J. Basic. Appl. Sci. Res., 4(4)249-259, 2014
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ISSN 2090-4304
Journal of Basic and Applied Scientific Research
www.textroad.com

Mergers and Acquisitions: Effect on Financial Performance of Banking Institutions of Pakistan

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Received: February 18 2014
Accepted: March 272014

ABSTRACT

Mergers and acquisition turn out to be the main source in the dynamic environment. Organizations now face the domestic and international competition due to globalization and liberalization in the corporate world. This study is conducted to find out the influence of business combinations on financial performance of acquiring banks in Pakistan. In this paper the post-merger financial performance of Pakistani acquiring banks is measured by using financial and accounting ratios analysis. Sample of this research consists of eleven banks involved in the process of merger and acquisition during 2006-2010. Three years before and after-merger data is used to test the significance of study. Paired sample t-test statistics and Data Envelopment Analysis tools is used with the help of statistical software SPSS. The results of this study show that Pakistani banks are no different than the banks in other parts of the world. On the basis of findings, it is concluded that financial performance of acquiring banks insignificantly improved in the post- post-merger period. Post-merger profitability (insignificantly), liquidity (significantly) and capital leverage (insignificantly) improved while assets quality (significantly) deteriorated.

KEYWORDS: Mergers, Acquisitions, Financial performance, Acquirer, Target, Ratios analysis, manufacturing sector, Paired sample t-statistics, Data Envelopment Analysis

INTRODUCTION

The growth of an economy depends on the rate at which banks convert the resources to more productive use to produce more output. Merger and acquisition increases the size and capacity of the banks which results in improving the efficiency of the system. Business consolidations have made the financial markets more strong and provide more opportunities for investment. Banks hunted rapid improvement in the operating performance due to merger and acquisition activities started from United State of America, Europe and then scattering throughout the world [1].

Banking Industry in Pakistan When British came in Indo-Pak subcontinent; they also brought their systems and cultures along with them which also include banking systems which kept its dominance intact in the region. One year after the partition of subcontinent, in 1948, State Bank of Pakistan (SBP) were established and for the convenience and scarcity of resources, policies and regulations of State Bank of India were implicated. Later, during the period of 1960 to 1970 the tradition of establishment of specialized Developmental Financial Institutions (DFIs) was introduced and kept prevailing resulting in the shape of a few leading names of banking history like Industrial Development Bank of Pakistan (IDBP) and Agricultural Development Bank(ADB). In the next decade, in the year 1974, Zulfiqar Ali Bhutto brought the idea of nationalization of commercial banks and implemented that and in the same time period Pakistan Banking Council(PBS) came into being which had the responsibility of supervising the banking sectors of Pakistan. PBS then was dissolved giving all its responsibilities and powers to SBP and making SBP the only regularity authority surviving in Pakistan banking system. Before the nationalization of commercial banks, Banking Companies Ordinance was made which till date is implied in Pakistan and is followed by the banks. In the present era, a quick glance on the banking systems can tell that Nationalized Commercial Banks are going through an evolutionary time period, restructuring their systems and Private Banks on the other hand, is adopting the tradition of mergers and acquisition (M&A) to increase its paid-up capital and strengthening their networks. The entire Pakistan financial sector is divided into banking and non-banking financial institutions. The share of banks in the entire financial sector is the 88% and the remaining 12% share belongs to the non-banking financial institutions like insurance, modarabas, leasing companies, investment banks, finance houses, mutual funds and venture capital entities [2].The present study assess whether the business combination contribute anything to this weak economy. In this paper Pakistani banking industry is chosen to determine the effect of business alliances on the financial

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performance indicators like liquidity, efficiency, profitability, assets quality and the wealth of shareholders following the mergers

Merger and acquisition is to bring the two organizations together with different cultural values, personality and cultures [3].A merger is an integration of two or more firms into one and firm agrees to share the control of joint business with other owner. The phrase merger or acquisitions are mostly used interchangeable [4].Basically acquisition means “to acquire” or “to takeover”. Acquisition is a process in which usually one company is bigger or dominant over other and big company acquire the assets or share of smaller company and takes the full control on its management. An acquisition is a single or multiple transactions whereby a company purchase the assets or shares of another company with the intention of obtaining its control.

