

A comparative study of BSE and international stock exchanges with special reference to pharmaceutical industries

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I. Introduction To The Study

One of the most profound and far-reaching financial phenomenon in the late twentieth century and the forefront of this century is the explosive growth in international financial transactions and capital flows among various financial markets in developed and developing countries. This phenomenon in international finance is not only a result of the liberalization of capital markets in developed and developing countries and the increasing variety and complexity of financial instruments, but also a result of the increasing relativity of the developing and developed economies as developing countries become more integrated in international flows of trade and payments. More freedom in the moving of capital flows improves the allocation of capital globally, allowing resources to move to areas with higher rates of return. Contrarily, attempts to restrict capital flows lead to distortions of capital structure that are generally costly to the economies imposing the controls. Thus, the boost in international capital flows and financial transaction is an underway and, to certain extent, irreversible process.

This study covers various international stock exchanges from different socio-political and economic background such as New York Stock exchange (NYSE) Hong Kong Stock Exchange (HSE), Australian Securities Exchange, Frankfurt Stock Exchange, Shanghai Stock Exchange, Germany stock exchange and Bombay Stock Exchange (BSE) has been used in the study as a part of Indian Stock Market with reference to pharmaceutical industry. For this study it covers various pharmaceutical companies from both Indian and international industry by a random selection.

The Indian stock market is the world third largest stock market on the basis of investor base and has a collective pool of about 20 million investors. There are over 9,000 companies listed on the stock exchanges of the country. 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

1.1 Literature Review

This chapter deals about review of various studies related to comparison of different stock market studies. The research gap of this study was found out by conducting a detailed literature review of studies in different countries during the recent years.

Debjban mukharjee(t.a pai management institute manipal india. He found that the popular belief that the markets in general and Indian market in particular is more integrated with other global exchanges from 2002-03 onwards. This can very well be seen since the South Asian crisis of the mid- late nineties barely affected us particularly because we were insulated due to government policies and was just making the transition. However, in the later time periods, the influence of other stock markets increased on our BSE or NSE, but at a very low almost insignificant level.

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In this paper, they found that the correlation of stock returns of India with five other Asian countries. There exists a very weak correlation between the Indian markets and Hong Kong, Indonesia, Malaysia and Japan. Comparatively higher correlation was found between the Indian and the Korean markets, which seemed to have weakened in the short run. Hence it can be said that the Indian markets offer diversification benefits to international investors looking for investment in the Asia Pacific region. . Indian markets also delivered the highest compounded annual growth rate in stock market returns, both in the short as well as long run.

Poshakwale, Sunil (2002) examined the random walk hypothesis in the emerging Indian stock market by testing for the nonlinear dependence using a large disaggregated daily data from the Indian stock market. The sample used was 38 actively traded stocks in the BSE National Index. He found that the daily returns from the Indian market do not conform to a random walk. Daily returns from most individual stocks and the equally weighted portfolio exhibit significant non-linear dependence. This is largely consistent with previous research that

has shown evidence of non-linear dependence in returns from the stock market indexes and individual stocks in the US and the UK. Noor, Azuddin Yakob, Diana Beal and Delpachitra,

Sarath (2006) studied the stock market seasonality in terms of day-of-the-week, month-of-the-year, monthly and holiday effects in ten Asian stock markets, namely, Australia, China, Hong Kong, Japan, India, Indonesia, Malaysia, Singapore, South Korea and Taiwan. He concluded that the existence of seasonality in stock markets and also suggested that this is a global phenomenon.

Pandey and Kumar (2008) found co movement of Indian markets with eight other key stock exchanges in Asia for the period from 2000 to 2008. They found that the period was marked with high volatility among all markets under study.

Raju and Ghosh (2004) found that skewness and kurtosis is less in Indian market stock returns as compared to other countries. They also said that there was a need for a study on volatility in Indian stock markets after 2000 to see whether changes in market microstructure have resulted in changes in volatility pattern and facilitating international comparison of volatility.

Hiard (1997) and Asimakopoulos (2002) investigated the interrelationship between daily returns generated by major stock exchanges. Evidence found that strong interdependence exists between the daily returns generated by United States and other selected major world indices.

1.3 Statement Of The Problem

In modern era, the fluctuations in the Indian market are attributed heavily to cross border capital flows in the form of FDI, FII and to reaction of Indian market to global market cues. In this context, understanding the relationship and influence of various exchanges on each other is very important. This study compares global exchanges which are from different geopolitics- socio-economic areas with BSE (SENSEX). The movements in indices of international stock exchanges like Hong Kong stock exchange, Shanghai Stock Exchange, Germany Stock exchange, New York Stock exchange and Australian Stock Exchange had analyzed here with the Bombay Stock Exchange with reference to various pharmaceutical companies from Indian and international industry.

1.4 Objectives Of The Study

Primary objective: To make a comparative analysis of the Indian Stock Market with respect to various international stock markets with special reference to pharmaceutical industry.

Secondary Objectives:

- To understand the market price movements of different pharmaceutical companies
- To analyze the profitability of different pharmaceutical companies
- To understand the market capitalization of different pharmaceutical companies.

1.5 Scope Of The Study

This study can help the investors to understand the impact of important happenings on the Indian Stock exchange and international stock exchanges. This is especially relevant in the current scenario when the financial markets across the globe are getting integrated into one big market and the impact of one exchange on the other exchanges. The study of the stock exchanges in countries would definitely help the future investors to take investment decisions while investing in pharmaceutical sector in different countries. For this study, 6 stock exchanges are considered including Bombay Stock exchange (BSE), Australian Security market (ASX), Shanghai Stock Exchange (SSE), Hong Kong Stock Exchange (HSE), Frankfurt Stock Exchange (FSE), Germany Stock Exchange is the other stock exchanges which had taken for this study and also 10 pharmaceutical companies are randomly selected. Name of the stock indices are SENSEX S&P 100 (of BSE), Hang Seng (of HSE), S&P/ASX 100(of ASX), DAX (of FSE), shanghai index (of SSE)

1.6 Research Methodology

For the comparative analysis of Indian stock market and different stock exchanges in the world here used India's major stock index BSE SENSEX and 5 international indices such as New York Stock exchange (NYSE), Hong Kong Stock Exchange (HSE), Australian Securities Exchange, Frankfurt Stock Exchange, Shanghai Stock Exchange and Germany stock exchange. It analyze the relationship between the various exchanges to prove that the Indian markets have become more integrated with its international markets and its reaction are in tandem with that are seen globally. The study tries to acquire qualitative information regarding Indian Stock Exchange and various International stock exchanges and also to investigate linkage between Indian stock market with different international stock market. The stock return data of all the sample countries indices were collected from their respective websites. The qualitative data for each index were collected from their annual reports and various published secondary sources. And also gather some data from expert person's regarding share market operation and trading.

Tools Used

This is the main part of the study wherein the various stock exchanges of the sample have been compared on certain parameters, both qualitatively and quantitatively.

Qualitative Analysis

1. Market capitalization

Market capitalization (or market cap) is the total value of the issued share of a publicly traded company; it is equal to the share price times the number of shares outstanding.

2. Number of listed securities:

Number of listed securities acts as an indicator for the volume and liquidity of any exchanges and it provide information regarding stability and movement of market.

3. Index movement:

Index movement refers changes of different international movement in a particular period. It will helps to technical analysis in market.

