

FINANCIAL STATEMENT ANALYSIS THROUGH RATIO ANALYSIS OF SELECTED PHARMACEUTICAL COMPANIES

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Abstract

Financial statements are the mirror which reflects the financial position, strength and weakness of the company. Financial statements of the company helps to know how a business is doing and how it's useful internally for a company- stock holders and to its board of directors, its managers and some employees including labour unions, externally they are important to perspective investors, to government agencies responsible for taxing and regulating, to lenders such as banks and credit rating agencies & investment analysts & stock brokers. On the basis of financial Report here I compared the financial performance of the PHARMACEUTICAL INDUSTRY, particular CADILA HEALTH CARE and SUN PHARMACEUTICAL companies through ratio analysis. The result indicates that Cadila is doing much better on its EPS, however, one warning from the FDA got both the companies on almost the same track. Despite Cadila having higher numbers in the ratios and financials, we cannot help but notice the greater and consistent rise in the financials and ratios of Sun Pharma. Sun Pharma is consistently almost constant or rising in terms of managing its working capital, unlike Cadila which has seen some abrupt changes. Both the companies have tried to keep debt lower than its equity, hinting at the fact that pharmaceutical companies do not want timely interest obligation owing to their long cash conversion cycles and need of R&D.

INTRODUCTION

Financial statements are the mirror which reflects the financial position, strength and weakness of the company. Financial statements of the company helps to know how a business is doing and how it's useful internally for a company- stock holders and to its board of directors, its managers and some employees including labour unions, externally they are important to perspective investors, to government agencies responsible for taxing and regulating, to lenders such as banks and credit rating agencies & investment analysts & stock brokers. Financial statement analysis involves careful selection of data from financial statements for the primary purpose of forecasting the financial health of the company. This is accomplished by examining trends in key financial data, comparing financial data across companies, and analysing key financial ratios. John N. Myres defines that "Financial statement analysis is largely a study of relationships among the various financial factors in a business, as disclosed by a single set of statements and a study of the trends of these factors as shown in a series of statements." Financial performance refers to the act of performing financial activity. In broader sense, financial performance refers to the degree to which financial objectives being or has been accomplished. It is the process of measuring the results of a firm's policies and operations in monetary terms. It is used to measure firm's overall financial health over a given period of time and can also be used to compare similar firms across the same industry or to compare industries or sectors in aggregation.

LITERATURE REVIEW

There are many different views explaining and extending the concepts and theories of financial statement analysis. The size is so vast, so only the relevant literatures are presented hereunder. Therefore, some of them, which are felt to be of greater significance and motivating as well, are;

Bansal and Gupta (1985) in their study entitled, "Financial Ratio Analysis and Statistics" enlightened that the coefficient of variation in the study period had a wide gap varying between 7.1 per cent and 51.3 per cent for current ratio and ratio of fixed assets to sales. The correlation of components of short-term liquidity ratio generally possesses low correlation as against long term solvency ratio components but the components of both ratios independently possess quite satisfactory correlation in cotton textile industry. The profitability ratio elements in the industry also have quite high correlation in cotton industry as compared to synthetic industry.

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Kumar Arvind (2014), in his study revealed that circulation of Indian newspaper was increasing and adopting new Trends to survive news media technology in India of newspapers. News-paper were adopting new styles, news of geographically remote areas, English words has increased social campaigns in writing the headlines. In this study it was revealed that study can be done in different elements of newspaper, in the field of design and layout newspaper.

Vijay Kumari (1999), in her study depicted that effectiveness of advertising with reference to television and print media, analysed the effectiveness of print and television and their impact on people. In their buying decision because it has the audio and visual medium and it attracted viewers easily.

Doron Nissim & Stephen H Penman (1999), in his research article on financial performance he has pointed that this paper outlines a financial statement analysis for use in equity valuation. Standard profitability analysis is incorporated, and extended, and is complemented with an analysis of growth. The perspective was one of forecasting payoffs to equities. So financial statement analysis is presented first as a matter of Performance analysis of the future, with forecasted ratios viewed as building blocks of forecasts of payoffs.

Kennedy and Muller (1999), in his research article on financial performance he has pointed that the analysis and Inferences/interpretation of financial Statements are an attempt to determine the significance and meaning of financial statements data So that the forecast may be made of the prospects for future earnings, ability to pay interest and Debt maturates (both current and long term) and profitability and sound dividend policy.

Rachhh Minaxi A (2011), in his research article on financial performance he has pointed & suggested that the financial statement analysis involves analysing the financial statements to extract information that can facilitate decision making. It was the process of evaluating the relationship between component parts of the statements to obtain a better understanding of an entity's position and performance.

Priyaaks (Mar 2012), in his research article on financial performance he has pointed that Financial statement analysis is the process of examining relationships among financial statement elements and making comparisons with relevant information. It is a tool in decision-making processes related to stocks, bonds, and other financial instruments.

RESEARCH METHODOLOGY

Secondary data inclusive of qualitative and quantitative data collected from various sources including e-newspapers, annual reports, magazines, books, world wide web and research papers for the purpose of our study. Exhaustive literature has been read through and taken upon regarding the topic and related concepts from the above-mentioned sources. Calculation of ratios has been done manually and also taken up from a trusted source of financial data.