Merger activity in banking sector of Pakistan picks up by the liberal reforms announced by central bank of Pakistan in 2002. The banking sector of Pakistan showed drastic changes from the past few years due to the liberal reforms taken by SBP. There are various factors which are responsible for mergers and acquisitions in Pakistan including regulatory capital requirements, changes in legal framework and profit seeking .Central bank of Pakistan made it mandatory for banks to maintain minimum paid up capital from time to time, then it becomes very difficult for banks to meet these criteria alone and the banks started to combine together, equal level banks merged and larger banks acquire the certain smaller banks [5].

THEORETICAL BACKGROUND AND REVIEW OF LITERATURE

Literature review means to gather the information which had been previously collected by other researchers related to subject. The sources of information are; books, research papers and internet search engines. All these gathered secondary data will helped us to better understand the research topic. Just like other sectors sufficient literature is present on the business alliances in banking sector. In order to understand the diversified impact of business combinations on bank’s performance and its effect on profitability many past era researches related to the research topic is reviewed in order to analyze and extract the prolific results. There are many studies on business combinations and a number of theories are presented and verified. Scholars have investigated financial effect of business consolidations on profitability, efficiency, growth, liquidity, and leverage. Whether a merged organization attains expected performance may be the critical query which is examined by many scholars.

Researcher [6] investigated the impact of merger and acquisitions on the post mergers efficiency of banks. In this study a sample of nine mergers and acquisitions are selected that yield efficiency gains. The author explained 16 financial ratios including Liquidity, profitability, efficiency and capital ratios. The results of this study indicate that nine mergers resulted in significant cost reductions in line with the forecasts prior to the merger. It is concluded that four of the nine mergers are clearly able to improve the cost, but five are not.

Researchers [7]Investigated mergers effect on the operating efficiency of banks in New Zealand. This present study used accounting ratios and DEA (Data Envelopment Analysis) to study the impact efficiency 6 bank mergers in New Zealand between 1989 and 1998. In this study three models of DEA are shown .Each model uses same input variables, but output variables are different in each DAE model to measure efficiency gains for banks engaged in merger and acquisitions.

Researcher [8]Investigated the efficiency impact of mergers and acquisitions in general the Swedish banking industry and particularly in the saving banks in Sweden. The purpose of this study is to evaluate the effects of the efficiency of bank mergers in Sweden. In this study a sample of 28 Sweden banks that underwent merger during the year 1984 to 2002 are taken. This study used the un- balanced panel data analysis technique to test the significance. In addition, the analysis shows that post-merger, no significant improvement in the technical efficiency of the bank after the consolidation. The results of this study are in agreement with the findings of the banking literature on mergers.

Researcher [9]analyzed the hectic pace of mergers; the financial institutions involved in the recent years. The main aim of this paper is to explore the value of synergy. Synergy is the benefit that merged firms can get only when the firms combine. This study explains the importance of financial synergy in merger and acquisitions transactions between insurance companies. The survey of financial synergies focuses on issues of solvency, liquidity and leverage. It is concluded that mergers in the insurance industry increase the efficiency of firms.

Researchers [10]analyzed the mergers effect on the performance of Singaporean banking sector. The aim of this study is to trace the answer of questions such as did the mergers result in increasing the post- merger efficiency in Singapore banking, can low efficient bank is the target of acquisition, can low efficient target bank reduces the post- merger efficiency of the acquiring bank, can more profitable and efficient bank increases the post- merger efficiency of acquiring bank and how the relative performance of Singapore banks can be determined. In this study a sample of all banks that underwent mergers and acquisition during 1998-2004 in Singapore are taken. In this paper Data Envelop Analysis (DEA) and Tobit regression are used to test the significance. The results suggest that bank profitability has a significant positive impact on the efficiency of banks; on the other hand poor credit quality has a significant negative impact on the performance of banks

Researchers [11]Studied the impact of mergers on banking performance. This study concluded that mergers increased the efficiency of sample banks. But it is also pointed out drawback of mergers which was creation of monopolies and synergies.

