored electronically by your broker. This is done to make the shares easier to trade. In the past, when a person wanted to sell his shares that person physically took the certificates down to the broker. But now stocks can be purchased with a click of mouse.

Most stocks are traded on exchanges where both buyers and sellers meet and decide on a price. The purpose of a stock exchange is to facilitate the exchange of securities between buyers and sellers, and reducing the risks of investing. Some exchanges are physical locations where transactions are carried out on a trading floor. The other type of exchange is virtual, composed of a network of computers where trades are made electronically.

**ONLINE TRADING**

Traditionally stock trading was done through stock brokers personally or through telephones. As number of people trading in stock market increased enormously in last few years, some issues like location constrains, busy phone lines, miss communication etc. started growing in stock broker offices. Then Information technology helped stock brokers to solve those problems by Online Stock Trading method (Online stock brokers).

Online stock trading is an internet based stock trading facility where Investor can trade shares through a website without any manual intervention from the broker. It also provides investors with rich, interactive information in real time including market updates, investment research and robust analysis. Advantages and disadvantages of online trading

Still some people like offline stock trading where the customer calls the broker to enquire about the stock prices. Then the broker asks some personal details to verify his identity. After that customer can order the amount and the price at which he wants to buy a particular stock. The broker places the order on behalf of the customer. Similarly, the customer can also sell the shares in offline mode. And the customer can monitor all these transactions by logging into his account. The main advantage in offline trading is time-saving.

**BSE Sensex**

The BSE Sensex is a value-weighted index composed of 30 companies with the base April 1979 = 100. It has grown by more than four times from January 1990 till date. The set of companies in the index is essentially fixed. These companies account for around one-fifth of the market capitalization of the BSE. We can use information from April 1979 onwards in estimating the long-run rate of return on the BSE Sensex and that comes to 0.52% per week (continuously compounded) with a standard deviation of 3.67%. This translates to 27% per annum, which translates to roughly 18% per annum after compensating for inflation.

**WHY BANKING SECTOR**

The banking industry in India seems to be unaffected from the global financial crises which started from U.S in the last quarter of 2008. Despite the fallout and nationalization of banks across developed economies, banks in India seems to be on the strong fundamental base and seems to be well insulated from the financial turbulence emerging from the western economies. The Indian banking industry is well placed as compare to their banking industries western counterparts which are depending upon government bailout and stimulus packages.

The strong economic growth in the past, low defaulter ratio, absence of complex financial products, regular intervention by central bank, proactive adjustment of monetary policy and so

called close banking culture has favoured the banking industry in India in recent global financial turmoil.

Although there will no impact on the Indian banking system similar to that in west but the banks in India will adopt for more of defensive approach in credit disbursal in coming period. In order to safe guard their interest; banks will follow stringent norms for credit disbursal. There will be more focus on analyzing borrower financial health rather than capability.

The report "**Indian Banking Sector Forecast to 2012**" contains comprehensive research and rational analysis on various segments, like assets size, income level and number of cardholders, in the Indian banking industry. It also analyzes the current performance and key market trends, and helps clients to understand various products available in the market and their future scope.

The forecast given in this report is not based on a complex economic model but is intended as a rough guide to the direction in which the market is likely to move. The future projection is done on the basis of the current market scenario, past trends, and rules and regulations laid by the regulator and supervisor of the financial system, Reserve Bank of India (RBI).

In India banks have been categorized into 14 banks. They are

- AXIS BANK
- BANK OF INDIA
- BANK OF BARODA
- CANARA BANK
- FEDERAL BANK
- HDFC BANK
- ICICI BANK
- IDBI BANK
- INDUSIND BANK
- KOTAK
- PUNJAB NATIONAL BANK
- SBI
- UNION BANK
- YES BANK

**1.3 COMPANY ANALYSIS**

According to the individual - Audited financial statement for the Year of 2011, total net operating revenues increased with 0.32%, from INR 478.56 tens of millions to INR 480.07 tens of millions. Operating result decreased from INR 173.4 tens of millions to INR 140.67 tens of millions which means -18.88% changes. The results of the period increased 32.41% reaching INR 247.29 tens of millions at the end of the period against INR 186.76 tens of millions last year. Return on equity (Net income/Total equity) went from 49.58% to 54.30%, the Return On Asset (Net income / Total Asset) went from 22.93% to 25.61% and the Net Profit Margin (Net Income/Net Sales) went from 39.03% to 51.51% when compared to the same period of last year. The Debt to Equity Ratio (Total Liabilities/Equity) was 212.07% compared to 216.17% of last year. Finally, the Current Ratio (Current Assets/Current Liabilities) went from 2.15 to 2.27 when compared to the previous year.

**HISTORY OF THE ORGANISATION-SHAREKHAN LTD**

Sharekhan is one of the leading share broking and retail brokerage firms in the country. It is the retail broking arm of the Mumbai-based **SKI Group (ShripalSevantilalKantilalIshwarlal Pvt. Ltd)**, which has more than **88 years** of experience in the stock broking business. SSKI is a veteran equities solutions company with **more than 8 decades** of trust and credibility in the Indian stock markets. It helps the customers/people to make informed decisions and simplifies investing in stocks.

Sharekhan brings to you a user- friendly online trading facility, coupled with a wealth of content that will help you stalk the right shares. SSKI named its online division as a Sharekhan and it is into retail broking. The business of the company **overhauled10 years ago on February 8, 2000.** It acts as a discount brokerage house to a full service investment solution provider. It has specialized research product for the small investors and day traders.

**About Sharekhan:**

- SSKI named its online division as SHAREKHAN and it is into retail broking.
- The business of the company **overhauled 10 years ago on February 8, 2000.**
- It acts as a discount brokerage house to a full service investment solutions provider.
- It has specialized research product for the small investors and day traders.
- Largest chain of **640 shares shops** in **280 cities** across India.

- The site was also launched on February 8, 2000 and named it as www.sharekhan.com.
- The **Speed Trade account** of Sharekhan is the next generation technology product launched on **April 17, 2002.**
- It offers its customers with the trade execution facilities on the NSE and BSE, for cash as well as derivatives, depository services.
- Ensures convenience in Trading Experience: Sharekhan's trading services are designed to offer an easy, hassle free trading experience, whether trading is done daily or occasionally. Sharekhan providing the customers with a multi-channel access to the stock markets.
- It gives advice based on extensive research to its customers and provides them with relevant and updated information to help him make informed about his investment decisions.

**SHAREKHAN'S MISSION & VISION:**

**Mission**

"To educate and empower the retail investor to help him/her take better investment decisions."

**Vision:**

"To be the best retail broking brand in the Indian equities market."

