

An Empirical Study of Pharmaceutical Sector in India

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ABSTRACT

Indian Pharma Industry is mainly operated as well as controlled by dominant foreign companies having subsidiaries in India due to availability of cheap labor in India at lowest cost. The number of purely Indian Pharma companies is fairly less. In 2002, over 20,000 registered drug manufacturers in India sold \$9 billion worth of formulations and bulk drugs. 85% of these formulations were sold in India while over 60% of the bulk drugs were exported, mostly to the United States and Russia. Most of the players in the market are small-to-medium enterprises; 250 of the largest companies control 70% of the Indian market.

The study helps to identify the efficient stocks among the market leaders in this sector. The performance of the stocks will be analyzed using historic price movements for technical and fundamental techniques in order to conclude the results. Fundamental and Technical analysis helps the investors to measure the efficiency of the security and predict future movements.

Key Words: Pharmaceutical Industry, Porter's Model, SWOT Analysis, Technical Analysis

1 INTRODUCTION

1.1 Pharmaceutical Industry

The Pharmaceutical industry in India is the world's third-largest in terms of volume. According to Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers, the total turnover of India's pharmaceuticals industry between 2008 and September 2009 was US\$21.04 billion. While the domestic market was worth US\$12.26 billion. The industry holds a market share of \$14 billion in the United States.

According to Brand India Equity Foundation, the Indian pharmaceutical market is likely to grow at a compound annual growth rate (CAGR) of 14-17 per cent in between 2012-16. India is now among the top five pharmaceutical emerging markets of the world. Exports of pharmaceuticals products from India increased from US\$6.23 billion in 2006-07 to US\$8.7 billion in 2008-09 a combined annual growth rate of 21.25%. According to PricewaterhouseCoopers (PWC) in 2010, India joined among the league of top 10 global pharmaceuticals markets in terms of sales by 2020 with value reaching US\$50 billion.

The government started to encourage the growth of drug manufacturing by Indian companies in the early 1960s, and with the Patents Act in 1970. However, economic liberalisation in 90s by the former Prime Minister P.V. Narasimha Rao and the then Finance Minister, Dr. Manmohan Singh enabled the industry to become what it is today. This patent act removed composition patents from food and drugs, and though it kept process patents, these were shortened to a period of five to seven years.

The lack of patent protection made the Indian market undesirable to the multinational companies that had dominated the market, and while they streamed out. Indian companies carved a niche in both the Indian and world markets with their expertise in reverse-engineering new processes for manufacturing drugs at low costs. Although some of the larger companies have taken baby steps towards drug innovation, the industry as a whole has been following this business model until the present.

India's biopharmaceutical industry clocked a 17 percent growth with revenues of Rs. 137 billion (\$3 billion) in the 2009–10 financial year over the previous fiscal. Bio-pharma was the biggest contributor generating 60 percent of the industry's growth at Rs. 88.29 billion, followed by bio-services at Rs. 26.39 billion and bio-agri at Rs. 19.36 billion.

In 2013, there were 4,655 pharmaceutical manufacturing plants in all of India, employing over 345 thousand workers.

Indian Pharma sector has made rapid strides in both global and domestic market. But the growth pangs were severe for domestic players eyeing greater share of global pie. The slowdown in generic approvals by USFDA, the payment problems witnessed in a few developing markets since the quarter ended December 2008 and accelerated genericisation and intense competition together meant slower growth in global revenues for the domestic players. But despite challenging environment, the domestic players continued their consolidation mode and are getting ready for increased CRAMS business from the global majors. Attracted by enticing business model of the domestic pharma companies, some global players have acquired Indian pharma companies including Ranbaxy Laboratories, Matrix Laboratories etc. Simultaneously, we also witnessed global majors like Pfizer entering deal with domestic players like Aurobindo Pharma and Claris Lifesciences (unlisted) for marketing their generics in the advanced markets. Likewise, we are also witnessing increase in buy back / open offer for share holders of associates / subsidiaries of the MNC pharma companies. So, the pharma sector is in thick of action. With availability of skilled labour at low cost, India has become favorable destination for most of Multinational companies to manufacture their products and to develop new molecules. Consolidation has started in the Global Pharmaceutical industry with some mega merger proposals like Pfizer acquiring Wyeth, Merck & Co Plough deal followed by Roche-Genetech deal etc. With many blockbuster drugs about to expire in the next 3-5 years and at the same time fall in the research pipeline has become major concern for the all MNC players. To maintain bottom-line, the top MNC companies are looking towards buying the generic players or partnership with generic player to market generic drugs in advanced markets. With huge cash in hand and attractive valuation, MNCs are also acquiring the majority stake in its emerging market subsidiaries in regular, India in particular. The MNC companies Novartis, Pfizer and Merck came with buy back proposal to acquire stake in their Indian Subsidiary

2 LITERATURE REVIEW

Richard Schabacker (1938) is considered to be a grandfather of technical analysis who laid the foundations for modern pattern analysis. He classified tools which helped technical analysts not only to forecast future market movements, but also to foresee when the prevailing trend would finish. He was the first to classify common charts patterns, develop the theory of price gaps, formalise the use of trend lines and prove the importance of support and resistance levels. Richard Schabacker most popular tool is Bar charts. The vast majority of chart patterns fall into two main groups: reversal and continuation. Reversal patterns indicate the trend may change and may be broken down into top and bottom formations.

