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Mergers and Acquisition: A Pre-Post Analysis of Selected Indian Companies

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Abstract
The main objective of the study is to analyze the financial achievement of the companies before and after merger acquisition.For the present study, the researcher has chosen the merger and acquisition of three Companies of India having turnover more than 5 billion. The data has been collected from the financial reports of selected companies and their respective websites**.** The researcher has adopted the ratio analysis for analyzing the impact of before and After the Merger & Acquisition of the company's financial performance.The outcome from the paired sample t-test is notable at 99% which shows that Hindalco Industries Limited has an increment in performance after M&A in comparison to Before M&A.The finding of this particular research reveals that there is a significant impact on the surviving Company i.e. Hindalco Industries Limited, EBIDTA Margin and Operating Profit Margin..

Keywords: *Merger and Acquisition, Share, Firms, Financial Performance*

I. INTRODUCTION

The merger is defined as when more than two companies decided to collaborate with each other for their own benefit in terms of income or business expansion. At the point when Merger occurs between two industries than there is trade of securities and just one industry endures' though Acquisition is in truth a demonstration of procuring extraordinary order by an industry with the advantages (acquisition of benefits potentially by singular amount thought or maybe by item reasonable concern) or possibly overseeing (acquisition of stocks/shares or maybe getting administration above Board) of an extra business without combining their industries really. Generally, a company acquires very good command with the target industry by obtaining majority shares of that business. Nevertheless, the great command may be worked out with an under majority shareholding, generally ranging somewhere between 12% as well as percent since the staying shareholders, scattered and sick organized, are actually not likely to challenge the command of this acquirer.

II. REVIEW OF LITERATURE

Tang and Alger (2015**)** examined about the mergers and acquisitions from 2006 to 2010 in the Philippine money related industry and its impact on firm execution utilizing both returns on asset and abnormal asset for resource received from the system of Ball and Brown (1968). The outcomes show that utilizing ROA, budgetary execution altogether diminished after the merger. And he locates no critical change in the anomalous profit for an asset in pre-merger and post-merger activity. This may demonstrate that the lessening in the ROA was brought about by the market movement and not by the merger action.

Ugwuanyi and Uche Boniface (2015)analyzed the impacts of Merger and Acquisition on the monetary exhibition of chose deposit cash banks

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in Nigeria with an accentuation on Profit After Tax, Gross Earnings and Asset Growth as money related productivity parameters. Two Nigeria Deposit Money Bank was chosen utilizing comfort and judgmental test choice strategies. They gathered information from the distributed budget summaries of the banks in particular previous Oceanic bank and Ecobank Plc (presently Ecobank Plc) and previous Intercontinental Bank Plc and Access Bank (Access Bank Plc). They had used Regression statistical tools for analyzing the data. Their outcomes uncovered that Post Merger Financial Performance was fundamentally improved than the Pre-Merger time of the banks. Their investigation, therefore, prescribes that banks can combine or procure each other as this has demonstrated to turn into a plat structure for safeguarding sickly ones and could give a stage that could upgrade monetary execution.

Meena & Dhar (2014) compared of liquidity ratios and asset liability management practice in three banks i.e. Public, Private and Foreign sector in India.They also identified the interest rate sensitivity of the Balance Sheet item of the selected banks to see the gap between rate sensitive asset and rate sensitive liabilities. Researcher revealed that overall banks in India have a good short term liquidity position and all banks are financing their short term liabilities by their long term assets.

Vasavi (2015) examined that the International Banking situation has demonstrated significant changes in the previous years as far as Mergers and Acquisitions. Mergers and Acquisition is a helpful technique for the development and extension in any Industry and the Indian Banking Sector is no special case. It is useful for the endurance of the feeble banks by converging into the bigger bank. Because of the money related framework deregulation, the passage of new players and items with trendsetting innovation, globalization of the monetary markets, changing client conduct, more extensive administrations at less expensive rates, investor riches requests, and so forth., have been on the ascent. Her examination shows the effect of Mergers and Acquisitions in the Indian Banking division. In the underlying stage, subsequent to merging there may not be a critical improvement because of early-stage troubles however later they may improve

Nirmala and ArshaShaju (2016)examined the post and pre-acquisition economic performance of merged firms in the Indian manufacturing sector. They made up a sample of three companies. For analysis, they had used the Wilcox on signed-rank test and ratio analysis. Result found that mergers and acquisitions had no major impact on the economic performance of the companies.