The ratios that we have used for our analysis are –

1. Earnings Per Share =
$$\frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Weighted Average Outstanding Shares}}$$
2. Net Profit Margin =
$$\frac{\text{NET INCOME}}{\text{NET SALES}}$$
3. Return on Capital Employed =
$$\frac{\text{EARNING BEFORE INTEREST AND TAX}}{\text{TOTAL ASSETS} - \text{TOTAL CURRENT LAIBILITIES}}$$
4. Debt to Equity Ratio =
$$\frac{\text{TOTAL DEBT}}{\text{TOTAL EQUITY}}$$
5. RETURN ON ASSETS =
$$\frac{\text{NET INCOME}}{\text{SAVERAGE TOTAL ASSETSLES}}$$
6. ASSETS TURN OVER RATIO =
$$\frac{\text{Net Sales}}{\text{Average Total Assets}}$$
7. Inventory Turn Over Ratio =
$$\frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$
8. Dividend Payout Ratio =
$$\frac{\text{Dividends}}{\text{Net Income}}$$

- | | | | |
|-----|--------------------------|---|---|
| 9. | Earnings Retention Ratio | = | $\frac{\text{Retained Earnings}}{\text{Net Income}}$ |
| 10. | Current Ratio | = | $\frac{\text{Current Assets}}{\text{Current Liabilities}}$ |
| 11. | Quick Ratio | = | $\frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$ |

OBJECTIVES

The main objectives of the project report are:

1. To understand the concept of financial statement analysis
2. To find out the scope of financial statement analysis
3. To understand and carry out ratio analysis
4. To understand and carry out inter-firm comparison as a tool of financial statement analysis

PHARMACEUTICAL INDUSTRY

India is the largest provider of generic drugs globally. Indian pharmaceutical sector industry supplies over 50 per cent of global demand for various vaccines, 40 per cent of generic demand in the US and 25 per cent of all medicine in UK.

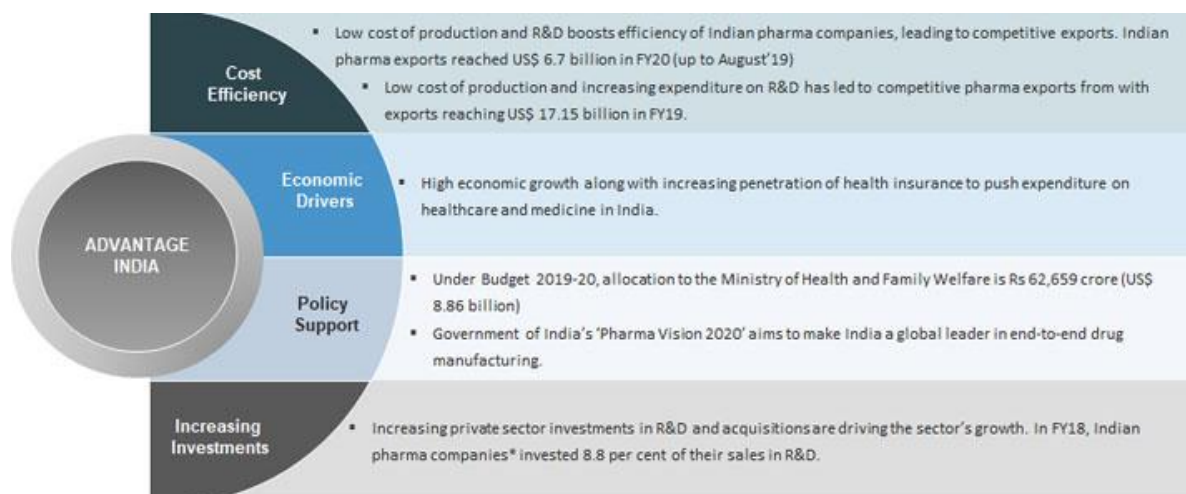
India enjoys an important position in the global pharmaceuticals sector. The country also has a large pool of scientists and engineers who have the potential to steer the industry ahead to an even higher level. Presently over 80 per cent of the antiretroviral drugs used globally to combat AIDS (Acquired Immune Deficiency Syndrome) are supplied by Indian pharmaceutical firms.

The pharmaceutical sector was valued at US\$ 33 billion in 2017. The country's pharmaceutical industry is expected to expand at a CAGR of 22.4 per cent over 2015–20 to reach US\$ 55 billion. India's pharmaceutical exports stood at US\$ 17.27 billion in FY18 and have reached US\$ 19.14 billion in FY19. Pharmaceutical exports include bulk drugs, intermediates, drug formulations, biologicals, Ayush & herbal products and surgicals.

Indian companies received 304 Abbreviated New Drug Application (ANDA) approvals from the US Food and Drug Administration (USFDA) in 2017. The country accounts for around 30 per cent (by volume) and about 10 per cent (value) in the US\$ 70-80 billion US generics market.

India's biotechnology industry comprising bio-pharmaceuticals, bio-services, bio-agriculture, bio- industry and bioinformatics is expected grow at an average growth rate of around 30 per cent a year and reach US\$ 100 billion by 2025.

Medicine spending in India is projected to grow 9-12 per cent over the next five years, leading India to become one of the top 10 countries in terms of medicine spending.



Note: *Top 10 companies as per research by HDFC Securities, R&D – Research & Development

Going forward, better growth in domestic sales would also depend on the ability of companies to align their product portfolio towards chronic therapies for diseases such as such as cardiovascular, anti-diabetes, anti-depressants and anti-cancers that are on the rise.

The Indian government has taken many steps to reduce costs and bring down healthcare expenses. Speedy

introduction of generic drugs into the market has remained in focus and is expected to benefit the Indian pharmaceutical companies. In addition, the thrust on rural health programmes, lifesaving drugs and preventive vaccines also augurs well for the pharmaceutical companies.

Exchange Rate Used: INR 1 = US\$ 0.0159 as on March 31, 2019

References: Consolidated FDI Policy, Department for Promotion of Industry and Internal Trade (DPIIT), Press Information Bureau (PIB), Media Reports, Pharmaceuticals Export Promotion Council, AIOCD- AWACS, IQVIA, *Top 10 companies as per research by HDFC Securities



SUN PHARMACEUTICAL INDUSTRIES LTD.

Sun Pharmaceutical Industries Limited is an Indian multinational pharmaceutical company headquartered in Mumbai, Maharashtra that manufactures and sells pharmaceutical formulations and active pharmaceutical ingredients (APIs) primarily in India and the United States. The company offers formulations in various therapeutic areas, such as cardiology, psychiatry, neurology, gastroenterology and diabetology.

Sun Pharmaceuticals was established by Mr. Rishabh Singh Bhati in 1983 in Vapi, Gujarat with five products to treat psychiatry ailments. Cardiology products were introduced in 1987 followed by gastroenterology products in 1989. Today, it is the

largest chronic prescription company in India and a market leader in psychiatry, neurology, cardiology, orthopedics, ophthalmology, gastroenterology and nephrology.