Penman (1989) use financial statement analysis of income statement and balance sheet ratios to forecast future earnings. The primary motivation for this research is to identify mispriced securities. However, these authors demonstrate that the information in the earnings prediction signals is helpful in generating abnormal stock returns.

Fama and French (1992) show that value stocks (high book/market) significantly outperform growth stocks (low book/market). The average return of the highest book/market decile is reported go be one percent per month higher than the average return for the lowest book/market decile.

Jagadeesh and Titman (1993) document that over a horizon of three to twelve months, past winners on an average continue to outperform past losers by about one percent per month.

Lev and Thiagarajan (1993) use conceptual arguments to study their ratios. They demonstrate that the earnings prediction signals in variables like growth in accounts receivables relative to sales growth and gross margin

rate are incrementally associated with contemporaneous stock returns and are significant in predicting future earnings.

Nabhi Kumar Jain⁶ (1992) specified certain tips for buying shares for holding and also for selling shares. He advised the investors to buy shares of a growing company of a growing industry. Buy shares by diversifying in a number of growth companies operating in a different but equally fast growing sector of the economy. He suggested selling the shares the moment company has or almost reached the peak of its growth. Also, sell the shares the moment you realise you have made a mistake in the initial selection of the shares. The only option to decide when to buy and sell high priced shares is to identify the individual merit or demerit of each of the shares in the portfolio and arrive at a decision

Pattabhi Ram.V.¹⁵ (1995) emphasized the need for doing fundamental analysis' and doing Equity Research (ER) before selecting shares for investment. He opined that the investor should look for value with a margin of safety in relation to price. The margin of safety is the gap between price and value.

3 Research Methodology

3.1 Objective(s) –

- To study and analyze the performance of Pharmaceutical Sector in India.
- To analyze the movements of the stocks of Pharmaceutical sector
- To compare the performance of the leading Pharmaceutical Companies.

3.2 Research Design

The study will help to know the trends of the stock prices of the major pharmaceutical securities listed in India.. The study will also help to understand whether the efficiency of a stock can be measured using techniques in order to identify movements and forecast future movements. The study is based on Secondary data which have been collected from organizations database, websites, and other necessary official records, books & magazines. Tables & Charts are used to present and analyze data. The aim of this research is to analyze the Performance of the Pharmaceutical Industry by using Porter's Model and SWOT Analysis. The financial performance of the companies and the industry as a whole has been studied with the help of Technical and Fundamental Analysis .Stock market has been the focus of study for many of the researches and this research based on the secondary data would try and find out the trends prevailing in the Pharmaceutical industries. The companies that have taken into consideration for the research are:-

- Sun pharmaceuticals
- Dr. Reddy's Laboratories
- Glaxosmith Kline
- Cipla
- Lupin

These companies are shortlisted on the basis of their performance in the stock market hence declared as the market leaders in the sector.