Quantitative analysis

Mathematical Indicators

Share prices do not rise or fall in straight lines. The movements are erratic. This makes it difficult for the analyst to gauge the underlying trend. We can use the mathematical tool of moving averages to smoothen out the apparent erratic movements of share prices and highlight the underlying the trend.

a) Moving Averages

Moving averages are mathematical indicators of the underlying trend of the price movement. Two types of moving averages are commonly used by analysis-**the simple moving average and the exponential moving average**. The closing prices of shares are generally used for the calculation of moving averages.

b) Overall Profitability Ratios

✓ Earnings Per Share (Eps)

Earnings per share are a small variation of return on equity capital and are calculated by dividing the net profit after taxes and preference dividend by the total number of equity shares.

$$\text{Eps} = \frac{\text{Net Profit After Tax} - \text{Preference Dividend}}{\text{No. Of Equity Shares}}$$

The earnings per share is very good measure of profitability and when compared with EPS of similar other companies, it gives a view of the comparative earnings or earnings power of a firm. EPS calculated for a number of years indicates whether or not earning power of the company has increased.

1.6 Limitations Of The Study

- The topic has a broad nature which is a limitation.
- The study is based only on secondary data.
- Time is a major constraint for a detailed study.

Karvyservices– An Overview

1. Stock broking
2. Demat services
3. Investment product distribution
4. Investment advisory services
5. Corporate finance & Merchant banking
6. Insurance
7. Mutual fund services
8. IT enabled services
9. Registrars & Transfer agents
10. Loans

II. Introduction About Different Stock Market

2.1.1 Bse- Bombay Stock Exchange

Established in 1875, BSE Ltd. (formerly known as Bombay Stock Exchange Ltd.), is Asia's 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. BSE's popular equity index - the S&P BSE SENSEX - is India's most widely tracked stock market benchmark index. 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 (source: world federation of exchange). 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. BSE is the first exchange in India and second in the world to obtain an ISO 9001:2000 certification.

History

The Bombay Stock Exchange is the oldest exchange in India. It traces its history to 1855, when four Gujarati and one Parsi stockbroker would gather under banyan trees in front of Mumbai's Town Hall. The location of these meetings changed many times, as the number of brokers constantly increased. The group eventually moved to Dalal Street in 1874 and in 1875 became an official organization known as 'The Native Share & Stock Brokers Association'. In 1958, the BSE became the first stock exchange to be recognized by the Indian Government under the Securities Contracts Regulation Act. In 1980 the exchange moved to the Phiroze Jeejeebhoy Towers at Dalal Street, Fort area. In 1986 it developed the BSE SENSEX index, 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) had a capacity of 8 million orders per day.

3.12 Hong Kong Stock Exchange-Hse

Hang Seng Indices Company Limited (Hang Seng Index), a wholly -owned subsidiary of Hang Seng Bank, was established in 1984 and is Hong Kong's leading index compiler covering Hong Kong and mainland China markets. Hang Seng Indexes calculates and manages the Hang Seng Family of Indexes. Starting in 1969 with the creation of the Hang Seng Index, now widely recognized as the barometer of the Hong Kong stock market, Hang Seng Index has been at the forefront of the market, developing numerous market measures to help investors make their investment decisions. Indexes in the Hang Seng Family of Indexes are grouped into five categories - Flagship Indexes, Benchmark Indexes, Thematic Indexes, Strategy Indexes and Bond Indexes - then classified as Hong Kong-listed, Cross-market or Mainland-listed according to where their constituents are listed. Currently, the Hang Seng Family of Indexes comprises over 300 real-time and daily indexes. Going forward, Hang Seng Indexes will continue to broaden its index series to meet the widening spectrum of investor demand for index investment solutions.

The trading day consists of:

- A pre-opening auction session from 9:00 am to 9:30 am. The opening price of a security is reported shortly after 9:20 am.
- A morning continuous trading session from 09:30 am to 12:00 pm
- An extended morning session from 12:00 noon to 1:00 pm, also referred to as the lunch break. Continuous trading proceeds in specifically-designated securities (currently two ETFs, 4362 and 4363). Trading in other securities is not possible. However, previously-placed orders in any securities can be cancelled from 1:00 pm onwards.
- An afternoon continuous trading session from 1:00 pm to 4:00 pm

History

The history of the securities exchange began formally in the late 19th century with the first establishment in 1891, though informal securities exchanges are known to have been in existence since 1861. The exchange has predominantly been the main exchange for Hong Kong despite co-existing with other exchanges at different points in time. After a series of complex mergers and acquisitions, in the twenty first century, HKSE remains the core. From 1947 to 1969 the exchange monopolised the Hong Kong market.

2.13 The Frankfurt Stock Exchange- Fse

Frankfurter Wertpapierbörse (FWB, the Frankfurt Stock Exchange) is one of the world's largest trading centres for securities. With a share in turnover of more than 90 per cent, it is the largest of Germany's seven stock exchanges. Deutsche Börse AG operates the Frankfurt Stock Exchange, an entity under public law. In this capacity it ensures the functioning of exchange trading.

The Frankfurt Stock Exchange facilitates advanced electronic trading, settlement and information systems. Thus, it is able to meet the steadily growing requirements of cross-border trading. Besides the specialist trading at Frankfurt Stock Exchange, its fully electronic trading system Xetra is one of the leading electronic trading platforms in the world. With the launch of Xetra in 1997, the Frankfurt Stock Exchange succeeded not only in strengthening its own competitive position. It also created attractive framework conditions for foreign investors and market participants.

Today, the Frankfurt Stock Exchange is an international trading centre. This is also reflected in the structure of its participants. Some 130 of around 250 market participants come from outside Germany.

History

The roots of FWB Frankfurter Wertpapierbörse (Frankfurt Stock Exchange) go back to the period of medieval fairs. The Frankfurt autumn fair is mentioned in writing for the first time during the Assumption holiday in the year 1150. The autumn fair is believed to have had its origin in the 11th century as a harvest fair. Since the year 1330, when Emperor Ludwig the Bavarian expanded this privilege to include a spring fair as well, the city became an important centre for commercial and monetary transactions. As a result of the trading activity during the fair, the manufacture of goods on order gradually developed into merchandise production for an open and nationwide market.

2.14 New York Stock Exchange- Nyse

The New York Stock Exchange (NYSE), sometimes known as the "Big Board" is a stock exchange located at 11 Wall Street, Lower Manhattan, New York City, New York, United States. It is by far the world's largest stock exchange by market capitalization of its listed companies at US\$16.613 trillion as of May 2013. Average daily trading value was approximately US\$153 billion in 2008. The NYSE trading floor is located at 11 Wall Street and is composed of four rooms used for the facilitation of trading. A fifth trading room, located at 30 Broad Street, was closed in February 2007. The main building, located at 18 Broad Street, between the corners of Wall Street and Exchange Place, was designated a National Historic Landmark in 1978, as was the 11 Wall Street building. The NYSE is operated by NYSE Euronext (NYSE: NYX), which was formed by the NYSE's 2007 merger with the fully electronic stock exchange Euronext. In December 2012, it was announced that the company would be sold to Intercontinental Exchange (ICE), a futures exchange headquartered in Atlanta, Georgia, The United States, for \$8 billion, a figure that is significantly less than the \$11 billion bid for the company tendered in 2011.

2.15 Australian Securities Exchange- Asx

ASX is one of the world's leading securities exchanges, offering a full suite of services from listings, trading, clearing and settlement across a comprehensive range of asset classes. As the first major financial market open every day, ASX prides itself in being a world leader in raising capital and consistently ranks in the top 5 exchanges globally in terms of capital raised. With a total market capitalization of \$1.5 trillion, ASX is home to some of the world's leading resource, finance and technology companies. Its \$47 trillion interest rate derivatives market is the largest in Asia and among the biggest in the world. The interest rate swaps market is \$15 trillion alone. It was created by the merger of the Australian Stock Exchange and the Sydney Futures Exchange in July 2006. Today, ASX has an average daily turnover of \$4.685 billion and a market capitalization of around AU\$1.2 trillion, making it one of the world's top-10 listed exchange groups, comparable to the New York Stock Exchange, London Stock Exchange and Deutsche Bourse. ASX Group is a market operator, clearing house and payments system facilitator. It also oversees compliance with its operating rules, promotes standards of corporate governance among Australia's listed companies and helps to educate retail investors. In addition to its role as a market operator, ASX subsidiaries include, Australian Securities Exchange - handles ASX's primary, secondary and derivative market services.