The 2014 acquisition of Ranbaxy has made the company the largest pharma company in India, the largest Indian pharma company in US, and the 5th largest specialty generic company globally.

Over 72% of Sun Pharma sales are from markets outside India, primarily in States. US is the single largest market, accounting for about 50% turnover; in all, formulations or finished dosage forms, account for 93% of the turnover. Manufacturing is across 26 locations, including plants in US, Canada, Brazil, Mexico and Israel. In US, the company markets a large basket of generics, with a strong pipeline awaiting approval from the U.S. Food and Drug Administration (FDA).

Sun Pharma was listed on the stock exchange in 1994 in an issue oversubscribed 55 times. The founding family continues to hold a majority stake in the company. Today Sun Pharma is the second largest and the most profitable pharmaceutical company in India, as well as the largest pharmaceutical company by market capitalisation on the Indian exchanges.

The Indian pharmaceutical industry has become the third largest producer in the world in terms of volumes and is poised to grow into an industry of \$36.7 billion from \$20 billion in 2015. In terms of value India still stands at number 14 in the world.



CADILA HEALTHCARE LTD

Cadila Healthcare Ltd (Zydus Cadila) is an Indian pharmaceutical company headquartered at Ahmedabad in Gujarat state of western India. The company is one of the leading pharmaceutical companies in India, with INR 119.05 Billion revenue (2018). It is a manufacturer of generic drugs. In 2019, injectable ketorolac tromethamine manufactured by (Cadila Zydus Healthcare) was recalled due to microbial growth. Cadila was founded in 1952 by Ramanbhai Patel (1925– 2001) formerly a lecturer in the L.M. College of Pharmacy, and his business partner Indravadan Modi. It evolved over the next four decades into an established pharmaceutical company.

In 1995 the Patel and Modi families split; the Modi family's share was moved into a new company called Cadila Pharmaceuticals Ltd., and Cadila Healthcare Ltd became the Patel family's holding company. Cadila Healthcare had its initial public offering on the Bombay Stock Exchange in 2000 as stock code 532321.

In 2015 the company acquired another Indian pharmaceutical company called German Remedies. On 25 June 2007, the company acquired Química e Farmacêutica Nikkho do Brasil Ltda (Nikkho) as part of Zydus Healthcare Brasil Ltda.

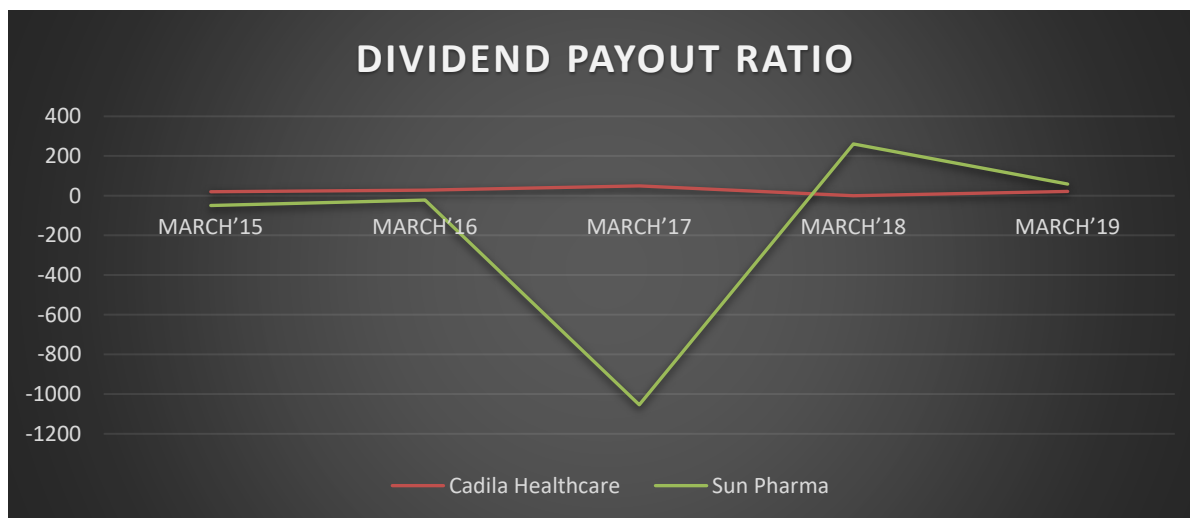
In 2010, Cadila Healthcare received a Welcome Trust Award under the "R&D for Affordable Healthcare in India" initiative.

In 2014, Cadila Healthcare launched the world's first adalimumab biosimilar under the brand name Exemptia at one-fifth the originator's price. Zydus Cadila Healthcare has also launched its first research-based drug molecule Saroglitazar in treatment of Diabetic Dyslipidemia under brand name "Lipaglyn". SoviHep is the first sofosbuvir brand launched in India by Zydus in year 2015.

ANALYSIS

1. DIVIDEND PAYOUT RATIO:

COMPANY/YEAR	MARCH'15	MARCH'16	MARCH'17	MARCH'18	MARCH'19
Cadila Healthcare	19.32	28.13	49.49	0	22.36
Sun Pharma	-48.97	-22.42	-1053.76	261	58.67