**Growth:**

In a short span of **10 years**, the company has scripted a remarkable growth story. Starting from beginnings in **8th February2000** as an online trading portal, Sharekhan today has a pan-India presence as well as global footprint in UAE and Oman with over **1,529 outlets** serving **9,50,0000 customers** across **450 cities.**

**Sales turnover & profit of last year:**

According to the individual - Audited financial statement for the Year of 2011, total net operating revenues increased with 0.32%, from INR 478.56 tens of millions to INR 480.07 tens of millions. Operating result decreased from INR 173.4 tens of millions to INR 140.67 tens of millions which means -18.88% changes. The results of the period increased 32.41% reaching INR 247.29 tens of millions at the end of the period against INR 186.76 tens of millions last year. Return on equity (Net income/Total equity) went from 49.58% to 54.30%,

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**Awards:**
- It was awarded "Top Domestic Brokerage House" Four times by EURO and ASIA money
- It was a winner of Best Financial Website
- India's most preferred brokers within 5 years "Awaaz customers award 2005"
- A wired companies along with Reliance, HII, Infosys , etc by "Business Today" 2004
- CNBC Award winner ,2004

**Products offered:**
- Depository Services
- Internet Trading
- Commodity Derivatives
- Mutual Fund Distribution
- IPO services
- Insurance Services

**Achievements &milestones:**

**Future Plan:**
- The Coimbatore capital ltd has planned to expand its branches all around Tamilnadu, at present it has 150 branches in and around the Tamilnadu, they are going to come out with 234 branches in Tamilnadu within a couple of years
- They have plan to expand across the Tamilnadu also

## ORGANIZATIONAL STRUCTURE

```
        CEO
         ↓
   Country Head
         ↓
   Regional Head
         ↓
Associate vice president
         ↓
   Branch Manager
         ↓
  Assistant Manager
         ↓
  Advisory Manager
         ↓
Relationship Manager
         ↓
      Dealer
         ↓
   Office Dealer
```
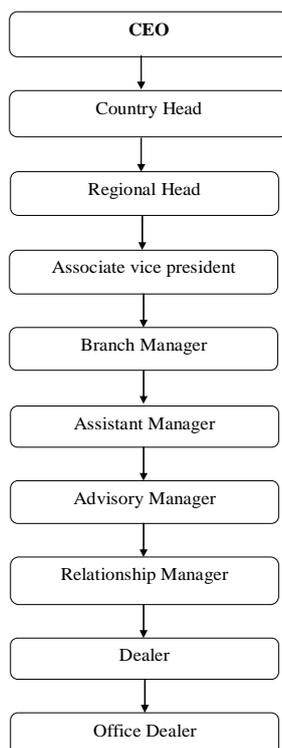
**BRAND IDENTITY**



Bombay Stock Exchange has now adopted only its initials as the new name (BSE), positioning itself better position as a national multi-asset financial infrastructure institution. BSE's strategic shift in approach, attitude and business focus is reflected in its new tag line - Experience the New.

With renewed zeal and focus on new business opportunities, product and service innovation, upgrades in technology, increased investor and member focus, BSE is always pushing the envelope on all fronts. The ambition is to continually improve and adopt new and better ways of conducting our business.

As the first stock exchange in Asia and the pioneer of securities transaction business, BSE prides itself on being at the forefront of bringing innovations to the Indian capital markets while creating diverse investment opportunities for the investor community in India throughout its long history.

BSE continues to undertake several initiatives to build on its strong brand, legacy and market position to create value for its stakeholders and the financial system.

**1.4 OBJECTIVES OF THE STUDY**

- **Primary objective**
- **Secondary objective**

**Primary objective**
- To study on the analysis of volatility of securities traded on bse sensex

**Secondary objective**
- To evaluate the volatility of the stocks in particular index.
- To identify the effect of those events in the whole market.
- To estimate the future price for the script and market.
- To suggest the appropriate alternative for investor.
- To suggest investors to buy, hold and sell stock in the market.

**1.5 STATEMENT OF THE PROBLEM:**
- Most of the investors are not able to predict the volatility of share price. So they are not able to select the right stock for their investment according to their risk ability

Frequent volatility of share price leads to

**1.6 SCOPE OF THE STUDY**
- The study will be helpful in knowing that how to analyze the share price behavior before go for an investment.
- To have a better understanding of the stock market trend will facilitate allocation of financial resources to the most profitable investment opportunity.
- The volatility of stock price is due to several economic and non-economic factors. The study is aimed at ascertaining the behavior of selected stock price.

**CHAPTER 2: REVIEW OF LITERATURE**

**1.1 REVIEW OF LITERATURE**
According to **Philip Kotler perceptions are more important than reality,** as it is perceptions that will affect the consumer's actual behavior. And Perception is defined as the selection, organisation, and interpretation of marketing and environmental stimuli into a coherent picture (Assael, 1998).

In the study conducted by **Nidhi walia and Ravinder kumar (2007)** examined the investor's preference for traditional trading and online trading. The major findings of the study were that Indian investors are more conservative, they do not change easily and Indian traditional traders still choose brokers for trading. But Internet traders are more comfortable with online trading because of its transparency and complete control over the terminal.

Another study by **Sandeep Srivastava, Surendra S Yadav and P K Jain (2008)** on "Derivative Trading in Indian Stock Market Broker's Perception" found that high net worth individuals and proprietary traders contribute to the major proportion of trading volumes in the derivative segment. The survey also revealed investors are using these securities for risk management, profit enhancement, speculation and arbitrage. It also emphasized to popularize option instruments because they may prove to be a useful medium for enhancing retail participation.

Several earlier studies done regarding the characteristics of online traders in USA by Barber and Odean (2002) found that young men are more likely to use the Internet for investing, and that online investors tend to increase turnover and decrease their performance after switching to online trading. Research conducted by Konari Uchida (2006) on the characteristics of Japanese online investors found Japanese online investors prefer higher capital gains, choose low-Volatility stocks less often, use chart data more frequently, and are more likely to choose stocks to buy and sell themselves.

The study conducted by **Yingzi Xu, Robert Goedegebuure and Beatrice van der Heijden (2006) on "Customer Perception, Customer Satisfaction, and Customer Loyalty within Chinese Securities Business**, Towards a Mediation Model for Predicting Customer Behavior" found service quality perceived by customers has a direct, significant effect on customer satisfaction. Also the relationship between perceived service value and customer loyalty is found to be determined by customer satisfaction.

As Fanelli and Erlich say in their study, financial means money and money means an extended Emotional baggage (Erlich and Fanelli 2004: 7). Individual attitude toward money is an extremely emotional one. Unlike consumer goods when taking the decision to purchase a financial product you do not buy one brand but rather rely on the advice of financial intermediaries in the final Decision (Lewis 2008: 105).

Stafford, Lusch and Kabulis suggests that individuals can purchase all types of financial products In a specific time, however products are purchased for longer periods of time in such a way as to satisfy the utility function. They also say that sometimes consumers must not only decide between various alternatives of spending the money, but also if to acquire or to save the

Respective amounts (Stafford, Kasulis and Lusch 1982: 397).

## CHAPTER 3: RESEARCH METHODOLOGY
**RESEARCH METHODOLOGY**

**3.1 TYPE OF RESEARCH**

**ANALTICAL RESEARCH:**

The study uses Analytical Research Design.

**3.2 DATA AND SOURCES OF DATA**

NATURE OF DATA

The data used in secondary data.

SOURCES OF DATA

Data were collected for a period of Three year $1^{st}$ Jan 2010 to $31^{st}$ December 2012. The data are collected from the BSE web.

**3.3 TIME PERIOD COVERED**

Data were collected for a period of Three year $1^{st}$ Jan 2010 to $31^{st}$ December 2012.The daily volatility based on the BSE sensex.

**3.4 STATISTICAL TOOLS USED**

The tools used for this project are

1. Beta

2. Quarterly Moving average

**SIMPLE MOVING AVERAGE**

The moving average is one of the key trend lines that are plotted on a chart reflecting the closing price over weeks. When the moving average moves above or below the daily chart it may generate a buy or sell signal.

A moving average is an indicate that shows the average value a security's price over a period of time .when calculating a moving average ,a mathematical analysis of the security's average value over a predetermined time period is made .As the security's price changes, its average price moves up or down

**Buy signal**: when the security's price rises above its moving average
**Sell signal**: when the security's price rises below its moving average
**BETA**

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. The beta factor describes the movement in stocks or portfolios returns in relation to that of the market return

The main purpose of using Slope or Beta is to predict the change in the market. Beta is a measure of the market or non –Diversible risk associated with any given security in the market .The Formula for predicting Beta is as follows:

Market Value of Beta = P1-P0 / P0*100

Where,

P1    Today's Close
P0    Previous Close

Beta = Cov (x, y) / var (x)

Where,

X   Market Value of bse

Y   Market Value of the company.

