Journal of Business and Social Sciences Research (JBSSR), Vol. 2, No. 1 & 2, pp. 47-68

 ISSN: 2542-2812.

A Comparative Study of Merger Effect on Financial Performance of Banking and Financial Institutions in Nepal*

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ABSTRACT

Merger and Acquisition is relatively new reorganization practice undertaken to strengthen the BFIs in the Nepalese financial market. This study makes an attempt to analyze the financial performance of merged banking and financial institutions relative to their pre-merger performance, and assess the perception of the stakeholders towards merger. Six banks and financial institutions are considered as sample to undertake this study along with 120 respondents for secondary and primary data respectively. The financial ratios comparison method along with t-test of changes in performance measures has been used. This study found that merger impacts performance positively when larger and stable parties such as commercial banks act as bidders as opposed to the merger between smaller BFIs mainly other than commercial banks as bidder. The loan quality significantly deteriorates after merger in most of the cases and profitability measured in terms of ROA and ROE is adversely affected in most of the cases after the merger. Therefore, the merger should not be considered as the definite solutions to overcome the challenges faced in the market; enough evaluation is needed to select the right partners before executing the merger.

Keywords: Financial performance; mergers; cost efficiency; ratio comparison analysis and t-test

1. Introduction

Merger and acquisition have become a key part of many corporate business strategies for the organizations attempting to strengthen and maintain their competitive position in the market place. The U.S. banking industry experienced a

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* The earlier version of this paper was presented in an international conference organized by Faculty of Management, Pokara University, in Pokhara on 27th February, 2017 and international conference organized by Central Department of Management, Tribhuvan University, in Lalitpur on 1-2 June, 2017.

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sustained and unprecedented merger movement from 1980 to 1998. During that period, approximately 8,000 bank mergers occurred. The 1990s, especially 1994-98, was a period of numerous large bank mergers, including several that were among the largest in U.S. banking history. Coincidently, the growth in Nepalese financial sector had taken off in 1990s preceded by the adaption of the economic liberalization policy in 1980s. This overwhelming growth of the BFIs led to malpractice and unfair competition along with poor performance in the banking sector. It has created such a situation where Nepal Rastra Bank (NRB), the central bank of Nepal, found it difficult to remain vigilant on the performance of BFIs and protect public confidence on banking sector.

NRB has introduced the Merger by law, 2068 with the objective of reducing the number of BFIs, enhancing financial stability and promoting public confidence on the banking sector. As a consequence, the banking sector is now experiencing an encouraging restructuring and consolidation. The merger policy is expected to resolve the complexities brought about by the rampant growth in the number of BFIs. NRB has also increased the minimum capital requirement of Rs. 8 billion for commercial banks according to the Monetary Policy of 2072/73 which has forced the BFIs to enter into the merger process. It is expected to help NRB for the efficient regulation and supervision of the institutions under its jurisdiction.

The encouragement for merger by the NRB has resulted in an overwhelming growth in the merger activities. Merger has been used as a means to address cost efficiency, economies of scale and scope of activities (Pathak, 2016). Evidences show that due to economies of scale and scope, bank merger activity is positively related to cost efficiency for small and medium-sized banks even though the number of bank employees does not decline (Peng & Wang, 2004). But Cornett, McNutt and Tehranian (2006) provide contrary evidence that large bank mergers produce greater performance gains than small bank mergers, and activity focusing mergers produces greater performance gains than activity diversifying mergers.

Further, the forced merger arising from direct intervention of government destroys economic value in aggregate and the average efficiency of acquiring banks does not seem to be better than the target banks (Chong, Liu & Tan, 2006). It can be quite costly to integrate institutions which are dissimilar in terms of their loans, earnings, cost, deposit and sizes. As we have cases of merges between different sizes and across different classes of BFIs, the potential cost efficiency from mergers may or may not be significant in our system. Further, Nepalese literature lacks thorough or formal studies on the impact of the merger in the financial performance of merged institutions. Moreover, various studies on the effect of the mergers of banks in the international sector have shown mixed results both in favor and against the financial benefits of merger leading to a state of confusion.

Therefore, the motivation of this study is to fulfill the deficit of Nepalese evidence on the impact of bank mergers on the financial performance by comparing the post-merger performance with pre-merger performance and endorsing whether the ongoing merger policy in Nepal is yielding positive results or not.

Thus, this study makes an attempt to answer research questions such as (i) what is the impact of merger on the financial performance? (ii) If the merger has been instrumental in augmenting financial performance, which of the performance measures have been enhanced the most? (iii) Is merger effective to address the current inefficiencies of banking sector? (iv) if not, what sort of changes should be made in merger policy by the regulator? (v) How is merger perceived by the employees and shareholders of BFIs?

Upon its completion, the study helps the stakeholders of the banking industry to understand the status of the merger of the financial institutions and its impact in the financial performance. It provides data and evidence to help them make better decisions for investment and business in the market.

Rest of the study has been organized as follows: the second section includes review of relevant literature and framing theoretical concept. The third section deals with the model and methods of study, whereas the fourth section includes data presentation and analysis. The fifth section incorporates the conclusion of the study.