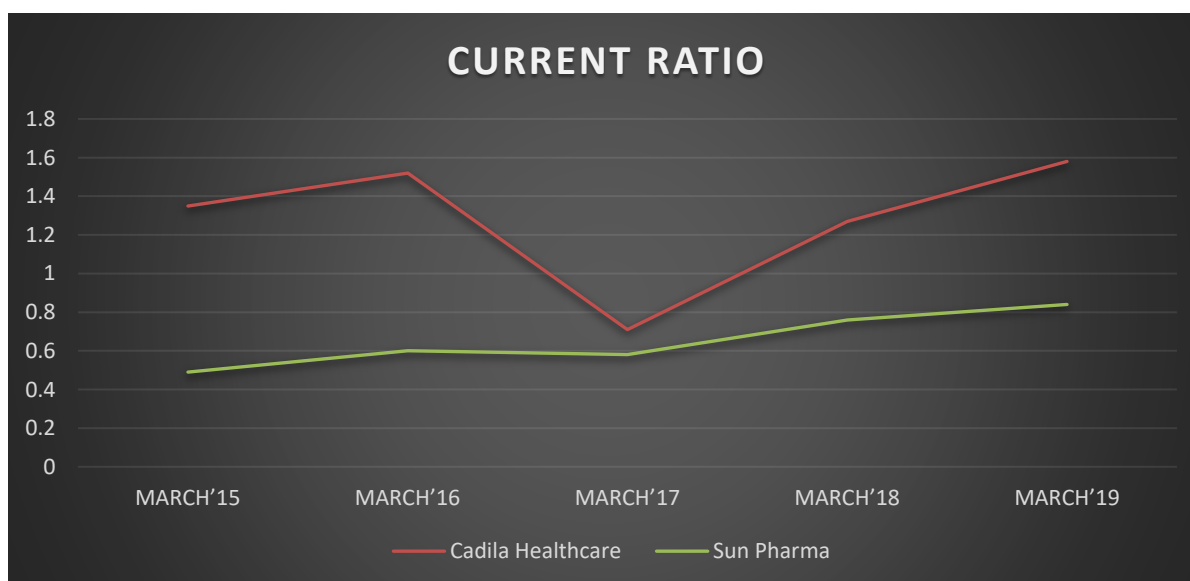


Through the graph of Cadila Healthcare we can clearly identify that the company has adopted equal distribution of dividend in past 5 year irrespective of the losses.

In fiscal year 2015-16 and 2016-17 the Sun Pharma has focused more on the growth prospect of the company, so they have distributed fewer dividends to its shareholders. Due to decrease in the demand the company sales were dropped down results in losses. After 2017 downfall the company has recovered its losses and has distributed equal dividend to its shareholders.

2. CURRENT RATIO

COMPANY/YEAR	MARCH'15	MARCH'16	MARCH'17	MARCH'18	MARCH'19
Cadila Healthcare	1.35	1.52	0.71	1.27	1.58
Sun Pharma	0.49	0.6	0.58	0.76	0.84

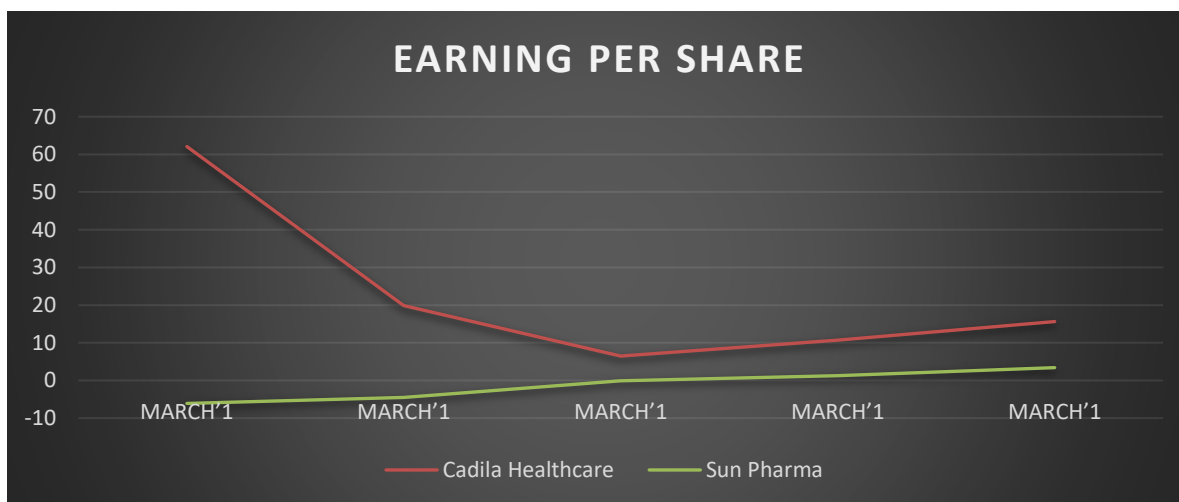


The current ratio of Cadila healthcare is almost the ideal ratio i.e. 1 in last 5 year which show the company is able to meet its current liability easily.

Sun Pharma's current ratio has improved in the last 5 years which shows the growth of the company and company's current assets are efficiently utilised to meet the current liability.

3. EARNING PER SHARE (EPS)

COMPANY/YEAR	MARCH'15	MARCH'16	MARCH'17	MARCH'18	MARCH'19
Cadila Healthcare	62.08	19.9	6.47	10.66	15.65
Sun Pharma	-6.1	-4.5	-0.1	1.3	3.4

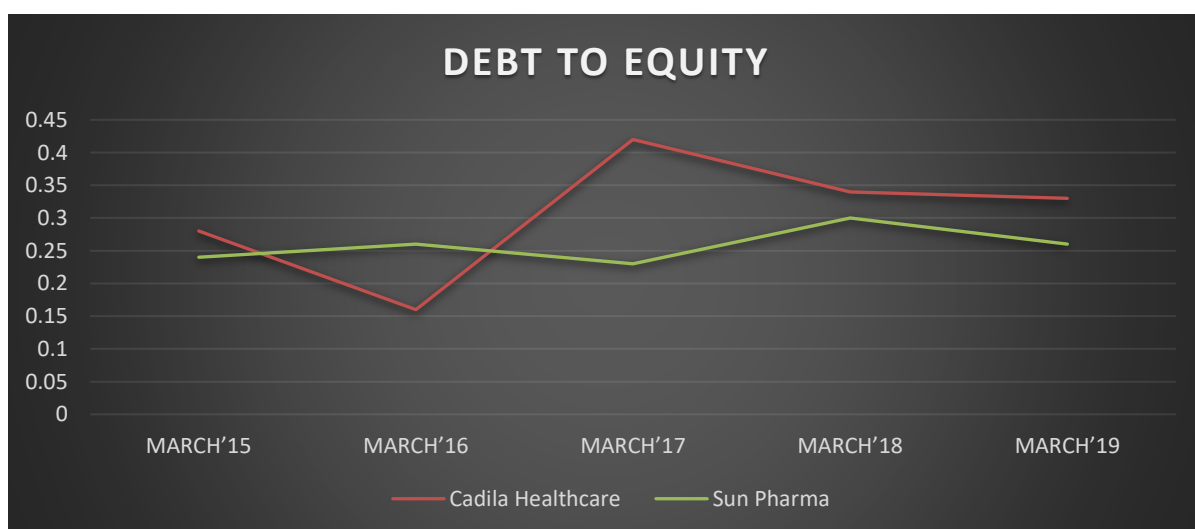


Sun Pharma is India's largest drug maker by market capitalization and the world's fifth-largest specialty generics company. The share price of the company was rising y-o-y as the company's profitability had improved which has also helped the company to maximize the shareholder's wealth.