Monthly Market value of beta = P1-P0 / P0*100

For calculating the yearly beta Value, Monthly beta was calculated and added to find the yearly market value of Beta.

Where,

P1   Current month average closing price.

P2   Previous month average closing price.

Where,

X   Market Value of bse
Y   Market Value of the company (Monthly average)

**3.5 LIMITATIONS OF THE STUDY**

- The Study was conducted with the available secondary data available and analysis was made accordingly.
- The study is confined to 3 years only and hence the Changes those have Taken Place Before and after these periods have not been taken into Considerations.
- The study considers only one sectors Name Banking Sector

**CHAPTER 4: ANALYSIS & INTERPRETATION**

**4.1 DATA ANALYSIS AND INTERPRETATION**

**BANKING SECTOR:**

**4.1.1 TABLE SHOWING THE VOLATILITY OF AXIS BANK**

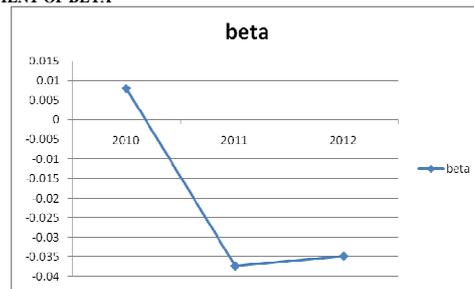| YEAR | ALPHA | BETA | STANDARD DEVIATION |
|---|---|---|---|
| 2010 | -0.17452 | 0.008007 | 2.88767 |
| 2011 | -0.13724 | -0.03722 | 1.024518 |
| 2012 | -0.18996 | -0.03478 | 0.854525 |

**MOVEMENT OF BETA**



FIGURE 4.1.1

**INTERPRETATION**

A beta of less than 1 means that the stock is less volatile than the market as whole. While a beta greater than 1 means stock is 0 more volatile than the market as whole. The beta volume can be less than 0, meaning either that their stock is losing money. While the market is gaining (more likely) or that the stock the stock is gaining while the market is losing (less likely).

**4.1.2 TABLE SHOWING THREE QUARTER MOVING AVERAGE OF AXIS BANK:**

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in RS) | ACTUAL |
|---|---|---|---|---|
| 2010 | 1 | 1106.483 | | |
| | 2 | 1246.517 | 1251.161 | 1176.5 |
| | 3 | 1400.483 | 1347.228 | 1323.5 |
| | 4 | 1394.683 | 1362.2 | 1397.583 |
| 2011 | 1 | 1291.433 | 1323.55 | 1343.058 |
| | 2 | 1284.533 | 1240.278 | 1287.983 |
| | 3 | 1144.867 | 1133.572 | 1214.7 |
| | 4 | 971.3167 | 1082.967 | 1058.092 |
| | | 1132.717 | 1045.117 | 1052.017 |
| 2012 | 1 | | | |
| | 2 | 1031.317 | 1074.606 | 1082.017 |
| | 3 | 1059.783 | 1125.533 | 1045.55 |
| | 4 | 1285.5 | 781.761 | 1172.642 |

**MOVING AVERAGE**
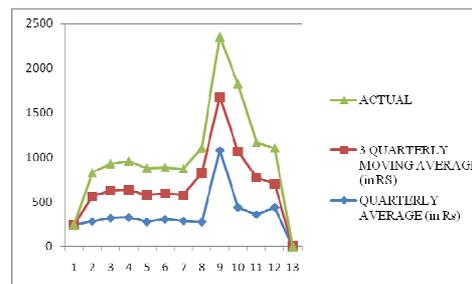


FIGURE 4.1.2

**INTERPRETATION**

The average Closing Price as on 4th quarter 2012 was 1,285.5which is greater than the moving average. Moreover the prices Movement during the years were showing an upward trend

Which Indicates that the security's price has been going up. It shows a buying signal for the investors.

**4.2.1 TABLE SHOWING THE VOLATILITY OF BANK OF BARODA**

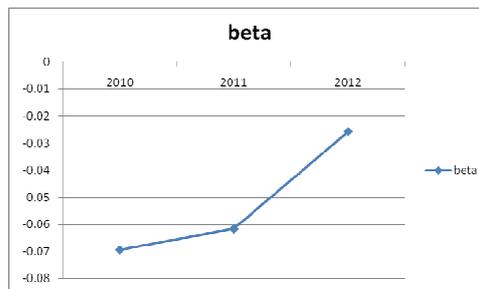| YEAR | ALPHA | BETA | STANDARD DEVIATION |
|------|-------|------|--------------------|
| 2010 | -0.13283 | -0.06941 | 0.819432 |
| 2011 | -0.11038 | -0.06168 | 1.029823 |
| 2012 | -0.24778 | -0.02577 | 0.86014 |

**MOVEMENT OF BETA**



FIGURE 4.2.1

**INTERPRETATION**

A beta of less than 1 means that the stock is less volatile than the market as whole. While a beta greater than 1 means stock is 0 more volatile than the market as whole. The beta volume can be less than 0, meaning either that their stock is losing money. While the market is gaining (more likely) or that the stock the stock is gaining while the market is losing (less likely).

**4.2.2TABLE SHOWING THREE QUARTER MOVING AVERAGE OF BANK OF BARODA**

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE(in RS) | ACTUAL |
|------|-----------|---------------------------|-----------------------------------|--------|
| 2010 | 1 | 785.0333 | | |
|  | 2 | 695.6167 | 736.4889 | 740.325 |
|  | 3 | 728.8167 | 736.0222 | 712.2167 |
|  | 4 | 783.6333 | 741.1444 | 756.225 |
| 2011 | 1 | 710.9833 | 762.5111 | 747.3083 |
|  | 2 | 792.9167 | 795.4611 | 751.95 |
|  | 3 | 882.4833 | 858.8167 | 837.7 |
|  | 4 | 901.05 | 910.65 | 891.7667 |
| 2012 | 1 | 948.4167 | 886.5722 | 924.7334 |
|  | 2 | 810.25 | 819.9889 | 879.3334 |
|  | 3 | 701.3 | 703.7444 | 755.775 |
|  | 4 | 599.6833 | 433.6611 | 650.4917 |

**MOVING AVERAGE**
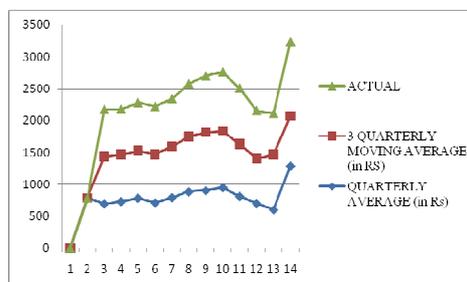


FIGURE 4.2.2

**INTERPRETATION**

The average Closing Price as on 4th quarter 2012 was 599.68which is greater than the moving average. Moreover the prices Movement during the years were showing an upward trend Which Indicates that the security's price has been going up. It shows a buying signal for the investors.

**4.3.1TABLE SHOWING THE VOLATILITY OF BANK OF INDIA**

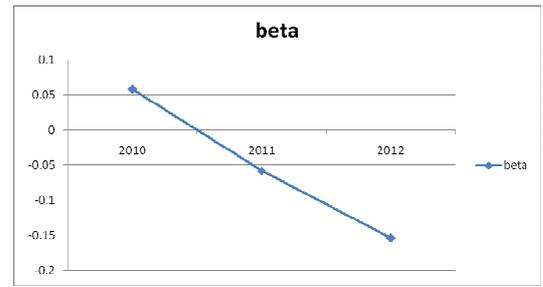| YEAR | ALPHA | BETA | STANDARD DEVIATION |
|---|---|---|---|
| 2010 | -0.21527 | 0.058557 | 1.371893 |
| 2011 | -0.11813 | -0.05802 | 0.831333 |
| 2012 | -0.20681 | -0.15353 | 0.881284 |

**MOVEMENT OF BETA**



**FIGURE 4.3.1**

**INTERPRETATION**

A beta of less than 1 means that the stock is less volatile than the market as whole. While a beta greater than 1 means stock is 0 more volatile than the market as whole. The beta volume can be less than 0, meaning either that their stock is losing money. While the market is gaining (more likely) or that the stock the stock is gaining while the market is losing (less likely).

