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Effects of Merger and Acquisition on the Profitability of Banks

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Abstract:

The main aim of this research study is to shed light on the effect of merger and acquisition on the profitability of banks in Pakistan. Debt equity ratio (DER), return on capital employed (RCE), net profit margin (NPM), gross profit margin (GPM), operating profit margin (OPM) and Return on equity (ROE) were selected in this research for analyzing the profitability of banks on three years before the merger and three years after the merger of banks. In this research study Paired sample T-test was applied in order to find out the effect of pre and post-merger & acquisition performance of banks.

Key words: Debt equity ratio (DER), return on capital employed (RCE), net profit margin (NPM), gross profit margin (GPM), operating profit margin (OPM) and Return on equity (ROE)

INTRODUCTION

Mergers and acquisitions (M&A) is a general term that refers to the consolidation of companies or assets through various types of financial transactions. M&A can include a number of different transactions, such as mergers, acquisitions, consolidations, tender offers, purchase of assets and

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management acquisitions. In all cases, two companies are involved. The term M&A also refers to the department at financial institutions that deals with mergers and acquisitions.

Acquisition and mergers are carried out to enlarge business and produce efficiency in the present business. Mostly acquisition in banking and insurance sector of Pakistan have been taken place to expand business. Some acquisition like Adamjee Insurance Co acquired by MCB Bank Ltd through hostile takeover was aimed at keep the acquired company as standalone and use it for its sister companies. But standard bank Ltd acquired Union Bank Ltd for expanding its branch network and volume of Business (Awan and Ahson, 2015)

M & A is a process in which two, or even more than two, firms are amalgamated into a single entity in order to enhance their market position and market share through swapping out the competitors, and increasing the efficiency of a firm by combining the resources (Odeck, 2008). The Oxford dictionary defines merger as “converting two or more business concerns into one”. Thus, merger can be defined as the amalgamation of two or more than two firms by purchase/acquisition or through common interests, but different from the consolidation where the firm continues its operations without creating any new entity (Kemal, 2011).

Mergers and acquisitions (M&A) is the area of corporate finances, management and strategy dealing with purchasing and/or joining with other companies. In a merger, two organizations join forces to become a new business, usually with a new name. Because the companies involved are typically of similar size and stature, the term "merger of equals" is sometimes used. In an acquisition, on the other hand, one business buys a second and generally smaller company which may be absorbed into the parent organization or run as a subsidiary. A company under consideration by another organization for a merger or acquisition is sometimes referred

to as the target. The benefit of consolidation is to improve the performance of weak banks in three ways; at first by improving shareholders' value and efficiency, secondly by enhancing personal supremacy, thirdly by improving financial condition of weak banks. Moreover, mergers can reap the benefits of economies, gain synergy4 and trim down costs (Prompitak, 2009; Sinha & Kaushik, 2010). Eleven merging events have been taken place during 2006- 2010. Karachi Stock Exchange reported that 18% bidder banks had repeatedly merged during this time period, where 40% mergers took place only in 2006. Large numbers of empirical studies have been devoted towards the issue of merger and performance across the globe (Altunbas & Marques, 2007; Badreldin & Kalhoefer, 2009) while few researchers have worked in context of Pakistan (Arshad, 12; Kemal, 2011;). This research has been designed to inspect the relationship of mergers and performance and the extent of variation in post-merger performance of banks. This research is helpful for policy makers to rationalize their decision and for bidder banks to review their performance level after mergers.
The main aim of this study is to empirically examine the relation of merger & acquisition with the profitability of banks and impact of foreign and local mergers on the profitability of banks in Pakistan.

II. LITERATURE REVIEW

Two approaches are usually used to measure the effects of M & A on the firm performance. One is operating performance approach, which compares the pre and post-merger performances of merged firms. Second, the share price approach, which measures the effects of M & A on the basis of share prices of the merged firms (Kumar, 2009).