Researchers [12]investigated the effect of mergers and acquisitions in the banking sector of Malaysia. The objective of this study is to make available proof of the proficiency improvements that banks experienced from the 1998—2004 merger application in Malaysia and also to assess the performance of banking institutions. In this research a sample of ten Malaysian banks are selected that underwent merger and acquisitions during the 1998 to 2004.Three approaches to analyze the impact of mergers are used in this study namely paired sample t-statistics, Data envelopment analysis and regression analysis to test the significance. The variables of study called camel –type variables includes advances/loan loss reserves to capital ; growth of loans; in order to measure the liquidity risks of banks, a ratio of loan to deposits is used. The efficiency impact of mergers is measured by using the DEA. Paired sample t-statistics is used to measure the pre and post-merger average performance of camel type variables. The results of this study show that mergers do not result in improving the productive efficiency of merged banks.

Authors [13]explained that much research work on merger and acquisition has been done in United States, Europe and other countries in the world. It has been quite rare to find research work on mergers and acquisitions in Middle East and North Africa. This paper explains the impact of Egypt economic reforms in general on Egyptian economy and the banking reforms in particular. This study is conducted to measures the performance of Egyptian banks, mergers or acquisitions during the period 2002-2007.In this study a sample of 10 banks was chosen that are underwent mergers and acquisitions during the 2002-2007. In this study return on equity was used to measure the profitability impact of merger and acquisitions, the degree of success to determine banking reforms to strengthen and consolidate the Egyptian banking sector. The results of this study suggest that banks all submitted offers mergers and acquisitions have not shown significant improvements in performance and return on equity. It was noted that mergers and acquisitions have not had a clear impact on the profitability of banks in the Egyptian banking sector.

Another [14]analyzed the impact of mergers and acquisitions on the operating efficiency of Malaysian banks. The author classify the efficiency into technical, pure technical and scale efficiency. In this study a sample of 28 mergers are taken that underwent merger activity during 1997-2003. This study examines the impact of mergers and acquisitions on technical efficiency, pure technical and scale efficiency of the Malaysian banking sector. This study used the data envelopment analysis (DEA) approach and calculate the technical, pure technical and scale efficiency of acquiring banks during the period 1997-2003. The results suggest that post- merger technical efficiency of Malaysian banks is higher as compared to the pre- merger technical efficiency of Malaysian banks.

Authors [15] investigated the extent of the impact of merger and acquisition on Malaysia banks productivity over the period 2003-2007. The aim of this study is to explore the productivity growth of commercial banks in Malaysia .In this study a sample of nine commercial banks are taken that underwent merger and acquisition activity in Malaysia during 2003-2007.It analyzes both technological change and changes in technical efficiency of merging banks in Malaysia with a non-parametric analysis of data envelopment analysis (DEA).. This study examines the two input and three output variables. The input variables are operating expense and interest expense. Output variables used in this study are net interest income, total amount of loans and advances and non- interest income. It is found that the total factor productivity (TFP) had six of the nine banks with average increases.

Researchers [16]investigated the impact of mergers and acquisitions on the financial performance of certain financial institutions in India. This study is concerned only with the financial sector of India. In this study a sample of 17 companies are selected that underwent merger and acquisition activity in India during 2000-2008. In this study two measurement tools are used, ratios analysis and Wilcoxon. In this study financial ratios and Wilcoxon test are used for four parameters such as overall profitability measure, liquidity measure, solvency measures and overall efficiency parameters. This study found a significant change in the results of the shareholders, there is no significant change in the liquidity situation of the company.

Researcher [17]analyzed the merger effects on the efficiency and productivity of banks in India. The purpose of this study is to explore the motivations of mergers and acquisitions in the Indian banking sector. In this study a sample of six Indian banks are selected that underwent merger and acquisition during year 2000-2006. In this study the author used the financial ratios. Ratios are used to examine the profitability, efficiency, liquidity assets quality and capital position of Indian banks. The researchers used an independent t test to examine the statistical significance of this test is to verify not only the analysis of the situation, but also the impact of mergers and acquisitions on the performance of banks. The result of the study shows that banks have a positive impact on mergers and acquisitions.

Another study [18]analyzed the post –merger profitability of Pakistan banking sector. The aim of this study is to explore the role of mergers and acquisitions in the globalized economy. The author explained the various objectives behind the mergers such as diversification, taxation, and increases in sales, improve market share, synergy and economies of scope and scale. In this study the case of Royal Bank of Scotland is considered because in 2008 Royal Bank of Scotland acquires the ABN Amro bank.. The most common performance indicators used in this study are liquidity ratios, profitability ratios, leverage ratios, return on investment ratios and stock market ratios. The results show that RBS's financial performance in terms of profitability, liquidity, asset management flow, debt and cash is very satisfactory before the proposed merger. This means that the merger agreement does not improve the financial performance of the bank.