**4.3.2TABLE SHOWING THREE QUARTER MOVING AVERAGE OF BANK OF INDIA**

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in RS) | ACTUAL |
|---|---|---|---|---|
| 2010 | 1 | 373.1 | | |
| | 2 | 337.3667 | 350.9889 | 355.2334 |

| | 2 | | | |
|---|---|---|---|---|
| | 3 | 357.5 | 354.2111 | 375.6417 |
| | 4 | 311.35 | 222.95 | 334.425 |

**MOVING AVERAGE**
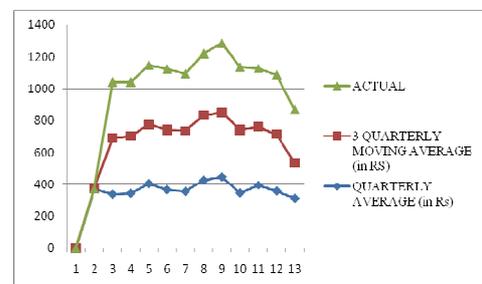


**FIGURE4.3.2**

**INTERPRETATION**

The average Closing Price as on 4th quarter 2012 was 311.35which is greater than the moving average. Moreover the prices Movement during the years were showing an upward trend Which Indicates that the security's price has been going up. It shows a buying signal for the investors.

**4.4.1TABLE SHOWING THE VOLATILITY OF CANARA BANK**

| | 3 | 342.5 | 361.2445 | 339.9334 |
|---|---|---|---|---|
| | 4 | 403.8667 | 370.5167 | 373.1834 |
| 2011 | 1 | 365.1833 | 374.4056 | 384.525 |
| | 2 | 354.1667 | 381.2389 | 359.675 |
| | 3 | 424.3667 | 408.0056 | 389.2667 |
| | 4 | 445.4833 | 404.9611 | 434.925 |
| 2012 | 1 | 345.0333 | 394.7666 | 395.2583 |
| | | 393.7833 | 365.4389 | 369.4083 |

| YEAR | ALPHA | BETA | STANDARD DEVIATION |
|---|---|---|---|
| 2010 | -0.03827 | 0.044132 | 2.203397 |
| 2011 | -0.06721 | -0.14407 | 0.829329 |
| 2012 | 0.006478 | 0.02514 | 2.362266 |

**MOVEMENT OF BETA**



**FIGURE4.4.1**

**INTERPRETATION**

A beta of less than 1 means that the stock is less volatile than the market as whole. While a beta greater than 1 means stock is 0 more volatile than the market as whole. The beta volume can be less than 0, meaning either that their stock is losing money. While the market is gaining (more likely) or that the stock the stock is gaining while the market is losing (less likely).

**4.4.2TABLE SHOWING THREE QUARTER MOVING AVERAGE OF CANARA BANK**

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in RS) | ACTUAL |
|---|---|---|---|---|
| 2010 | 1 | 397.5833 | | |
| | 2 | 428.8667 | 450.4944 | 413.225 |
| | 3 | 525.0333 | 553.3778 | 476.95 |
| | 4 | 706.2333 | 614.6722 | 615.6333 |
| 2011 | 1 | 612.75 | 628.55 | 659.4917 |
| | 2 | 566.6667 | 541.0222 | 589.7084 |
| | 3 | 443.65 | 477.1 | 505.1584 |
| | 4 | 420.9833 | 449.8389 | 432.3167 |
| 2012 | 1 | 484.8833 | 441.1389 | 452.9333 |
| | | 417.55 | 424.5778 | 451.2167 |
| | 2 | | | |
| | 3 | 371.3 | 414.2889 | 394.425 |
| | 4 | 454.0167 | 275.1056 | 412.6584 |

**MOVING AVERAGE**
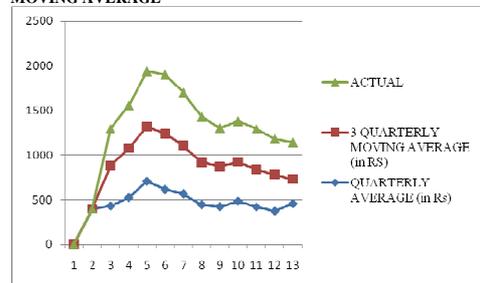


**FIGURE4.4.2**

**INTERPRETATION**

The average Closing Price as on 4th quarter 2012 was 454.02which is greater than the moving average. Moreover the prices Movement during the years were showing an upward trend Which Indicates that the security's price has been going up. It shows a buying signal for the investors.

**4.5.1TABLE SHOWING THE VOLATILITY OF FEDERAL BANK**

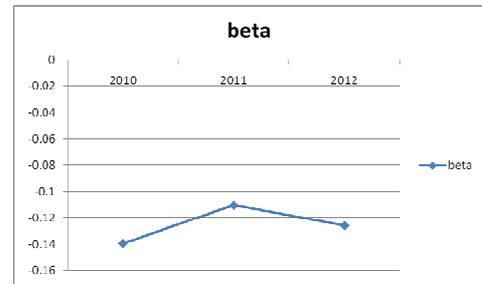| YEAR | ALPHA | BETA | STANDARD DEVIATION |
|---|---|---|---|
| 2010 | -0.24505 | -0.13923 | 0.953804 |
| 2011 | -0.11565 | -0.11026 | 1.198269 |
| 2012 | -0.1914 | -0.12561 | 0.765806 |

**MOVEMENT OF BETA**



FIGURE 4.5.1

**INTERPRETATION**

A beta of less than 1 means that the stock is less volatile than the market as whole. While a beta greater than 1 means stock is 0 more volatile than the market as whole. The beta volume can be less than 0, meaning either that their stock is losing money. While the market is gaining (more likely) or that the stock the stock is gaining while the market is losing (less likely).

**4.5.2TABLE SHOWING THREE QUARTER MOVING AVERAGE OF FEDERAL BANK**

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in Rs) | ACTUAL |
|---|---|---|---|---|
| 2010 | 1 | 259.85 | | |
| | 2 | 318.8 | 312.65 | 289.325 |
| | 3 | 359.3 | 371.8389 | 339.05 |
| | 4 | 437.4167 | 391.3445 | 398.3584 |
| 2011 | 1 | 377.3167 | 417.8834 | 407.3667 |
| | 2 | 438.9167 | 401.2778 | 408.1167 |
| | 3 | 387.6 | 398.7833 | 413.2584 |
| | 4 | 369.8333 | 389.3389 | 378.7167 |
| 2012 | 1 | 410.5833 | 403.1222 | 390.2083 |
| | | 428.95 | 420.5611 | 419.7667 |
| | 2 | | | |
| | 3 | 422.15 | 450.7278 | 425.55 |
| | 4 | 501.0833 | 307.7444 | 461.6167 |

**MOVING AVERAGE**
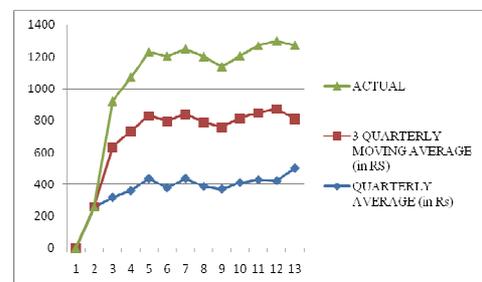


FIGURE 4.5.2

**INTERPRETATION**

The average Closing Price as on 4th quarter 2012 was 501.08which is greater than the moving average. Moreover the prices Movement during the years were showing an upward trend Which Indicates that the security's price has been going up. It shows a buying signal for the investors.