2. Review of Literature

The existence of complementary resources contributes for synergy from M&A and rewards the value of contributions made by both parties (Hitt, Harrision, & Ireland, 2001). However, the mergers between the banks exhibiting similar strategic characteristics result in better performance than those involving strategically dissimilar banks (Ramaswamy, 1997). Some merger and acquisition activities might have mixed effects as mergers seek to improve income from expanded services, but the increase in income is offset by higher staff costs and ROE improves because of decrease in capital (Focarelli, Panetta, & Salleo, 2002). So, merger and acquisition have both positive and negative effects on different performance barometer. Singh and Gupta (2015) argue that there is significant difference in post-merger Net Profit Margin, Operating Profit Margin, Return on Capital Employed, Return on Net Worth, Interest Coverage, Deposit per Employee and Credit Deposit Ratio but non-significant difference with respect to Gross Profit Margin, Dept-Equity Ratio, Current Ratio, Quick Ratio, Earnings per Share. The study concludes that the banks have positive effects of merger on financial performance when distinguished between pre mergers and post-merger period.

Linder and Crane (1993) have identified that the acquiring bank is more efficient than the acquired but the profitability ratios do not improve significantly after the merger (Pathak, 2016). Similarly, Badreldin, and Kalhoefer (2009) come up with no clear evidence of improved performance or profitability after merger and acquisition but minor positive effects on the credit risk position in Egyptian banks identified. However in Greek economy, when compared with the ratios of non-merging banks, there is positive impact of merger on operating performance but negative impact on liquidity measures (Mylonidis and Kelnikola, 2005).

The effect in the profitability is also the result of their cost efficiency along with the revenue generation achieved through synergy. The merged banks have lower costs than non-merged banks because they tend to use the most efficient technology available as well as a cost minimizing input mix of allocate efficiency (Al-sharkas, Hassan, & Lawrence, 2008) and thus it is positively related to the benefit of economies of scale and scope from merger of small and medium-sized banks (Peng & Wang, 2004). Further, improved performance is the result of both revenue enhancements and cost reduction activities. However, revenue enhancements are most significant in those mergers that also experience reduced costs (Cornett, McNutt, & Tehranian, 2006).

However, the major objective of any organization is to maximize the shareholders' wealth. The commercial bank mergers significantly enhance shareholder value, especially that of the superior bank shareholders (Bhatta, 2016) than those that have not and therefore have ascertained to have better results than the overall sector (Juma et al., 2012) even though the merger does not improve ROA (Lum, 2009). However, unlike in the findings on the voluntary mergers and acquisitions, the forced merger scheme destroys economic value in aggregate and the acquiring banks tend to gain at the expense of the target banks (Chong, Liu, and Tan, 2006). However, Fatima and Shehzad (2015) find an insignificant impact of merger on shareholders' wealth in short run and overwhelmingly negative returns in the long run in Pakistani banking sector.

Moreover, the stakeholders view that the major reasons for merger are to raise shareholder's value, raise bank's profitability, and lower costs and enlarge market shares (Joash & Njangiru, 2014). There is negative market reaction towards M&A by the target firms but positive reaction by the bidding firms in Asian market (Cheung & Wong, 2009). Moreover, the bank employees feel personally threatened by mergers and acquisitions (Mylonakis, 2006) which also depends on the type of merger as the employees are less satisfied in collaborative merger than in extension merger and is influenced by age, gender and marital status (Wickramasinghe & Karunaratne, 2009). They seek proper organizational identification from the new management which directly affects their turnover intentions (Baniya & Adhikari, 2017).

Since the evidences from different economies on bank mergers suggest varying impact, this study adds to the existing literature on the effects of merger in the banking industry with evidence of Nepalese context revealing which performance dimension significantly improves, deteriorates or remain constant after the merger. It also helps to gain comparative view by linking the results of this study with results from other economies. Furthermore, the published literatures in the Nepalese economy consider only the operational profitability ratios as the variables to measure the post-merger performance and rather than making comparisons of individual financial institutions, pooled data is taken.

3. Methodology

This section deals with the model, conceptual framework, and methodology used for the study.

3.1 The basic model

This study has used the quantitative method to meet the overall objectives and provide answer to the research questions. Both primary and secondary data have been collected for this study. Different techniques and methods have been observed in the past studies. For this study, the financial ratios comparison method along with t-test of changes in performance measures has been used.

Pathak (2016) has followed the operational performance approach to study the post-merger effects of financial institutions which deals with the link between mergers and the productivity efficiency of the banks involved. Fadzlan (2004) has used the non-parametric frontier approach, Data Envelopment Analysis (DEA) to analyze the technical and scale efficiency of commercial banks. Pre and post-merger and acquisition performance have been studied using the correlation analysis (Fatima and Shehzad, 2014) and regression analysis (Ayorinde & Abdul-Ramon, 2012) to test the significance of the various financial ratios. Abbas et al. (2014) have used ratio analysis between pre and post M&A to measure the financial performance where profitability & efficiency, leverage and liquidity ratios are the key ratios. Singh and Gupta (2015) have used the paired sample t-test to measure the pre and post-merger performance. In this study, the ratio analysis approach of Abbas et al. (2014) is followed for ratio wise comparison of pre and post-merger performance. Along with this, the paired sample t-test approach of Singh and Gupta (2015) is followed to analyze the financial ratios of the sample BFIs. To analyze the perception of the stakeholders, the descriptive survey design of Josh and Nijangiru (2015) is followed.

