EFFECTS OF BUSINESS COMBINATION ON FINANCIAL PERFORMANCE: EVIDENCE FROM PAKISTAN'S BANKING SECTOR

Rehana Kouser, Ph.D (Corresponding Author)
Department of Commerce
Bahauddin Zakariya University, Multan-Pakistan
Tel: +92-333-6102638
E-mail: rehanakousar@bzu.edu.pk

Irum Saba
Ph.D. Scholar
INCEIF, Malaysia
Tel: +60-12-3338548
E-mail: irumsaba@gmail.com

ABSTRACT

This contemporary study addresses the mergers and acquisitions (M&A) and provides insight to the impacts of M&A. It explores the effects of merger on profitability of the bank by using six different financial ratios. We have selected 10 commercial banks that faced M&A during the period from 1999 to 2010. The lists of banks were selected from the Karachi Stock Exchange (KSE). Quantitative data analysis techniques are used for inference. Data were collected from the annual reports of the sample banks for the period of six years (three years before the combination and three after). Analysis was done by using paired t-test. Study concluded that our all alternate hypothesis are rejected because. The results recommend that operating financial performance of all commercial bank's M&A included in the sample from banking industry had declined later. The results shows that there is a decline in all 6 ratios: profitability ratios, return on net worth ratios, invested capital, and debt to equity ratios. We can argue that increased performance after M&A is not necessary and it varies with contextual factors.

1.   INTRODUCTION

Predominate early conventional banking had its genesis in Italy. The vocation grew out of the trade boom of the ostensible commercial revolution of the High Middle Ages (1000–1350).

By the late thirteenth and fourteenth centuries there were three types of banking institutes:
- International Merchant Banks
- Local Deposit Banks
- Pawn Broking Establishments

Prior to the Indo-Pak subcontinent's partition in 1947, banking in Pakistan was subjugated by branches of British banks. The State Bank of Pakistan, Pakistan's central bank, was established in 1948. It implicated the supervisory, pecuniary and other policies of the State Bank of India. During 60s to 70s, a sizeable quantity of specialized Developmental Financial Institutions (DFIs) such as Industrial Development Bank of Pakistan (IDBP) and the Agricultural Development Bank (ADB) emerged. In 1974, all domestic commercial banks were nationalized by the government by Z.A. Bhutto. The Pakistan Banking Council (PBC) was formulated, which took the responsibility of banking sector with some supervisory duties and powers. But later on it was dissolved and afterwards   SBP was the only authority who was supposed to supervise and regulate all the banks and financial institutions in the state. Scheduled commercial banks in Pakistan which include nationalized, foreign and private banks are operating in accordance with the provision of the Banking Companies Ordinance, 1962. A closer glance at commercial banks operating in Pakistan reveals various emerging inclinations. The Nationalized Commercial Banks (NCBs) are going through wide-ranging restructuring programs. Private Banks are consolidating their situation by escalating their paid-up-capital and intensifying divisional and sub-divisional network structures.

In the story, mergers and acquisitions have appeared in five stages. In the beginning the first movement of mergers occurred from 1897 to 1904. And in this era, the companies merger took place who want to enjoy a

monopoly on their production lines as railways, electricity, etc. this wave have taken place in the form of horizontal mergers and occurred in the heavy manufacturing industries. Most of the mergers that were visualized in this phase become failed because they could not achieve the desired performance. The next phase of mergers occurred in 1916 to 1929 and its major emphasis was to merge business sectors for oligopoly not monopoly. Technological development as the development of railways and transport vehicles under the condition of mandatory infrastructure for such a merger or acquisition takes place. The second wave of mergers taken place was main horizontal or conglomerate in nature. Those industries that have gone on a merger at this stage were the primary producers of metals, foodstuffs, petroleum products, transport equipment and chemicals. Investment banks have played a crucial role in facilitating mergers and acquisitions. The second wave of mergers resulted in the collapse of the stock market in 1929 and the Great depression. Tax benefits, which were granted, inspired the merger in 1940. On the other hand the type of mergers took place during (1965-69) was mostly conglomerate. Mergers were financed from equity, investment banks are no longer played an important role. The third wave of mergers is over for the separation of conglomerates in 1968. And this happened due to the underprivileged progress of conglomerates.The 4th wave of mergers that began in 1981 and ended in 1989was characterized by the acquisition target, the wren is much larger compared with the third wave of mergers.The merger took place between the oil and gas industry, pharmaceutical industry, banking and airline industries. The 4th wave of mergers over anti absorption laws.The fifth wave of mergers (1992-2000) was inspired globalization of the stock market boom and a wave of mergers occurred deregulation. This merger wave occurred mainly in banking and telecom sectors. They were mostly funded by capital rather than debt finance.