Badreldin & Kalhoefer (2009) and Kumar (2009) examine the post merger operating performances of acquiring organizations on the basis of financial ratios analysis and found

no improvement in the operating performances. On the other hand, Pawaskar (2001) found lower operating performance in the post-merger period. Similarly, Mantravadi & Reddy (2008) observe a negative impact of mergers on operating performce, and found horizontal mergers causing higher decline in the operating performances as compared with conglomerate and vertical mergers. However, some other studies (Healy, Palepu, & Ruback, 1992; Beena, 2004; Tarawneg. 2006; Lau, Proimos & Weight, 2008) observe improvement in post merger performances of firms.

Ullah, et al., (2010) investigated two merging events of Faysal investment bank limited and Atlas investment bank by comparing four years pre and post-merger performance. Three factors; profitability, capital adequacy and solvency were used to determine financial performance. T-test indicates that there was insignificant increase in profit while capital adequacy and solvency had improved significantly. After mergers both banks were in better position due to improvement in technology, administration, and elevated capacity of the banks t o pay back their long term liability

State bank of Pakistan has been taking regulatory measures at micro and macro level both to promote the banking sector which led the wave of merger in Pakistan (Mehta &Kakani 2006) . To make banking sector secure and sound and to reduce financial risks SBP increased its minimum capital requirement to 23billion (net of losses). To meet this requirement of State bank of Pakistan, small banking using merger and acquisition as a tool for their survival. The changes in regulation playing an important role in market expansion either in geographic market or product market which was previously not allowed (DeYoung et al 2009). Law and order situation of country also affect the process of merger and acquisition . The foreign bank investment like to invest in those countries which provide them better quality as well as freedom from government.(Beccalli& Frantz 2008).

Afza (2012) described that merger is a combination of two corporations and makes a big one corporation. There is a negotiation process begin between two companies prior to going to the merging contract. After the negotiations both parties agreed on the specific type of merger and make a contract. It is an action in which both parties are deliberate and stocks are exchanged through cash compensation to the merged company. Stock swap or cash compensation to the target or merged company means it allow the stockholder to share their risk if any involved during business.

Awan & Siddique (2015) argue that wild fluctuations in the stock Market have caused the failure of many investment Banks in Pakistan. They pointed out that 1990s was the period when dozens of investment banks including Orix Investment Bank, Crescent Investment Bank, Trust Investment Bank, Al-Towfeeq Investment Bank, Asset Investment Banks were formed and they generated huge funds through public offerings when stock market was in book. They also invested their funds in different scripts on long-term basis when their prices were very high. But later on, when the stock market was crashed the value of their investment was washed away and continuous slump in the market caused bankruptcy of these investment banks. Awan & Saeed (2015) disclosed that organizational conflict also affect its performance and if it continues it will lead it to bankruptcy. They suggested that organizational conflict should be managed through developing conflict resolution mechanism.

III. RESEARCH METHODOLOGY

3.1 DATA, POPULATION AND SIZE OF THE STUDY

The study population consist of nine bank's data of pre and post-merger acquisition from the year 1996 to 2016. However the data of the selected banks were collected from the annual reports of the banks. In research study purposive sampling

technique have been used for the limited banks in order to examine the pre and post-merger performance of these selected banks.

SAMPLE UNITS BANK	YEAR OF MERGER	Merged in
First Dawood Bank	2002	Atlas Bank
Atlas Bank	2003	KASB Bank
Habib Metropolitan Bank	2006	Habib Bank AG Zurich
Askari Leasing	2006	Askari Bank
PICIC Commercial Bank	2007	NIB Bank Limited
Union Bank	2007	Standard Chartered Bank Ltd.
RBS	2007	Faysal Bank
Albarka Bank	2010	Emirates Global Islamic Bank
My Bank Ltd	2011	Summit Bank

3.4 Variables of the study

3.3.1 Gross Profit Margin (GPM).

$$GPM = \frac{\text{Revenue} - \text{Expenses incurred for revenue}}{\text{Revenue}}$$