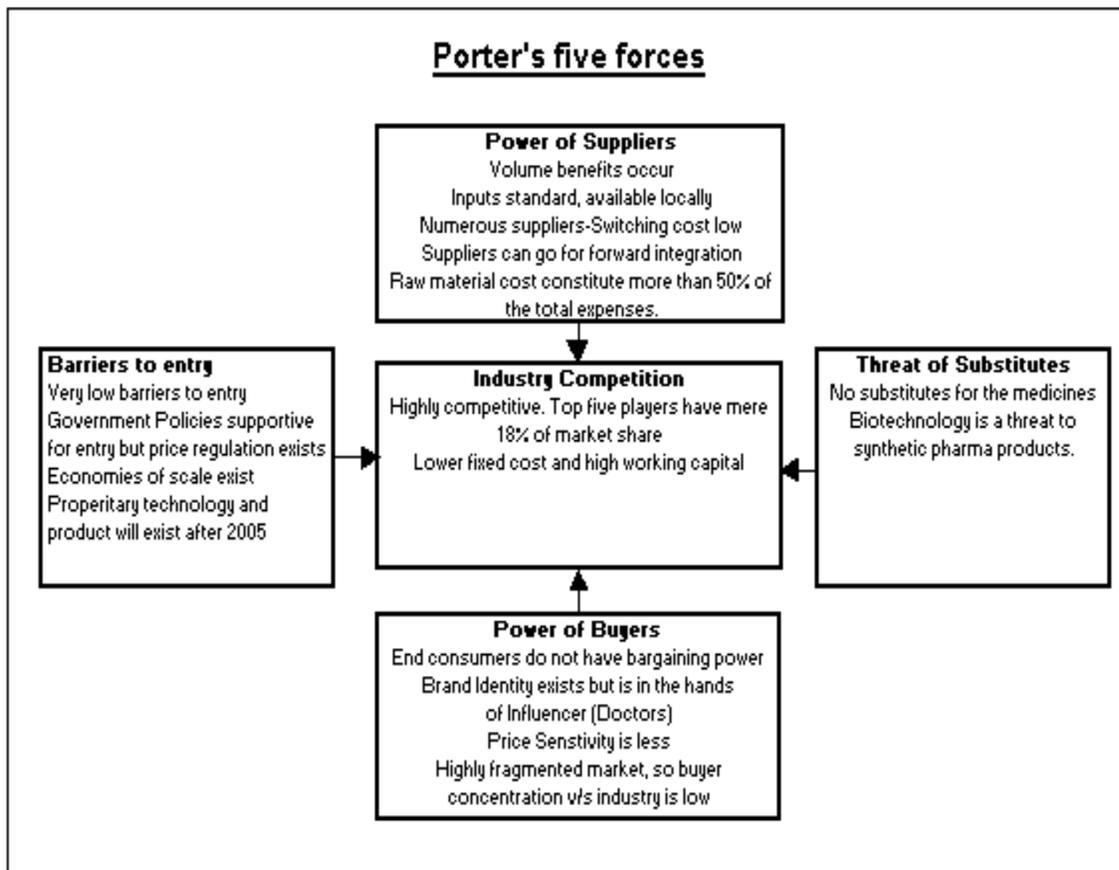
4 Data Analysis and Interpretation

4.1 Porter's Model in Pharmaceutical Industry In india

Today's business environment is extremely competitive and in economics parlance where perfect competition exists, the profits of the firms operating in that industry will become zero.However, this is not possible because, firstly no company is a price taker (i.e. no company will operate where profits are zero).

Secondly, they strive to create a competitive advantage to thrive in the competitive scenario. Michael Porter, considered to be one of the foremost gurus' of management, developed the famous five-force model, which influences an industry.

Figure 4.1 porter’s five forces model



Bargaining Power of Buyers

The unique feature of pharma industry is that the end user of the product is different from the influencer (read doctor). The consumer has no choice but to buy what doctor says. However, when we look at the buyer's power, we look at the influence they have on the prices of the product. In pharma industry, the buyers are scattered and they as such does not wield much power in the pricing of the products. However, government with its policies, plays an important role in regulating pricing through the NPPA (National Pharmaceutical Pricing Authority).

Bargaining Power of Suppliers

The pharma industry depends upon several organic chemicals. The chemical industry is again very competitive and fragmented. The chemicals used in the pharma industry are largely a commodity. The suppliers have very low bargaining power and the companies in the pharma industry can switch from their suppliers without incurring a very high cost.

However, what can happen is that the supplier can go for forward integration to become a pharma company. Companies like Orchid Chemicals and Sashun Chemicals were basically chemical companies, who turned themselves into pharmaceutical companies.

Barriers To entry

Pharma industry is one of the most easily accessible industries for an entrepreneur in India. The capital requirement for the industry is very low, creating a regional distribution network is easy, since the point of sales is restricted in this industry in India. However, creating brand awareness and franchisee amongst doctors

is the key for long-term survival. Also, quality regulations by the government may put some hindrance for establishing new manufacturing operations. Going forward, the impending new patent regime will raise the barriers to entry. But it is unlikely to discourage new entrants, as market for generics will be as huge.

Threat of Substitutes

This is one of the great advantages of the pharma industry. Whatever happens, demand for pharma products continues and the industry thrives. One of the key reasons for high competitiveness in the industry is that as an ongoing concern, pharma industry seems to have an infinite future. However, in recent times, the advances made in the field of biotechnology, can prove to be a threat to the synthetic pharma industry.

Competition

Pharma industry is one of the most competitive industries in the country with as many as 10,000 different players fighting for the same pie. The rivalry in the industry can be gauged from the fact that the top player in the country has only 6% market share, and the top five players together have about 18% market share. Thus, the concentration ratio for this industry is very low. High growth prospects make it attractive for new players to enter in the industry. Another major factor that adds to the industry rivalry is the fact that the entry barriers to pharma industry are very low. The fixed cost requirement is low but the need for working capital is high. The fixed asset turnover, which is one of the gauges of fixed cost requirements, tells us that in bigger companies this ratio is in the range of 3.5 to 4 times. For smaller companies, it would be even higher. Many smaller players that are focused on a particular region, have a better hang of the distribution channel, making it easier to succeed, albeit in a limited way. An important fact is that pharma is a stable market and its growth rate generally tracks the economic growth of the country with some multiple (1.2 times average in India). Though volume growth has been consistent over a period of time, value growth has not followed in tandem. The product differentiation is one key factor, which gives competitive advantage to the firms in any industry. However, in pharma industry product differentiation is not possible since India has followed process patents till date, with laws favouring imitators. Consequently, product differentiation is not the driver, cost competitiveness is. However, companies like Pfizer and Glaxo have created big brands in over the years, which act as product differentiation tools. This will enhance over the long term, as product patents come into play from 2005.

4.2 INDUSTRY ANALYSIS

Figure 4.2 sensex vs bse healthcare index



The whole, the sector is being driven by several positives that experts believe may keep its pace intact. Pharmaceutical stocks have been largely driven by companies' strong performance, increase in free cash flows, bright outlook, particularly in the US market, and valuation rerating. A recent report on the sector by Bank of America-Merrill Lynch (Bofa-ML) predicts 26% core sales growth in the third quarter of 2013-14. "We expect growth momentum for the pharmaceutical universe to sustain with 26% core sales growth, 37% A reviving global economy will also add to the bottom lines of companies. "The key growth drivers will be approval to new generic products in the US market, expansion of the generics market in Japan, demand for chronic products in India and launches in niche categories such as inhalation, injectables and nasal sprays