Major drivers for the mergers are to achieve firms long term objectives instead of short term. This wave of mergers over stock market bubble burst. Mergers and acquisitions in the banking sector has increased in most countries of the world, and the number of large national and international banks around the world involved in mergers and acquisitions and the main purpose is to achieve economies of scale known.Through mergers and acquisitions, banks can achieve a significant growth of its operations and minimize costs on a large scale. Competition is reduced because the merger eliminates competition in the banking sector.Banking mergers and acquisitions are horizontal mergers, because the parties are involved in dealing with similar business, but not always, sometimes, when the non-bank financial institutions for similar services, so that they can be combined with other banks. In Outlook, mergers and acquisitions in the banking sector shows that the size and growth of all sizes can easily be achieved through mergers and acquisitions.In many countries, international banks and multinational companies expand their business through mergers and acquisitions. In some cases, banks also suffer financially acquisitions or mergers in the banking sector and as a result of this dominance and place resizing.One of most common argument is that firms can avail "synergies" benefits after merging, because the two firms work better and efficiently as if they will work separately, and they can get economy of scale, eliminating the replica department will result in reducing cost, after combining (Ravenscraft and Scherer, 1987). Main objectives of study are as follows:
- To scrutinize the financial performance of bidder firms before and after acquiring target firms.
- To analyze the locally merged and acquired bank's impact on monetary performance of bidder firms
- To verify the efficiency improvements due to which banks merged or acquired by other banks
- Effects of mergers and acquisitions seen so far.

Core objective of this study is to analyze data from commercial banks and financial data from annual reports. Financial analysis is used to connect the performance of banks before and after the merger, and assess their impact on the performance of banks. This study focuses on commercial banks in Pakistan, merged or were acquired during the period 1999-2001, and also listed on the KSE.

2.   LITERATURE REVIEW
Several studies discussed, tested and proposed empirical validations on mergers and acquisitions (M&A) in last many decades. These researches have tested the economic impact of M&A through their pre and post-performance analysis, on industry, shareholders and company their selves. Moreover, they also proposed different methods for analyzing and attaining the success from mergers. And these proposals have positive impact on short-term and long-term both.

Rhoades (1993) studied the impact of mergers in banking industry on efficiency and profitability considering both the domestic and cross border mergers. It discussed the cost and profit efficiency analysis of 33 bank-to-bank mergers which shows that the most of the domestic mergers improves the cost efficiency and little improvement of profit efficiency whereas little improvement in the profit efficiency and no improvement in the cost of efficiency in the cross border mergers.

Sufian (2004) focused on the efficiency effects of M&A of banks in Malaysia. For this purpose Malaysian commercial banks were taken to analyze the technical efficiencies during the merger year, and study pre and post-merger period. Their results proved an overall increase in efficiency in the sample period which is around 95.9%. They also concludes that merger program was successful and the small size Malaysian banks. Although the financial sector especially banks took advantage and got benefits from mergers but some of the large banks faced certain inefficiencies of large scale from this.

Kumar & Bansal, (2008) explored the impact of M&A on corporate performance in India. They investigate that whether all the claims which are made about the mergers are achieved in India or not. This study used financial data, tables and different ratios to make analysis of correlation etc. and found that in most of the cases the company who acquire other through M&A got so many benefits and generate synergy in long run like increase in cash flow, larger business, competitive advantage, diversification and reduction in cost etc.

Mantravadi & Reddy (2008) studied pre and post-merger performance in India and target the acquiring firms from diverse sectors and different industries but their major emphasis was on measurement of operating performance of the firms through financial ratios. They select the sample of all the mergers between public limited ad trading firms during 1991-2003. the findings of this study did not show much impact in the post-merger operating performance of the firms in different industries in India.

Badreldin & Kalhoefer, (2009) research is based on Egyptian banks which have faced Merger or acquisition during the era of 2002-2007. They calculated companies Return on Equity (RoE) in order to the level of progress and success of banking reforms in strengthening and consolidating this sector. Their analysis suggested an increase in the performance when companies are compared with the pre-merger performance. It is concluded in the study that M&A in the Egyptian banking sector's profitability showed a significant improvement and a small positive impact on the credit risk position. But these observations are not similar to the current process.

Sufian & Habibullah (2010) observes Malysian banking sector on the basis of their technical efficiency after merger and acquisition. Study found a higher mean technical efficiency level when they compare it with the pre-merger period.   Mishra & Chandra, (2010) examined Indian pharmaceutical firms' performance with respect to M&A. They were of the view that M&A have no significant impact on at firm's probability in the long run and this is due to the resultant X-inefficiency and entry of new firms into the market.

Obaid-ullah, Sabeeh-ullah & Usman, (2010) investigated the effects of mergers on the financial performance of Atlas Investment and Al-Faysal Investment Bank Ltd from Pakistan. Study employed three financial measures; profitability and earning, capital adequacy and solvency. It found that for Faysal bank limited average improvement is recorded in the post-merger period. It is concluded that in post-merger period of sample both the banks improved their financial performance. Authors commented that M&A is a good strategy to increase the performance of the bank. Merger increase the financial performance due to improved   attention to business, improved management, better credit assessment, and easy access to the new and expensive technology.