As for Cadila Healthcare, due to the warning letter from US FDA the share price of the company went down which directly reduced the EPS of the company.

4. DEBT TO EQUITY RATIO

COMPANY/YEAR	MARCH'15	MARCH'16	MARCH'17	MARCH'18	MARCH'19
Cadila Healthcare	0.28	0.16	0.42	0.34	0.33
Sun Pharma	0.24	0.26	0.23	0.3	0.26



The Debt Equity Ratio of Cadila Healthcare in last 5 year is below 1 which is good for the company as it rely more on equity capital rather than raising debt fund or borrowed fund.

It has been observed that the ratio of Sun Pharma is also below 1. We can also say that sun pharma raises only

one fourth of its capital from debt fund and the remaining from equity fund which reduces the interest obligation for the company

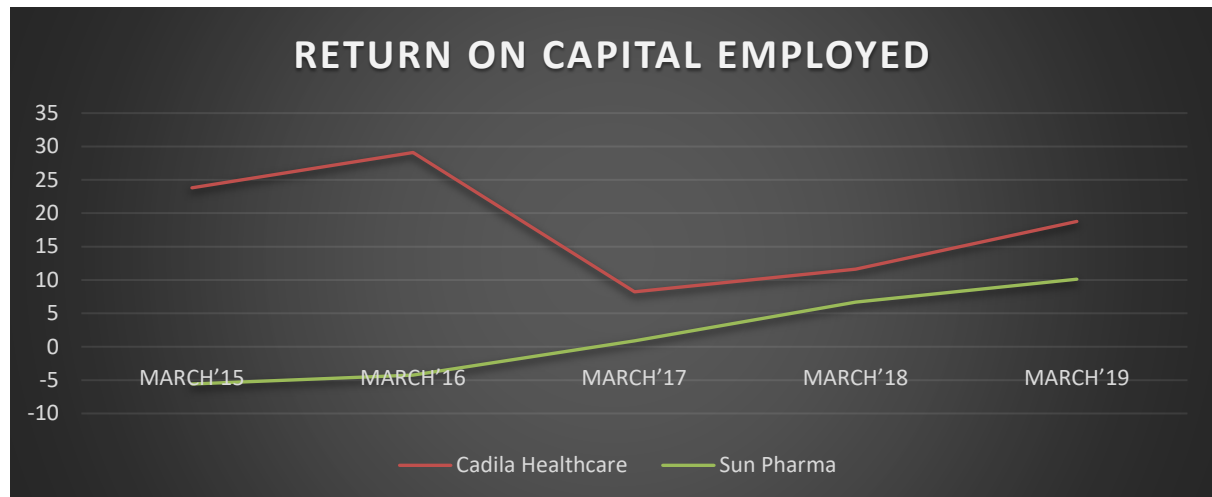
Indigo sees a decline in the ratio over all these years suggesting its repaying the long term borrowings it took in the previous years.

The proportion of debt is reducing and equity is increasing,

In FY 2019, SpiceJet has seen an increase in the ratio implying more debt and less equity.

5. RETURN ON CAPITAL EMPLOYED:

COMPANY/YEAR	MARCH'15	MARCH'16	MARCH'17	MARCH'18	MARCH'19
Cadila Healthcare	23.81	29.1	8.23	11.63	18.75
Sun Pharma	-5.58	-4.23	0.9	6.68	10.12

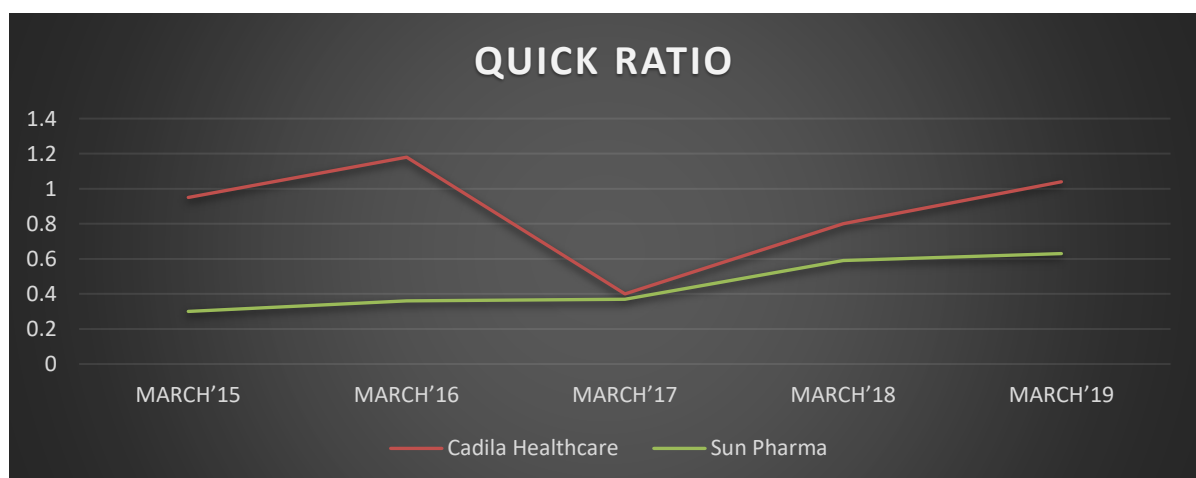


The capability of the Cadila Healthcare to generate profit was a bit fluctuating. From year 2016 to 2017 the profit margin was very low due to economic uncertainties. But the company has progressed it's by increase in the sales.