History

The ASX Group's origins as a national exchange go back to 1987. The Australian Stock Exchange Limited was formed in 1987 after the Australian Parliament drafted legislation that enabled the amalgamation of six independent state-based stock exchanges. Each of those exchanges brought with it a history of share trading dating back to the 19th century. In 2006 The Australian Stock Exchange merged with the Sydney Futures Exchange and originally operated under the name Australian Securities Exchange. Later, however, ASX launched

a new group structure to better position it in the contemporary financial market environment. From 1 August 2010 the Australian Securities Exchange has been known as the ASX Group.

2.1.6 Shanghai Stock Exchange-Sse

The Shanghai Stock Exchange (SSE) was founded on Nov. 26th, 1990 and in operation on Dec. 19th the same year. It is a membership institution directly governed by the China Securities Regulatory Commission (CSRC). The SSE bases its development on the principle of "legislation, supervision, self-regulation and standardization" to create a transparent, open, safe and efficient marketplace. The SSE endeavors to realize a variety of functions: providing marketplace and facilities for the securities trading; formulating business rules; accepting and arranging listings; organizing and monitoring securities trading; regulating members and listed companies; managing and disseminating market information. After several years' operation, the SSE has become the most preeminent stock market in Mainland China in terms of number of listed companies, number of shares listed, total market value, tradable market value, securities turnover in value, stock turnover in value and the T-bond turnover in value. As at the end of 2011, there were 931 listed companies on SSE, with 39 new listings in 2011 (including 1 holistic listing). By the end of the year, there were 975 listed stocks on SSE with a total market capitalization of RMB 14,837.622 billion, decreasing by 17.11% year-on-year, and free-float market capitalization of RMB 12,285.136 billion, up 13.69% from the previous year. The year-end total share capital of all the listed companies reached 2,346.65 billion shares, of which 1,799.38 billion shares or 76.68% were tradable. A large number of companies from key industries, infrastructure and high-tech sectors have not only raised capital, but also improved their operation mechanism through listing on Shanghai stock market.

History

Shanghai was the first city in China where securities business was developed. Stock trading in Shanghai traces its roots back to the 1860s. In 1891, the Shanghai Sharebrokers Association was established as the embryo of China's stock bourses. Later in 1920 and 1921, the Shanghai Security Goods Exchange and the Shanghai Chinese Security Exchange commenced operations respectively. By the 1930s, Shanghai had emerged as the financial center of the Far East, where both Chinese and foreign investors could trade stocks, debentures, government bonds and futures. In 1946, Shanghai Securities Exchange Co., Ltd. was created on the basis of Chinese Security Exchange, but ceased operations three years later in 1949. Since 1980, under the guidance of Deng Xiaoping Theory, China's securities market has evolved in tandem with the country's introduction of reform and opening up policy and the development of socialist market economy. In 1981, trading in treasury bonds was resumed. In 1984, stocks and enterprise bonds emerged in Shanghai and a few other cities. On November 26, 1990, Shanghai Stock Exchange (SSE) came into existence, and on December 19 of the same year, it formally started operations.

Table no 3.1 list of stock exchanges

COUNTRY	STOCK EXCHANGE NAME	INDICES NAME
India	Bombay Stock Exchange	Sensex
Hong Kong	Hong Kong Stock Exchange	Hang Seng
USA	New York Stock Exchange	DJIA
Germany	Frankfurt Stock Exchange	Dax
Australia	Australian Securities Exchange	S & P/ ASX 100
China	Shanghai Stock Exchange	Shanghai index

Analysis And Interpretation

The analysis part of this study to prove the above research issue the various analysis tools is used. The tools used this study can be classified in to Two:

1. Qualitative analysis
2. Quantitative Analysis

Qualitative Analysis

In this section the various stock exchanges have been compared on the following parameters:

1. Market Capitalization
2. Number of listed securities
3. Index movement

Market Capitalisation

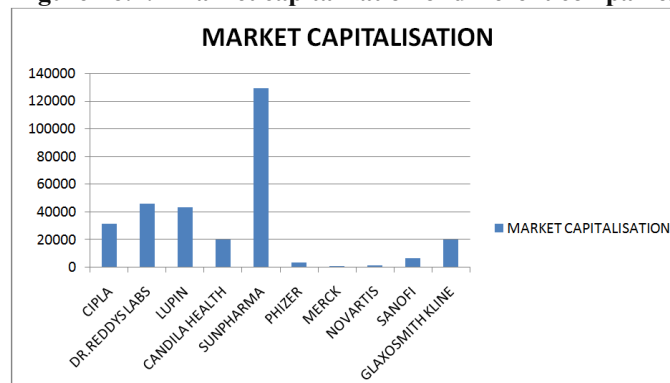
Market capitalization represents the aggregate value of a company or stock. It is obtained by multiplying the number of shares outstanding by their current price per share. Market capitalization (or market cap) is the total

value of the issued shares of a publicly traded company; it is equal to the share price times the number of shares outstanding. As outstanding stock is bought and sold in public markets, capitalization could be used as a proxy for the public opinion of a company's net worth and is a determining factor in some forms of stock valuation. Market capitalization gives an idea about the size of the respective exchanges and also it can produce position or rank of market on the basis of market capitalization and trade value. Market capitalization is calculated by multiplying a company's shares outstanding by the current market price of one share. The investment community uses this figure to determine a company's size, as opposed to sales or total asset figures.

Table no:4.2 Market capitalization of different pharmaceutical companies

COMPANY	MARKET CAPITALISATION (Rs. In crs)
CIPLA(indian)	31518.68
DR.REDDYS LABS	46,195.61
LUPIN	43334.42
CANDILA HEALTH	20320.27
SUNPHARMA	129219.92
PHIZER(international)	3675.72
MERCK	1079.21
NOVARTIS	1494.49
SANOFI	6962.73
GLAXOSMITH KLINE	20251.22

Figure no:4.1 market capitalization of different companies



Listed Securities

When a private company decides to go public and issue shares, it will need to choose an exchange on which to be listed. To do so, it must be able meet that exchange's listing requirements and pay both the exchange's entry and yearly listing fees. Listing requirements vary by exchange and include minimum stockholder's equity, a minimum share price and a minimum number of shareholders. Exchanges have listing requirements to ensure that only high quality securities are traded on them and to uphold the exchange's reputation among investors. Investment instrument (such as stock/shares, bonds) that is officially listed (quoted) on a stock exchange for public trading. Unlisted securities are traded (in the US) in over the counter market or (in the UK) in alternative investment market. Also called listed investment or quoted security.

