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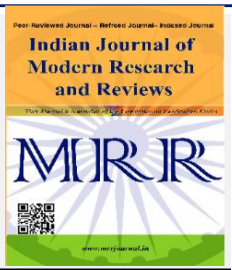

Research Article

The Effect of Mergers and Acquisitions on the Financial Performance of Nepalese Commercial Banks

Kabi Raj Acharya and Naveen Kumar Sharma

Abstract:
Involuntary mergers and their impact on the financial performance of a merged entity have received little attention in the academic world. To examine the phenomenon, we utilize a unique setting whereby a regulatory change influences merger activities in Nepal. We hand-collect financial data from each company's website and conduct a mean difference test between the financial ratios three-year before and after the involuntary merger. We find that financial institutions grow in size after the merger, but these involuntary mergers do not improve the financial performance of the companies involved. Thus, we recommend that institutions conduct due diligence before approaching a merger partner.

Keywords: *Mergers and acquisitions, commercial banks, financial performance, synergy, regulation, Involuntary*

Introduction
In the modern global economy, mergers and acquisitions (M&As) are used worldwide to improve competitiveness, gain greater market share, avoid unhealthy competition, broaden product portfolios, enter new markets, and enhance technical capabilities. M&As may occur either as a rational choice of managers or result from macroeconomic disturbances such as recession (Trautwein, 1990)[1]. A rational strategic acquisition decision may lead to value creation via gains from synergy (Joash & Njangiru, 2015; Yanan, Hamza & Basit, 2016)[2, 3]. However, macroeconomic disturbances, including regulation changes, can negatively affect the parties involved (Malatesta & Thompson, 1993; Schipper & Thompson, 1983)[4, 5]. Even though the influence of the former channel has been extensively studied, the latter has received little attention. We aim to fill the gap in the literature by examining a unique setting whereby an introduction of a regulatory change influences firms to be involved in a merger.

The financial sector plays a major role in a nation's economic growth and development. Banking and financial institutions (BFIs) help circulate money between lenders and borrowers, provide loans to business entities, fund innovative projects, and provide aid in revenue collection. Because BFIs play a mediatory role among several corporate organizations, any changes in the financial sector affect the entire market. Considering the importance of the sector, we focus our analysis on BFIs.

In Nepal, after the financial sector reform in 1984, the number of private BFIs increased substantially. By 2011, the total number of BFIs reached 218. Many of these BFIs suffered due to a small capital base, liquidity crunch, and poor corporate governance. To improve their financial condition, World Trade Organization (WTO) and International Monetary Fund (IMF) proposed that these institutions should increase their paid-up capital. Following the proposal, in July 2010, the central bank of Nepal issued a guideline stating that BFIs should increase their minimum capital fund based on the risk-weighted assets and suggested BFIs merge with other banking institutions to help obtain the goal.

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Consequently, Nepalese BFIs undergo several mergers. These involuntary mergers help increase the capital of the resulting new entity but may not produce the desired improvement in its financial performance. Considering the merger's involuntary nature, we hypothesize that Nepalese BFIs do not perform due diligence and thus fail to realize gains from synergy following the merger. We hand collected financial information of several BFIs that were involved in a merger during the period from 2014 to 2016. We conduct mean difference tests of the financial ratios of the BFIs three years before and after the merger. We focus our analysis on six key ratios: return on assets (ROA), return on equity (ROE), earning per share (EPS), net worth, non-performing loan, and weighted average interest rate spread (IRS). Our results show that following the merger, BFIs do increase their net worth but do not show substantial improvement in their financial performance; exceptions were few banks with better partner selection that were able to translate anticipated synergy to actual positive post-merger performance. Our paper is the first to examine the long-run effect of involuntary mergers in the Nepalese banking and financial sector. Dwa and Shah (2017)[6] and Pathak (2016)[7] examine mergers between a few banking institutions, and they focus on the short-run analysis, particularly one year after the merger. Second, by examining the impact of a regulatory change, we add to the M&A literature that examines mergers as a macroeconomic phenomenon.

Our paper is structured as follows—section two reviews related literature. Section three provides information about the financial market in Nepal. Section 4 explains our hypothesis, and section five describes our data collection process. We conduct our empirical tests in section six and conclude in section seven.