Researchers [19]investigated the effects of mergers and acquisitions on the financial and operating performance of banking industry in Greek. The author also explained the impact of relaxation in financial regulations in Greek. In this study a sample of 26 commercial banks are chosen that engaged in mergers and acquisitions in Greek during 1996-2004.This study also include 15 non merged banks in study sample. The author also explained that financial ratios are used to examine the four important areas of banks such as profitability, productivity, operating and liquidity. The statistical tool paired sample t-test is used to measure the significance. The overall results show that bank mergers and acquisitions have no effect and do not create wealth. It is finally concluded that operating performance does not improve after mergers and acquisitions. There are also controversial results when comparing non-merger.

Researcher [20]analyzed the pre and post- merger operating performance of banks merged in Nigeria. Mergers were carried out in order to achieve greater efficiency prevent financial operational difficulties and eliminating bottlenecks. In this study a sample of three banks are selected that underwent merger transactions during 2002-2008.This study used the secondary form of data. Financial ratios are computed to measure the operating performance of acquiring firms. The study used the paired sample t-test to test the significance. The results of this study also reveal that an increase financial performance results in an improved financial efficiency.

Researchers [21]Study the Indian financial sector in the scenario of mergers and acquisitions. The aim of this research is to investigate the post- merger impact in the financial sector of India. Author stated that Indian corporations s were subject to a strict control regime before 1990s. In this study a sample of eighty mergers are selected that involved in mergers and acquisitions during the 1993—2010. This study uses the paired sample t-test, regression and will cox on /Mann Whitney to achieve the research objectives and to test the significance of research hypothesis. The variables used in this study are profit margin, total cost, advances, profit before interest and taxes, depreciation and amortization, profit after tax ratio, current ratio, interest coverage ratio and return on capital employed. Three years average before and after merger is taken for all variables and significance is tested with the help of paired sample t- statistics. The conclusion of this study is that mergers have a positive and negative impact on the firm performance but the impact is insignificant as a whole.

Researchers [22]studied the past literature related to banks mergers and acquisition which shows effect on the wealth of business owner and investors. The main aim of this study is to proof whether mergers results in improving the wealth of shareholders. This study shows that in order to improve the wealth of shareholders, these must be synergistic benefits. Synergy motive can further be divided into operational and financial synergy.. The result of this study shows that mergers and acquisition are the burning issue for the researcher and the literature has discussed almost on every aspect of mergers including effect on post-merger profitability, efficiency and synergy.

Researchers [23]explained that the recent financial crisis has prompted a number of mergers and acquisitions in the financial sector including banks. The aim of this study is to determine that the hypothesis mergers and acquisitions not helpful in producing the powerful institutions and industries during the period 2006 to 2008. In this study data were collected using six accounting-based parameters for 105 companies involved directly into mergers and acquisitions during this period. In this study financial ratios are used to measure the pre and post- merger financial performance of acquiring firms. The ratios that are used in this study are return on assets, return on equity, and assets to employee, and deposits to equity and net interest to total assets. It is concluded that the observed results support the hypothesis and expose merger and acquisition inefficiency. Overall these results show the ineffectiveness of mergers and acquisitions.

Statement of the Problem

Mergers and acquisitions is another and mostly preferable option a firm adopts for recapitalization. State bank of Pakistan announces from time to time minimum paid up capital requirements for locally and foreign incorporated banks in Pakistan. When the state bank of Pakistan increases the minimum paid up capital requirements, ordered to increase the number of branches and also to maintain capital adequacy ratio at certain level, then it becomes very difficult for banks to meet these criteria alone and the banks started to combine together, equal level banks merged and larger banks acquire the certain smaller banks. This has sent some of banks on the move to consider merger and acquisition as a survival strategy, There is a whole list of the challenges the banks encounter after the consolidation which is also a source of increasing unemployment in the country which hampers the growth of economy largely. The challenges are listed as; inappropriate corporate governance practices, insufficient risk management, non-durable infrastructure, extra dependence over public financial means, improper regulations and check and balance, insufficient credit assessment skills and techniques, lack of professional behaviors and poor skills and training. All these factors become the reason of illiquidity in the banking sector and hampering its prosperity even more. These causes have provided the ground for this research and it aims to go deep in all these problems and digging out the reasons behind the failure of banks in achieving the profit levels they intend to reach and how these reasons can be avoided and changed to others that can make the flow of growth smoother. The completion of this research would cater all these problems. To cater this problem of banking systems, particularly of Pakistan, I intend to study that how much and in what way mergers and acquisitions have contributed towards the inclination of financial performance of banks.