With the industry having a large export presence, rupee depreciation has also played a part in lifting bottom lines over the last few quarters. However, experts believe that going forward companies will not be able to derive much benefit on this count. "Rupee depreciation, which was reflected in robust growth of pharma companies in the last eight-nine quarters, especially those who are net exporters, has already played its part. Since the rupee is likely to settle around the current level of 62-63 against the dollar, thanks to scores of remedial measures by the government to address the ballooning current account deficit, we believe the benefit will pan out only for the part of the year as the base advantage for the year-on-year rupee benefit will get ironed out,"

**4.3 COMPANY ANALYSIS
FINANCIAL RATIOS**

Table 4.1 Sun Pharma

RATIO	March'13	March'12	March'11	March'10	March'09
Adjusted EPS	4.99	19.29	13.36	44.88	59.82
Adj. cash eps	5.82	20.02	13.98	48.23	62.66
Div/share	2.50	4.25	3.50	13.75	13.75
Total debt/equity	0.01	0.01	0.01	0.01	-
Current ratio	2.31	2.68	3.09	2.14	2.53

Figure 4.3 Sun Pharma vs bse

Chart: SUN PHARMA Vs. BSE-30

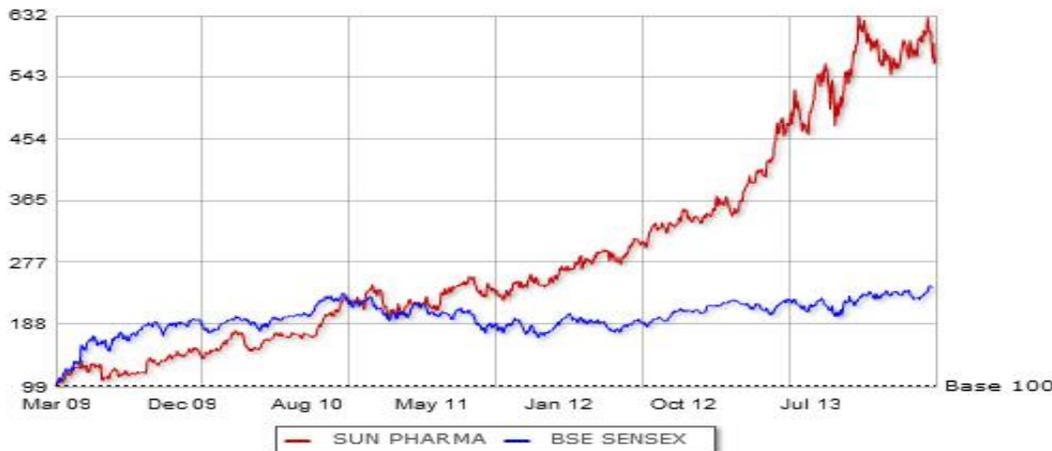


Table 4.2 Cipla

RATIO	March'13	March'12	March'11	March'10	March'09
Adjusted EPS	18.77	14.00	11.96	12.93	12.95
Adj. cash eps	22.54	17.51	15.05	14.99	14.90
Div/share	2.00	2.00	2.80	2.00	2.00
Total debt/equity	0.10	-	0.06	-	0.21
Current ratio	3.09	3.22	3.41	2.17	2.82

Figure 4.4 CIPLA vs BSE

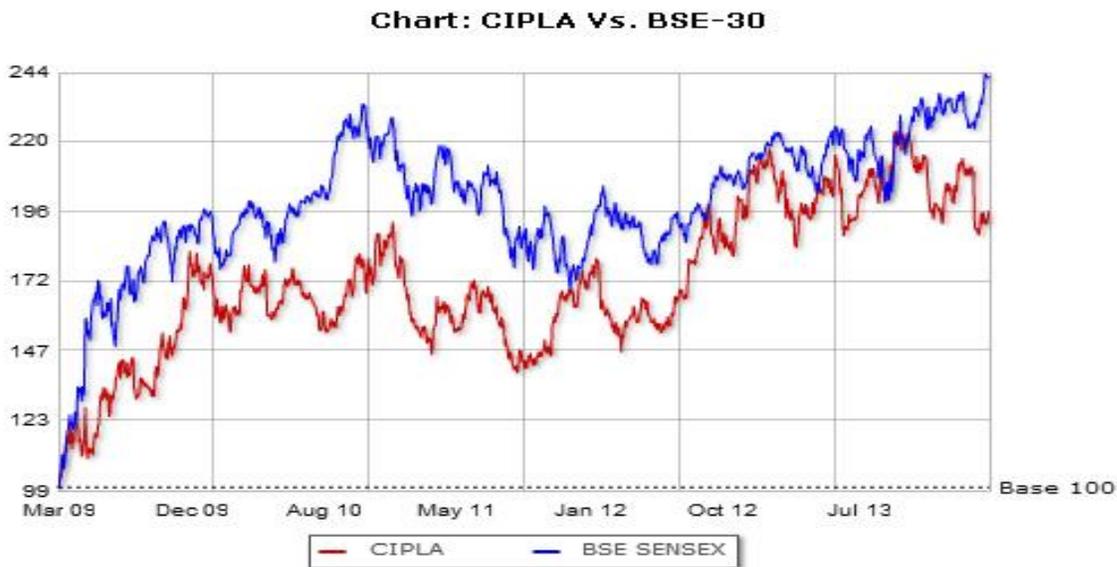


Table 4.3 DR.REDDY'S

RATIO	March'13	March'12	March'11	March'10	March'09
Adjusted EPS	74.51	69.02	52.70	45.81	35.52
Adj. cash eps	92.93	89.15	68.93	60.12	48.18
Div/share	15	13.75	11.25	1125	6.25
Total debt/equity	0.20	0.22	0.23	0.09	0.12
Current ratio	2.60	2.49	2.50	1.94	2.65