Rathinam and Sridharan(2016) evaluated the impact of M&A on the financial efficiency of selected banks in India through ratio analysis. They found that M&A in India has some impact on the financial performance of banks and the acquiring firms were able to generate value.

Gupta and Banerjee(2017) examined the outcome of the merger upon profitability plus liquidity position. It analyzes 3 years of pre and post-merger economic performance of the businesses. For this specific, secondary data of 3 years, prior and post-merger collected from annual audited financial statements from the period 2000-2015. Various financial ratios put on to look at the earnings and liquidity position. They did the evaluation with the aid of the statistical tool paired t-test utilized on accounting ratios by SPSS to evaluate the significance of the research. The finding of their particular research reveals that there are zero improvements in the financial performance of acquirer companies after the merger.

Satyanarayana D. et al. (2017)studied the effect of brand new entrant R Jio on competitive strategies of opponents within the market. The study discovered that Reliance Jio's free introducing offer creates plenty of unforeseen changes and radicals in consumer's behaviors and also

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competitor's strategies. The effect of the new entrant affects equilibrium within the mobile market and also creates rivals insecure that they start acquisitions and mergers in Indian mobile community providers. Since the exit obstacles are present in the market, they can't get out of the market. It is going to be way too hard for small players in the market to create a major market share. The sole option to be stronger to participate with Jio is making strategic alliances with many other competitors. In order to withstand in the industry, the Idea and Airtel acquired Vodafone and Telenor respectively.

Pandya(2018) measured the impact of M&A in India from 1991 to 2010 through time series data. Researcher revealed that there is huge growth in performance of financial sector and industry after M&A which is more than 80% during the time period. Researcher also found that M&A was at peak in 2006

Verma and Rathore (2018)made a comparative assessment of the status of banks. Research concluded that Indian Research has not been able to keep up with the International Standard in field of banks and M&A.

Poddar (2019) estimated the impact of pre and post financial performance of the acquired companies. Researcher compare the pre and post merger performance of the acquirer company in selected M&A deals in India in two period i.e.2007-2008 by using financial ratios and paired t test at 5% significance. Researcher concluded that there are few factors which leading to constrain the performance of Indian acquirer companies like global financial crisis etc.

Rajan and Babu (2019)focused on profitability and liquidity position of banks in context to pre-post merger in India. Financial measure has calculated by using CAMEL approach and Data envelopment Analysis. Researcher found that HDFC Bank ltd, Federal Bank and Bank of Baroda were efficient in terms of financial performance as compared to other banks.

III. OBJECTIVES OF THE STUDY

- To study the concept of Merger and Acquisition.
- To study the impact of M&A on the companies Financial Performance.

IV. HYPOTHESIS OF THE STUDY

- H_1: There is no significant impact of Merger & Acquisitions on EBIDTA of the selected companies.
- H_2: There is no significant impact of Merger & Acquisitions on Net Profit Margin of the selected companies.
- H3: There is no significant impact of Merger & Acquisitions on Operating Profit of the selected companies.

V. METHODOLOGY

This segment portrays the overall methodology embraced for this examination:

- **Research Technique:** The adopted exploratory research design is used for this research because it gives more accuracy in results between the variables.
- **Sample Size:** For the present study, the researcher has chosen the merger and acquisition of 3 Companies of India having turnover more than 5 billion**.**The selected company are the following:
    1. Sun Pharmaceuticals- Ranbaxy (2014)
    2. Tata Steel Limited-Corous(2007)
    3. Hindalco Industries Limited-Novelis (2007)
- **Data Collection:** The data has been collected from the financial reports of selected companies and their respective websites.
- **Period of the Study:** The data were collected from the period of three Years before M&A and three Years after M&A.
- **Tools of the Study:** The researcher has adopted the Percentage analysis for analyzing the impact of before and After

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the Merger & Acquisition of the company's financial performance. In which the researcher analyzed the following percentage:
- EBIDTA Margin
- Net Profit Margin
- Operating Profit Margin

- **Statistical Analysis:** For testing the hypothesis, we employed the following Tests:
  - Mean
  - Standard Deviation
  - Absolute value of Co-efficient of Variation
  - Paired t-test

VI. RESULTS & DISCUSSION

EBIDTA Margin

EBIDTA margin represents the profitability ratio of the company that shows the earning of the company before interest, depreciation, amortization, and taxes as a % of the companies revenue

$$\textbf{EBIDTA Margin} = \frac{\textbf{EBIDTA}}{\textbf{Revenue}} \textbf{x 100}$$

H1: Before and after the Merger & Acquisition period does not impact the EBIDTA Percentage of the selected companies.