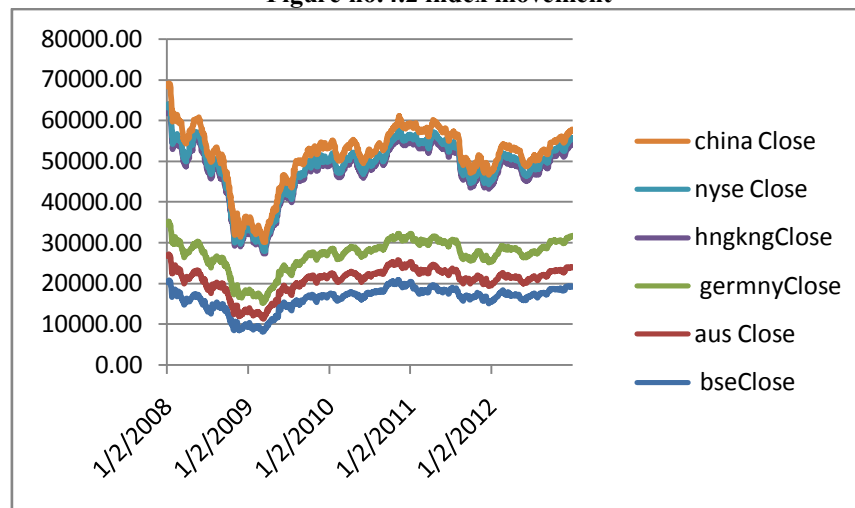
Table no:4.3 listed securities

Parameter	BSE	FSE	HKE	ASX	SSE
Name	SENSEX	DAX	HANG SENG	ASX	SHANGH AI
Number of companies	30	30	33	200	50

Index Movement

Index movement refers changes of different international movement in a particular period. It will helps to technical analysis in market.

Figure no:4.2 index movement



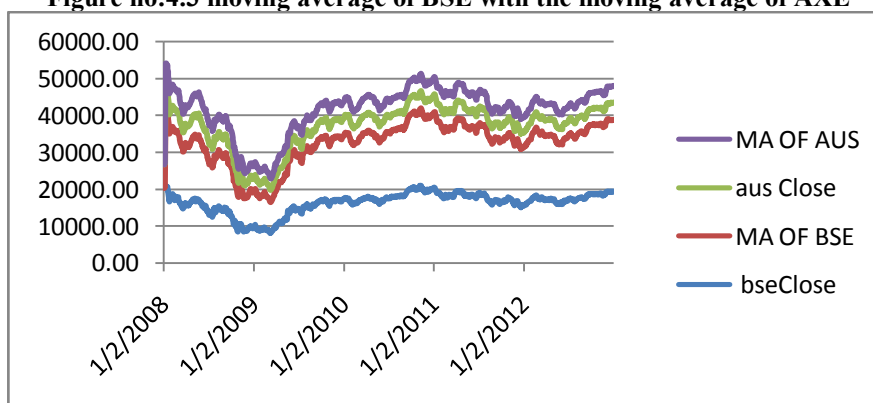
Interpretation:

The above graphs represent 5 years index movement starting from January 2008 to December 2012. It shows movement of six stock market indices including BSE Sensex, DJIA, Shanghai, ASX, Hang Seng, FSE. All the stock markets are showing a steady increase in index 6 months prior to recession. Recession started in December 2007. Initially it was originated in America then later it spread to the world economy. The result of recession all the leading stock markets in the world show a steady decline in their index. It was followed the same up to 2009. After recession period, NYSE index showing a steep fall. As a result of recession most of the world economies were adopted certain policies and removing the restriction in order to bring the economy in its previous stage. So it started to revive. By looking the above graph we can see that the index of BSE is influenced by all other stock exchanges.

III. Quantitative Analysis

To analyzing the trend of Bombay stock exchange with Australian stock market Moving average from 2008 to 2012

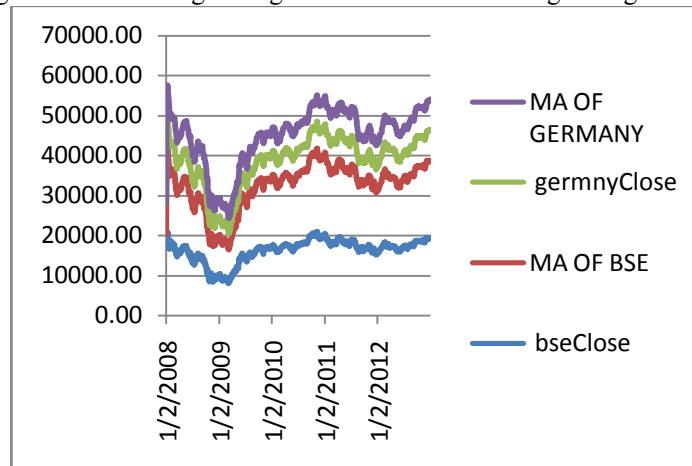
Figure no:4.3 moving average of BSE with the moving average of AXE



Interpretation:

The above graph shows that the BSE and AXE are related to each other. Both the AXE the BSE moves in the same direction.

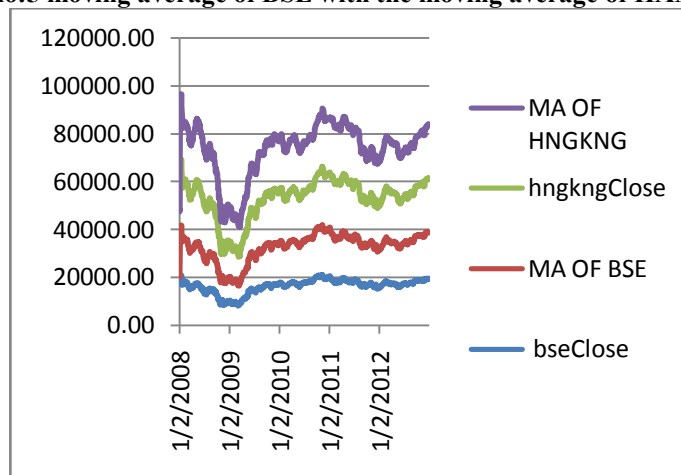
Figure no:4.4 moving average of BSE with the moving average of DAX



Interpretation:

The above graph shows that the BSE and DAX are related to each other. Both the DXE the BSE moves in the same direction.

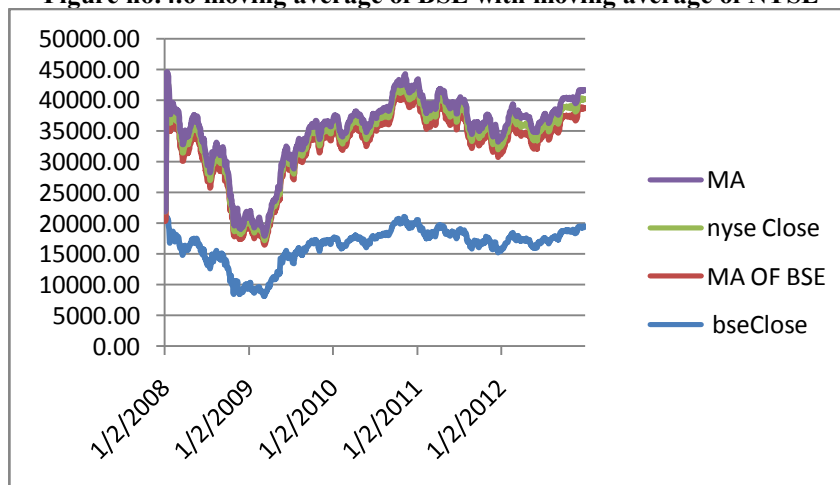
Figure no:5 moving average of BSE with the moving average of HANG SENG



Interpretation:

The above graph shows that the BSE and HANG SENG are related to each other. Both the HANG SENG and the BSE moves in the same direction.