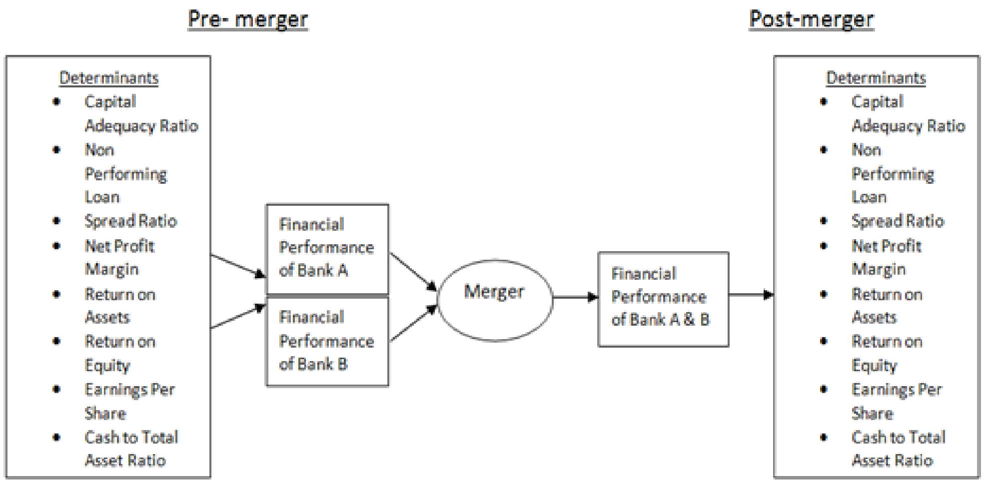

Figure 1: Conceptual Framework

3.2 Conceptual framework

The following conceptual framework is the foundation on which this study is based upon. The framework shows that the different ratios of the pre-merger period of the sampled banks is taken and compared with the post-merger period.

3.3 The data

The statistics regarding M&A in banking sector of Nepal are available in the Financial Stability Report, 2014 of Nepal Rastra Bank. According to this report, altogether there are 24 cases of merger in the banks and financial institutions until July 2013. For the secondary data, 6 cases of merger have been taken as samples for the study. The sample includes three cases of merger where one bidding BFI has merged with another single BFI to form a single institution and three cases where one bidding BFI has merged with other two BFIs to form a single institution. Table 1 shows the list of sampled BFIs for this study. For the qualitative aspect of information related to the merger, the structured questionnaire has been used to collect the primary data from 120 respondents. Among them 60 respondents are BFI employees and the remaining 60 respondents are shareholders excluding bank employees. The convenient sampling technique has been used to determine the sample.

Table 1: BFIs taken as sample for the study

Name of BFI (after merger)	Bidder BFI	Merged BFIs
NIC Asia Bank	Nepal Industrial and Commerce Bank	Bank of Asia
Macchapuchhre Bank	Macchapuchhre Bank	Standard Finance
Supreme Development Bank	Annapurna Bikash Bank	Suryadarsan Finance
Synergy Finance	Butwal Finance	Alpic Everest Finance CMB Finance
Global IME Bank	Global Bank	IME Finance Lord Buddha Finance
Yeti Development Bank	Manakamana Development Bank	Yeti Finance Valley Finance

The study uses eight financial ratios such as Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), Spread Ratio (SR), Net Profit Margin (NPM), Return on Assets (ROA), Return on Equity (ROE), Earnings per Share (EPS) and Cash to Total Assets (CTA) to measure the performance. The selection of the ratios conforms to the variables used by Abbas et al. (2014). It covers profitability & efficiency, leverage and liquidity ratios for analyzing the pre and post-merger financial performance of the bank.

To measure the financial performance of the selected banks, the averages of three year pre- and post-merger financial ratios of the sample banks have been used. The financial ratios are collected and calculated from the annual reports of the merged BFIs and are collected from the respective websites of the merged institution and the bank supervision report of Nepal Rastra Bank.

3.4 Data Analysis Procedures

Both the secondary and primary data collected from the above mentioned sources have been analyzed and interpreted by using various statistical tools. The following hypotheses have been estimated and well tested.

HO_1: There is no significant increment in Capital Adequacy Ratio (CAR) of selected BFI's of post-merger entities.

HO_2: There is no significant increment in Non-Performing Loan (NPL) of selected BFI's of post-merger entities.

HO_3: There is no significant increment in the SR (Spread Ratio) of selected BFI's of post-merger entities.

HO_4: There is no significant increment in Net Profit Margin (NPM) of selected BFI's of post-merger entities.

HO_5: There is no significant increment in Return on Assets (ROA) of selected BFI's of post-merger entities

HO_6: There is no significant increment in Return on Equity (ROE) of selected BFI's of post-merger entities

HO_7: There is no significant increment in Earning per Share (EPS) of selected BFI's of post-merger entities

HO_8: There is no significant increment in CTA (Cash to Total Asset) ratio of selected BFI's of post-merger entities

4. Results and Discussion

4.1 Descriptive Analysis of Pre and Post-merger Financial Ratios

The table below gives the minimum, maximum, mean and standard deviation for each variable in the pre and post-merger period for descriptive analysis.