Table 1: EBIDTA Margin before Merger & Acquisition (In Percentage)

Period	**Sun Pharmaceuticals**	**Tata Steel Ltd.**	**Hindalco Industries Ltd.**
Before Merger	52.34	41.85	27.52
	30.8	40.55	26.63
	6.88	41.68	24.41
Mean	30	41.36	26.18
SD	18.56	0.57	1.3
│COV│	75.78	1.7	6.1

It is cleared from table 1 that the mean value of EBIDTA margin before the merger is followed by 30 for Sun Pharmaceuticals followed by 41.36 for Tata Steel Limited, 26.18 for Hindalco Industries Limited. The value of the coefficient of variation of EBIDTA margin before the merger is followed by 75.78% in Sun Pharmaceuticals followed by 1.7% in Tata Steel limited, 6.1% in Hindalco Industries Limited. The table shows that the EBIDTA margin in Sun Pharmaceuticalsis less consistent and on the other hand it is more consistent in Tata Steel Limited

Table 2: EBIDTA Margin after Merger & Acquisition (In Percentage)

Period	**Sun Pharmaceuticals**	**Tata Steel Ltd.**	**Hindalco Industries Ltd.**
After Merger	-4.32	45.69	23.09
	-0.04	40.16	19.83
	8.18	40.68	19.62
Mean	1.27	42.17	20.84
SD	5.18	2.49	1.58
│COV│	498.89	7.24	9.33

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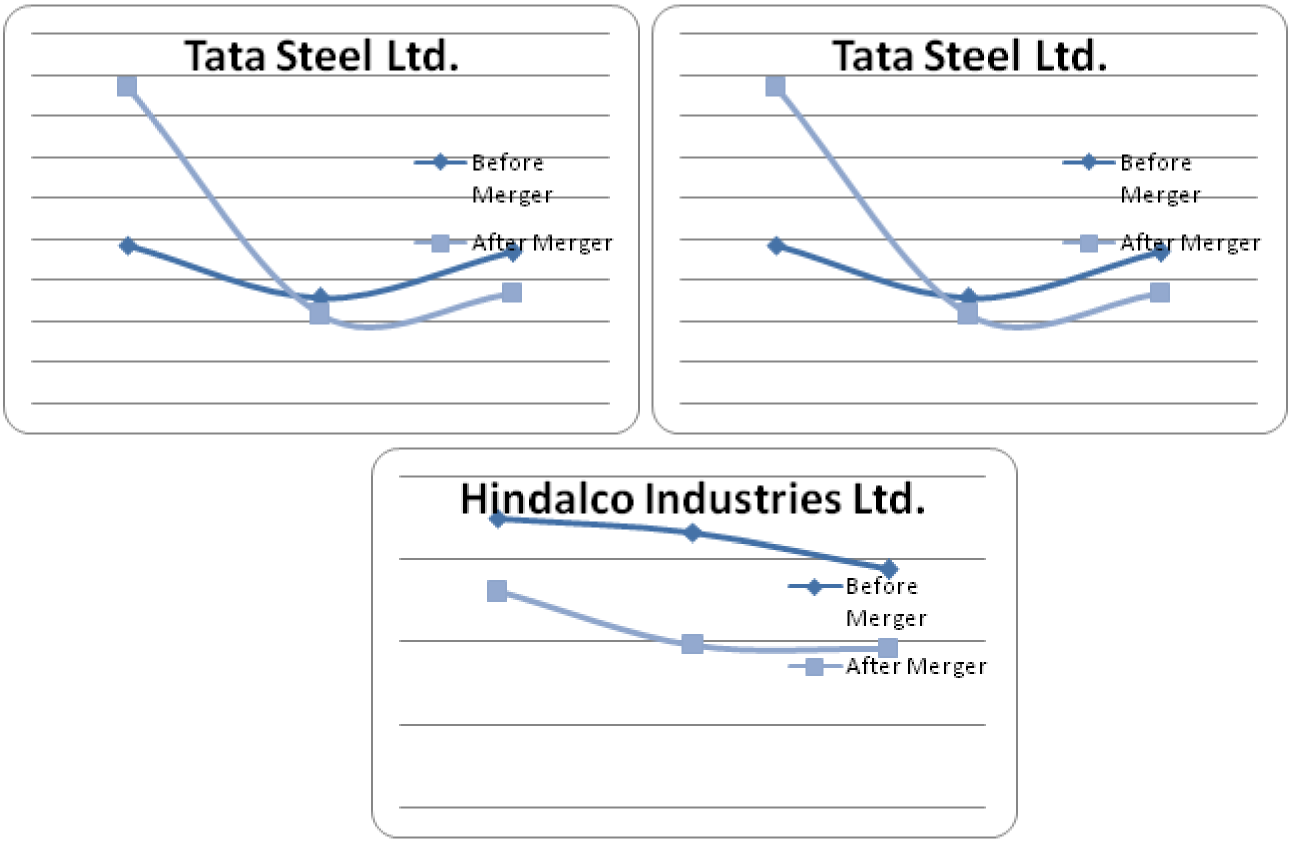
It is cleared from table 2 that the mean value of EBIDTA margin after the merger is followed by 1.27for Sun Pharmaceuticalsfollowed by 42.17 for Tata Steel Limited, 20.84for Hindalco Industries Limited. The value of the coefficient of variation of EBIDTA margin after the merger is followed by 498.89% in Sun Pharmaceuticalsfollowed by 7.24% in Tata Steel limited, 9.33% in Hindalco Industries Limited. The table shows that the EBIDTA margin inSun Pharmaceuticalsis less consistent and on the other hand it is more consistent in Tata Steel Limited.