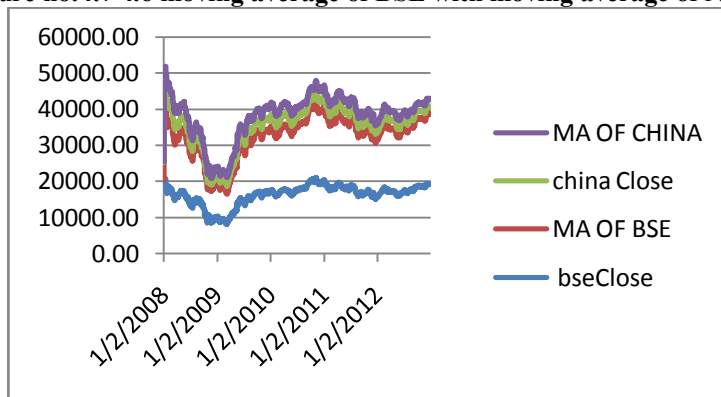
Figure no:4.6 moving average of BSE with moving average of NYSE



Interpretation:

The above graph shows that the BSE and NYSE are related to each other. Both the NYSE and the BSE moves in the same direction.

Figure no:4.7 4.6 moving average of BSE with moving average of NYSE

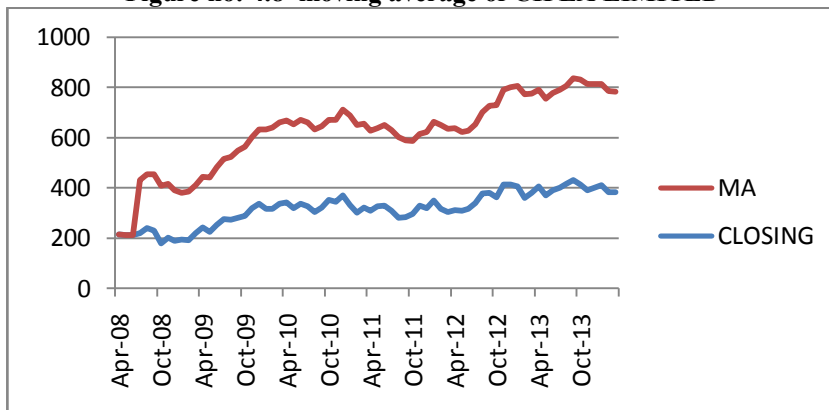


Interpretation:

Both BSE and SHANGHAI interrelated in their index movements. The index movement of both exchanges is in the same direction. Through this we can see that BSE influenced by the SHANGHAI stock exchange.

**Monthly Moving Averages Of Different Pharmaceutical Companies From 1-4-2008 To 31-3-2014
Indian Pharmaceutical Companies**

Figure no: 4.8 moving average of CIPLA LIMITED



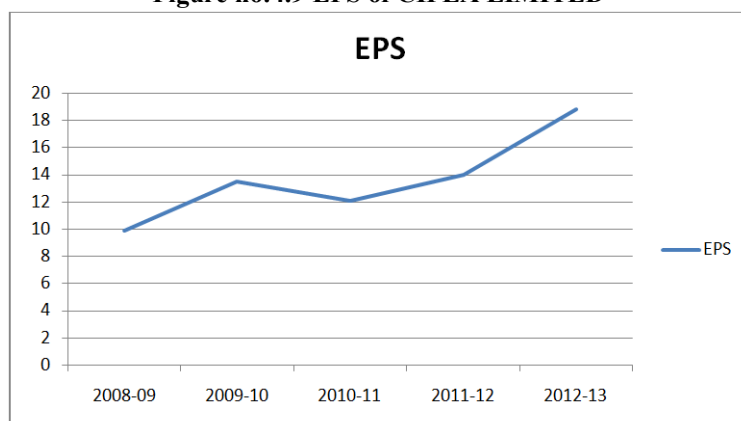
Interpretation:

This graph shows the closing price movement of cipla limited. The price movement falls in 2009 after that it getting increasing. and shows a slight fall in 2011augest and 2012june.

Table no:4. 4 Earnings Per Share of Cipla Limited

YEAR	EPS
2008-09	9.88
2009-10	13.47
2010-11	12.05
2011-12	14
2012-13	18.77

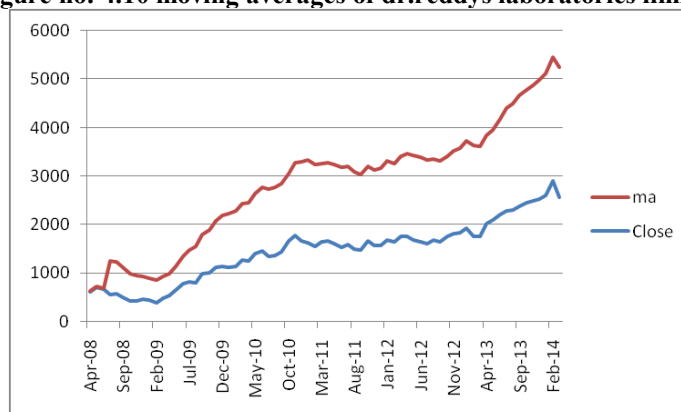
Figure no:4.9 EPS of CIPLA LIMITED



Interpretation:

According to the above data the EPS of cipla limited shows an increasing trend up to 2009-10. And in 2010-11 the EPS has gone down and after wards the EPS has shown an increasing trend.

Figure no: 4.10 moving averages of dr.reddys laboratories limited



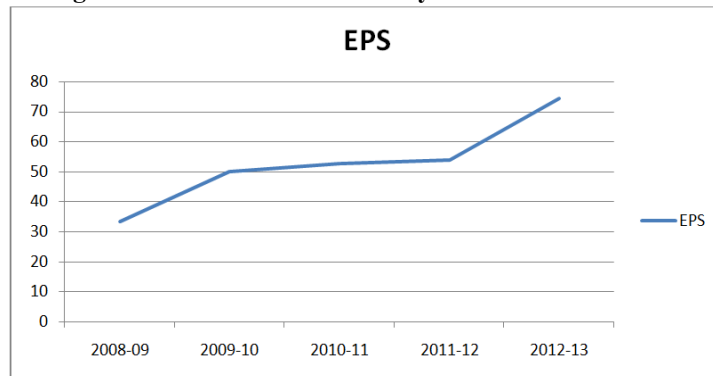
Interpretation:

The price movement of dr.reddys lab falls up to 2009 and after that the price getting increasing

Table no:4.5 Earnings Per Share of Dr. Reddys Laboratories Limited

YEAR	EPS
2008-2009	33.29
2009-2010	50.11
2010-2011	52.78
2011-2012	53.81
2012-2013	74.51

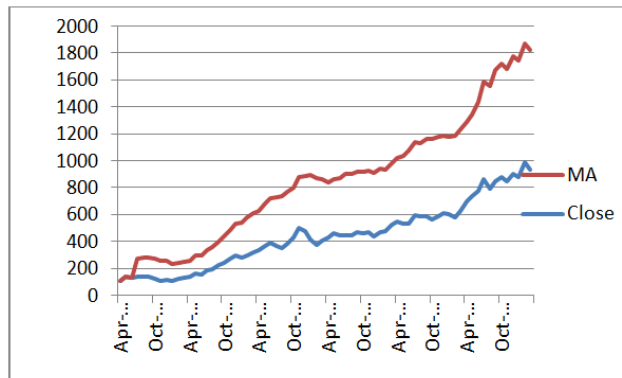
Figure no: 4.11 EPS of Dr. Reddy's laboratories limited



Interpretation:

According to the above data the EPS of Dr. reddys laboratory limited shows an increasing trend. So that we can say that the profitability of this company increasing year by year.