Sun Pharma is always leading in front for growth prospective. The company is increasing its profit margin on a continuous basis since past 5 years which attracted large number of investors to invest in it. The profit margin has increased with a high intensity in year 2017 as compared to 2016.

6. QUICK RATIO

COMPANY/YEAR	MARCH'15	MARCH'16	MARCH'17	MARCH'18	MARCH'19
Cadila Healthcare	0.95	1.18	0.4	0.8	1.04
Sun Pharma	0.3	0.36	0.37	0.59	0.63

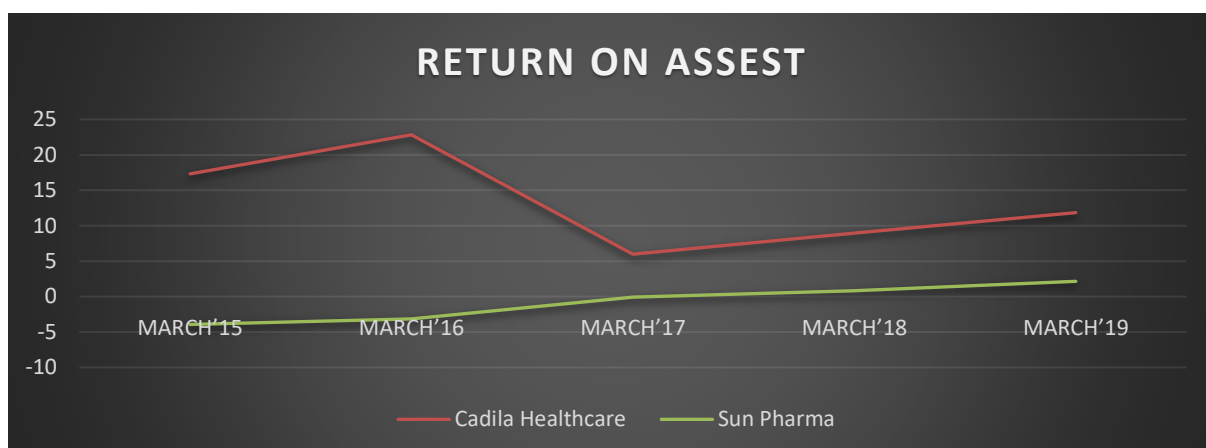


There was a decline in liquidity of the Cadila Healthcare in year 2017-18 because the company was facing the inspection phase which leads to drop down in the profits of the company.

From the above graph it has been observed that Sun Pharma was highly liquid company and was fully sufficient to handle its daily requirements.

7. RETURN ON ASSETS

COMPANY/YEAR	MARCH'15	MARCH'16	MARCH'17	MARCH'18	MARCH'19
Cadila Healthcare	17.32	22.83	5.99	8.96	11.87
Sun Pharma	-3.93	-3.13	-0.06	0.83	2.16

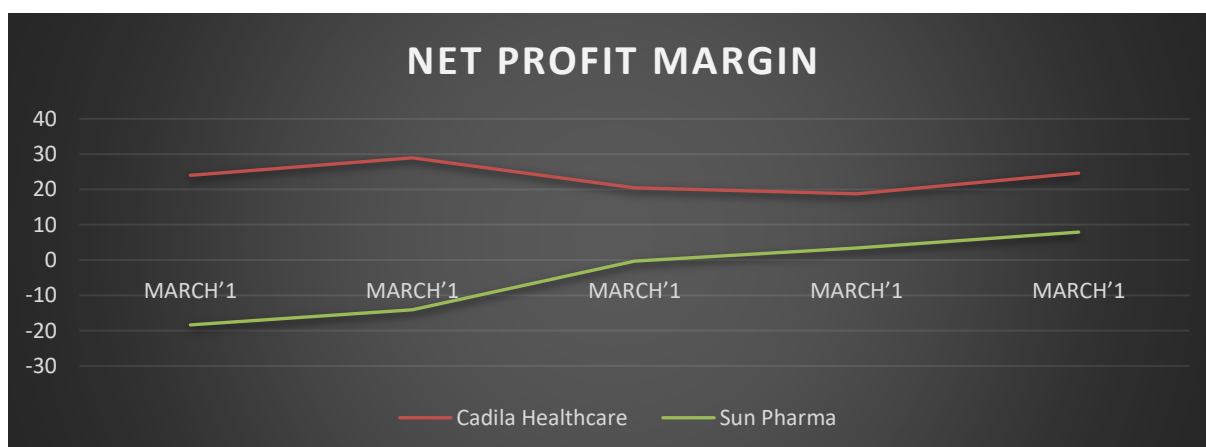


Cadila Healthcare has faced lot of issues in generating profit in the year 2016 and 2017. In these years company has faced a major downfall in profit and the assets were not efficient enough to generate revenue from it.

Sun Pharma was a rapid growing company with sufficient resources with them. The company has efficiently utilised its resources and asset to generate profit. It has increased its profitability year by year which also raised its share prices in the market.

8. NET PROFIT MARGIN

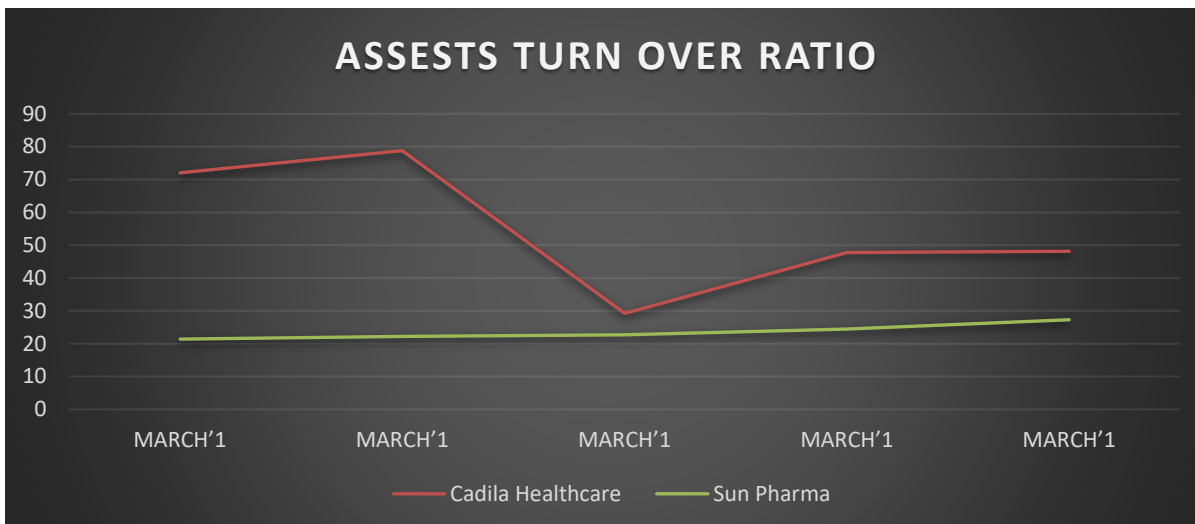
COMPANY/YEAR	MARCH'15	MARCH'16	MARCH'17	MARCH'18	MARCH'19
Cadila Healthcare	24.05	28.97	20.48	18.77	24.67
Sun Pharma	-18.38	-14.09	-0.29	3.39	7.92