Table 3: Paired T-Test Results

	Sun Pharmaceuticals	**Tata Steel Ltd.**	**Hindalco Industries Ltd.**
Paired ‘t’ Test	1.714	−0.537	7.242
‘p’ Value	0.2287(NS)	0.6452(NS)	0.0185**

It is cleared from table 3 that the results of the paired’t’ test show that the hypothesis of the selected all companies except Hindalco Industries Limited are accepted. On the other hand, the hypothesis of the company Hindalco Industries Limited is rejected. Hence, it is identified that there is no significant difference between before and after the merger period of the selected all companies except Hindalco Industries Limited because there is a significant difference between before and after the merger period of the company Hindalco Industries Limited in itsEBIDTA margin

Figure 1: Comparison of EBIDTA Percentage of selected Companies between Before and After M&A



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Net Profit Margin

The net profit margin is used to measure of operating efficiency of any business. It is used for the return on shareholder's investments. The higher the ratio better is the operational efficiency of the business concern.

$$\textbf{Net Profit Margin} = \frac{\textbf{Net Income}}{\textbf{Revenue}} \textbf{x 100}$$

H2: Before and After the Merger & Acquisition period does not impact the Net Profit Percentage of the selected companies.

Table 4: Net Profit Margin In Before Merger & Acquisition (In Percentage)

Period	**Sun Pharmaceuticals**	**Tata Steel Ltd.**	**Hindalco Industries Ltd.**
Before Merger	42.27	23.97	13.51
	21.23	23.17	13.95
	-99.99	24.19	14.57
Mean	-12.16	23.77	14.01
SD	62.69	0.43	0.43
│COV│	631.27	2.25	3.8

It is cleared from table 4 that the mean value of net profit margin before the merger period endowed by -12.16in Sun Pharmaceuticalsfollowed by 23.77in Tata Steel Limited, 14.01in Hindalco Industries Limited. The coefficient of variation of net profit margin before the merger period is endowed by -631.27%in Sun Pharmaceuticalsfollowed by 2.25% in Tata Steel Limited, and 3.8% in Hindalco Industries Limited. The table shows that the net profit margin in Sun Pharmaceuticals is less consistent and on the other hand it is more consistent in Tata Steel.