Figure 4. 12 moving average of .LUPIN LIMITED



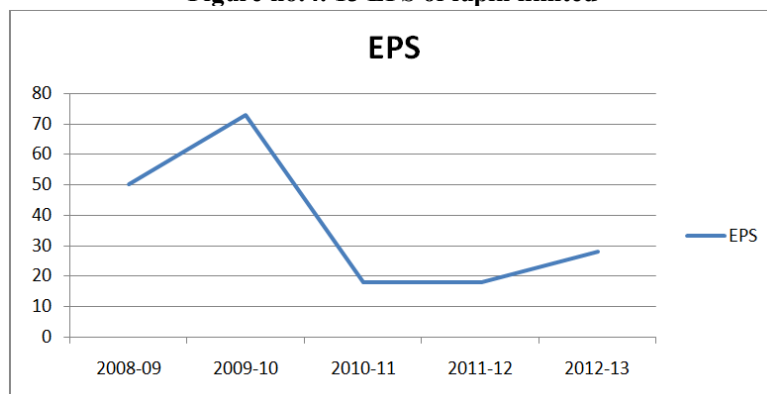
Interpretation:

It shows a slight decreasing in 2009 and after 2009 it is increasing an increasing rate.

Table no: 4.6 Earnings per Share of Lupin limited

YEAR	EPS
2008-09	50.35
2009-10	72.96
2010-11	18.15
2011-12	18.01
2012-13	28.16

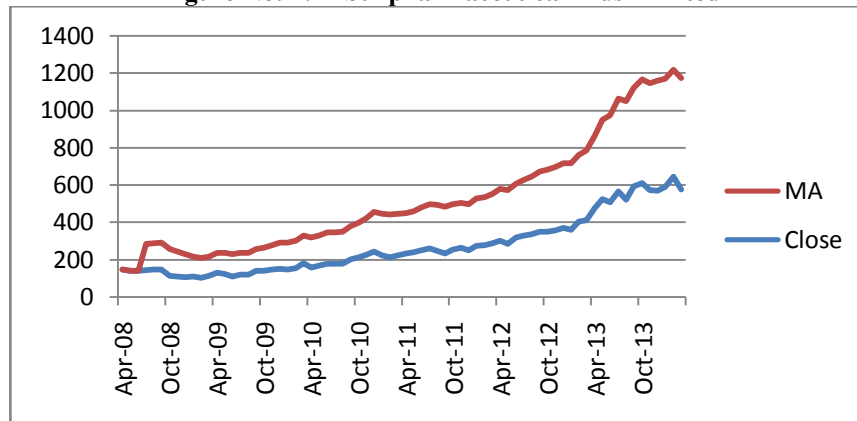
Figure no:4. 13 EPS of lupin limited



Interpretation:

From the above data we can understand that the EPS of Lupin limited increased up to 2009-10. After that it shows a great fall or declining trend in profitability during 2010-11 and in next year there was a slight decrease and in 2012-13 it shows an increasing profitability.

Figure No: 4.14 Sunpharmaceutical Inds Limited



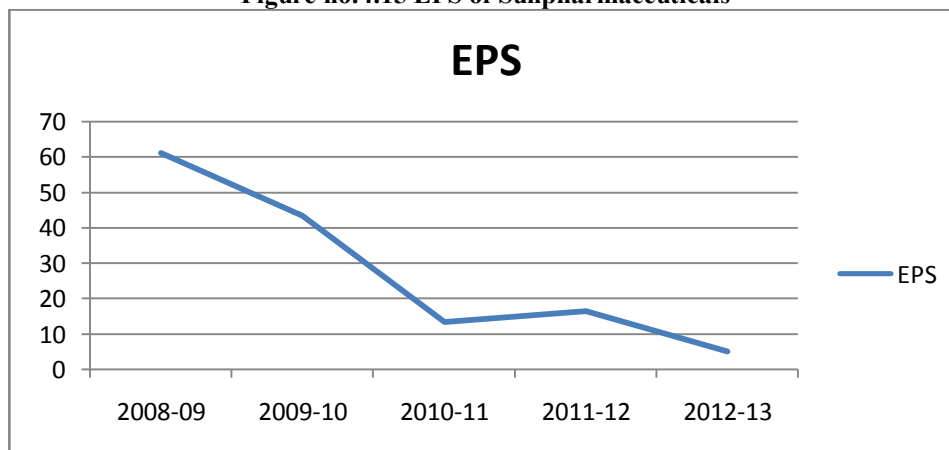
Interpretation:

The price of sunpharmaceutical limited slightly increasing from 2008 to 2013 but there is a slight fall in 2014.

Table no: 4.7 Earnings Per Share of Sunpharmaceutical inds limited

YEAR	EPS
2008-09	61.09
2009-10	43.39
2010-11	13.36
2011-12	16.39
2012-13	4.99

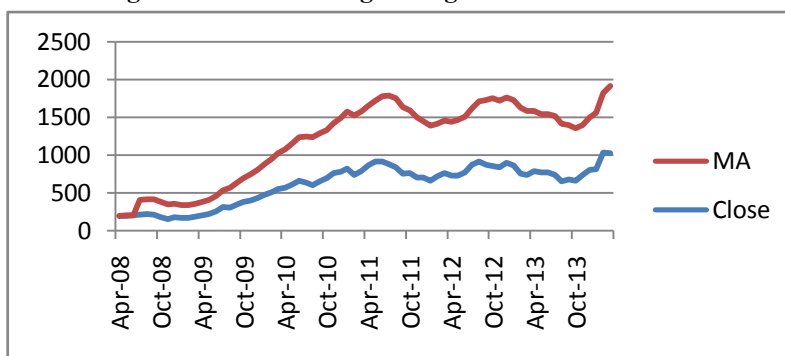
Figure no:4.15 EPS of Sunpharmaceuticals



Interpretation:

This graph shows the decreasing trend in profitability of Sunpharmaceuticals up to 2010-11. Then there is a slight increase in 2011-12 and again the EPS shows a downward trend.

Figure no: 4.16 moving average of CANDILA HEALTH



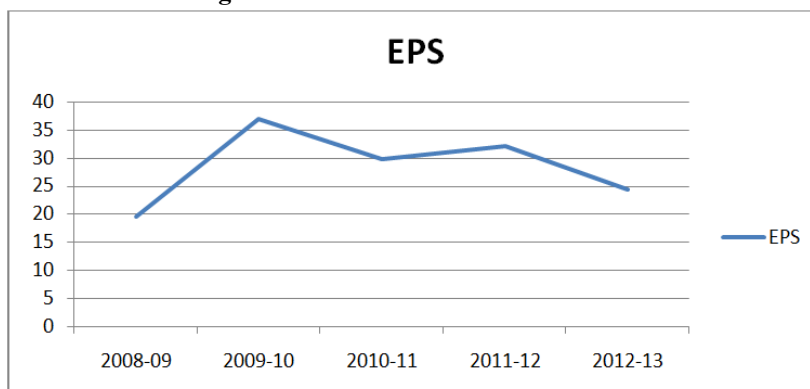
Interpretation:

The price increased an increasing rate from 2009 to 2011 august. Then it is declines up to January 2012. Then it slightly increasing and again it fall in 2013 but in 2014 it increased an increasing rate.

Table no:4.8 Earnings Per Share of candila health

YEAR	EPS
2008-09	19.48
2009-10	36.87
2010-11	29.81
2011-12	32.11
2012-13	24.35

Figure no: 4.17 EPS of Candila Health

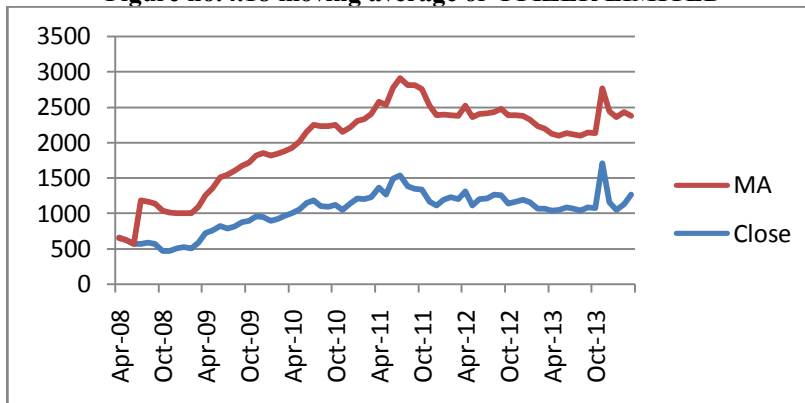


Interpretation:

The profitability of Candila Health has increased in 2009-10 and after that it will decreased in an increasing rate. Again it was increased in 2011-12 then it is decreased.