Kemal (2011) discussed post-merger profitability for Royal Bank of Scotland. Researcher used accounting ratios to analyze the financial performance of Royal Bank of Scotland (RBS) after merger. Study analyzed financial statements for four years (2006-2009) by using 20 vital ratios. Results shown that the financial performance of RBS in the areas of profitability, liquidity, assets management, leverage, and cash flows have been quite satisfactory before the merger deal. It means that merger fails to improve the financial performance of the bank.

3.   HYPOTHESES
Based on the literature, questions, and the response variables, the following hypotheses are:
- Mergers in banking sector in the post-merger & acquisition period have improved the Gross Profit Margin of acquiring firms.
- Mergers in banking sector in the post-merger &acquisition period have improved the Operating Profit Margin of acquiring firms.
- Mergers in banking sector in the post-merger &acquisition period have improved the Net Profit Margin of acquiring firms.
- Mergers in banking sector in the post-merger &acquisition period have improved the Return on Capital Employed of acquiring firms.
- Mergers in banking sector in the post-merger &acquisition period have improved the Return on Net Worth of acquiring firms.

- Mergers in banking sector in the post-merger &acquisition period have improved the Debt Equity Ratio of acquiring firms.
-

4.   RESEARCH METHODOLOGY

Study is based on the quantitative research design. Business combinations' effects are investigated on firm's performance measures. This section of thesis report presents the information about the variables of the study, sample of Study, hypotheses formulated, quantitative methods used and analysis tools.

4.1.   Variables of Study

As research study is based on the comparative analysis, so that's why it mainly focuses on independent variables. Dependent variable here is the acquisition of firm, and independent variables are six performance measures:

- Gross Profit Margin
- Operating Profit Margin
- Net Profit Margin
- Return on Capital Employed
- Return on Net Worth
- Debt Equity Ratio
-

These variables are analyzed to measure the financial performance of companies, whether there was a momentous improvement of the monetary condition of the company after acquisition.

4.1.1.   Gross Profit Margin

The estimated gross margin is not exactly your pricing strategy, but there are good signs for a year. Without an adequate gross margin of the company is willing to pay for operating expenses and build for the future. Corazon Tequila Co. has gross margins of 65%, so their margin is higher than 100% of the cost. Overall, companies need a stable gross margin. GPM should not vary significantly from period to period, unless the industry will affect the transition, the cost of goods sold or the price. It is calculated as follows:

4.1.2.   Operating Profit Margin

Operating margin ratio indicates how much profit of organization remains, after paying the variable costs of production such as wages, materials, etc. It's a percentage of sales, and shows the effectiveness of cost control and business expenses related to the company. When asked on the standard achieved by the action and does not constitute or occasional transactions. The terms used to describe the relationship between operating profit margin, operating margin, operating margin, operating margin, operating margin or return on sales (ROS) includes. The operating profit margin ratio formula is calculated simply using:

4.1.3.   Net Profit Margin

The profit margin indicates the number of trading companies for every $ 1 that generates income or sales. Profit margins vary by industry, but also all other factors being equal, high-margin compared to the best players. In some cases, the price is low margin. Some companies, especially retailers, are known for their low cost and high-volume approach. In other cases, the margins of low prices reduce profits, as the computer industry in 2000.

4.1.4.   Return on Capital Employed

Indicator of the profitability of companies realize that in the capital, is like dividing earnings before interest and taxes on the difference between assets and liabilities. The ratio represents the efficiency as a result of capital used to generate revenue. ROIC is the ratio between profits and capital. ROIC shows the rate of return on capital invested in the economy and can be used to improve the profitability and efficiency of business processes to display. In simplified its formula to calculate is following:

4.1.5.   Return on Net Worth

ROE profitability indicator shows how much money companies have invested money from shareholders and get a return on equity is known (RONW). It is calculated as follows:

The ROE is useful for comparing the profitability of other companies. Investors want to see a return on stocks, so they prefer this approach, subtracting the dividends should be deducted from net income funds represented parties may change in the capital, after: profitability common equity (ROCE) = Net profit - dividends of preference shares / common stock.

4.1.6.   Debt to Equity Ratio

It is a measure of a company's financial leverage. We calculate this ratio by dividing the long term debt to stock holder equity. Normally we get this data from the fiscal year and calculate it. Its helps us to take so many decisions e.g. investment etc. from investment point of view   those companies who have a higher debt equity ratio, are considered risky investment particularly in those times when interest rate is high because companies has to pay the heavy interest from their debts. And according to the company, this may not be benefited that it

has a liability of long-term loans with more interest. If companies have high debt and capital, it simply means that they are very used to finance the debt (i.e., trade credits) for their activities, which means that many companies, the cost of repaying these loans.

4.2.   Sample of Study

According to the research questions addressed, sampling is purposive. Business combinations are selected only in the financial sector of Pakistan's economy. Combinations occurred on Karachi Stock Exchange (KSE) specific to the Banking sector are taken as the units of study. There are 10 acquisitions selected as sample in this research study. These units are tabulated in the following table along with the year of acquisition.