3.3.2. Net Profit Margin

$$NPM = \frac{\text{Profit after tax}}{\text{Revenue}}$$

3.3.3. Return on Capital Employed

$$RCE = \frac{\text{EBIT}}{\text{Total assets} - \text{current liabilities}}$$

3.3.4. Debt to Equity Ratio

$$DER = \frac{\text{Total liabilities}}{\text{Share holder's equity}}$$

3.5 Paired Sample t-test

In The current study used the paired sample t-test due to the fact of finding the effects of merger and acquisition before and after the announcement. The test also find out the significant difference of values of the similar measurement on the basis of

two different conditions (Ajai and Gaur, 2009). The null hypothesis of the test is the

H0: difference of the mean values is zero

H1; difference of the mean value is not zero

$t_{n-1} = \frac{\bar{d} - 0}{s_d / \sqrt{n_d}}$, where $\bar{d}$ is the average of all the paired differences found in the **sample, and t_{n-1} is a value on the t-distribution with $n_d - 1$ degrees of freedom.**

3.5.1 Independent sample t test

In the daily life circumstances, it is difficult to determine the population mean. But the interest of the researchers is to compare the two populations by using them randomly. Such type of conditions, in which the researchers are interested in finding the difference among the means of two independent groups (Ajai and Gaur, 2009).

$$t_{obt} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

Where:

t_{obt} = obtained t

$\bar{X}_1$ and $\bar{X}_2$ = means for the two groups

s_1^2 and s_2^2 = variances of the two groups

n_1 and n_2 = number of participants in each of the two groups

IV. ANALYSIS AND INTERPRETATIONS

In this chapter we have discussed and explained empirically descriptive statistics, mean and paired differences of GPM, RCE, DA, NPM and ROE of the firms.. The interpretation of the tables are as under:-

4.1 DESCRIPTIVE STATISTICS

Variable	N	Minimum	Maximum	Mean	Std. Deviation
GPM	24	-.11	1.12	.4378	.38765
RCE	24	-.59	.41	-.0784	.17645
ROE	24	-1.23	.93	.0234	.48373
DA	24	.01	.99	.9765	.17653
NPM	24	-1.28	.24	-.3425	.38373

The minimum value in Gross profit margin is -.11 and maximum is 1.12. The mean GPM in the data is .4378 with the standard deviation of .38765. The minimum value in RCE is -.59 and maximum is .41. The mean RCE in the data is -.0784 with the standard deviation of .17645. The minimum value in ROE is -1.23 and maximum is .93. The mean ROE in the data is .0234 with the standard deviation of .48373. The minimum value in DA is .01 and maximum is .99. The mean DA in the data is .9765 with the standard deviation of .17653. The minimum value in NPM is -1.28 and maximum is .24. The mean NPM in the data is -.3425 with the standard deviation of .38373.

Table 4.2 Change in Mean GPM of the firms

Firm Merged/ Acquired	Pre- Mean Return	Post- Mean Return	Change in Mean Return	Return Increase/ Decrease
HMB-HBAG	0.462535	0.311136	0.180089	Increase
PICIC-NIB	0.430386	0.253380	0.183606	Increase
UB-SCB	0.622289	0.673834	-0.04975	Decrease
RBS-FB	0.412334	0.412423	-0.004189	Decrease
FDB-AB	0.463359	0.098932	0.363587	Increase
ATB-KSB	0.253374	-0.077673	0.172031	Increase
MB-SUB	0.274903	0.9700234	-0.70518	Decrease
AL-AB	0.793333	0.4226723	0.382907	Increase
AB-EGIB	0.573387	0.24555674	0.3322296	Increase

As per the above table the GPM of six mergers increased and three decreased. The highest GPM increase in the Askari leasing after merging into Askari Bank 38 percent while the highest decrease of GPM My Bank after merging into Summit Bank with 70 percent.