Table 2: Descriptive statistics of pre-merger financial ratios

Ratios	N	Minimum	Maximum	Mean	Std. Deviation
Capital Adequacy Ratio	45	10	57.81	21.938	11.075
Non-Performing Loan	45	0.09	25.45	4.026	5.827
Spread Ratio	45	24.04	61.75	39.035	9.024
Net Profit Margin	45	1.32	86.73	35.744	20.131
Return on Assets	45	0.03	4.58	1.672	0.996
Return on Equity	45	0.21	29.04	11.178	7.271
Earnings Per Share	45	0.48	37.8	8.793	9.326
Cash to Total Assets	45	7.59	47.09	19.709	7.947

There is lower deviation in the ROA of the BFIs and larger deviation in the NPM in both pre and post-merger period as shown in table 2 and table 3.The ROA of the sampled BFIs are closer to the mean whereas the NPM widely dispersed which shows that the spread rate of the BFIs vary greatly from one another. However, due to the loss incurred by Synergy Finance, which is formed with merger of Butwal Finance with Alpic Everest Finance and CMB Finance, in the period right after merger, there appears to be higher deviation in NPM. The mean NPL has decreased nearly half in post-merger as compared to the pre-merger period, whereas the mean ROA has become negative and the mean ROE has been nearly zero in the post-merger period.

Table 3: Descriptive statistics of post-merger financial ratios

Ratios	N	Minimum	Maximum	Mean	Std. Deviation
Capital Adequacy Ratio	18	9.09	47.08	17.436	10.760
Non-Performing Loan	18	0.64	29.7	8.594	9.112
Spread Ratio	18	6.96	55.08	37.374	12.125
Net Profit Margin	18	-555.9	59.72	-28.442	150.177
Return on Assets	18	-7.69	1.9	-0.164	3.016
Return on Equity	18	-87.63	20.99	0.001	27.980
Earnings Per Share	18	-44.15	47.41	5.863	23.221
Cash to Total Assets	18	11.03	50.39	21.959	10.323

4.2 Comparative Ratio Wise Comparison of Pre and Post-merger Performance

Comparative ratio wise analysis helps to summarize the changes in the particular ratios in the post-merger period as compared to the pre-merger period of the selected BFIs under one heading. As the objective of the study is to assess the changes in the financial performance, ratio wise analysis is chosen to examine increase or decrease in the financial ratios.

Table 4: Pre and post merger analysis of CAR

Merged Entity	Pre-merger		Post-merger	Comparison	
	Bidder BFI (A)	Combined (B)	(C)	A vs. C	B vs. C
NIC Asia	12.27	13.43	13.24	Increase	Decrease
Macchapuchhre Bank	11.03	21.71	12.74	Increase	Increase
Supreme Dev. Bank	44.05	34.51	39.30	Decrease	Increase
Synergy Finance	16.98	19.61	10.95	Decrease	Decrease
Global IME Bank	10.77	19.60	11.73	Increase	Decrease
Yeti Dev. Bank	34.05	25.86	16.67	Decrease	Decrease

The table 4 shows that among the six samples, only in the case where the bidders are commercial banks witnessed an increase in the CAR after merger. However, CAR in all BFIs except Supreme Dev. Bank has decreased after merger as compared to the combined ratio prior to merger. This indicates that mergers between BFIs where one party is not a commercial bank increases the risk assets and reduces the cushion against the risks in the company. The evidence in this study contradicts with the evidence provided by Nedunchezhian and Premalatha (2013), who have found that the CAR has decreased after the merger where the bidder firm is a commercial bank.

Table 5: Pre and post merger analysis of NPL

Merged Entity	Pre-merger		Post-merger	Comparison	
	Bidder BFI (A)	Combined (B)	(C)	A vs. C	B vs. C
NIC Asia	0.68	1.28	2.24	Increase	Increase
Macchapuchhre Bank	3.04	2.04	2.11	Decrease	Increase
Supreme Dev. Bank	1.41	1.10	7.34	Increase	Increase
Synergy Finance	2.19	8.83	26.21	Increase	Increase
Global IME Bank	1.15	0.79	2.15	Increase	Increase
Yeti Dev. Bank	3.61	2.94	11.51	Increase	Increase

Table 5 shows that there is increase in the Non-Performing Loan (NPL) in almost all the merged BFIs in comparison to the bidder BFIs except Macchapuchhre Bank. When the post-merger NPLs are compared against the combined ratio of BFIs included into merger process prior to the merger, it is found that the NPL has increased in all BFIs, which is not a good indicator. In the case of Synergy Finance, the NPL has made a huge jump that indicates problematic condition of the finance company after merger threatening its solvency. The study of Peng & Wang (2004) has showed the similar result to this finding where the non-performing loan after merger has increased significantly affecting the efficiency of the institution.

Table 6: Pre and post merger analysis of SR

Merged Entity	Pre-merger		Post-merger	Comparison	
	Bidder BFI (A)	Combined (B)	(C)	A vs. C	B vs. C
NIC Asia	37.65	35.87	43.99	Increase	Increase
Macchapuchhre Bank	33.93	39.30	33.43	Decrease	Decrease
Supreme Dev. Bank	54.22	48.96	48.69	Decrease	Decrease
Synergy Finance	28.02	30.31	19.25	Decrease	Decrease
Global IME Bank	33.84	39.91	42.28	Increase	Increase
Yeti Dev. Bank	52.12	44.53	36.61	Decrease	Decrease

In table 6, spread ratio has decreased after the merger for all the BFIs except NIC Asia and Global IME Bank. Only in the case of NIC Asia and Global IME Bank, the actual post-merger SR exceeds the combined Pre merger SR of the bidding bank. This result indicates that banks do not perform well to enhance their income above the interest expense after merger. This is opposite of the findings of Al-Hroot (2015) which has offered the improvement in the spread ratio after merger but insignificantly for Jordhan Ali bank in Philadelphia.