International Pharmaceutical Companies

Figure no:4.18 moving average of PFIZER LIMITED



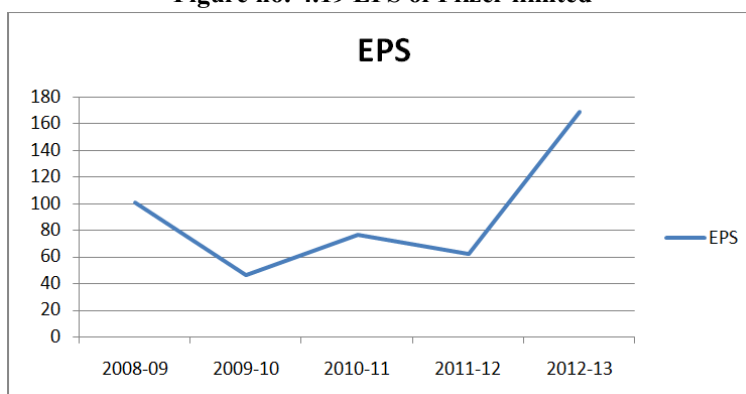
Interpretation:

This graph also shows a slight fall in 2008-2009 but after July 2009 the price is increased. And in 2011 the price movement increased in an increasing rate. The again it fall down slightly. In between 2013-14 the price movement is increased.

Table no:4.9 earnings per sahre of phizer limited

YEAR	EPS
2008-09	100.24
2009-10	45.87
2010-11	75.87
2011-12	61.87
2012-13	168.62

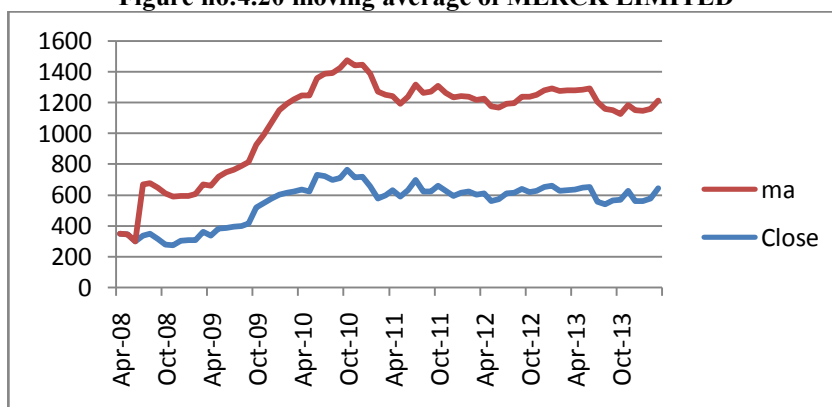
Figure no: 4.19 EPS of Pfizer limited



Interpretation:

This graph shows a high rate of profitability in 2008-09 but the rate fall in an increasing rate in 2009-10. Again it increased an increasing rate. Then it fall in 2011-12. But in 2012-13 it shows a high rate of profitability

Figure no:4.20 moving average of MERCK LIMITED



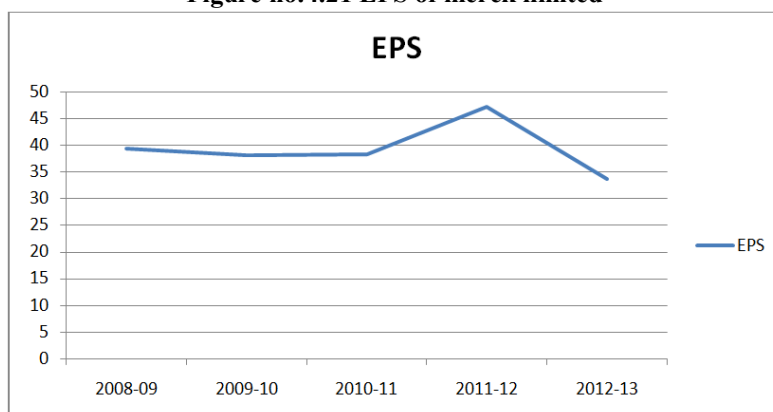
Interpretation:

This graph shows an increasing movement in the closing price from July 2009 to October 2010. Then it falls slightly.

Table no:10 Earnings Per Share of merck limited

YEAR	EPS
2008-09	39.45
2009-10	38.06
2010-11	38.36
2011-12	47.23
2012-13	33.66

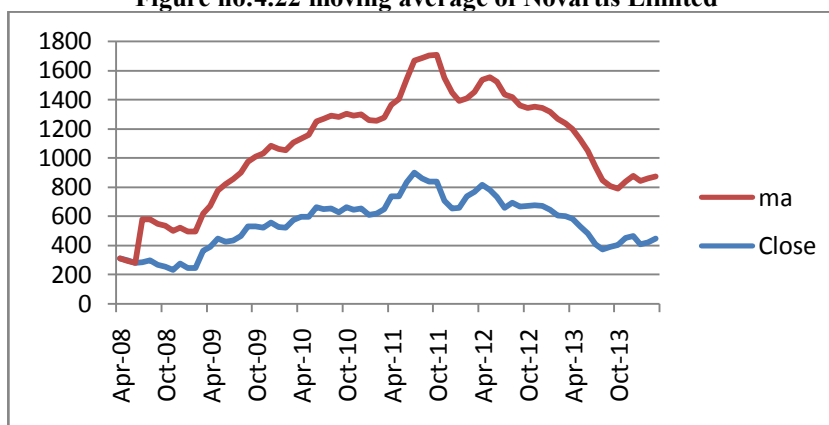
Figure no:4.21 EPS of merck limited



Interpretation:

According to the above graph the first 3 years shows slight decrease and increase. Then the fourth year it will increase in an increasing rate then again it decreased.

Figure no:4.22 moving average of Novartis Limited



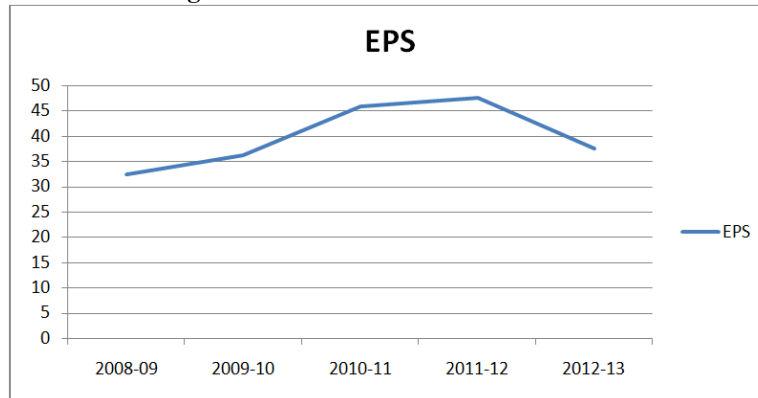
Interpretation:

This graph shows an increasing price movement of Novartis limited from February 2009 to march 2011. Then a greate increase up to aug 2011.then it fall down up to sep 2013.

