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A Study on Impact of Merger and Acquisition on the Performance of Facebook

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***Abstract*: Survival and Growth are two much needed concepts for each and every sector. For creating a stand of the business in the crowd, a competitor needs to be an overachiever. To achieve this, merger and acquisition plays a vital role. Merger and Acquisition means alliance of 2 or more companies. A merger leads to formation of a new company and acquisition leads to purchase of a company by other. The most common reason for firms to enter into merger and acquisition is to merge their power and control over the markets as well as managing the financial risk by using innovative techniques. The purpose of this paper is to examine the impact of merger and acquisition on the performance of Facebook. The broad objective of this study is to measure the impact of merger and acquisition on operating &financial performance as well as growth in the value of shares of Facebook. The analysis is done on the basis of certain parameters like operating ratios, financial ratios; Earning Per Share etc. t-statistics is used to test the hypothesis whether there is a significant impact of merger on the performance of the company or not. This study shows that there is no significant impact on the operating performance of the company whereas in case of financial performance and shareholders wealth there is a significant impact. The present research will be helpful to those companies who are taking developmental decisions, investors taking investment decisions, creditors taking financing decisions etc.**

***Keywords*: Merger, Acquisition, Efficiency, Survival, Operating, Financial.**

1. Introduction

It is generally held the opinion that flowing water is free from contamination; and stagnant water is the fulcrum of contamination. This can be encapsulated in relation to corporate sector as growth is the essence of corporate life; and stagnation is death of the corporate life. To improve performance, many companies were merged with other companies. Alliance of business entities is a universal phenomenon. In the present era, there is a cut throat competition in the market and the success of the merger depends on how well the two merging companies integrate themselves in carrying out day to day operations. "MERGER" can be expanded as M-Mixing, E-Entities, R-Resource, G-Growth, E-Enrichment, R-Renovation. An acquisition means acquiring a company's more than 50% shares and assets to control the company. A merger is a result that gives the owner-ship and a control of a firm to other. Merger and acquisition is a very popular concept after 1990s, where India entered in to the Liberalization, Privatization, and Globalization (LPG) era. LPG has a great impact in the industrial sector for which market become hyper-competitive. To avoid unhealthy competition and to face multinational companies, Indian companies are going for mergers and acquisitions. In USA merger activity has been marked by five prominent waves, they are: the first turn of the twentieth century, the second in 1929, the third in the latter half of the 1980s, the fourth in the first half off the 1980s and the last one in the latter half of 1990s. The final years of twentieth century, gave a very high level of merger activity which attracted the attention of big organizations for their development at a large. In 2000, the merger between Vodafone and Mannesmann took place was worth for $180 billion is the largest deal in history. The second largest merger in history took place in 2000 when America Online (AOL) merged with Timer Warner Inc.(TWX) in a deal worth a staggering $165 billion. Mergers were also took place in pharmaceutical industry. In 2014, Novartis AG (NVS) and Glaxo Smith Kline (GSK) agreed to swap $20 billion in assets in what amounted to major restructurings for both the firms. In software industry IT mainstay IBM acquired Red Hat for around $34 billion, making it biggest business deal involving an open source company yet. Mergers were successful in past years. In April 2012, Facebook bought Instagram for 1 billon dollars. Among all the mergers in past years merging of WhatsApp with Facebook is the most popular merger in social media. On 19th February 2014 Facebook announced the acquiring of WhatsApp for $19 billion. Acquisition was the sixth biggest in technology sector in world. The main aim of the acquisition is to bring more connectivity and utility to the world by delivering core internet services efficiently and affordably. WhatsApp helps to reach users on mobile devices practically by using fresh instant messaging service. Zuckerberg thoroughly understood the principles on which both WhatsApp and Instagram works, so he bought the companies and let them operate independently to achieve the objectives. The general objective of the present study is to analyse the impact of M&A on the performance of Facebook. Specific objectives are: 1) To analyse the impact of M&A on the operating and financial performance of Facebook. 2) To measure the post-merger impact on shareholder's wealth.

2. Review of literature

Ratan Roy (2015) conducted a research on “Impact of corporate merger on financial performance and HRM policies and practices: A study on selected Indian companies.” The objectives of the study were (1) to examine the financial performance of the selected Indian companies with the help of traditional methods. (2) to measure pre-merger and post-merger performance of the companies under study in terms of modern method like Economic Value Added (EVA). (3) to analyze and understand the impact of merger on major human resource management policies and practices. After analyzing the required data he found that merger is an effective strategy to improve performance and create value. However, it needs to be pointed out that merger is not a solution for all companies whose businesses are faced with problems.