Significance of the Study

This study has enormous significance for a number of users of the literature. Firstly, it has the ability to create awareness in the general public about the mergers and acquisitions and its possible effects on the growth and performance of the firms indulged and also the challenges they face. This study aims to educate people that how it fuels the growth of the banks. The study will also put a light on the repercussion the banking sector faces because of the mergers and acquisitions which intends to make the banking system stronger and more diversified. This research also intends to give the foreign potential and existing investors more elaborative reasons to invest in Pakistan banking system by enlightening them about the profits it has generated and benefits it has given to the sector under question. Through this research banking industry may be able to maintain their liquidity and profitability position during post- merger and acquisition. Industry may be able to know the effects of business combinations on the financial position of concerned industry.

Objectives of the Study

The objective of this research is to explore the effects on acquiring banks' performances in Pakistan in order to investigate the probable value addition or value deduction of bidding firms. The main objective of this research is to explore the effects on acquiring banks' performances in Pakistan in order to investigate the probable value addition or value deduction of bidding firms. Other objectives of this study are to

1 Examine and evaluate the post-merger impact on profitability, liquidity, assets quality and capital performance indicators of banking sector of Pakistan.

2 Examine whether mergers have improve the efficiency of banks.

3 This study also aimed to give suggestions and recommendations for the betterment of efficiency of the banking companies.

Hypothesis of the Study

In order to achieve the research objectives, research hypothesis needs to be formulated. On the basis of the research problem, research objectives and the review of literature, the researcher has identified the following broad hypothesis for this study.

H1: Mergers in Pakistan in the post-merger period have improved the profitability performance indicators of acquiring banks.

H2: Mergers in Pakistan in the post-merger period have improved the liquidity performance indicators of acquiring banks.

H3: Mergers in Pakistan in the post-merger period have improved the capital performance indicators of acquiring banks.

H4: Mergers in Pakistan in the post-merger period have improved the efficiency of acquiring banks.

Determinants of Financial Performance

Profitability: Mergers increase or reduce the gains of the two merging firms from what they would have been if they had not been merged. The majority of the hypotheses why mergers take place think that manager's take full advantage of profits [24].Successful mergers increase the profitability of the combined company. A different perspective of the impact of mergers about profitability emphasizes selection from the capital market [25].

Liquidity: Mergers also influence the liquidity shocks. Researcher [26] explains that "firm level diversification" results in improved liquidity while the views of [27] are quite opposite [26]. A firm with short of liquidity might merge with one which is surplus in liquid assets with the purpose that the joint short-term financial condition will get better [28].

Asset Quality: Assets quality is an alternative significant feature of the assessment of bank's performance. The key aim in measuring asset quality is to determine the percentage of non-performing assets to total assets [29].

Efficiency: The efficiency can be defined as a basis of added value. The sources of value can be represented in three categories: improving revenue, reducing costs and further growth opportunities. Efficiency is synergy drawn by M&A. Activity or turnover ratios are measure of efficiency and generally, "the higher the better". Typically the numerator is an operating measure such as sales (revenues) or cost of goods sold and the denominator is a balance sheet measure such as inventory or receivable. Efficiency ratios measure how effectively the firm employs its resources [30].

RESEARCH METHODOLOGY

Variables of study: This is a comparative study, so that's why it largely based on independent variables. Dependent variable here is the acquisition of bank, and independent variables are the thirteen financial performance indicators. Independent variables are liquidity, profitability, assets quality and capital. The Proxies of these variables include spread ratio , Net interest margin ratio, Return on equity, return on assets, non-interest income to total assets, interest expense to interest income, earnings per share, investment to total assets, advances to total assets, deposits to total assets, total liability to total assets, gross advances to deposits, non-performing loans to gross advances, non-performing loans to shareholders equity, capital ratio, break-up value per share and total deposits to total equity.