Table 5: Net Profit MarginIn After Merger & Acquisition (In Percentage)

Period	**Sun Pharmaceuticals**	**Tata Steel Ltd.**	**Hindalco Industries Ltd.**
After Merger	-18.38	23.84	14.00
	-14.09	21.36	14.96
	-0.29	20.23	12.28
Mean	-10.92	21.81	13.74
SD	7.71	1.5	1.1
│COV│	86.56	8.46	9.87

It is cleared from table 5 that the mean value of net profit margin in after merger period endowed by -10.92in Sun Pharmaceuticalsfollowed by 21.81in Tata Steel Limited, 13.74in Hindalco Industries Limited.The coefficient of variation of net profit margin is endowed by-86.56% in Sun Pharmaceuticalsfollowed by 8.46% in Tata Steel Limited, 9.87% in Hindalco Industries Limited. The table shows that the net profit margin in Tata Steel is more consistent and on the other hand it is less consistent in Sun Pharmaceuticals.

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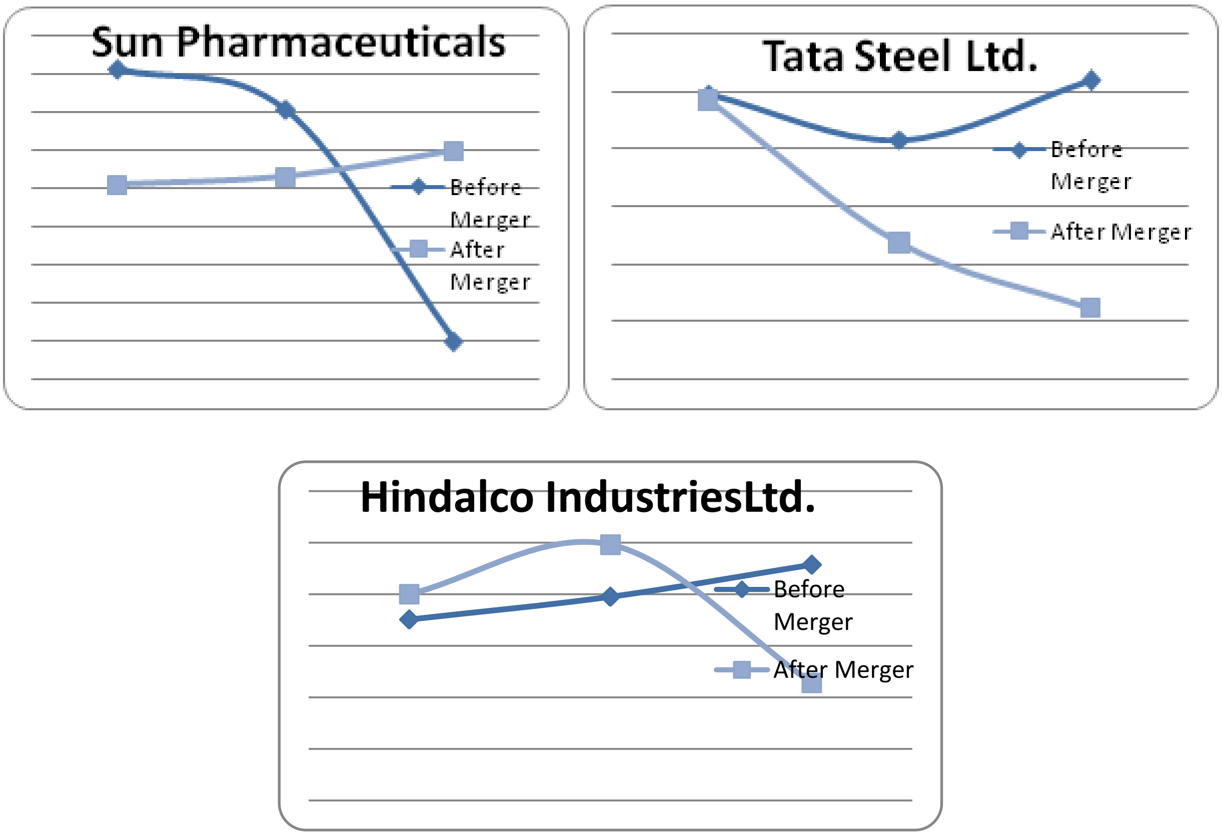
Table 6: Paired T-Test Results

	Sun Pharmaceuticals	**Tata Steel Ltd.**	**Hindalco Industries Ltd.**
Paired 't' Test	-0.025	1.774	0.257
'p' Value	0.982(NS)	0.218(NS)	0.821(NS)

It is cleared from table 6 that the result of the paired "t" test shows that the null hypothesis of the selected all companies are accepted. Hence, it is evaluated that there is no significant difference between before and after the merger period of the selected companies.