**4.6.1TABLE SHOWING THE VOLATILITY OF HDFC BANK**

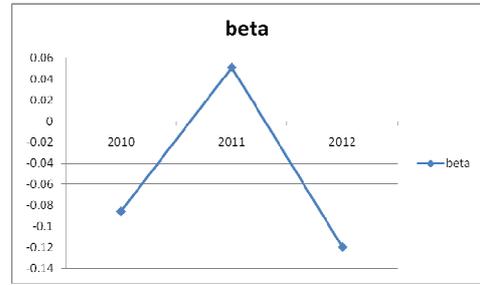| YEAR | ALPHA | BETA | STANDARD DEVIATION |
|------|-------|------|--------------------|
| 2010 | -0.05058 | -0.08556 | 0.590164 |
| 2011 | 1.410773 | 0.051218 | 25.35396 |
| 2012 | -0.14379 | -0.11958 | 0.506092 |

**MOVEMENT OF BETA**



FIGURE 4.6.1

**INTERPRETATION**

A beta of less than 1 means that the stock is less volatile than the market as whole. While a beta greater than 1 means stock is 0 more volatile than the market as whole. The beta volume can be less than 0, meaning either that their stock is losing money. While the market is gaining (more likely) or that the stock the stock is gaining while the market is losing (less likely).

**4.6.2TABLE SHOWING THREE QUARTER MOVING AVERAGE OF HDFC BANK**

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in Rs) | ACTUAL AVERAGE |
|------|-----------|---------------------------|------------------------------------|----------------|
| 2010 | 1 | 351.2 | | |
| | 2 | 386.11 | 395.5633 | 368.655 |

| | 2 | | | |
|------|---|---|---|---|
| | 3 | 603.8667 | 604.4722 | 570.5417 |
| | 4 | 672.3333 | 425.4 | 638.1 |

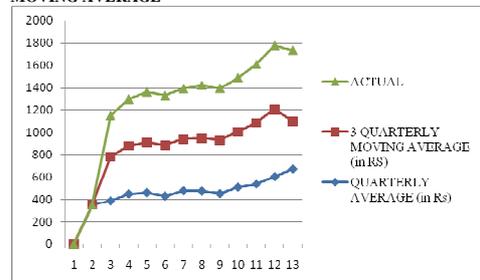| | 3 | 449.38 | 432.1367 | 417.745 |
|------|---|--------|----------|---------|
| | 4 | 460.92 | 446.4444 | 455.15 |
| 2011 | 1 | 429.0333 | 456.2822 | 444.9767 |
| | 2 | 478.8933 | 461.1811 | 453.9633 |
| | 3 | 475.6167 | 469.0089 | 477.255 |
| | 4 | 452.5167 | 479.2389 | 464.0667 |
| 2012 | 1 | 509.5833 | 499.7722 | 481.05 |
| | | 537.2167 | 550.2222 | 523.4 |

**MOVING AVERAGE**



FIGURE 4.6.2

**INTERPRETATION**

The average Closing Price as on 4th quarter 2012 was 672.33which is greater than the moving average. Moreover the prices Movement during the years were showing an upward trend Which Indicates that the security's price has been going up. It shows a buying signal for the investors.

**4.7.1TABLE SHOWING THE VOLATILITY OF ICICI BANK**

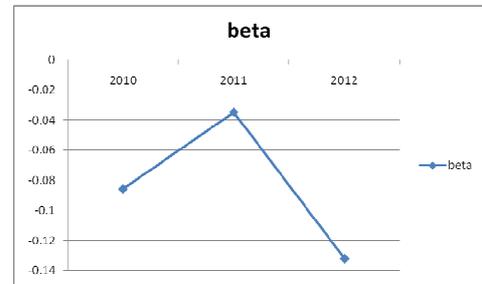| YEAR | ALPHA | BETA | STANDARD DEVIATION |
|---|---|---|---|
| 2010 | -0.00865 | -0.0858 | 0.885641 |
| 2011 | -0.09225 | -0.03483 | 1.079477 |
| 2012 | -0.18572 | -0.13198 | 0.786259 |

**MOVEMENT OF BETA**



**FIGURE 4.7.1**

**INTERPRETATION**

A beta of less than 1 means that the stock is less volatile than the market as whole. While a beta greater than 1 means stock is 0 more volatile than the market as whole. The beta volume can be less than 0, meaning either that their stock is losing money. While the market is gaining (more likely) or that the stock the stock is gaining while the market is losing (less likely).

**4.7.2TABLE SHOWING THREE QUARTER MOVING AVERAGE OF ICICI BANK**

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in Rs) | ACTUAL |
|---|---|---|---|---|
| 2010 | 1 | 884.9833 | | |
| | 2 | 893.1833 | 925.1778 | 889.0833 |

| | 3 | 997.3667 | 1013.511 | 945.275 |
| | 4 | 1149.983 | 1060.644 | 1073.675 |
| 2011 | 1 | 1034.583 | 1094.116 | 1092.283 |
| | 2 | 1097.783 | 1020.383 | 1066.183 |
| | 3 | 928.7833 | 934.3277 | 1013.283 |
| | 4 | 776.4167 | 867.9278 | 852.6 |
| 2012 | 1 | 898.5833 | 843.3722 | 837.5 |
| | | 855.1167 | 909.8222 | 876.85 |

| | 2 | | | |
| | 3 | 975.7667 | 975.4001 | 915.4417 |
| | 4 | 1095.317 | 690.3612 | 1035.542 |

**MOVING AVERAGE**



**FIGURE 4.7.2**

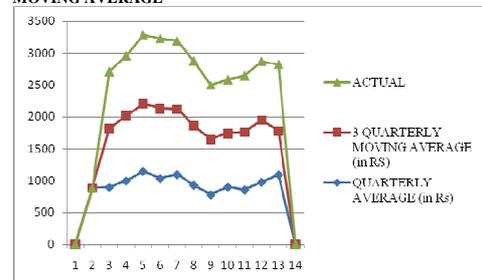**INTERPRETATION**

The average Closing Price as on 4th quarter 2012 was 1,095.32which is greater than the moving average. Moreover the prices Movement during the years were showing an upward trend Which Indicates that the security's price has been going up. It shows a buying signal for the investors.

**4.8.1TABLE SHOWING THE VOLATILITY OF IDBI BANK**

| | | | |
|---|---|---|---|
| | | | |

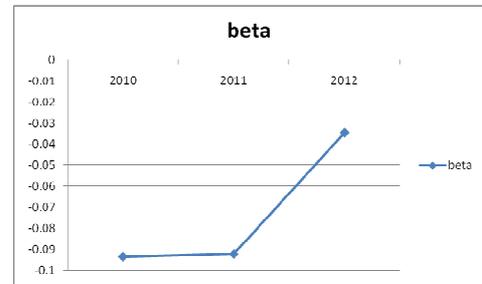| YEAR | ALPHA | BETA | STANDARD DEVIATION |
|------|-------|------|--------------------|
| 2010 | -0.35373 | -0.09339 | 0.803789 |
| 2011 | -0.21553 | -0.09217 | 0.787502 |
| 2012 | -0.29018 | -0.03452 | 0.762973 |

MOVEMENT OF BETA



FIGURE 4.8.1

**INTERPRETATION**

A beta of less than 1 means that the stock is less volatile than the market as whole. While a beta greater than 1 means stock is 0 more volatile than the market as whole. The beta volume can be less than 0, meaning either that their stock is losing money. While the market is gaining (more likely) or that the stock the stock is gaining while the market is losing (less likely).