Table 7: Pre and post merger analysis of NPM

Merged Entity	Pre-merger		Post-merger	Comparison	
	Bidder BFI (A)	Combined (B)	(C)	A vs. C	B vs. C
NIC Asia	42.66	35.60	37.13	Decrease	Increase
Macchapuchhre Bank	10.61	18.21	17.08	Increase	Decrease
Supreme Dev. Bank	44.60	40.74	19.50	Decrease	Decrease
Synergy Finance	38.48	40.33	-242.78	Decrease	Decrease
Global IME Bank	14.99	32.27	31.51	Increase	Decrease
Yeti Dev. Bank	56.96	46.59	-33.08	Decrease	Decrease

Table 7 shows decrease in the Net Profit Margin (NPM) in most of the BFIs after merger. The NPM of Macchapuchhre Bank and Global IME has improved but most of the other BFIs have experienced decrease in their net profit margins and two institutions, namely Synergy Finance and Yeti Development Bank have even incurred loss. The result shows that, merger may have increased cost of operations and thus negatively affects the profitability of the BFIs other than commercial banks as bidders. This result contradicts with the findings of Joash & Njangiru (2015) where the mergers and acquisitions have a significant positive effect on their market share, gross profit and net profit.

Table 8: Pre and post merger analysis of ROA

Merged Entity	Pre-merger		Post-merger	Comparison	
	Bidder BFI (A)	Combined (B)	(C)	A vs. C	B vs. C
NIC Asia	2.09	1.63	1.57	Decrease	Decrease
Macchapuchhre Bank	0.36	0.80	0.59	Increase	Decrease
Supreme Dev. Bank	3.12	2.34	1.07	Decrease	Decrease
Synergy Finance	0.78	1.38	-4.06	Decrease	Decrease
Global IME Bank	0.64	1.82	1.22	Increase	Decrease
Yeti Dev. Bank	3.10	2.31	-1.37	Decrease	Decrease

Table 8 shows decrease in return on assets (ROA) in most of the bidding BFIs after the merger and even two BFIs have negative ROA due to loss in their operations after the merger. Only two banks, Macchapuchhre Bank and Global IME Bank, show that ROA has improved after merger. Moreover, the actual post-merger ROA of all the BFIs has decreased in comparison to the combined ratios indicating negative outcome of the merger. The findings do not support Linder & Crane (1993), Badreldin and Kalhoefer (2009); and Al- Hroot (2015) where ROA has improved significantly after merger but is similar to the finding of Lum (2009).

Table 9: Pre and post merger analysis of ROE

Merged Entity	Pre-merger		Post-merger	Comparison	
	Bidder BFI (A)	Combined (B)	(C)	A vs. C	B vs. C
NIC Asia	24.73	17.83	14.54	Decrease	Decrease
Macchapuchhre Bank	4.32	4.80	7.20	Increase	Increase
Supreme Dev. Bank	10.07	10.76	4.03	Decrease	Decrease
Synergy Finance	12.26	11.72	-37.26	Decrease	Decrease
Global IME Bank	7.19	13.72	15.43	Increase	Decrease
Yeti Dev. Bank	9.14	11.18	-3.92	Decrease	Decrease

Table 9 shows decrease in Return on Equity (ROE) in most of the bidding BFIs after the merger except Macchapuchhre Bank and Global Bank. Instead, Synergy Finance and Yeti Development Bank have incurred a loss and produced a negative ROE after the merger. The evidence of improved ROE after merger is similar to the findings of Cornett, McNutt, and Tehranian (2006) which states that the large merger produce greater performance gains than small merger.

Table 10: Pre and post merger analysis of EPS

Merged Entity	Pre-merger		Post-merger	Comparison	
	Bidder BFI (A)	Combined (B)	(C)	A vs. C	B vs. C
NIC Asia	33.99	22.49	36.33	Increase	Increase
Macchapuchhre Bank	4.61	5.12	8.62	Increase	Increase
Supreme Dev. Bank	10.16	11.37	4.48	Decrease	Decrease
Synergy Finance	2.13	1.62	-22.51	Decrease	Decrease
Global IME Bank	7.21	14.57	15.84	Increase	Decrease
Yeti Dev. Bank	9.14	3.93	-7.58	Decrease	Decrease

Table 10 shows that among the six sampled BFIs, only in three BFIs the post-merger EPS has increased and two BFIs having negative EPS due to the loss incurred by the BFIs after the merger. The EPS of commercial banks with large total assets has increased. It shows the mixed effects of the merger. The evidence of increased EPS after merger supports the findings of Lum (2009). But the evidence of decreased EPS after merger is similar to the evidence of Fatima and Shehzad (2014).