4.3.   Data Collection

Research is based on the secondary data. This data is collected from secondary sources mainly, annual reports of the companies, website of KSE, website of SBP, and "Financial Statements Analysis of Financial Sector" issued by the SBP.

4.4.   Statistical Methods

To draw inferences about the effects of business combinations on the firms' financial health we used to compare the selected financial ratios of firms. At first descriptive statistics is computed for each variable for before combination period and after combination period. Average pre-merger, the combination of financial indicators ratios6, three years before and after three years was calculated for each year of connection degree (or the year of approval, the moment in time of completion of the merger are not available.). The combination was years of study called year 0. For many years prior to the merger, the share of operating costs considered acquisitions. After the merger, the numbers of the new company will be accepted. After the performance of fusion compared to performance before the merger, and research on significant differences test was conducted combined t. The analysis to determine whether there is a significant increase of selective indicators for companies. T-test is used to calculate for assuming equal variance and unequal as well. Microsoft Excel and Minitab is used to complete the statistical analysis.

According to the methodology explained earlier in the previous section of thesis report data is analyzed on the basis of each hypothesis. Analysis provides empirical findings with respect to each variable at three stages:
- Descriptive statistics for before and after combination
- Results for t-test (assuming equal variance) using data of before and after three years
- Results for t-test (assuming un-equal variance) using data of before and after three years

5.   Empirical Findings and Conclusion

For Operating Profit Margin, we find the descriptive measures using before and after combination data, which shows no significant changes in figures.

Use of t-test elaborates that we have sufficient evidence to reject our all alternate hypotheses. Hypothesis 1, there is significant increase in the Operating Profit Margin, after combination, is rejected because t-value is not greater than the p-value. Other hypotheses, testing, gross margin, net margin, return on equity, return on invested capital and leverage ratio, which also decreased significantly increased. Results are same in both cases i.e. equal variance assumption and opposite.

The results of pre and post-merger operating performance when compared, it shows that there is a significant decline in mean of net operating profit margin (30.8 percent vs. - 1.5 percent), and it is also statistically proved that t- value of OPM is -3.41, there is also a decline in gross profit margin (37.9 percent vs. 32.5 percent), but not significant (t-value is -1.08), net profit margin also shows a decline (21.3 percent vs. 7.6 percent), and it is also statistically proved (t-value of NPM is -1.18), return on net worth shows a significant decline (10.9 percent vs. -2.9 percent), and t-value of return on net worth is -2.36, return on capital employed (4.83 percent vs. 2.0 percent), and debt to equity ratio (0.1217 vs. 0.1157 percent) shows insignificant decline as t-value is -1.00 and -0.25.

So, on the basis of findings above, our all alternate hypothesis are rejected because t-value is less than p-value. The results recommend that operating financial performance of all commercial bank's mergers and acquisitions included in the sample from banking industry had declined after mergers and acquisitions. The results shows that there is a decline in all 6 ratios profitability ratios, return on net worth ratios & invested capital, and debt to equity ratios, so we concluded that there is a negative impact of mergers and acquisitions on bank's performance after mergers and acquisitions.

This study was assumed to test whether the mergers and acquisitions have an impact on the result of acquirer firms after merger in terms of impact on operating performance. The results from the analysis showed that there is a negative impact of mergers and acquisitions on performance of acquirer firms after mergers. Results are also consistent with the Kemal (2011) who found that financial performance of RBS do not improve following merger, and also with the findings of Mantravadi & Reddi, (2008), and Mishra & Chandra, (2010) who found that due to inefficiency and entry of new firms, M & A don't have a significant impact on profitability in long-run. But result was inconsistent with Sufian and Habibullah, (2009) who found that anchor bank is supported by economies of scale reasons and this study also accepted the idea that merger program among Malaysian domestic commercial banks was driven by economic reasons.

The reason for negative results could be multifold. However, a financial crisis is the most important factor to affect the performance of banking sector. Financial reforms in the 2000s and some political factors are also the cause of decrease in the ratios, due to deviations in the policies. Other international factors may be the reason for negative results in statistical analysis. Finally, financial reporting standards and fair value accounting requirements could be the reasons of decrease in the numbers.

Table-1: Sample Units

Bank	Year of Merger
Habib Metropolitan Bank	2006
NIB Bank Ltd.	2007
Standard Chartered Bank Ltd.	2007
ABN Amro	2006
RBS	2007
Crescent Commercial Bank	2004
Faysal Bank Ltd.	2002
KASB Bank Ltd.	2003
Atlas Bank td.	2006
Atlas Investment Ban Ltd.	2002

**Table-2: Variables of Study**

Gross Profit Margin	(Revenue - Cost of Goods Sold)/Revenue
Operating Profit Margin	Operating income/Total revenue
Net Profit Margin	Profit after Tax/Revenue
Return on Capital Employed	EBIT / (Total Assets – Current Liabilities)
Return on Net Worth	Net Income/Shareholders Equity
Debt to Equity Ratio	Totalliabilities/Shareholders Equity