**4.8.2 TABLE SHOWING THREE QUARTER MOVING AVERAGE OF IDBI BANK**

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in Rs) | ACTUAL |
|------|-----------|---------------------------|-------------------------------------|--------|
| 2010 | 1 | 118.35 | | |
| | | 119.6 | 122.9722 | 118.975 |
| | 2 | | | |
| | 3 | 130.9667 | 140.05 | 125.2834 |
| | 4 | 169.5833 | 146.3167 | 150.275 |
| 2011 | 1 | 138.4 | 148.6444 | 153.9917 |
| | 2 | 137.95 | 130.0833 | 138.175 |
| | 3 | 113.9 | 115.8722 | 125.925 |
| | 4 | 95.76667 | 104.7889 | 104.8333 |
| 2012 | 1 | 104.7 | 98.01667 | 100.2333 |
| | 2 | 93.58333 | 96.34444 | 99.14167 |
| | 3 | 90.75 | 96.15001 | 92.16667 |
| | 4 | 104.1167 | 64.95557 | 97.43335 |

MOVING AVERAGE
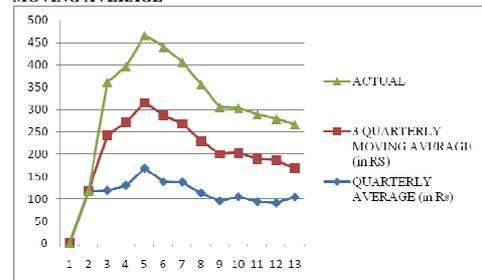


FIGURE 4.8.2

**INTERPRETATION**

The average Closing Price as on 4th quarter 2012 was 104.11which is greater than the moving average. Moreover the prices Movement during the years were showing an upward trend Which Indicates that the security's price has been going up. It shows a buying signal for the investors.

**4.9.1TABLE SHOWING THE VOLATILITY OF INDUSIND BANK**

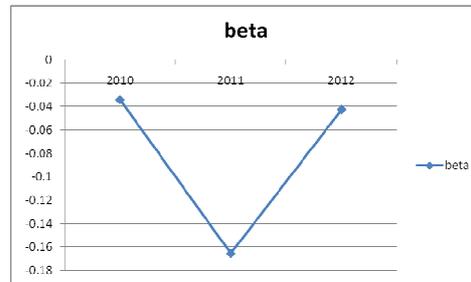| YEAR | ALPHA | BETA | STANDARD DEVIATION |
|------|-------|------|--------------------|
| 2010 | -0.33436 | -0.03396 | 1.117084 |
| 2011 | -0.02416 | -0.16509 | 1.58576 |
| 2012 | -0.22419 | -0.04227 | 0.72377 |

**MOVEMENT OF BETA**

**FIGURE 4.9.1**

**INTERPRETATION**

A beta of less than 1 means that the stock is less volatile than the market as whole. While a beta greater than 1 means stock is 0 more volatile than the market as whole. The beta volume can be less than 0, meaning either that their stock is losing money. While the market is gaining (more likely) or that the stock the stock is gaining while the market is losing (less likely).

**4.9.2TABLE SHOWING THREE QUARTER MOVING AVERAGE OF INDUSIND BANK**

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in Rs) | ACTUAL |
|------|-----------|---------------------------|-----------------------------------|--------|
| 2010 | 1 | 155.95 | | |
| | 2 | 198.4167 | 194.8 | 177.1834 |
| | 3 | 230.0333 | 234.0278 | 214.225 |
| | 4 | 273.6333 | 246.4278 | 251.8333 |
| 2011 | 1 | 235.6167 | 258.2167 | 254.625 |
| | 2 | 265.4 | 253.6222 | 250.5084 |
| | 3 | 259.85 | 259.8889 | 262.625 |
| | 4 | 254.4167 | 274.2389 | 257.1334 |
| 2012 | 1 | 308.45 | 295.6056 | 281.4334 |
| | 2 | 323.95 | 322.1722 | 316.2 |
| | 3 | 334.1167 | 352.5 | 329.0334 |
| | 4 | 399.4333 | 244.5167 | 366.775 |

**MOVING AVERAGE**

**FIGURE 4.9.2**

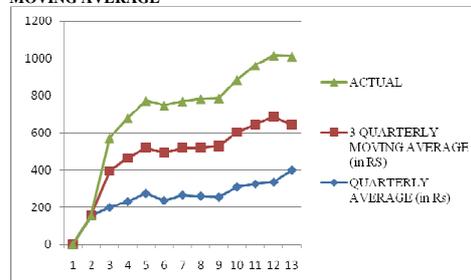**INTERPRETATION**

The average Closing Price as on 4th quarter 2012 was 399.43which is greater than the moving average. Moreover the prices Movement during the years were showing an upward trend Which Indicates that the security's price has been going up. It shows a buying signal for the investors.

**4.10.1TABLE SHOWING THE VOLATILITY OF KOTAK MAHINDRA BANK**

| | | | |
|---|---|---|---|
| | | | |

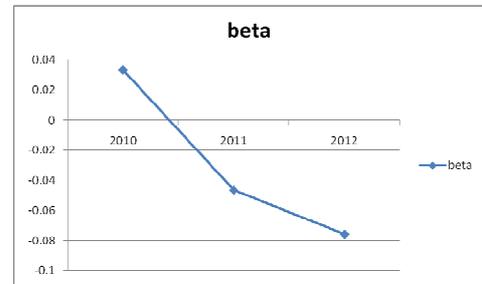| YEAR | ALPHA | BETA | STANDARD DEVIATION |
|------|-------|------|--------------------|
| 2010 | 0.111062 | 0.033275 | 6.207741 |
| 2011 | -0.12012 | -0.04661 | 0.825157 |
| 2012 | -0.0765 | -0.0759 | 0.620283 |

MOVEMENT OF BETA



**FIGURE 4.10.1**

**INTERPRETATION**

A beta of less than 1 means that the stock is less volatile than the market as whole. While a beta greater than 1 means stock is 0 more volatile than the market as whole. The beta volume can be less than 0, meaning either that their stock is losing money. While the market is gaining (more likely) or that the stock the stock is gaining while the market is losing (less likely).

**4.10.2TABLE SHOWING THREE QUARTER MOVING AVERAGE OF KOTAK MAHINDRA**

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in Rs) | ACTUAL |
|------|-----------|---------------------------|------------------------------------|--------|
| 2010 | 1 | 378.51 | | |
| | 2 | 377.55 | 393.6656 | 378.03 |

| | 3 | 424.9367 | 1262.646 | 401.2434 |
|------|---|----------|----------|----------|
| | 4 | 2985.45 | 1275.318 | 1705.193 |
| 2011 | 1 | 415.5667 | 1283.778 | 1700.508 |
| | 2 | 450.3167 | 438.4334 | 432.9417 |
| | 3 | 449.4167 | 456.3056 | 449.8667 |
| | 4 | 469.1833 | 482.65 | 459.3 |
| 2012 | 1 | 529.35 | 525.8944 | 499.2667 |
| | | 579.15 | 565.4222 | 554.25 |

| | 2 | | | |
|------|---|----------|----------|----------|
| | 3 | 587.7667 | 602.5722 | 583.4584 |
| | 4 | 640.8 | 409.5222 | 614.2834 |

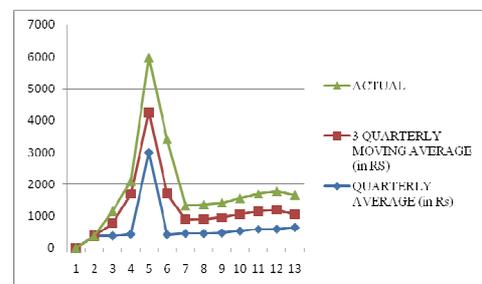**MOVING AVERAGE**



**Figure 4.10.2**

**INTERPRETATION**

The average Closing Price as on 4th quarter 2012 was 640.8which is greater than the moving average. Moreover the prices Movement during the years were showing an upward trend Which Indicates that the security's price has been going up. It shows a buying signal for the investors.