Population of study: The population of this study consists of those banks that gone through the wave of mergers from the period of 2006—2010. These banks are various investment banks, modaraba and commercial banks. Three year data of bidder banks has been compared pre and post- merger so that deviations in profitability, liquidity, assets quality and capital can be measured. The reason of using three years, in words of [6] about half of any efficiency gains should be obvious after one year, and all gains should be realized within three years.

Data Collection: This study is based on the secondary data. The data relating to the selected units under study is obtained from prospectus, pamphlets and annual reports of the selected units. Financial information over a period of 2006-2010 is studied that involve collection of financials for three years before the merger and after the merger?

Sampling Method and Sample Size: Restricting this research to public limited banks reduces expected confusion of unnecessary variables [31, 32].Consistent with previous study of [33] corporations in the sample had to satisfy the following criteria: The acquirer and target firm had to be Pakistani listed bank, three year pre and post-data were available. The non-probability sampling technique has been used in this study. A sample of eleven banks is selected by using purposive sampling. Mergers and acquisitions always result in creation of an organization. Mergers and acquisitions occur in Pakistan in form of commercial banks, investment banks, modarabas and even in asset management company. To find out the financial statements of the total population was not an easy that's why a sample of eleven banks was yet selected. The basic sample criteria are that the acquired bank must be in the same industry as the target, all of the assets of the target bank were acquired and the acquiring bank was not involved in any other merger or acquisition during the sample period. In this study, the sample is constructed by examining the merged companies' data available on Karachi Stock Exchange for incidences of mergers between banking companies during 2006-2010. The final sample consists of eleven mergers.

Statistical methods: The analysis of this study is divided into two parts; namely, financial ratios using paired sample ''t'' test and data envelopment analysis (DEA).Author [34] in his book stated that financial ratios are used to measure the relationship between two things. According to him financial ratios are more convenient method of measuring and managing success. Financial ratios provide best proxies. The analysis is performed by using fourteen performance ratios using paired sample ''t'' test. Data envelopment analysis (DEA) will be used to examine the relative indicators of technical and productive efficiency of commercial banks. DEA is an efficiency model. DEA is a non-parametric technique used to measure the production efficiency of decision making units (DMUs). It is a mathematical programming approach based on the concept of efficiency having its roots to the research work done by [35]in which by using linear programming he takes the prices as input to measure cost efficiency of different financial institutions after that [36] extend the [35] work and introduce the input oriented approach by taking the assumption of constant return to scale (CRS). Researcher [37] extended the model of CRS and introduces the variable return to scale. DEA is based on the concept of efficiency. DEA is used to measure the efficiency of each bank with relative to its competitors.

Many researchers have used financial rations to evaluate the performance of banking institutions but due to some demerits of this technique researchers prefer to use DEA model. These researchers include [38-41. They used DEA model to measure the profitability, profit and cost efficiency of various commercial banks.

There are two approaches to measure the bank efficiency by using the DEA approach, one is production approach and other is intermediation approach. In this research intermediation approach is used which is further divided into two type of analysis i. e. input oriented analysis and out oriented analysis by taking the assumption of constant return to scale (CRS) and variable return to scale (VRS). Data Envelopment Analysis (DEA) online Software is used to measure the post-merger efficiency effect of mergers and acquisition.

In this study the variables that are used as inputs includes total deposits, Interest Expense and non- Interest Expense. The output variable includes total loans, interest income and non- interest Income. Researchers [42, 43] used the same variable for Taiwan banks. The total deposits, interest expense and non- interest expense as an input variable and total loans, interest income and non- interest income as an output variable for DEA analysis also used by [39, 41].

The data regarding the (input) variables such as total deposits, interest expense and non- interest expense and the (output) variable such as total loans, interest income and non- interest income are taken from the financial statements of commercial banks: by feeding the data in the data envelopment analysis online software and by applying the input oriented analysis under constant returns to scale (CRS) three years averages pre and three year averages post-merger of each bank (DMU) efficiencies are calculated. The efficiency score is normally represented between zero to one or in percentage form (100%). The efficiency equal to one means the bank is efficient or if it is less than one then it means it is less efficient as compared to efficient unit and if efficiency score is less than 0.75 then it is inefficient.