**Table-3: Critical values for the Hypotheses related to variables of study**

Variable	Alternate Hypothesis	t-value	p-value
Operating Profit Margin	Increased significantly after Combination	-3.41	0.999
Gross Profit Margin		-1.08	0.858
Net Profit Margin		-1.18	0.879
Return on Net Worth		-2.36	0.989
Return on Capital Employed		-1.00	0.838
Debt to Equity Ratio		-0.25	0.599

Table-4: Descriptive Measures for Financial Ratios

	V1		V2		V3		V4		V5		V6	
	Before	*After*	*Before*	*After*	*Before*	*After*	*Before*	*After*	*Before*	*After*	*Before*	*After*
Mean	0.308	-0.115	0.379	0.325	0.213	0.076	0.102	-0.029	0.048	0.020	0.122	0.116
Standard Error	0.067	0.104	0.035	0.035	0.057	0.101	0.024	0.050	0.011	0.026	0.016	0.018
Median	0.288	0.045	0.355	0.306	0.193	0.124	0.133	0.047	0.028	0.004	0.107	0.080
Standard Deviation	0.367	0.572	0.193	0.192	0.312	0.553	0.132	0.273	0.062	0.141	0.086	0.099
Sample Variance	0.135	0.327	0.037	0.037	0.098	0.306	0.017	0.075	0.004	0.020	0.007	0.010
Kurtosis	3.213	1.925	0.491	0.149	8.506	1.915	1.988	0.458	6.297	8.894	6.237	2.198
Skewness	1.096	-1.221	-0.287	0.022	1.925	0.102	-0.402	-1.026	2.215	2.890	2.286	1.740
Range	1.902	2.533	0.889	0.844	1.865	2.803	0.687	1.024	0.309	0.662	0.406	0.356
Minimum	-0.362	-1.756	-0.143	-0.142	-0.405	-1.216	-0.237	-0.699	-0.026	-0.104	0.023	0.023
Maximum	1.540	0.777	0.746	0.702	1.460	1.587	0.450	0.325	0.284	0.558	0.430	0.379

Where V1 is Operating Profit Margin, V2 is Gross Profit Margin, V3 is Net Profit Margin, V4 is Return on Net Worth, V5 is Return on Capital Employed, and V6 is Debt to Equity Ratio. Before means figures before combination and after shows post combination figures.