**4.11.1TABLE SHOWING THE VOLATILITY OF PUNJOB NATIONAL BANK**

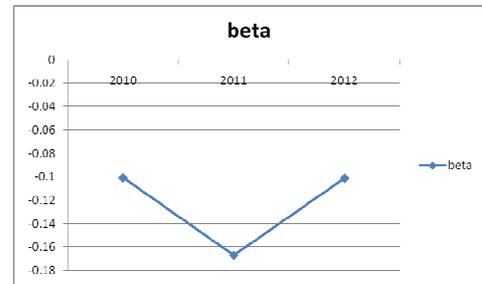| YEAR | ALPHA | BETA | STANDARD DEVIATION |
|---|---|---|---|
| 2010 | -0.07418 | -0.10065 | 0.852873 |
| 2011 | -0.09016 | -0.16704 | 0.812157 |
| 2012 | -0.25027 | -0.10099 | 0.75685 |

**MOVEMENT OF BETA**



**FIGURE 4.11.1**

**INTERPRETATION**

A beta of less than 1 means that the stock is less volatile than the market as whole. While a beta greater than 1 means stock is 0 more volatile than the market as whole. The beta volume can be less than 0, meaning either that their stock is losing money. While the market is gaining (more likely) or that the stock the stock is gaining while the market is losing (less likely).

**4.11.2TABLE SHOWING THREE QUARTER MOVING AVERAGE OF PNB**

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in Rs) | ACTUAL |
|---|---|---|---|---|
| 2010 | 1 | 938.1333 | | |
| | 2 | 1028.117 | 1049.083 | 983.1252 |

| | 2 | | | |
|---|---|---|---|---|
| | 3 | 748.4333 | 784.3055 | 777.1083 |
| | 4 | 798.7 | 515.7111 | 773.5667 |

**MOVING AVERAGE**
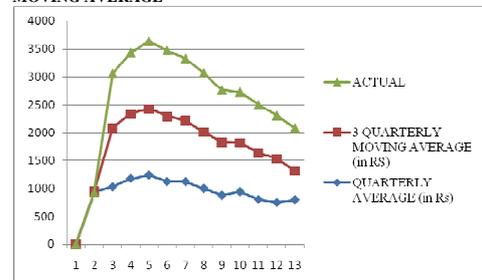


**FIGURE 4.11.2**

**INTERPRETATION**

The average Closing Price as on 4th quarter 2012 was 798.7which is greater than the moving average. Moreover the prices Movement during the years were showing an upward trend Which Indicates that the security's price has been going up. It shows a buying signal for the investors.

**4.12.1TABLE SHOWING THE VOLATILITY OF SBI**

| | | | |
|---|---|---|---|
| | | | |

| YEAR | | | | |
|---|---|---|---|---|
| | 3 | 1181 | 1150.711 | 1104.559 |
| | 4 | 1243.017 | 1183.261 | 1212.009 |
| 2011 | 1 | 1125.767 | 1164.611 | 1184.392 |
| | 2 | 1125.05 | 1084.328 | 1125.409 |
| | 3 | 1002.167 | 1002.783 | 1063.609 |
| | 4 | 881.1333 | 941.4001 | 941.6502 |
| 2012 | 1 | 940.9 | 875.9389 | 911.0167 |
| | | 805.7833 | 831.7055 | 873.3417 |

| YEAR | ALPHA | BETA | STANDARD DEVIATION |
|------|-------|------|--------------------|
| 2010 | -0.04982 | -0.11832 | 0.571467 |
| 2011 | -0.10172 | -0.13271 | 0.784935 |
| 2012 | -0.17185 | -0.15569 | 0.796565 |

MOVEMENT OF BETA
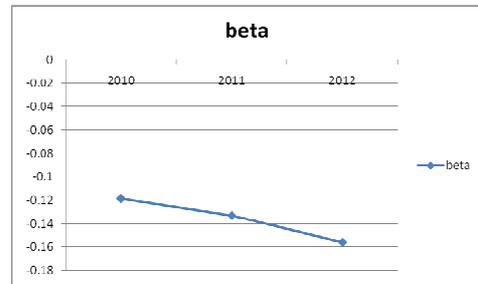


FIGURE 4.12.1

**INTERPRETATION**

A beta of less than 1 means that the stock is less volatile than the market as whole. While a beta greater than 1 means stock is 0 more volatile than the market as whole. The beta volume can be less than 0, meaning either that their stock is losing money. While the market is gaining (more likely) or that the stock the stock is gaining while the market is losing (less likely).

**4.12.2TABLE SHOWING THREE QUARTER MOVING AVERAGE OF SBI**

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in Rs) | ACTUAL |
|------|-----------|---------------------------|-------------------------------------|--------|
| 2010 | 1 | 2037.617 | | |
| | | 2289.467 | 2387.011 | 2163.542 |

| | 2 | | | |
|------|---|---------|----------|----------|
| | 3 | 2833.95 | 2702.956 | 2561.709 |
| | 4 | 2985.45 | 2833.239 | 2909.7 |
| 2011 | 1 | 2680.317 | 2722.961 | 2832.884 |
| | 2 | 2503.117 | 2419.767 | 2591.717 |
| | 3 | 2075.867 | 2114 | 2289.492 |
| | 4 | 1763.017 | 3308.995 | 1919.442 |
| 2012 | 1 | 6088.1 | 3357.417 | 3925.559 |

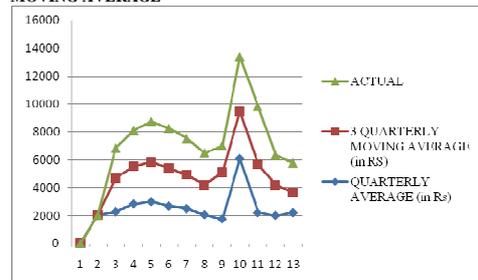| | 2 | 2221.133 | 3446.2 | 4154.617 |
|------|---|----------|----------|----------|
| | 3 | 2029.367 | 2157.211 | 2125.25 |
| | 4 | 2221.133 | 1416.833 | 2125.25 |

**MOVING AVERAGE**



FIGURE 4.12.2

**INTERPRETATION**

The average Closing Price as on 4th quarter 2012 was 2,221.13which is greater than the moving average. Moreover the prices Movement during the years were showing an upward trend Which Indicates that the security's price has been going up. It shows a buying signal for the investors.

**4.13.1TABLE SHOWING THE VOLATILITY OF UNION BANK**

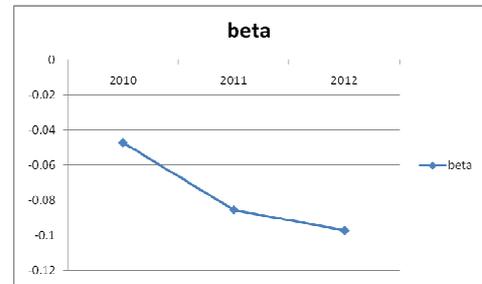| YEAR | ALPHA | BETA | STANDARD DEVIATION |
|------|-------|------|--------------------|
| 2010 | -0.16175 | -0.04711 | 1.044894 |
| 2011 | -0.11762 | -0.08524 | 1.167834 |
| 2012 | -0.29722 | -0.09706 | 0.987641 |

**MOVEMENT OF BETA**



FIGURE 4.13.1

**INTERPRETATION**

A beta of less than 1 means that the stock is less volatile than the market as whole. While a beta greater than 1 means stock is 0 more volatile than the market as whole. The beta volume can be less than 0, meaning either that their stock is losing money. While the market is gaining (more likely) or that the stock the stock is gaining while the market is losing (less likely).