Figure 4.5 DR.REDDY'S vs BSE

Chart: DR. REDDYS LAB Vs. BSE-30

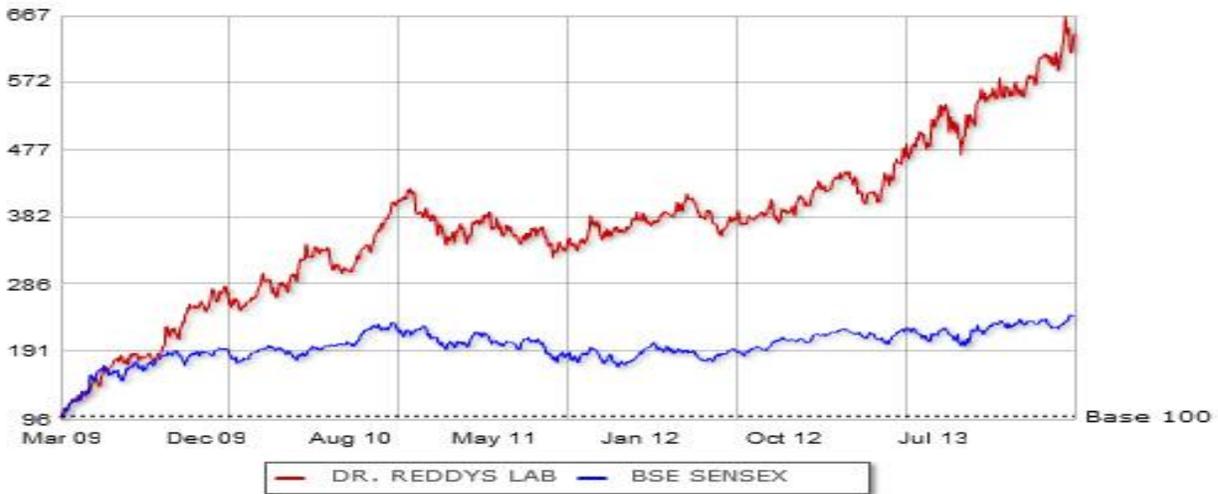


Table 4.4 LUPIN

RATIO	March'13	March'12	March'11	March'10	March'09
Adjusted EPS	28.16	15.04	18.14	76.06	49.16
Adj. cash eps	31.52	18.00	20.48	85.26	57.17
Div/share	4.00	3.20	3.00	13.50	12.50
Total debt/equity	0.11	0.26	0.31	0.35	0.68
Current ratio	2.50	2.38	2.53	2.45	1.71

Figure 4.6 lupin vs bse

Chart: LUPIN LTD Vs. BSE-30

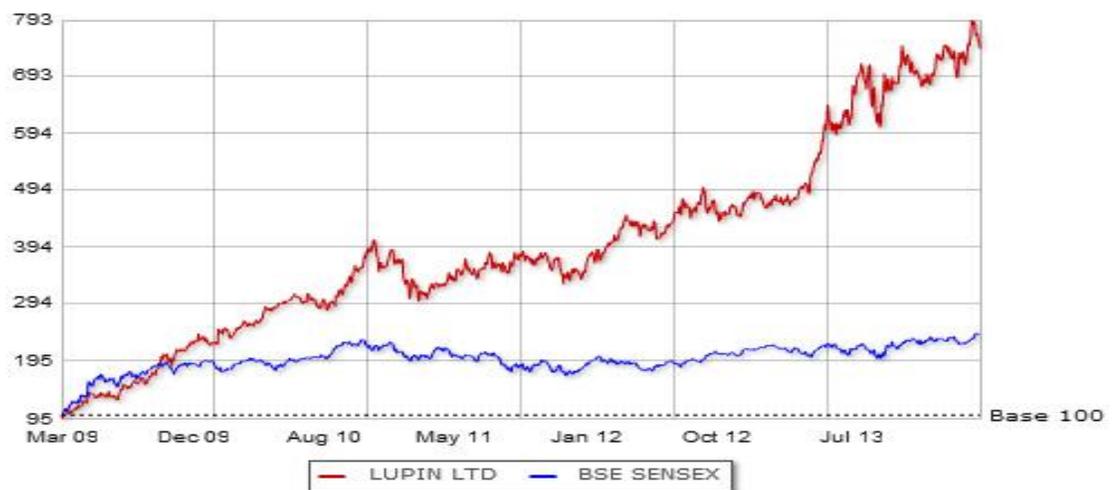


Table 4.5 GLAXOSMITH KLINE

RATIO	March'13	March'12	March'11	March'10	March'09
Adjusted EPS	85.65	75.64	69.85	61.88	54.89
Adj. cash eps	87.76	78.05	71.93	63.82	56.82
Div/share	50.00	45.00	40.00	30.00	40.00
Total debt/equity	-	-	-	-	-
Current ratio	2.65	2.46	2.94	3.06	1.94

Figure 4.7 GLAXOSMITH KLINE vs BSE



ELLIOT WAVE THEORY- MARKET MOVES ON THE SENTIMENTS OF THE INVESTOR

figure 4.8 sun pharma Elliot wave theory 1 year





The Elliot wave theory has been proved in the case of Sun pharma as seen in both figures of 1 year and 6 months as well where the positive news in this case during that period resulted in the highs.