Table 4.3 Change in Mean RCE of the firms

Firm Merged/ Acquired	Pre- Mean Return	Post- Mean Return	Change in Mean Return	Return Increase/ Decrease
HMB-HBAG	0.22222	0.11332	0.098999	Increase
PICIC-NIB	0.11249	-0.12194	0.225529	Increase
UB-SCB	0.809648	0.02543	0.055552	Increase
RBS-FB	-0.00974	0.08202	-0.08947	Decrease
FDB-AB	0.09533	-0.28898	0.377781	Increase
ATB-KSB	0.011121	-0.35637	0.355587	Increase
MB-SUB	-0.12221	-0.08097	-0.07213	Decrease
AL-AB	0.022061	-0.02895	0.050914	Increase
AB-EGIB	-0.09922	-0.04454	-0.07558	Decrease

The table shows that 6 merger events have increased in their RCE while the 3 merger firm's RCE is decreased. The highest increase is in the First Dawood Bank merged to Atlas Bank who get 37 percent increased in their RCE. The event 4 (Royal Bank of Scotland to Faysal Bank) had highest 8 percent decrease in their RCE

Table 4.4 Change in Mean ROE of the firms

Firm Merged/ Acquired	Pre- Mean Return	Post- Mean Return	Change in Mean Return	Return Increase/ Decrease
HMB-HBAG	0.329698	0.87264	-0.55291	Decrease
PICIC-NIB	0.353391	-0.17528	-0.17682	Decrease
UB-SCB	0.372776	0.36406	0.00998	Increase
RBS-FB	0.049222	1.625302	-1.57829	Decrease
FDB-AB	0.360556	-0.59981	0.95428	Increase
ATB-KSB	-0.073493	-0.29747	0.24891	Increase
MB-SUB	-0.180532	-0.22994	0.04041	Increase
AL-AB	0.2959584	-0.00998	0.303964	Increase
AB-EGIB	-0.089611	-0.023	-0.07551	Decrease

The table shows the table shows that 5 merger events have increased in their ROE while the 4 merger firm's ROE is decreased. The highest increase is in the First Dawood Bank merged to Atlas Bank who get 95 percent increased in their ROE. The event 1 (Habib Metropolitian Bank to Habib AZ Zurich) had highest 55 percent decrease in their ROE

Table 4.5 Change in Mean DA of the firms

Firm Merged/ Acquired	Pre- Mean Return	Post- Mean Return	Change in Mean Return	Return Increase/ Decrease
HMB-HBAG	0.94325	0.93997	0.013138	Increase
PICIC-NIB	0.911452	0.852912	0.07064	Increase
UB-SCB	0.937757	0.849095	0.098662	Increase
RBS-FB	0.930018	0.901149	0.029868	Increase
FDB-AB	0.950519	0.865931	0.085588	Increase
ATB-KSB	0.923842	0.636181	0.297661	Increase
MB-SUB	0.897254	0.985313	-0.09806	Decrease
AL-AB	0.921325	0.957949	-0.04662	Decrease
AB-EGIB	0.772326	0.92427	-0.16194	Decrease

The table shows the table shows that 6 merger events have increased in their DA while the 3 merger firm's DA is decreased. The highest increase is in the Atlas Bank to KASB Bank, who got 29 percent increase in their DA. The event 9 (Al Bark Bank to Emirates Global Islamic Bank) had highest 16 percent decrease in their DA.

Table 4.6 Change in Mean NPM of the firms

Firm Merged/ Acquired	Pre- Mean Return	Post- Mean Return	Change in Mean Return	Return Increase/ Decrease
HMB-HBAG	0.281321	0.198303	0.083018	Increase
PICIC-NIB	0.220226	-0.3558	0.567247	Increase
UB-SCB	0.240837	0.057949	0.171888	Increase
RBS-FB	-0.02779	0.427589	-0.45439	Decrease
FDB-AB	0.226723	-0.57446	0.809478	Increase
ATLB-KASB(6)	-0.22999	-0.85678	0.634469	Increase
MB-SUB	-0.27099	-0.24298	-0.03516	Decrease
AL-AB	0.139858	-0.02263	0.162353	Increase
AB-EGIB	-0.28225	-0.02062	-0.27063	Decrease

The table shows that 6 merger events have increased in their NPM while the 3 merger firm's NPM is decreased. The highest increase is in the First Dawood Bank merged to Atlas Bank, who got 80 percent increase in their NPM. The event 4 (Royal Bank of Scotland to Faysal Bank) had highest 45 percent decrease in their NPM.