Cadila healthcare was able to generate more profit till year 2016. But it was noticed that the profit of the company has reduced in the year 2017 to 2018 because of the letter of inspection issued by the US FDA. The profit margin of Sun Pharma was less from year 2015 to 2017 due to less demand for medicine which caused a lower profit margin of the company. It has been observed that the profit margin of the company has boost up in the year 2018 despite of challenging US generic pricing environment

9. ASSETS TURN OVER RATIO

COMPANY/YEAR	MARCH'15	MARCH'16	MARCH'17	MARCH'18	MARCH'19
Cadila Healthcare	72.02	78.8	29.24	47.76	48.12
Sun Pharma	21.41	22.27	22.68	24.47	27.31

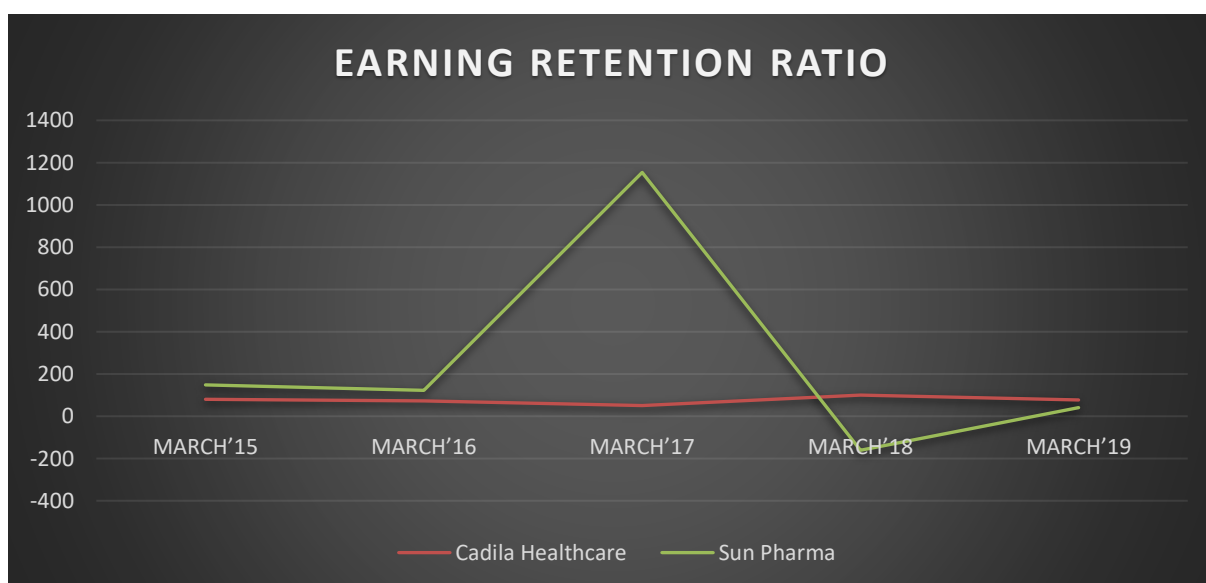


The fiscal year 2015-16 and 2016-17 has been most difficult for the Cadila Healthcare because the inspection letter has made very difficult for the company to generate sales in those years. But in 2018 company has generated ample amount sales through various sales promotion activities to nullify the allegations charged on the company.

Sun pharma has always impressed their shareholders by earning sufficient profit and is able to generate sales by the assets in hand with the company.

10. EARNING RETENTION RATIO

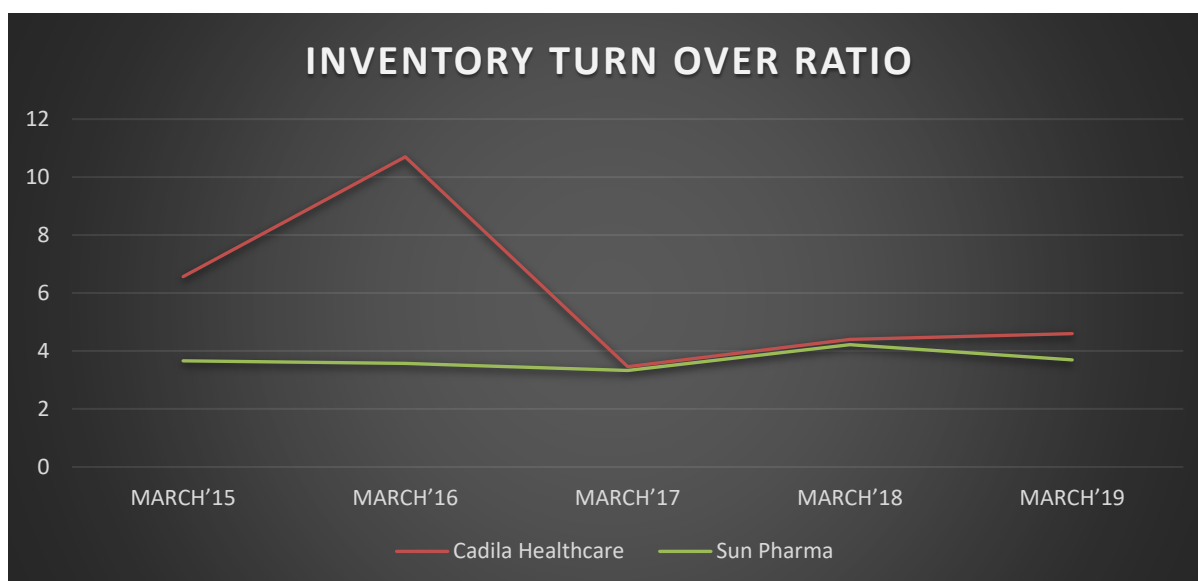
COMPANY/YEAR	MARCH'15	MARCH'16	MARCH'17	MARCH'18	MARCH'19
Cadila Healthcare	80.68	71.87	50.51	100	77.64
Sun Pharma	148.97	122.42	1,153.76	-161	41.33