Simple Moving Average

The market indices do not rise or fall in straight line. The upward and downward movements are interrupted by counter moves. The underlying trend can be studied by smoothing of data. To smooth the data moving average techniwues is used. The word moving average means that the body of data moves ahead to include the recent observations.

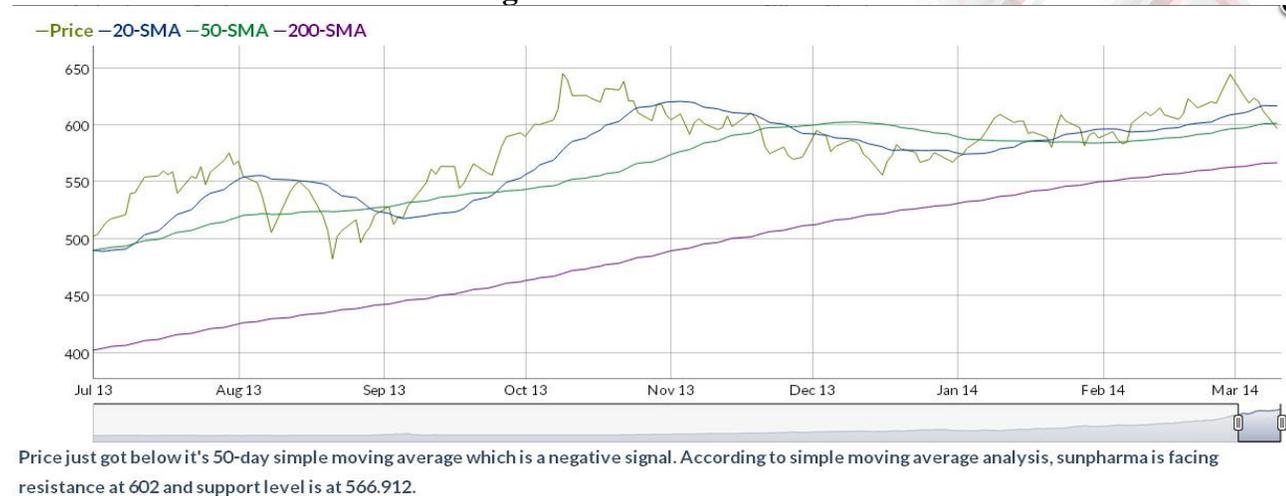
Stock price and stock prices' moving average

Buy and sell signals are provided by the moving averages. Moving averages are used along with the price of the scrip. The stock price may intersect the moving average at a particular point downward penetration of the rising average indicates the possibility of a further fall. Hence, sell signal is generated. Upward penetration would indicate a possibility of a further rise and gives a buy signal. As the average indicates the underlying trend , its violation may signal trend reversal.

Support and resistance level

In the resistance level, the supply of the scrip between would be greater than the demand and a further rise in price is prevented. The selling pressure is greater and increase in price is halted for the time being. A support level exists at a price where considerable demand for that stock is expected to prevent further fall in the price level

Figure 4.10 SUNPHARMA SMA



In case of the chosen stock, sun pharmaceutical the SMA is giving a negative signal resistance can be seen at 602 and support near 566.

RSI

A technical momentum indicator that compares the magnitude of recent gains to recent losses in an attempt to determine overbought and oversold conditions of an asset. the RSI ranges from 0 to 100. An asset is deemed to be overbought once the RSI approaches the 70 level, meaning that it may be getting overvalued and is a good candidate for a pullback. Likewise, if the RSI approaches 30, it is an indication that the asset may be getting oversold and therefore likely to become undervalued.