Table 11: Pre and post merger analysis of CTA

Merged Entity	Pre-merger		Post-merger	Comparison	
	Bidder BFI (A)	Combined (B)	(C)	A vs. C	B vs. C
NIC Asia	9.67	11.98	12.40	Increase	Increase
Macchapuchhre Bank	13.62	14.34	18.35	Increase	Increase
Supreme Dev. Bank	25.43	31.60	37.23	Increase	Increase
Synergy Finance	26.37	20.26	21.45	Decrease	Increase
Global IME Bank	11.80	19.76	14.70	Increase	Decrease
Yeti Dev. Bank	20.66	20.64	27.63	Increase	Increase

Table 11 shows increase in the Cash to Total Assets (CTA) in most of the bidding BFIs after the merger. Only in the case of Global IME Bank the post-merger CTA has decreased in comparison to CTA of Bidder and combined ratio in the pre-merger period. These results show that there is improvement in the liquidity performance of the BFIs after merger as their cash and cash equivalents have increased. This result is in opposite of the findings of Al-Hroot (2015) where the Cash to Total Assets significantly deteriorated after the merger.

4.3 Analysis of Financial Ratios of Sample BFIs

This table below present the mean value and standard deviation for each variable of the sampled BFIs. It is the tool that helps in the inferential analysis as the paired sample t-test is used to evaluate the significant impact of mergers on the financial performance of the bank as per the objective of the study.

Table 12: Analysis of financial ratios of NIC Asia bank limited

Ratios	Status	N	Mean	Std. Dev.	t-value	p-value
	Pre-merger	3	13.43	1.034		
Capital Adequacy Ratio	Post-merger	3	13.24	0.782	0.259	0.809
	Pre-merger	3	1.28	0.951		
Non-performing Loan	Post-merger	3	2.24	0.147	-1.727	0.221
	Pre-merger	3	35.87	3.185		
Spread Ratio	Post-merger	3	43.98	3.331	-3.049	0.038
	Pre-merger	3	35.6	4.868		
Net Profit Margin	Post-merger	3	37.12	4.755	-0.388	0.718
	Pre-merger	3	1.63	0.284		
Return on Assets	Post-merger	3	1.57	0.311	0.247	0.817
	Pre-merger	3	17.83	3.536		
Return on Equity	Post-merger	3	14.54	1.442	1.495	0.209
	Pre-merger	3	22.49	2.809		
Earnings Per Share	Post-merger	3	36.33	10.914	-2.126	0.101
	Pre-merger	3	11.98	2.281		
Cash to Total Assets	Post-merger	3	12.4	1.468	-0.270	0.800

Table 12 shows that the average spread ratio, net profit margin, earnings per share and cash to total assets are found to have improved after the merger while other ratios have deteriorated. Here, the spread ratio has improved significantly after the merger and the changes in other ratios are not statistically significant. This result contradicts to the findings of Badreldin and Kalhoefer (2009) where most of the ratios have improved.

Table 13: Analysis of financial ratios of Macchapuchhre bank limited

Ratios	Status	N	Mean	Std. Dev.	t- value	p-value
	Pre-merger	3	21.71	7.005		
Capital Adequacy Ratio	Post-merger	3	12.74	2.212	2.116	0.102
	Pre-merger	3	1.17	1.027		
Non-performing Loan	Post-merger	3	2.11	1.27	-0.990	0.378
	Pre-merger	3	39.3	4.666		
Spread Ratio	Post-merger	3	33.43	9.832	0.934	0.403
	Pre-merger	3	18.21	3.294		
Net Profit Margin	Post-merger	3	17.08	13.488	0.141	0.895
	Pre-merger	3	0.8	0.255		
Return on Assets	Post-merger	3	0.59	0.488	0.650	0.551
	Pre-merger	3	4.98	2.031		
Return on Equity	Post-merger	3	7.19	6.341	-0.577	0.595
	Pre-merger	3	5.12	2.195		
Earnings Per Share	Post-merger	3	8.62	8.706	-0.675	0.537
	Pre-merger	3	14.34	2.172		
Cash to Total Assets	Post-merger	3	18.35	3.453	-1.703	0.164

Table 13 shows that the average of return on equity, earnings per share and cash to total assets are found to have improved after the merger. However, other ratios have deteriorated and all above differences are not statistically significant.

Table 14: Analysis of financial ratios of supreme bank limited

Ratios	Status	N	Mean	Std. Dev.	t-value	p-value
	Pre-merger	3	34.507	7.208		
Capital Adequacy Ratio	Post-merger	3	39.300	7.244	-0.812	0.462
	Pre-merger	3	1.107	0.584		
Non-performing Loan	Post-merger	3	7.343	2.430	-4.321	0.041
	Pre-merger	3	48.963	2.763		
Spread Ratio	Post-merger	3	48.690	2.431	0.129	0.904
	Pre-merger	3	40.737	10.024		
Net Profit Margin	Post-merger	3	19.500	12.156	2.335	0.080
	Pre-merger	3	2.340	0.758		
Return on Assets	Post-merger	3	1.073	0.649	2.198	0.093
	Pre-merger	3	10.757	2.834		
Return on Equity	Post-merger	3	4.027	2.680	2.989	0.040
	Pre-merger	3	11.370	3.374		
Earnings Per Share	Post-merger	3	4.480	3.162	2.581	0.061
	Pre-merger	3	31.603	3.303		
Cash to Total Assets	Post-merger	3	37.227	11.466	-0.816	0.460

Table 14 shows that the average ratios of capital adequacy ratio and cash to total assets are found to have improved after the merger but other ratios have deteriorated. The profit margin, return on assets and earnings per share are statistically significant at 10 percent level of significance. This result is similar to the findings of Singh and Gupta (2015) where certain ratios of ICICI banks are significant in 5 percent level of significance and some are significant in 10 percent level of significance.