Figure-1: Descriptive statistics for Operating Profit Margin
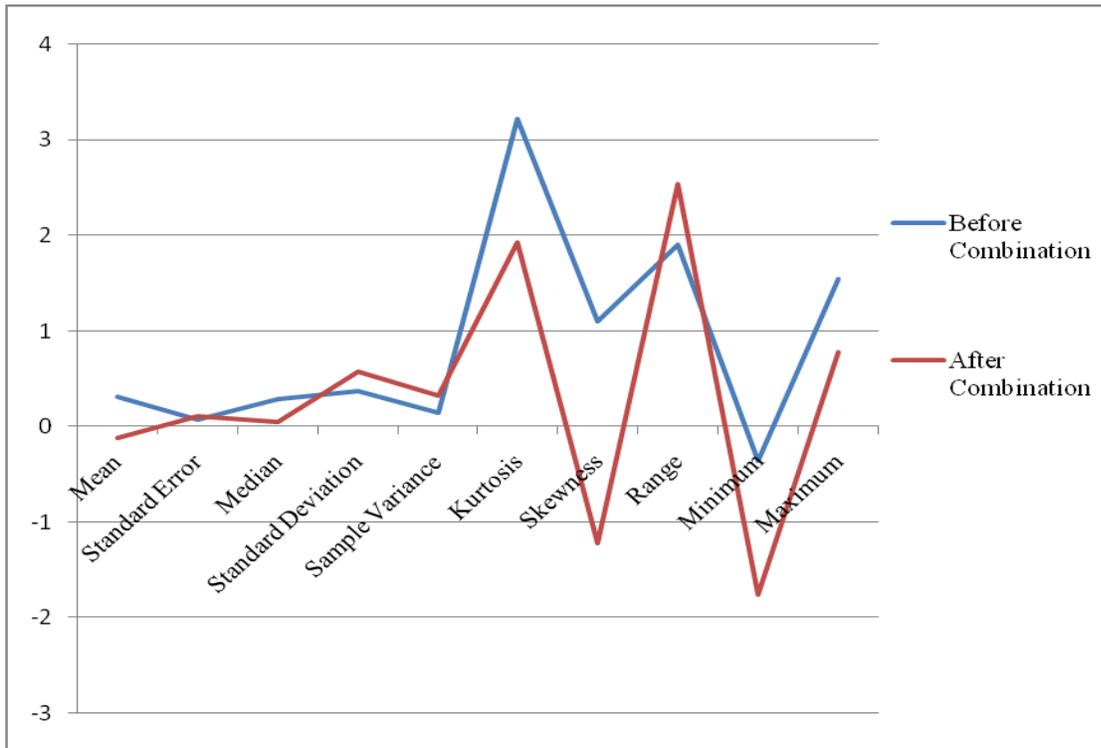
Figure-2: Descriptive statistics for Gross Profit Margin
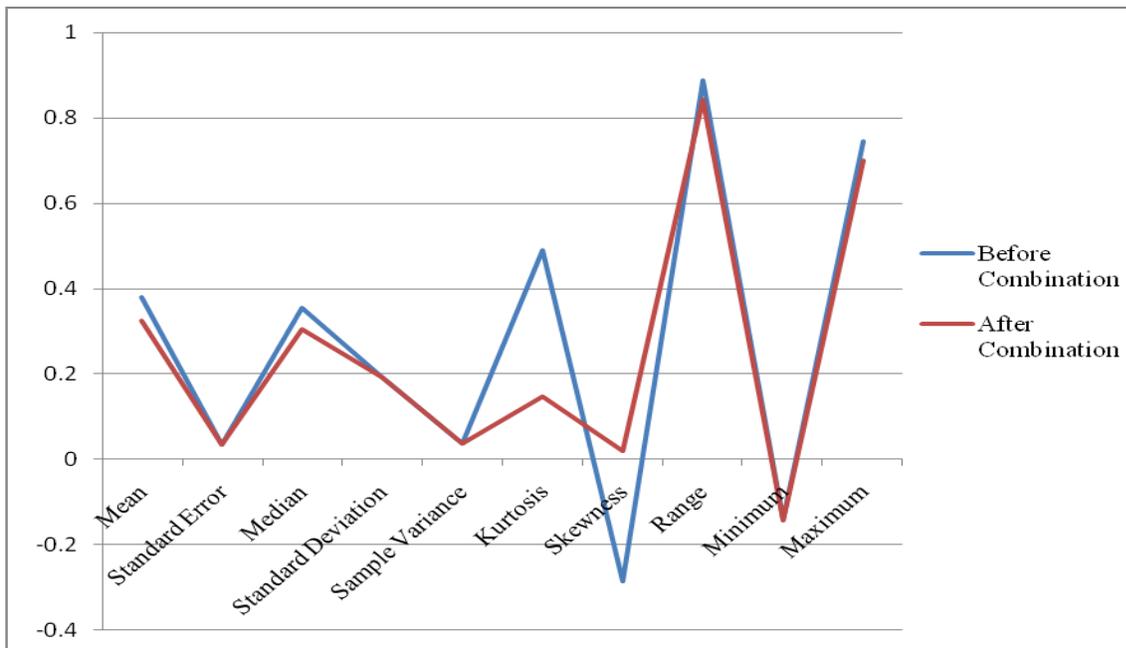
Figure-3: Descriptive statistics for Net Profit Margin
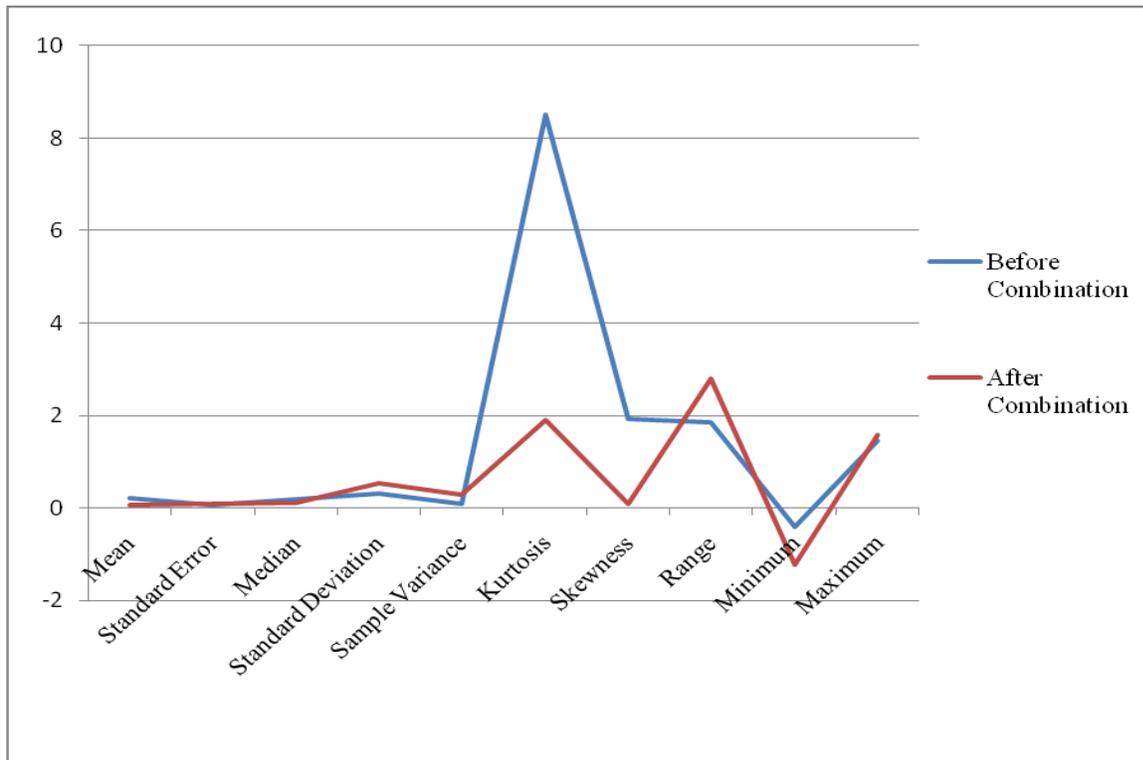