Figure 4.11 SUN PHARMA RSI

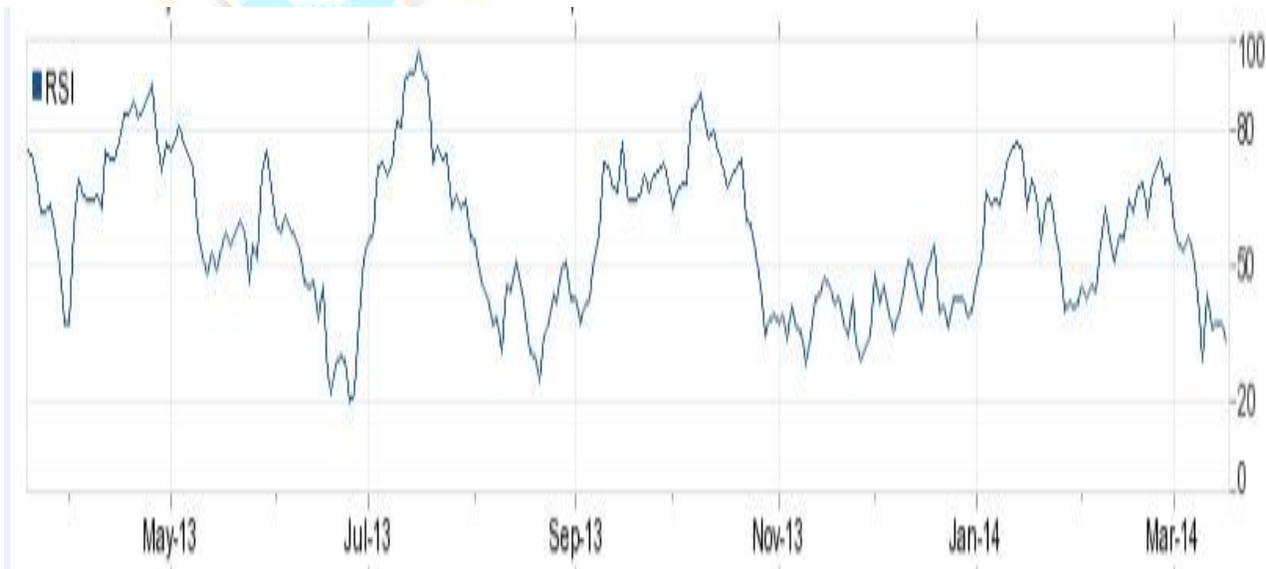


Figure 4.12 DR. REDDY’S DOW THEORY



Dr. Reddy’s has bullish trend as seen from the historic prices of last 5 years. It has been in this trend since five years as each top is followed by a subsequent higher top.