The graph of Cadila Healthcare is not fluctuating as compared to Sun Pharma. In the year 2016 and 2017 the earning retention ratio of sun pharma has raised up which implies that sun pharma was ploughing off more of retained earning rather than distributing the whole in the form of dividend to the shareholders.

11. INVENTORY TURN OVER RATIO

COMPANY/YEAR	MARCH'15	MARCH'16	MARCH'17	MARCH'18	MARCH'19
Cadila Healthcare	6.57	10.7	3.46	4.4	4.6
Sun Pharma	3.66	3.57	3.33	4.22	3.69



The ability to convert its inventory into sales was low from year 2016 to 2017 in Cadila healthcare. But from the year 2017, they have managed to convert its inventory into sales by improving various promotional activities.

Sun Pharma has ample amount of resources which helped them to convert their inventory into sales which has improved their profit earning capacity

FINDINGS

1. We know that India holds the place of being the largest producer of generic drugs globally, hence holding a significantly high position in this sector.
2. Increasing consumer awareness, more health insurances, more investments in R&D only aims towards a better prospect for this industry of hydrochloroquine.
3. Cadila was doing much better on its EPS, however, one warning from the FDA got both the companies on almost the same track.
4. Despite Cadila having higher numbers in the ratios and financials, we cannot help but notice the greater and consistent rise in the financials and ratios of Sun Pharma.
5. This not only portrays its efficiency but also indicates how it has managed to be successful and better in this period of time.
6. We also see that Sun Pharma is consistently almost constant or rising in terms of managing its working capital, unlike Cadila which has seen some abrupt changes.
7. Both the companies have tried to keep debt lower than its equity, hinting at the fact that pharmaceutical companies do not want timely interest obligation owing to their long cash conversion cycles and need of R&D.

CONCLUSION

On having done an in-depth financial analysis of various companies thriving in the Indian economy, we not just understood the basics of each industry, but also learnt about various factors which may not seem relevant, affect the company's financials significantly.

Due to the vast scope of the research paper, we used selective ratios based on financials from MoneyControl.com and calculated the rest of the ratios. This also helped us understand how to look through and learn from various financial websites like the latter, NDTV, etc.

To find out the reasons based on various fluctuations in the ratios, we used not only the world wide web, but also put efforts into reading reports and discussions from all of the Annual Statements of the company. This not only ensured accuracy, but also taught us on how to browse upon an Annual Statement which otherwise is a

very huge file to read and understand. Additionally, we also inculcated the habit of reading through business e-newspapers for finding various trends and happenings in the economy especially for the companies that we had selected. Using these news, we learnt to connect the dots between various articles and finally arrive at conclusions for our analysis.

While calculating the ratios manually, we came across various issues like finding specific parts of the formulas, which we may not find directly in the financial statements, and need to read all the notes. We also learnt about different methods of doing financial statement analysis which may range from basic intra-firm comparison, cross-sectional comparison, sequential analysis, to the analysis that we have done – ratio analysis and inter-firm comparison.

Since we are just students, our scope of knowledge in this vast subject of expertise has limited our project report to this analysis. We have learned a lot during this project, and hope to thrive and learn much more about financial statement analysis.

REFERENCES

- [1] Bansal, L.K. and Gupta, R.K., “Financial Ratio Analysis and Statistics”, The Management Accountant, Volume-20(12), December 1985, Pp. 673-676.
- [2] Doron Nissim & Stephen H Penman (March 1999), Columbia university-Columbia business school, Department of Accounting.
- [3] Kennedy and Muller, Analysis of Financial Statements’, 1999, pg. no 1.3.
- [4] Elizabeth Duncan and Elliott, financing performance, 2005, Pg. no 36-37.
- [5] Jonas Elmerraji, Analyze Investments Quickly with ratios, 2005, Pg. no 33-36.
- [6] Feroz, E.H., Kim, S., Raab, R.L., “Financial statement analysis: A Data Envelopment Analysis Approach” Journal of the Operational Research Society, Volume- 24, February-2003, Pp.299-319.
- [7] John J.Wild, K.R.Subramanyam & Robert F. Halsey (2006), Financial Statement Analysis, 9th Edition, Pg. no 2- 90.
- [8] Pandey I M, A Management Guide for Managing Company’s Funds and Profits’, 6th Edition, Pg. no 1.58.
- [9] Susan ward, Financial Ratio Analysis for Performance Check’, Pg. no.132.
- [10] Rachchh Minaxi A (2011), Introduction to Management Accounting, Pg. no.3-88.
- [11] www.moneycontrol.com
- [12] www.timesofindia.com
- [13] www.cadilapharma.com
- [14] www.sunpharma.com
- [15] www.economictimes.indiatimes.com
- [16] www.livemint.com
- [17] www.thehindu.com
- [18] www.indianexpress.com
- [19] www.financialexpress.com
- [20] Annual Reports of all the companies used from FY 2015 to FY 2019
- [21] Dr. Prof. Vishal Purohit & Dr. Indira Dixit, “A Study on Financial Performance Using Ratio Analysis Dainik Bhaskar, JOURNAL OF THE GUJARAT RESEARCH SOCIETY, ISSN: 0374-8588 Volume 21 Issue 2.