Figure 2: Comparison of Net Profit Ratio of selected Companies between Before and After M&A



Operating Profit Margin

It is the ratio of profit made from operating sources to the sales, usually shown as a percentage. It shows the operational efficiency of the firm and is a measure of the management's efficiency in running the outline operation of the firm.

$$\text{Operating Profit Margin} = \frac{\text{Operating Income}}{\text{Revenue}} \text{x } 100$$

H3: Before and After the Merger & Acquisition period does not impact the Operating Profit Ratio of the selected companies.

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Table 7: Operating Profit Margin Percentage Before Merger & Acquisition (In Percentage)

Period	Sun Pharmaceuticals	Tata Steel Ltd.	Hindalco Industries Ltd.
Before Merger	50.45	37.58	22.41
	27.27	35.43	21.77
	3.28	36.99	19.86
Mean	27	36.66	21.34
SD	19.25	0.9	1.32
│COV│	87.35	3.02	6.21

It is cleared from table 7 that the mean value of operating profit margin before the merger period endowed by 27 in Sun Pharmaceuticals followed by 36.66 in Tata Steel Limited, 21.34 in Hindalco Industries Limited. The coefficient of variation of operating profit ratio endowed by 87.35% in Sun Pharmaceuticals followed by 3.02% in Tata Steel Limited, 6.21% in Hindalco Industries Limited. The table shows that the operating profit margin in Sun Pharmaceuticals is less consistent and on the other hand it is more consistent in Tata Steel Limited.

Table 8: Operating Profit Margin In After Merger & Acquisition (In Percentage)

Period	Sun Pharmaceuticals	Tata Steel Ltd.	Hindalco Industries Ltd.
After Merger	-12.56	41.44	20.07
	-6.13	36.16	16.75
	2.69	36.34	16.07
Mean	-5.33	37.98	17.63
SD	6.25	2.44	1.74
│COV│	143.35	7.89	12.13

It is cleared from table 8 that the mean value of operating profit margin is after the merger period endowed by -5.33 in Sun Pharmaceuticals followed by 37.98 in Tata Steel Limited, 17.63 in Hindalco Industries Limited. The coefficient of variation of operating profit margin endowed by 143.35% in Sun Pharmaceuticals followed by 7.89% in Tata Steel Limited, 12.13% in Hindalco Industries Limited.The table shows that the operating profit margin is more consistent in Tata Steel Limited and it is less consistent in fickle in Sun Pharmaceuticals.

Table 9: Paired T-Test Results

	Sun Pharmaceuticals	Tata Steel Ltd.	Hindalco Industries Ltd.
Paired ‘t’ Test	1.794	0.984	4.799
‘p’ Value	0.2147(NS)	0.4287(NS)	0.0408**

It is cleared from table 9 that the result of the paired “t” test shows that the null hypothesis is accepted for selected companies Sun Pharmaceuticals and Tata Steel Limited whereas it is rejected for Hindalco Industries Limited.Hence, it is noted that there is no significant difference between before and after the merger period of the selected Sun