Hameed, Sardar Abdul, Akhtar Naveed (2014) conducted a research on “The impact of M&A on firm’s performance- An event study approach”. The objectives of the study were: 1. to find out the relationship between pre and post mergers & acquisitions on firm performance. 2. to find out the relationship between pre and post-merger & acquisition on share price of the selected firms. The contrast between stock market approach and accounting approach was also seen in the study.

Yan, Shu-rong, Tian, Man-wen (2014) conducted a research on “A new study on the influencing factors of the efficiency of M&A.” The objectives of the study were: 1. to distinguish between M&A transaction efficiency and M&A integration efficiency. 2. to explore different effect on M&A integration efficiencies. 3. to focus on govt. intervention on M&A integration efficiencies. The govt. intervention and agency costs were prominent factors influencing the efficiency of M&A integration of listed corporation.

ParamaBaraj, Pitabas Mohanty (2014) conducted a research on “Role of industry relatedness in performance of Indian acquires- long and short run effects.” The objective of the study was to analyze the effect of industry relatedness on the performance of the acquirer companies in India using both short run and long run performance measures. The CAARs (Cumulative Average Abnormal Returns) over all event periods were insignificant, implying that upon announcement, markets were neither optimistic nor pessimistic about their future implications i.e. no value was created in the short run.

Monika (2014) in her paper found that mergers and acquisitions shows value mixed motives and use behavioral theories to evaluate the rationalism behind decisions. The purpose of that paper was to analyze the overall financial performance and implications of recent mergers and acquisitions in Indian Banking system. Since Mergers and acquisitions have emerged as a natural process of business restructuring throughout the world and financial restructuring through mergers and acquisitions evokes a great deal of public interest and represent the most dynamic facet of corporate strategy.

NM Leepsa and CS Mishra (2013) were conducted a research on “Do mergers and acquisitions payoff immediately? Evidence from M&A in India”. The profitability of the companies improved in the acquisition year when compared to the pre-acquisition period. There is a significant improvement in ratios in post-acquisition period.

Singh and Mogla (2010) in their research paper showed the profitability of acquiring firms in the pre - and - post merger periods. The sample consists of 153 listed merged companies. Five alternative measures of profitability were used to study the impact of merging on the profitability of acquiring firms. This analysis reveals that profitability declined due to poor asset utilization. It suggests that managers should give attention to proper utilization of newly acquired assets.

Kukalis (2007) analyzed that the acquiring company outperformed the target company in pre-merger performance only in the first and second year. There are no statistically different results between pre and post-merger performance of the target company.

Akhavein, Berger, and Humphrey (1997) found changes in profitability experienced in the same set of large mergers. They found that banking organizations significantly improved their profit efficiency ranking after mergers.

Lorder and Martin (1992) found that, the acquirer company neither performs better nor worse than the control firms or industry during the first five years following the acquisition.

3. Methodology

The study has been based on descriptive sampling design as it describes the impact of merger and acquisition in the performance of company. It is conclusive in nature. 8 years final accounts of Facebook has been taken as sample i.e. from 2011 to 2018 for the study. The sample period consists of 4 years pre and 4 years post-merger. Judgmental/ Purposive sampling has been used for selecting samples. The study is based on the secondary data which has been collected from the official website of Facebook (investors. fb.com).

A. Data Analysis

For analysis of data following statistical and accounting tools have been used:

Ratio Analysis:

- Operating performance: Gross profit ratio, Net profit ratio, Operating profit ratio, Receivables ratio, Working capital turnover ratio.
- *Financial Performance:* Current Ratio, Quick Ratio, Cash Ratio, Asset turnover ratio, Debt/Equity ratio, Equity ratio, Fixed assets to net worth ratio, Return on assets ratio.
- *Shareholders wealth:* Earning per share, Price earnings ratio, Return on equity ratio, Return on investment.

Paired t-test has been used for testing hypotheses.