Figure-4: Descriptive statistics for Return on Net Worth
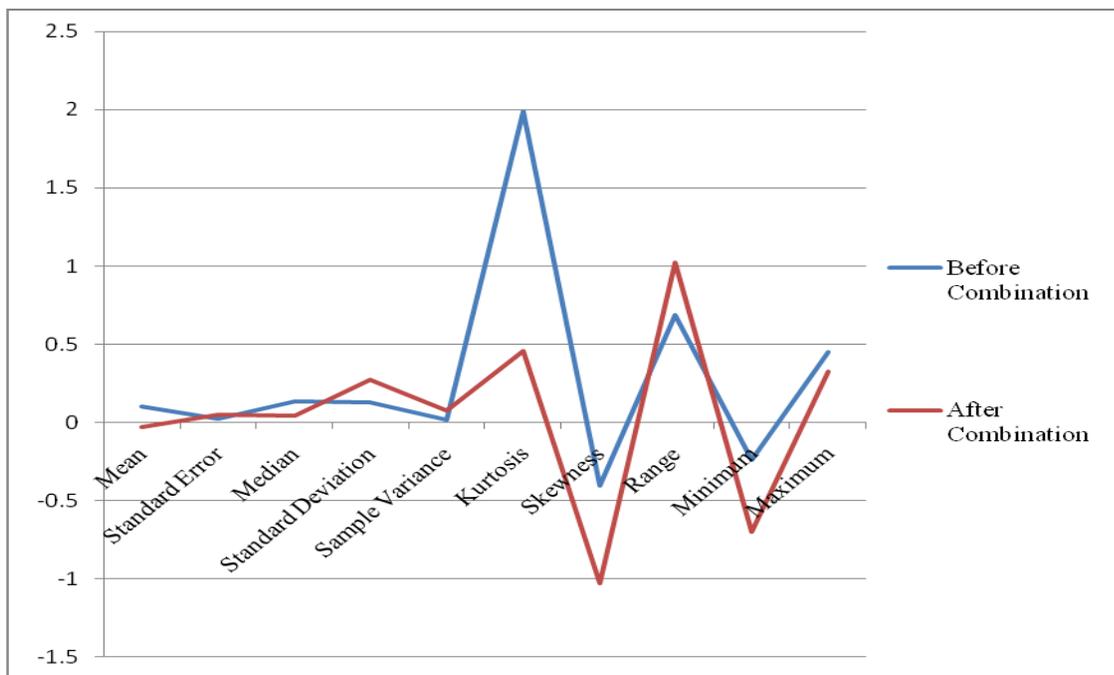
Figure-5: Descriptive statistics for Return on Capital Employed
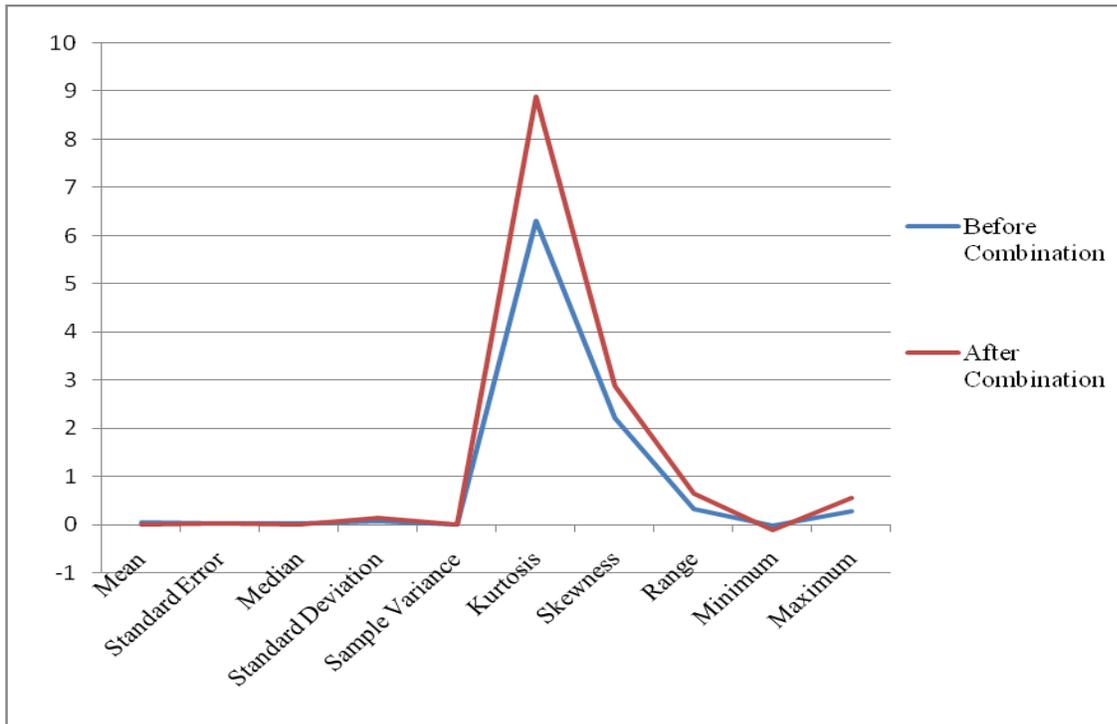
Figure-6: Descriptive statistics for Debt to Equity Ratio
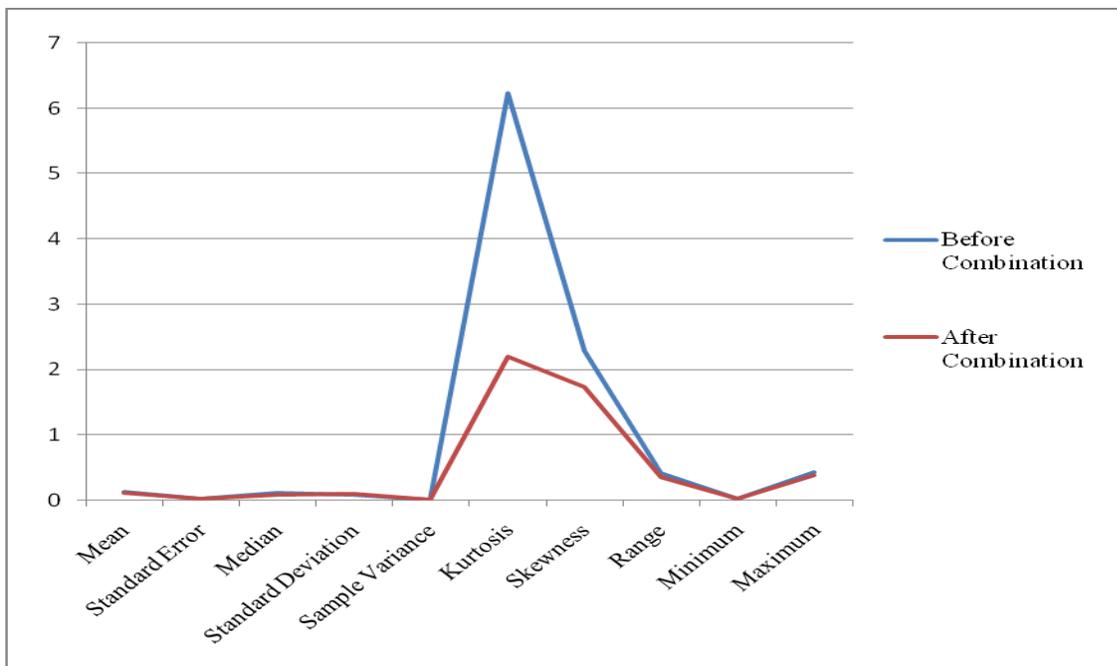
REFERENCES