Table no:4.11 Earnings Per Share of Novartis Limited

YEAR	EPS
2008-09	32.45
2009-10	36.29
2010-11	45.89
2011-12	47.57
2012-13	37.46

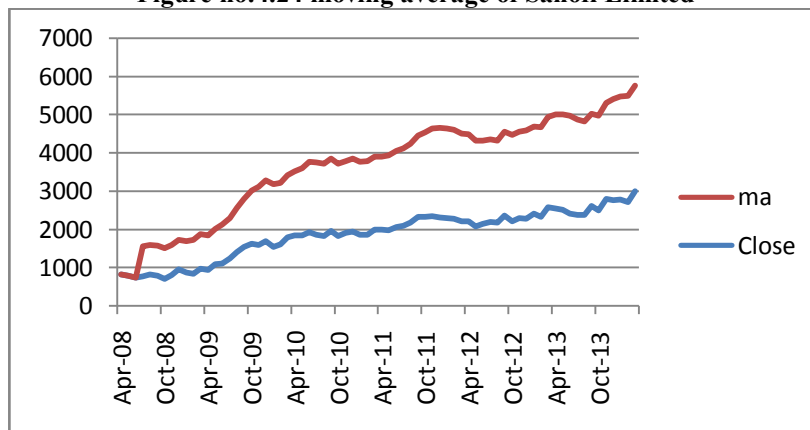
Figure no:4.23 EPS of Novartis Limited



Interpretation:

This graph shows an increasing rate of profitability from 2008 to 2012 but after that the rate of EPS will decreased.

Figure no:4.24 moving average of Sanofi Limited



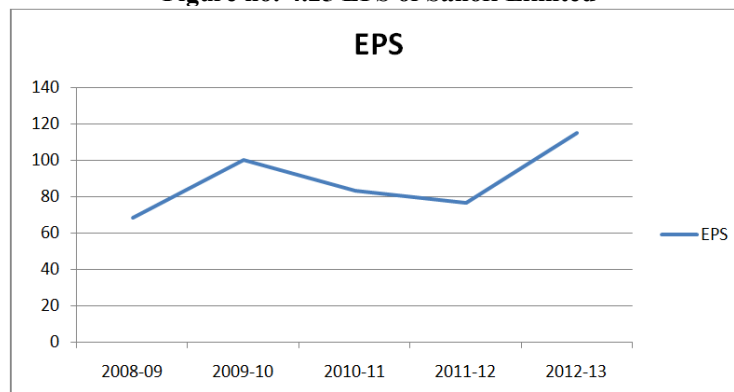
Interpretation:

The above graph shows the price moved in an increasing rate up to 2014. And a slight falls are coming between these years.

Table no:4.12 Earnings Per Share of Sanofi Limited

YEAR	EPS
2008-09	68.35
2009-10	100.19
2010-11	83.01
2011-12	76.71
2012-13	115.14

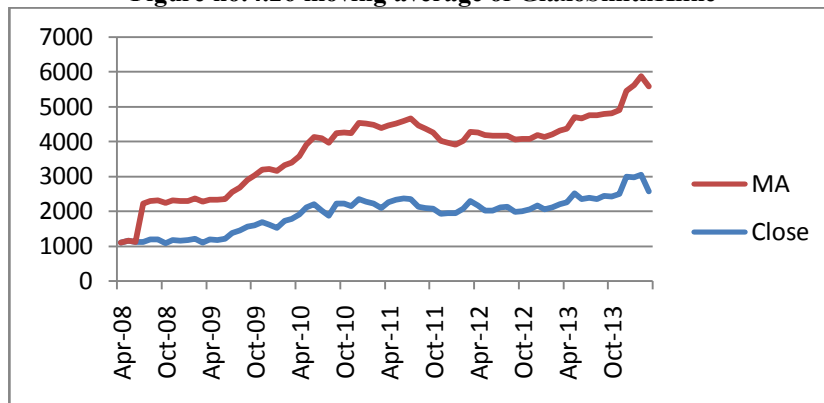
Figure no: 4.25 EPS of Sanofi Limited



Interpretation:

This graph shows an increasing trend of EPS from 2008-10. But it decreased in an increased rate from 2010-12. Again in 2012-13 the EPS increased in an increasing rate.

Figure no:4.26 moving average of GlaxoSmithKline



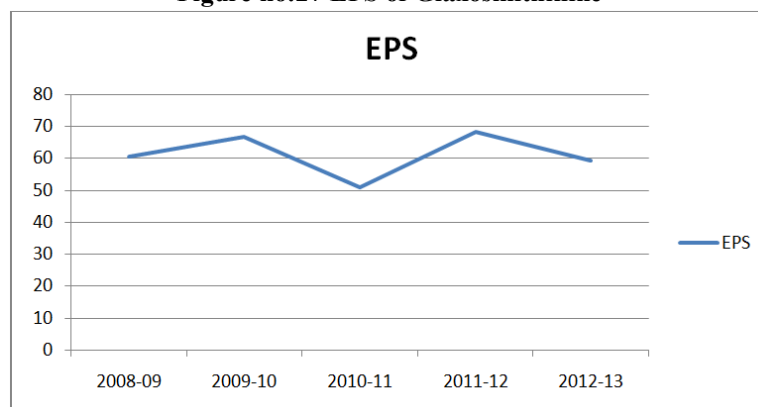
Interpretation:

This graph shows a simultaneous ups and downs of price movement.

Table no:2.13 Earnings Per Share of Glaxosmithkline

YEAR	EPS
2008-09	60.48
2009-10	66.55
2010-11	50.84
2011-12	68.15
2012-13	59.25

Figure no:27 EPS of Glaxosmithkline



Interpretation:

In 2008-09 the EPS of the company is 60.48 the second year there is a sudden increase in the EPS, and the value become 66.55. But in 2011-12 the EPS declines suddenly and the earnings become 50.84. In 2011-12 again there is a hike in the earnings to 68.15. And in the last year again the value decreases to 59.25

IV. Findings

- Indian stock exchange (BSE Sensex) is highly influenced by different international stock exchanges like shanghai, ASX, hang seng, FSE DAX, and DJIA.
- There exist long term relationship between BSE SENSEX and other stock exchanges. All other stock exchanges taken under the study are co integrated with BSE.
- The BSE Index under study is adjusting the changes in the other stock exchanges and making the equilibrium with the change.

- The profitability of sun pharmaceutical limited is showing a decreasing trend year by year due to the diversification charges but due to the good reputation of the company, it having a high rate of market capitalization.
- Through the moving average of different pharmaceutical companies. We can find that in 2008, both Indian and international pharmaceutical company's stock price had declined due to the Great Recession which started in December of 2007 in the US had a substantial negative impact on the world economy.
- From this study we can identify that the Indian market highly influenced by the international market.
- The changes in international pharmaceutical companies are affecting the Indian pharmaceutical industry.

V. Conclusion

From this study we realized that the Indian stock exchanges are influenced by other international stock exchanges. For the theoretical analysis, here, India's major stock index BSE SENSEX and five international indices such as Shanghai (China), ASX (Australia), Hang Seng (Hong Kong), FSE DAX (Germany) and DJIA (USA) had taken. And also from the quantitative analysis we can understand that the price movement change in the international pharmaceutical companies will affect the price movements in Indian pharmaceutical companies. For this analysis, top 10 pharmaceutical companies are selected from both Indian and international. Data used for this study over a period of five years starting from 1-April- 2008 to 31-march-2013. The sample company's indices were collected from their respective websites. The qualitative data for each index were collected from their annual reports and various published secondary sources. And also gather some data from expert person's regarding share market operation and trading. These lessons can help the investors understand the impact of important happenings on the Indian Stock exchange and international stock exchanges. In the current scenario the study is relevant where the financial markets across the world are communicating each other.

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