DATA ANALYSIS AND DISCUSSION

Paired sample ‘’t’’ test: Average Pre-Merger and Post-Merger financial performance variables are compared to see if there is any statistical significant change in operating performance due to merger, using ratios analysis and paired sample t-test at confidence level of 0.05.

Table 1: Paired Sample t-statistics of banking sector

Performance Variables	Pre-merger (adjusted average value)	Post-merger (adjusted average value)	Significance(2 Tailed)	Improved/ Deteriorated
Profitability				
Spread Ratio%	43.152	31.526	.050	Deteriorated
Net Interest Margin Ratio %	2.654	3.503	.042	Improved
Return On Equity%	2.787	.466	.012	Deteriorated
Return On Assets %	1.555	4.212	.088	Improved
Net-Markup/Interest Income To Total Assets %	1.425	1.434	.976	Improved
Interest Expense To Interest Income%	56.640	69.475	.044	Deteriorated
Earnings Per Share RS	1.904	2.571	.443	Improved
Liquidity				
Investment To Total Assets %	22.293	29.964	.005	Improved
Advances Net Of Provisions To Total Assets%	29.964	47.637	.674	Improved
Deposits To Total Assets%	64.442	73.917	.049	Improved
Total Liability To Total Assets%	84.736	88.375	.262	Deteriorated
Gross Advances To Deposits%	71.164	71.263	.989	Improved
Assets Quality				
Non-Performing Loans To Gross Advances %	5.948	15.937	.010	Deteriorated
Non-Performing Loans To Shareholders Equity%	40.025	96.713	.014	Deteriorated
Leverage And Capital				
Capital Ratio %	15.278	11.760	.027	Deteriorated
Break-Up Value Per Share RS	15.465	17.956	.348	Improved
Total Deposits To Total Equity times	7.023	10.457	.098	Improved

Table 1shows the average values of the performance indicators before and after the merger. Seventeen Performance variables shows that the score for the improved ratios after merger is ten (10/17, 59 %), and remaining seven Performance variables score shows deterioration in the post-merger period. Out of ten improved ratios three Performance variables such Net Interest Margin Ratio, Investment to Total Assets and Deposits to Total Assets are statistically significant. Performance indicator after the merger is satisfactory than that before the merger and the mean differences between the two periods significant at the 5% level. At the same time out of seven deteriorated performance variables six variables namely Spread Ratio, Return on Equity, Interest Expense To Interest Income, Non-Performing Loans To Gross Advances, Non-Performing Loans To Shareholders Equity, Capital Ratio are statistically significantly deteriorated at 5% level of significance. Finally it argued that overall banking sector of Pakistan post- merger performance improved and has an insignificant positive impact. Post-merger profitability (insignificantly), liquidity (significantly) and capital leverage (insignificantly) improved while assets quality (significantly) deteriorated. The results of this study are matched with the results of researchers [10, 13, 8, 17, 21]. So Hypothesis H2 is accepted because significant improvements in the performance variables are more than insignificant. Hypothesis H1 and H3 are rejected.

Data envelopment analysis (DEA): The results of post-merger efficiency of eleven sample banks by using data envelopment analysis (DEA) technique are given below

Table 2: Measurement of Efficiency of Banks

Bank Name	TE Under CRS	TE Under VRS	SE	RTS	Ranking Under CRS	Ranking Under VRS	% Reduction In Input Under CRS	% Reduction In Input Under VRS
Allied Bank	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Askari Bank	0.2256	0.635	0.889	1	8.00	6.00	77.44	36.5
Atlas Bank	0.7487	1.00	0.748	0.00	2.00	1.00	25.13	0.00
Bank Alflaha	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
J.S Bank	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Nib Bank	0.581	0.605	0.995	1	8.00	6.00	41.90	39.50
Standard Chartered	0.7284	1.00	0.728	0.00	3.00	1.00	27.16	0.00
Summit Bank	0.5814	0.802	0.676	1	6.00	3.00	41.86	19.80
Albaraka Bank	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Al Faysal Bank	0.9469	0.815	0.934	1	2.00	2.00	53.10	18.50
Kasab Bank	0.6266	1.00	0.6266	0.00	3.00	1.00	37.34	0.00
Average	0.7671	0.896	0.8724	0.36	3.27	2.18	27.63	10.39