**4.13.2TABLE SHOWING THREE QUARTER MOVING AVERAGE OF UNION BANK**

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in Rs) | ACTUAL |
|------|-----------|---------------------------|------------------------------------|--------|
| 2010 | 1 | 267.9167 | | |
|      | 2 | 305.2167 | 305.8945 | 286.5667 |
|      | 3 | 344.55 | 336.35 | 324.8834 |
|      | 4 | 359.2833 | 344.7111 | 351.9167 |
| 2011 | 1 | 330.3 | 333.2278 | 344.7917 |
|      | 2 | 310.1 | 299.8 | 320.2 |
|      | 3 | 259 | 257.2 | 284.55 |
|      | 4 | 202.5 | 330.9667 | 230.75 |
| 2012 | 1 | 531.4 | 323.75 | 366.95 |
|      |   | 237.35 | 315.2944 | 384.375 |

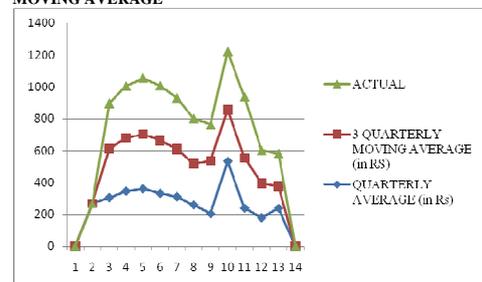| | 2 | | | |
|---|---|---|---|---|
| | 3 | 177.1333 | 217.2778 | 207.2417 |
| | 4 | 237.35 | 138.1611 | 207.2417 |

**MOVING AVERAGE**



FIGURE 4.13.2

**INTERPRETATION**

The average Closing Price as on 4th quarter 2012 was 237.35which is greater than the moving average. Moreover the prices Movement during the years were showing an upward trend Which Indicates that the security's price has been going up. It shows a buying signal for the investors.

**4.14.1TABLE SHOWING THE VOLATILITY OF YES BANK**

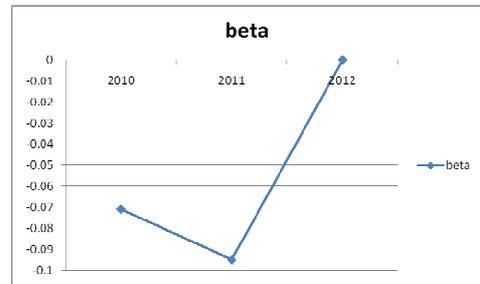| YEAR | ALPHA | BETA | STANDARD DEVIATION |
|------|-------|------|--------------------|
| 2010 | -0.17433 | -0.07065 | 0.870929 |
| 2011 | -0.16426 | -0.09465 | 0.874261 |
| 2012 | -0.16326 | 0 | 0.886498 |

**MOVEMENT OF BETA**



**FIGURE 4.14.1**

**INTERPRETATION**

A beta of less than 1 means that the stock is less volatile than the market as whole. While a beta greater than 1 means stock is 0 more volatile than the market as whole. The beta volume can be less than 0, meaning either that their stock is losing money. While the market is gaining (more likely) or that the stock the stock is gaining while the market is losing (less likely).

**4.14.2TABLE SHOWING THREE QUARTER MOVING AVERAGE OF YES BANK**

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in Rs) | ACTUAL |
|------|-----------|---------------------------|-------------------------------------|--------|
| 2010 | 1 | 246.8833 | | |
| | 2 | 280.8333 | 282.3 | 263.8583 |

| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in Rs) | ACTUAL |
|------|-----------|---------------------------|-------------------------------------|--------|
| | 3 | 319.1833 | 308.6778 | 300.0083 |
| | 4 | 326.0167 | 307.2111 | 322.6 |
| 2011 | 1 | 276.4333 | 302.7444 | 301.225 |
| | 2 | 305.7833 | 289.7611 | 291.1083 |
| | 3 | 287.0667 | 289.3444 | 296.425 |
| | 4 | 275.1833 | 546.1833 | 281.125 |
| 2012 | 1 | 1076.3 | 596.9444 | 675.7417 |
| | | 439.35 | 624.8056 | 757.825 |

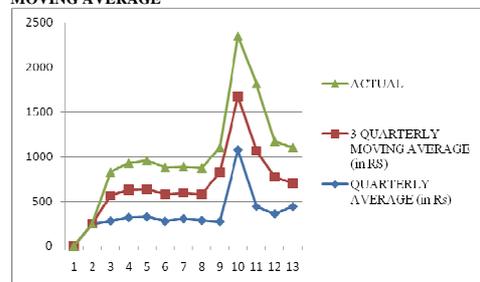| YEAR | QUARTERLY | QUARTERLY AVERAGE (in Rs) | 3 QUARTERLY MOVING AVERAGE (in Rs) | ACTUAL |
|------|-----------|---------------------------|-------------------------------------|--------|
| | 2 | | | |
| | 3 | 358.7667 | 412.4889 | 399.0584 |
| | 4 | 439.35 | 266.0389 | 399.0584 |

**MOVING AVERAGE**



**FIGURE 4.14.2**

**INTERPRETATION**

The average Closing Price as on 4th quarter 2012 was 439.35which is greater than the moving average. Moreover the prices Movement during the years were showing an upward trend Which Indicates that the security's price has been going up. It shows a buying signal for the investors.

1. The beta calculation can be further extended for all industries like IT, FMCG; Power sectors, Consumer Durables etc and can be compared with the benchmark index.
2. Comparison with NSE NIFY can provide more insights.

## CONCLUSION

The Beta value for PNB is higher therefore it shows that the volatility is high and low for Yes Bank for 2010. In 2011 the volatility is high for federal bank and low for yes bank. In 2012, volatility is high for Indusind Bank and Low for Punjab National Bank. Therefore when volatility is high, returns are more as risk is high.

### 5.4 SCOPE FOR FURTHER STUDY

1. The beta calculation and quarterly moving average can be further extended for all industries like IT, FMCG; Power sectors, Consumer Durables etc and can be compared with the benchmark index.
2. Comparison with NSE NIFY can provide more insights.

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www.nseindia.com
www.stockmaster.com

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## CHAPTER 5

### FINDINGS SUGGESTIONS & CONCLUSION

**FINDINGS**

1. The beta is found to be negative for all fourteen companies in all three years.
2. The quarterly average values for all three years were high for Axis Bank, Canara Bank, HDFC Bank, ICICI Bank, Indusind, Kotak Mahindra, SBI and Yes Bank
3. The quarterly average values for all three years were low for bank of India, bank of Baroda, IDBI bank, PNB and Union Bank.
4. The quarterly moving average values for all three years were high for Axis Bank, Canara Bank, HDFC Bank, ICICI Bank, Indusind, Kotak Mahindra, SBI and Yes Bank
5. The quarterly moving average values for all three years were low for bank of India, bank of Baroda, IDBI bank, PNB and Union Bank.
6. The actual day to day activities were fluctuating for the entire period of the study.
7. The standard deviations are positive for the entire period of study.
8. Alpha and beta were found to be negative for all three years.

**SUGGESTIONS**