Table 1
Operating ratios of Facebook from 2010 to 2018

Year Ratios	2010	2011	2012	2013	Mean (Pre-merger)	2014	2015	2016	2017	2018	Mean (Post- merger)
Gross profit (%)	75.02	76.82	73.19	76.18	75.30	82.72	84	86.29	86.58	83.24	85.02
Net profit (%)	18.84	18	0.62	18.94	14.1	23.46	20.46	36.86	39.16	39.59	34.01
Operating Profit (%)	52.27	47.31	10.57	35.61	36.44	40.06	34.72	44.96	49.69	44.61	43.49
Receivables Turnover (times)	5.29	6.78	4.34	7.09	5.87	7.42	7	6.92	6.97	7.35	7.06
Working capital turnover (times)	1.06	1.00	0.49	0.65	0.8	1.04	0.91	0.87	0.90	1.28	0.99
Assets turnover ratio (times)	0.66	0.58	0.33	0.43	0.5	0.31	0.36	0.42	0.48	0.57	0.45

(Source of data: Annual report of Facebook)

Table 2
Financial ratios of Facebook from 2010 to 2018

Year Ratios	2010	2011	2012	2013	Mean (Pre-merger)	2014	2015	2016	2017	2018	Mean (Post- merger)
Current ratio (times)	5.77	5.12	10.71	11.88	8.37	9.40	11.24	11.96	12.91	7.19	10.83
Quick ratio (times)	5.77	5.12	10.71	11.88	8.37	9.40	11.24	11.96	12.91	7.19	10.83
Cash ratio (times)	4.58	4.34	9.51	10.31	7.18	7.86	9.58	10.24	11.09	5.86	9.19
Debt/ Equity ratio (times)	0.38	0.29	0.28	0.15	0.27	0.10	0.11	0.09	0.13	0.15	0.12
Equity ratio (times)	0.72	0.77	0.78	0.86	0.78	0.90	0.89	0.91	0.88	0.86	0.88
Fixed assets to net worth ratio (times)	0.26	0.30	0.20	0.18	0.23	0.10	0.12	0.14	0.18	0.29	0.18
Return on equity (%)	39.17	23.34	0.45	9.69	18.16	8.14	8.34	17.26	21.43	26.28	18.32
Return on investment (%)	23.96	18.87	0.38	9.54	13.18	8.11	8.32	17.26	21.43	26.28	18.32
Return on assets (%)	20.26	15.79	0.35	8.38	11.19	7.35	7.46	15.72	18.85	22.71	16.18

(Source of data: Annual report of Facebook)

4. Results and discussion

Operating Performance: Operating ratios are used to reveal information about how efficiently the company is using resources to generate sales and cash. A company with strong operating ratios is able to utilize a minimum resource to generate high levels of sales, as well as a significant cash inflow. In this present paper, some of the most commonly used operating ratios are examined and the results of the same are presented in table 1.

From table 1 it is understood that the mean gross profit increased from 75.30% (pre-merger) to 85.02% (post-merger) which shows that there is a positive impact on the profitability position of Facebook. It tells how good Facebook is at providing services as compared to its competitors. In 2017 the gross profit is the highest at 86.58% and it decreased to 83.24% in 2018. Average Net profit increased from 14.1% (pre-merger) to 34.01% in post-merger period suggesting that company has made more money than it spent during post-merger. There is an increasing trend in net profit ratio. Net profit is the highest in 2018 with 39.59% which shows there is a positive impact on the overall profitability of Facebook. The mean operating profit has increased from 36.44% to 43.49% in post-merger period. From 2010 to 2013 there was a decreasing trend in the operating profit ratio and after merger it increased. There is a fluctuating trend marked in receivables turnover ratio during 2010 to 2018. It is also observed that there is a change in mean receivables turnover ratio from 5.87 times (pre-merger) to 7.06 times in post-merger period which indicates that debts are collected more promptly. In 2012 the receivables turnover ratio is the lowest i.e. 4.34 times which means there was more investments in debtors than required. There is a marginal change in the mean working capital turnover ratio by 0.19 times after merger. Though it is a good sign for the company but needs extra attention of the management to improve further. Moreover, it is observed that the average assets turnover ratio decreased in post-merger period that is from 0.5 times (pre-merger) to 0.45 times (post-merger) which indicates that there is a decrease in the assets utilization efficiency of the company. In 2014 assets turnover ratio was the lowest which shows that company was not efficiently using its assets to generate sales. Assets turnover ratio shows an increasing trend after merger.