Table 15: Analysis of financial ratios of synergy finance limited

Ratio	Status	N	Mean	Std. Dev.	t-value	p-value
	Pre-merger	3	19.607	3.422		
Capital Adequacy Ratio	Post-merger	3	10.947	1.674	3.938	0.017
	Pre-merger	3	8.830	1.896		
Non-performing Loan	Post-merger	3	26.207	3.819	-7.060	0.002
	Pre-merger	3	30.313	4.887		
Spread Ratio	Post-merger	3	19.253	11.974	1.481	0.213
	Pre-merger	3	40.333	24.697		
Net Profit Margin	Post-merger	3	-242.783	307.947	1.587	0.188
	Pre-merger	3	1.373	0.260		
Return on Assets	Post-merger	3	-4.063	5.205	1.807	0.212
	Pre-merger	3	11.720	6.251		
Return on Equity	Post-merger	3	-37.260	54.550	1.545	0.197
	Pre-merger	3	1.620	0.737		
Earnings Per Share	Post-merger	3	-22.510	28.748	1.453	0.283
	Pre-merger	3	20.837	2.663		
Cash to Total Assets	Post-merger	3	21.450	8.766	-0.116	0.913

Table 15 shows that the average ratios of cash to total assets are found to have increased after the merger but the other ratios have deteriorated. Here, the capital and the loan quality have deteriorated significantly after the merger. In other ratios, there is no significant difference in ratios before and after the merger. This result is similar to the findings of Kemal (2011) where merger has failed to improve the financial performance ratio of the bank.

Table 16: Analysis of financial ratios of global IME bank limited

Ratios	Status	N	Mean	Std. Dev.	t-value	p-value
	Pre-merger	3	16.550	5.993		
Capital Adequacy Ratio	Post-merger	3	11.727	0.623	1.387	0.238
	Pre-merger	3	0.673	0.557		
Non-performing Loan	Post-merger	3	2.153	0.466	-3.529	0.024
	Pre-merger	3	37.643	4.521		
Spread Ratio	Post-merger	3	42.280	13.191	-0.576	0.596
	Pre-merger	3	24.927	21.750		
Net Profit Margin	Post-merger	3	31.507	8.658	-0.487	0.652
	Pre-merger	3	1.333	0.996		
Return on Assets	Post-merger	3	1.217	0.384	0.189	0.859
Return on Equity	Pre-merger	3	10.517	6.904	-1.103	0.332

	Post-merger	3	15.430	3.448		
	Pre-merger	3	11.097	7.463		
Earnings Per Share	Post-merger	3	15.837	3.899	-0.975	0.385
	Pre-merger	3	16.983	5.067		
Cash to Total Assets	Post-merger	3	14.700	1.343	0.755	0.493

Table 16 shows that the average ratio of spread ratio, net profit margin, earnings per share and return on equity are found to have increased after the merger but the other ratios have deteriorated. Here, the loan quality has deteriorated significantly after the merger. In the other ratios there is no significant difference in ratios before and after the merger. This result is similar to the findings of Singh and Gupta (2015) where there is no significant improvement of the financial ratios of State Bank of India except the ner porfit margin.

Table 17: Analysis of financial ratios of yeti development bank limited

Ratios	Status	N	Mean	Std. Dev.	t-value	p-value
	Pre-merger	3	24.310	4.099		
Capital Adequacy Ratio	Post-merger	3	16.667	5.770	1.870	0.135
	Pre-merger	3	3.043	1.298		
Non-performing Loan	Post-merger	3	11.513	4.130	-3.389	0.028
	Pre-merger	3	42.697	8.012		
Spread Ratio	Post-merger	3	36.610	2.857	1.239	0.283
	Pre-merger	3	45.683	4.236		
Net Profit Margin	Post-merger	3	-33.077	95.402	1.428	0.289
	Pre-merger	3	2.087	1.020		
Return on Assets	Post-merger	3	-1.367	3.721	1.550	0.245
	Pre-merger	3	10.993	3.478		
Return on Equity	Post-merger	3	-3.923	27.125	0.945	0.398
	Pre-merger	3	2.867	2.374		
Earnings Per Share	Post-merger	3	-7.577	22.425	0.802	0.505
	Pre-merger	3	21.287	4.536		
Cash to Total Assets	Post-merger	3	27.630	6.908	-1.330	0.254

Table 17 shows that the average ratio of cash to total assets is found to have increased after the merger. However, the mean ratios of other ratios are found to have deteriorated. There are negative mean ratios of net profit margin, return on assets, return on equity and earnings per share due to the loss incurred after the merger. Here, the loan quality has deteriorated significantly after the merger. In the other ratios, there is no significant difference in ratios before and after the merger. This result contradicts the findings of Nedunchezhian & Premalatha (2013) where there are significant differences in financial performance before and after the merger activity.

4.4 Analysis of the Perception of the BFIs' Employees and Shareholders

The tables below show the view point of the respondents regarding the various issues relating to the merger observed in the present economy. The descriptive statistics for the response is done to present the perception of the BFI employees and the shareholders.