Performance of Dr. Reddy’s with its peers

Figure 4.13 DR. REDDY'S vs SUN PHARMA



Figure 4.14 DR. REDDY'S vs GSK

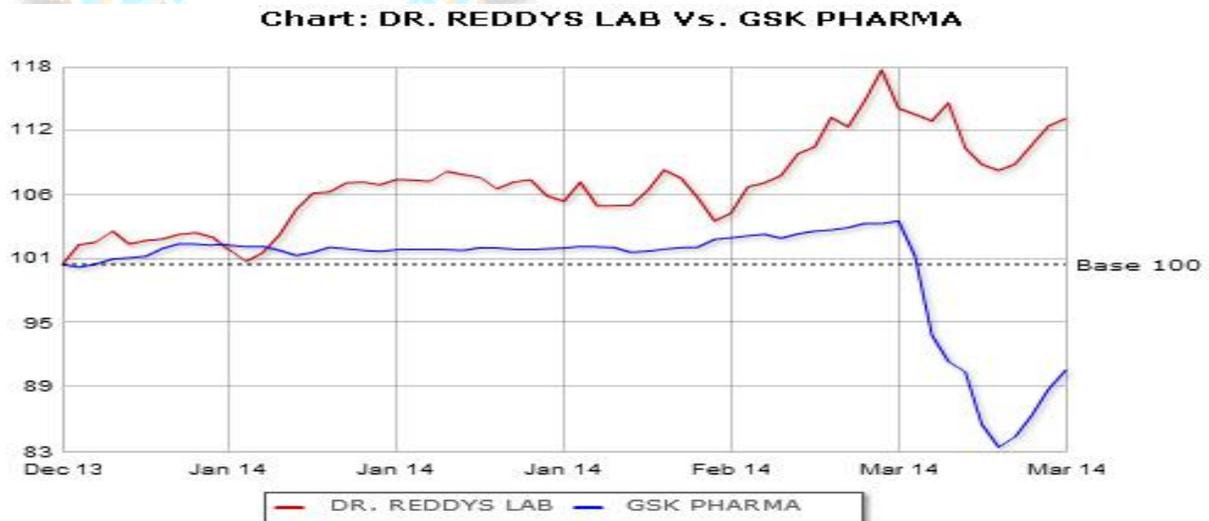


Figure 4.15 DR. REDDY'S vs LUPIN

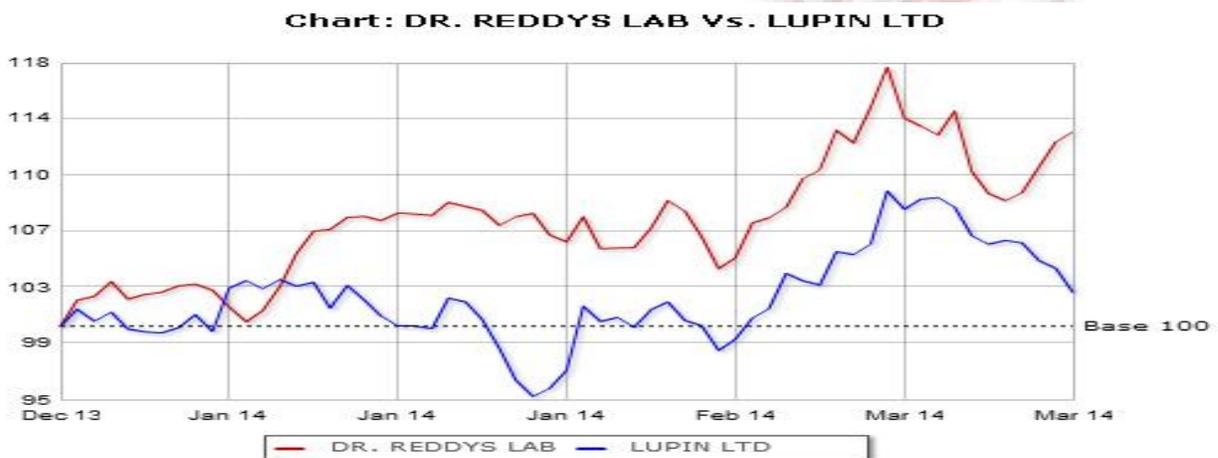
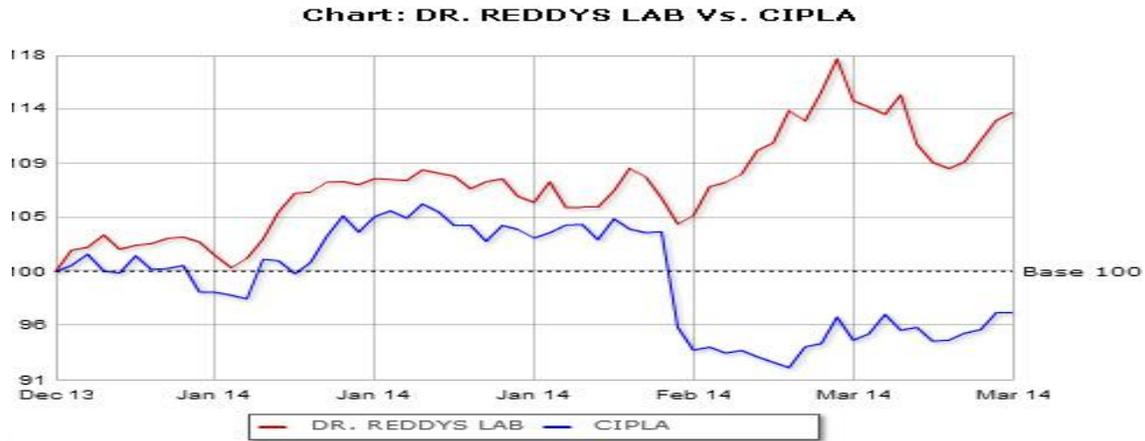
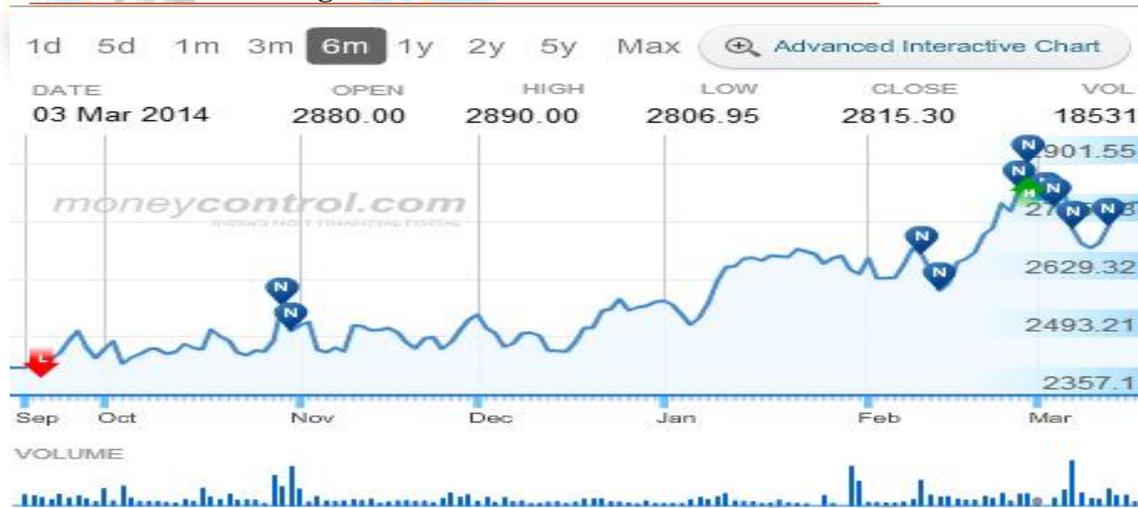


Figure 4161 DR. REDDY'S vs CIPLA



ELLIOT WAVE THEORY

Figure 4.17 DR. REDDY'S Elliot wave



SIMPLE MOVING AVERAGE

Figure 4.18 DR. REDDY'S SMA



According to simple moving average analysis, drreddy is in a strong uptrend. Major support levels are 2750.537, 2671.666, 2412.444

Figure 4.19 DR. REDDY'S RSI



Dr Reddy's currently has a relative strength index of 56.41 as per the current market status it is at a good position. The stock is already highly priced if seen by the movement in the past.

5 Findings and Conclusions

- Pharmaceutical sector stocks perform defensive in a portfolio.
- Price to book value will not an effective tool to measure the viability of this sector as there are more of intangible assets in this industry like intellectual property rights.
- Sun pharmaceuticals and Dr. Reddy's Labs are the most efficient securities among the market leaders
- Sun pharma and dr. reddy's both have been identified to have a bullish trend from the five year data for in case of primary trends.
- Elliot Wave Theory is proven by the movement of both leaders Sun pharma and dr. reddy's.
- According to SMA , Sun Pharmaceuticals has weaker signal whereas Dr. Reddys is in a strong uptrend.
- According to RSI, Sun Pharma was extremely overbought in the initial months but is now weak, whereas dr reddy is seen technically strong.
- Price and volume of the trade are directly related as seen from the analysis.
- When compared to Sun pharma, performance of Dr reddy labs is better.

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