Financial Performance: Financial performance means performing financial activities. It also refers to the degree to which financial objectives have been accomplished. The financial ratios are discussed below:

From the table 2 it is observed that mean current ratio is increased from 8.37 (pre-merger) to 10.83 (post-merger) that indicates the improvement in the liquidity position of Facebook. The ideal current ratio is 2:1 which means current assets should always be double of the current liabilities. But in case of Facebook, current asset is 8 times more than current liabilities before merger and it also increases after merger which is not good for the company. The reasons might be slow moving stocks, idle cash and bank balances etc. due to insufficient investment opportunities. Mean quick ratio increases from 8.37 times to 10.83 times in post-merger period that shows good liquidity position of the company. Company is having a high quick ratio than the ideal ratio (1:1) which is always not preferable because there may be slow paying debtors which is not good for company. Average Cash ratio is increased from 7.18 times (pre-merger) to 9.19 times (post-merger). The mean ratio of Debt/Equity decreased from 0.27 times (pre-merger) to 0.12times (post-merger) which is a positive sign for the company because a high D/E ratio is often associated with high risk. Further, it is also found that mean equity ratio increased by 0.10 times in post-merger period which has a positive impact

Table 3
Shareholders' Wealth Ratios of Facebook from 2010 to 2018

Year Ratios	2010	2011	2012	2013	Mean (Pre-merger)	2014	2015	2016	2017	2018	Mean (Post-merger)
Earnings per share ($)	0.28	0.46	0.01	0.60	0.3375	1.10	1.29	3.49	5.39	7.57	4.435
Price/ Earnings ratio (%)	11.92	8.53	9.14	11.12	10.1775	12.00	11.89	20.09	20.83	10.01	15.705
Return on equity (%)	39.17	23.34	0.45	9.69	18.1625	8.14	8.34	17.26	21.43	26.28	18.3275
Return on investment (%)	23.96	18.87	0.38	9.54	13.1875	8.11	8.32	17.26	21.43	26.28	18.3225

(Source of data: Annual report of Facebook)

but on the overall ent should give attention to improve this ratio. Higher the equity ratio, better is the long-term solvency position of the company. Mean fixed assets to net worth decreased from o.23% (pre-merger) to 0.18% (post-merger) which is also good for company because the ratio 0.75 or higher is usually undesirable and it also shows that less shareholders' funds are sunk into the fixed assets. Average return on equity increased by 0.16% in the post-merger period which has a positive impact on the overall financial performance. After merger ROE shows an increasing trend i.e. 8.14% (2014) to 26.28% (2018). Average return on investment increased from 13.18% (pre-merger) to 18.32% (post-merger). It is proving that there is more investment and return after merging of two companies. Further it is also seen that there is a change in return on assets from 11.19% (pre-merger) to 16.18% (post-merger) indicating that management is efficiently using its assets to generate earnings.

Shareholders Wealth:

From table 3, it is observed that the mean value of mean earnings per share increased from $ 0.3375 to $ 4.435 in post-merger period which shows a huge increase in the earning power of the company. In 2018, highest is the EPS at $7.57 giving an impression of a positive impact of merger on the value of shareholders. Average of P/E ratio is also increased from 10.1775% to 15.705% in post-merger period shows a positive future performance and investors have higher expectations for future earnings growth and are willing to pay more for them. There is a marginal increase in the average return on equity from 18.16255 to 18.3275% in post-merger period. Further it is observed that return on investment is also increased from 13.1875% (pre-merger) to 18.3225% (post-merger Both ROE and ROI have shown a positive trend. In the year 2018, both ROE and ROI were highest at 26.28%.

Testing of hypotheses:

In order to statistically examine the impact of M&A on the performance of Facebook, paired t-statistics is being used. The results are discussed below:

Table 4
T-statistics analysis

Performance	T-statistics	P-value
Operating	1.99	0.10
Financial	2.82	0.02
Shareholder wealth	3.04	0.05

(Source of data: Annual report of Facebook)

From table 4 it can be suggested that t- statistics of operating ratios is 1.99 having corresponding P- value of 0.10. It means at 5% level of significance the null hypothesis is accepted that means there is no significant impact of merger on the operating performance of Facebook. T- Statistics of financial ratios is 2.82 having corresponding P-value of 0.02. It means at 5% level of significance the null hypothesis is rejected that means there is significant impact of merger on financial performance of Facebook. At last t-statistics of shareholders wealth ratios is 3.04 having corresponding P- value of 0.05. It means at 5% level of significance the alternative hypothesis is accepted meaning that there is a positive impact of merger on shareholders wealth of the company.

5. Conclusion

This paper aimed at showing the significant impact of merger on the financial and operating performance of Facebook. From the present study, it is observed that there is no remarkable change in the operating performance of the company. But certainly merger has a great impact on the growth of financial as well as shareholders wealth of the company. The present piece of work is concerned with only one company i.e. Facebook to analyze the impact of merger on its overall performance. The time period under consideration is only for 8 years i.e. from 2010 t0 2018. Thus, there is a scope for further research to analyze the impact of merger by considering other companies for different time slot.

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