Table 18: Major challenges faced by BFIs

Status	Lack of investment and growth opportunities	Increasing operations cost	Increasing competition	Fulfilling capital requirement set by NRB	Total
BFI	12	6	19	23	
employee	20%	10%	31.7%	38.3%	60
Non-	12	6	21	21	
employee	20%	10%	35%	35%	60
	24	12	40	44	
Total	20%	10%	33.3%	36.7%	120

Table 18, shows the two major challenges to merger. 36.7% of the respondents feel that fulfilling capital requirement set by NRB is the major challenge and 33.33% feel increasing competition is the major challenge for the BFIs. However, 20% feel that the lack of the investment and growth opportunities as the challenge and only 10% feel increasing cost as the challenge faced by the BFIs in the economy.

Table 19: Main reason behind increment of mergers between BFIs

Status	NRB regulation on capital	Improve Financial performance	Reduce operating expenses	All of them	Total
	22	17	6	15	
BFI employee	36.7%	28.3%	10%	25%	60
	22	17	6	15	
Non-employee	36.7%	28.3%	10%	25%	60
	44	34	12	30	
Total	36.67%	28.33%	10%	25%	120

Table 19 shows the major challenge that the BFIs are facing is the fulfilling of the capital requirement, and is the main reason for the increment of the merger. The study made by Joash & Njangiru (2015) suggests that the main reason for bank merger and acquisition is to raise profitability and enlarge market share. 28.33% feel Improving financial performance as the reason, 28.33% feel reducing operating expenses as the reason and 25% feel the entire above mentioned are the reason for the increment of mergers between the BFIs in the economy.

Table 20: Main reason behind NRB encouraging merger

Status	Prevent Overcrowding	Maintain financial stability	Reduce supervisory cost	Make them competitive	Total
BFI employee	17 28.8%	30 50%	4 6.7%	9 15%	60
Non-employee	9 15%	37 61.7%	5 8.3%	9 15%	60
Total	26 21.7%	66 55.8%	9 7.5%	18 15%	120

Table 20 shows majority of the respondents (55.8%) have understood that NRB has aimed for financial stability in the market by encouraging mergers between the BFIs. Here 21.7% feel that NBR is encouraging mergers to prevent overcrowding of banks in the economy and the other 15% feel the reason is to make the BFIs more competitive. Only 7.5% feel that NRB is encouraging merger to reduce the supervisory cost.

Table 21: The major challenges during transition phase of merger

Challenges	N	Mean	Std. Deviation	Rank
Rank of Settlement in the brand name	120	3.31	1.365	5
Rank of composition of BOD	120	3.03	1.338	3
Rank of structure of new management team	120	2.73	1.465	1
Rank of employee management	120	2.9	1.44	2
Rank of ownership division	120	3.06	1.39	4

In table 21, we can see that most respondents perceive that structure of new management team is the most important issue that arises during the transition phase with mean of 2.73 and settlement of brand name as the least important issue in the transition phase of the merger with mean of 3.31.

Table 22: Effectiveness of merger by laws

Status	Yes	No	Difficult to say	Total
BFI employee	30 50%	20 33.3%	10 16.7%	60
Non-employee	31 51.7%	17 28.3%	12 20%	60
Total	61 50.8%	37 30.8%	22 18.3%	120

Table 22 shows 50.8% of the respondents feel that the merger has been effective to fulfill their objectives in the current scenario. However, 30.8% feel that the merger is not effective and 18.3% of the respondents are undecided to conclude whether merger has been successful to benefit the institutions in the economy.

5. Concluding Remarks

Merger has been undertaken for various motives including cost efficiency, revenue enhancement, capital position consolidation, economies of scale and scope and so on. The study shows that merger is beneficial only in the cases where large and stable parties such as commercial banks are involved and the financial performance of bidder BFIs improves after merger but the changes are not significant. As a consequence of merger between the two BFIs, the capital and EPS have improved at a cost of higher NPL and reduced profitability NPM, ROA and ROE as they are overburdened with the excess assets that are forced to acquire them.

Further, merger can be expected to yield positive impact when the bidder BFIs is commercial banks, which are relatively larger in size. These larger institutions have the capacity to provide the financial stability and backup to the merging institution and produce synergy effect after the merger supporting the evidence of Cornett, McNutt and Tehranian (2006). In case of the merger between the smaller BFIs, the merger is seen to be counterproductive as the weaker and troubled parties have to face huge financial loss after the merger. This finding is contradictory with the evidence of Peng and Wang (2004).

The loan quality significantly deteriorates after merger in most of the cases and profitability measured in terms of ROA and ROE is adversely affected in most of the cases after the merger. In merger the BFIs are bound to acquire staffs and other assets greater than their requirement that increases their expenses and reduce their profits and in certain cases also leads to incur loss.

The study also highlights that at present BFIs have to merge to maintain the capital requirement and financial stability and therefore M&A should be done by realizing the necessity rather than being forced into it. The merger should not be considered as the definite solutions to overcome the challenges faced in the market. Moreover, the banking institutions should make enough evaluation to select the right partners before executing the merger. However, the study is limited to focus on the few selected financial institutions for the period of six years and consider the eight financial ratios to measure the performance of the sample. The future researchers are further recommended to incorporate the recent merged BFIs and consider additional financial ratios along with swap ratios to analyze the effects of merger.

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