4.2 GROSS PROFIT MARGIN

4.2.2 Paired differences

Table 4.8 Paired differences

Paired Differences				
		Mean	T	Sig.
Pair 1	Before GPM & After GPM	.10638	1.043	.299

The mean of before gross profit margin and after profit margin is .10638; it means that there occurs only 10 percent change in the gross profit margin after merger and acquisition. The value of T is 1.043which is low than the standard value and that is why the significance level is lower to .299. The standard value of T is that the value should be greater than 2 if it is positive and it should be lower than 2 if it is negative. So it is concluded that merger and acquisition has no significant effects on gross profit margin in the sampled firms.

4.3 RETURN ON CAPITAL EMPLOYED

4.3.2 Paired differences

Table 4.10 Paired differences

Paired Differences				
		Mean	T	Sig.
Pair 1	Before RCE & After RCE	.17478	4.544	.001

The mean of before return on capital employed and after return on capital employed is .17478; it means that there occurs only 17 percent change in the return on capital employed after merger and acquisition. The value of T is 4.544which is high than the standard value and that is why the significance level is higher to. 001. The standard value of T is that the value should be greater than 2 if it is positive and it should be lower than 2 if it is negative. So it is concluded that merger and acquisition has significant effects on return on capital employed in the sampled firms.

4.4 RETURN ON EQUITY

4.4.2 Paired differences

Table 4.12 Paired differences

Paired Differences				
		Mean	T	Sig.
Pair 1	Before ROE & After ROE	1.22725	.980	.241

The mean of before return on equity and after return on equity is 1.22725; it means that there occurs only 100 percent change in the return on equity after merger and acquisition. The value of T is. .980 which is lower than the standard value and that is why the significance level is lower to . .241. The standard value of T is that the value should be greater than 2 if it is positive and it should be lower than 2 if it is negative. So it is concluded that merger and acquisition has insignificant effects on return on equity in the sampled firms.

4.5 DEBT TO EQUITY

4.5.2 Paired differences

Table 4.14 Paired differences

Paired Differences				
		Mean	T	Sig.
Pair 1	Before DE & After DE	.05484	1.439	.199

The mean of before debt to equity and after debt to equity is .05484; it means that there occurs only 54 percent change in the debt to equity after merger and acquisition. The value of T is 1.439which is lower than the standard value and that is why the significance level is lower to . .199. The standard value of T is that the value should be greater than 2 if it is positive and it should be lower than 2 if it is negative. So it is concluded that merger and acquisition has insignificant effects on debt to equity in the sampled firms.

4.6 NET PROFIT MARGIN

4.6.2 Paired differences

Table 4.16 Paired differences

Paired Differences				
		Mean	T	Sig.
Pair 1	Before NPM & After NPM	.3384	3.225	.004

The Mean of pre and post profit margin is .33784; it means that there occurs only 33 percent change in the net profit margin after merger and acquisition. The value of T is 3.225 which is higher than the standard value and that is why the significance level is lower to .004. The standard value of T is that the value should be greater than 2 if it is positive and it should be lower than 2 if it is negative. So it is concluded that merger and acquisition has insignificant effects on net profit margin in the sampled firms.

SUMMARY& RECOMMENDATIONS

The study was conducted to find out the effect of merger and acquisition on the financial performance of banks in Pakistani market. All the mergers done at Karachi Stock Exchange were treated as a population of the study. Among this population nine banks were selected as a sample of the study. The sample contains both merger by local and foreign banks. For the financial performance analysis, Gross profit margin (GPM), Operating profit margin (OPM), Net profit margin (NPM), return on capital employed (RCE), Return on equity (ROE) and Debt to equity ratio (DE) were selected to analyze the financial performance. Two windows were selected for the analysis i.e. 3 years before the merger and 3 years after merger of banks. Paired sample T-test was selected to find out the effect before and after merger and acquisition.

We recommend that all the banks should minimize their gross profit margin for the improvement of financial performance and efficiency. Furthermore the banks should

invest their capital in an effective manner so that the objective may be achieved effectively.

The banks should try to improve and increase their assets for internal use against their liabilities. Furthermore great attention may paid on increasing capital efficiency and mainly should rely on equity financing as compare to debt equity.

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