1. Badreldin, A., & Kalhoefer, C. (2009). The Effect of Mergers and Acquisitions on Bank Performance in Egypt. *Journal of Management Technology,* 1-15.
2. Kemal, M. U. (2011). Post-Merger Profitability: A Case of Royal Bank of Scotland (RBS). *International Journal of Business and Social Science*, 5(2), 157-162
3. Kumar, S., & Bansal, L. K. (2008). The impact of mergers and acquisitions on corporate performance in India. *Management Decision*, 46(10), 1531-1543.
4. Mantravadi, P. & Reddy, A.V. (2008). Post-Merger Performance of Acquiring Firms from Different Industries in India. *International Research Journal of Finance and Economics*, 22, 193-204.
5. Mishra, P. & Chandra T. (2010). Mergers, Acquisitions and Firms' Performance: Experience of Indian Pharmaceutical Industry. *Eurasian Journal of Business and Economics*, 3 (5), 111-126.
6. Obaid-ullah, Sabeeh-ullah & Usman, A. (2010). Post-merger Performance of Atlas Investment and Al-Faysal Investment Bank Ltd. in Pakistan. *International Research Journal of Finance and Economics,* 60, 168-174.
7. Rhoades, S. A. (1993). The Efficiency Effects of Horizontal Bank Mergers, *Journal of Banking and Finance*, 17.
8. Sufian, F. & Habibullah, M. H. (2009). Do mergers and acquisitions leads to a higher technical and scale efficiency? A counter evidence from Malaysia. *African Journal of Business Management*, 3(8), 340-349
9. Sufian, F. (2004). The Efficiency Effects of Bank Mergers and Acquisitions in a Developing Economy: Evidence from Malaysia. *International Journal of Applied Econometrics and Quantitative Studies*, 1(4), 53-74.