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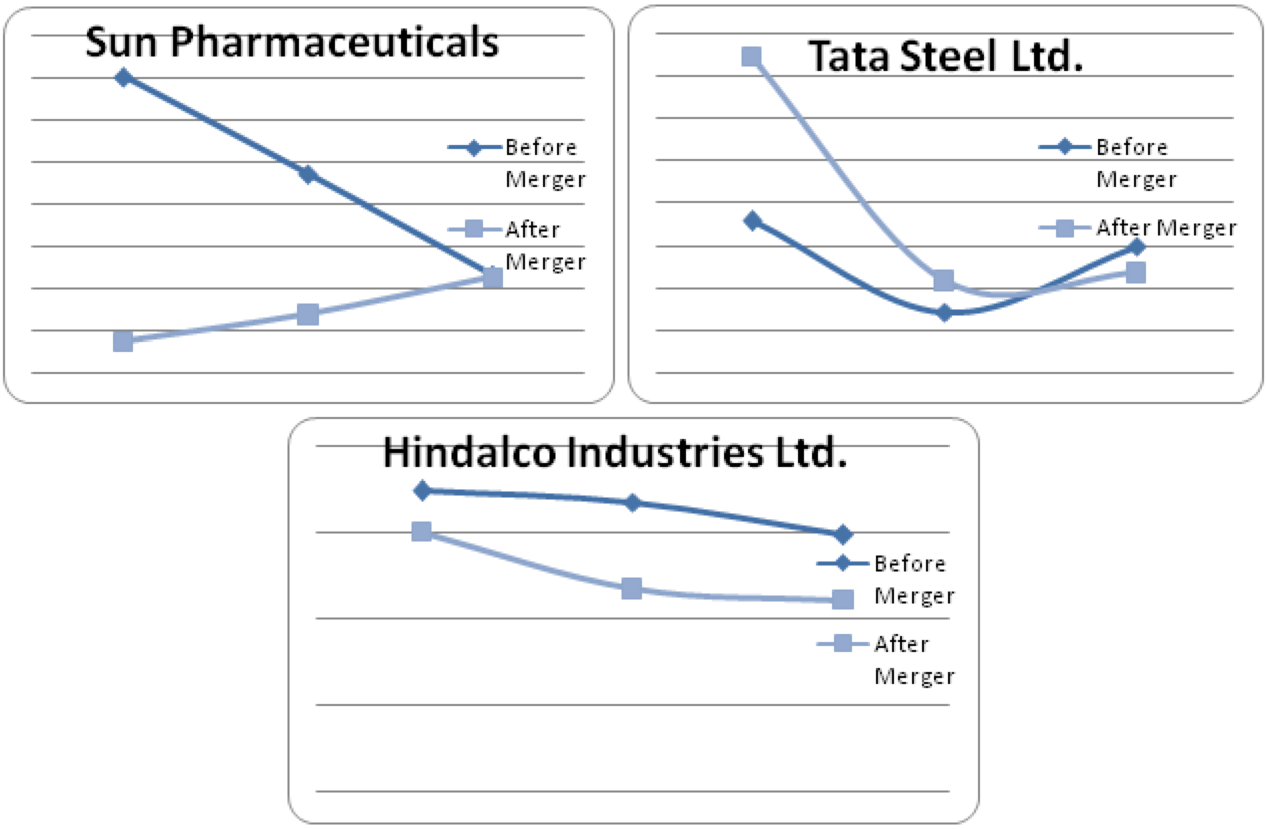
Pharmaceuticals and Tata Steel Limited companies in its operating profit margin percentage.

Figure 3: Comparison of Operating Profit Margin of selected Companies between Before and After M&A



VII. FINDINGS & CONCLUSION

From the above table representing the Pre and Post Merger EBDITA Margin, it is clearly visible that the EBDITA Margin of Sun Pharmaceuticals is less consistent as compared to Tata Steel Limited in both the scenarios i.e. Pre and Post Merger. However, Hindalco Industries Limited EBDITA Margin is neither less nor more consistent. Based on the above analysis, it can be mentioned that there is a significant impact on EBDITA Margin of Hindalco Industries Limited but the EBDITA Margin of Tata Steel Limited and Sun Pharmaceuticals has not been significantly impacted.

It has been examined that the Net Profit Margin of Sun Pharmaceuticals is less consistent as compared to Hindalco Limited and Tata Steel Limited in both Pre and Post Merger scenarios.It has been further examined that the Merger & Acquisition has no impact on Net Profit Margin of any of the selected companies i.e. Hindalco Industries Limited, Sun Pharmaceuticals, and Tata Steel Limited.

From the above research it can be observed that the Operating Profit Margin of Tata Steel Limited is more consistent as compared to Sun Pharmaceuticals whereas the consistency of Operating Profit Margin of Hindalco Industries Limited lies in between Tata Steel Limited and Sun Pharmaceuticals. Further, based on the above fact it can be summarized that the Hindalco Industries Limited has a significant impact on its Operating Profit Margin due to Merger and Acquisition. But the Operating Profit Margin of Tata Steel Limited and Sun Pharmaceuticals have no such significant impact.

In the above analysis, one more fact can be observed that the EBDITA of Sun

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Pharmaceuticals has drastically came down and the EBDITA of Hindalco Industries Limited has a slight downfall whereas, on the other hand, EBDITA of Tata Steel Limited has no such significant impact in both before and after Merger situations.

To conclude with the overall analysis of the Merger & Acquisition impact on the Companies, it can be said that there is no fixed parameters based on which it can be said that the decision of Merger and Acquisition will have a positive impact/result in all the cases, it depends upon various factors and may result can be either favorable or adverse on case to case basis.

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