Where

TE= technical efficiency, SE= Scale efficiency, RTS= return to scale, VRS= variable return to scale, CRS= constant return to scale, No. of banks considered for analysis= 11

Efficient = >1, Inefficient =< 1

Efficiency score CRS

The table2 indicates the efficiency of banks after merger under constant return to scale method. The results show that four banks are efficient after merger while other seven banks are inefficient having efficiency score less than one. The efficient banks are Allied Bank Limited, Alflah Bank Limited, Albaraka Bank (Pakistan) Limitedand J.S Bank Limited, while Askari Bank Limited, Atlas Bank Limited,NIB Bank Limited, Standard chartered Bank, Summit Bank Limited, Al Faysal Bank Limited and Kasab Limited Banks are inefficient. The average score after the merger is 0.7284. Basically this means that on average, the merger does not look to improve the productive efficiency of banks. Given, such conclusions, understandably sufficient, banks still carry on merging in order to advantage from the economic efficiency of alliance for instance the synergy effect.

Efficiency score distribution under VRS

The above mentioned results show that Allied , Alflaha, Al baraka and J.S Banks are efficient with score “1” while other banks such as Askari, Atlas, NIB, Standard Chartered , Summit , Al Faysal and Kasab are inefficient having score less than “1”.The average score after the merger is 0.896 . Basically this means that on average, the merger does not look to improve the productive efficiency of banks. Given, such conclusions, understandably sufficient, banks still carry on merging in order to advantage from the economic efficiency of alliance for instance the synergy effect. Hypothesis H4 is rejected. The results of this study are comparable to those obtained by [11, 23]that there is no improvement in terms of efficiency after the merger.

CONCLUSION

The purpose of this study is to examine the post-merger operating and financial performance of acquirer banks that have undergone through the process of merger and acquisition during year 2006-2010. In this study the impact of merger and acquisition on profitability, efficiency, liquidity, assets quality and capital performance variables is measured by using paired sample t-statistics and Data Envelopment Analysis (DEA) tools. The results of first objective show that Post-merger profitability (insignificantly), liquidity (significantly) and capital leverage (insignificantly) improved while assets quality (significantly) deteriorated. The results of second objective of this study shows that the overall average performance of sample banks is not improved after merger and acquisitions, some banks are efficient while other banks are less efficient. The efficient banks are Allied, Alflah, Albaraka and J.S Bank, while Askari , Atlas , NIB , Standard chartered , Summit, Al Faysal and Kasab Banks are inefficient. The less efficient banks should improve their deposits bases. These banks should boost up the investment operations, capital, advances and expenses should be carefully handled. This study is showing some sort of mixed results. The post-merger efficiency of banks is not totally efficient or inefficient. The limitation of this study is that it has ignored the impact of possible differences in the accounting methods adopted by different companies in the sample. The study has also not used any control groups for comparison (firms with similar characteristics) as was done in other studies. Another limitation of the study is the small sample size of mergers which might bring in the question of statistical validity of the results. Further research in this area could be an extension of the present study by estimating and comparing with banking industry averages and the differences, if any, could be explored further to drive further in sides. Researchers could also analysis the post-merger return to shareholder of acquiring banks involved in mergers in Pakistan to correlate with findings of studies indicating poor post-merger performance. Further research in this area could be an extension of the present study by analyzing the post-merger performance of financial and non-financial sector of Pakistan.

Recommendations

On the basis of this study, it is recommended that organizations should use mergers and acquisitions as a corporate expansion strategy. Corporations should also use other strategies such as retrenchment and reorganizing. Corporations which are profitable before combining the business can improve their financial position by making subsidiaries by adopting the strategy of group consolidation. Again, a merger may be effective or successful to deliver the immediate objective but may be failed to deliver all the theoretically defined benefits. So, it would be fallacious to assume, on the basis of this study, that overall mergers don't contribute anything to the companies and it is a useless exercise. The success of any business combination primarily is contingent on how mergers are planned, assessed and executed. Particularly, struggle should be made retain main employees of the merged firms through attractive packages of bonuses and pay increases, appropriate clashes resolution steps should take and serious efforts made to gain the anticipated profits of merger.

Acknowledgment:

The authors declare that they have no conflicts of interest in this research.

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