Review of literature

Theoretical Overview

A merger occurs when two or more firms agree to move forward as a single joint entity for their mutual benefits, while an acquisition occurs when a firm takes over assets, equipment, and plant or business unit of another organization. A merger is the complete absorption of one firm by another, wherein acquiring firm retains the identity, and the acquired firm ceases to exist as a separate entity. Mergers and acquisitions (M&As) is one of the ways by which firms attempt to create value, often via expansion into new markets, acquisition of new technology, achieving economies of scale, and reduction of redundant costs and competition (DePamphilis, 2008)[8]. Trautwein (1990)[1] summarizes merger motives as follows;

<table>
<tr><td rowspan="5">Merger as a rational choice</td><td rowspan="4">Merger benefits bidder's shareholders</td><td>Net gains through synergies</td><td>Efficiency theory</td></tr>
<tr><td>Wealth transfers from customers</td><td>Monopoly theory</td></tr>
<tr><td>Wealth transfers from target's shareholders</td><td>Raider theory</td></tr>
<tr><td>Net gains through private information</td><td>Valuation theory</td></tr>
<tr><td colspan="2">Merger benefits managers</td><td>Empire building theory</td></tr>
<tr><td colspan="3">Merger as a process outcome</td><td>Process theory</td></tr>
<tr><td colspan="3">Mergers as a macroeconomic phenomenon</td><td>Disturbance theory</td></tr>
</table>

Source: *Adapted from Trautwein (1990)[1]*

Firms are engaged in M&As either as a rational choice, as a process outcome, or due to a macroeconomic phenomenon. M&As may benefit the acquirer via net gains from synergy or transfer of wealth/information from a target to an acquirer. Acquirers can gain from synergy through a reduction in the cost of capital, lower systematic risk, and increase in market share, strengthen the core business, or gain in critical mass-competitive size (Bengtsson, 1992)[9]. Performance after the merger described by the synergy, i.e., the "2+2=5" effect, is the primary purpose for merging and acquiring new firms (Appelbaum *et al.*, 2000)[10]. M&As may also result from acquirers' trying to reduce competition by buying small firms in the same business (creating a monopoly), trying to buy undervalued companies, or trying to gain insider information about a potential target company. Besides, a disturbance in the industry, such as merger waves, or an economic crisis, such as a financial crisis, may increase the probability among firms searching for acquisition deals.

M&As have become popular in the banking sector as a major way of corporate restructuring in most countries (Jayadev & Sensarma, 2007)[11]. Banks often close redundant branches or consolidate back-office functions after a merger. Mergers also help bank increase productivity by helping increase a range of profitable banking products or diversify their portfolios. An increase in diversification lowers total costs by reducing desired capital-asset ratios, ultimately resulting in a lower probability of insolvency.

M&As may not always be beneficial to the target and the acquirer. Poor corporate performance in the post-merger period can be attributed to numerous reasons – managerial entrenchment, manager's desire for position and influence, low productivity, poor quality firm, reduced commitment, voluntary turnover, and related hidden costs and untapped potential (Buono, 2003)[12]. Financial synergies from M&As can be negative if acquiring companies have entirely different default costs or risks from the target company (Leland, 2007)[13]. Managerial and operational synergies, on the other hand, have been criticized as evasive concepts that are often claimed for mergers but seldom realized (Kitching, 1967; Porter, 1987)[14, 15].

Empirical Literature

Extant literature suggests that mergers have been beneficial to merging entities. Kumar and Bansal (2008)[16] find that compared to the pre-merger period, in more than half of the cases, post-merger financial performance has improved. Sinha and Gupta (2011)[17] report improvements in financial ratios such as earnings before interest and tax, return on shareholder funds, profit margin, interest coverage ratio, current ratio, and cost efficiency following the merger. Joash and Njangiru (2015)[2] and Yanan *et al.* (2016)[3] show that M&As raise the shareholder value and profitability of an acquirer. Pertaining to financial institutions, Oloye and Osuma (2015)[18] find that M&As are effective in ensuring the stability and profitability of the banking sector. They find that shareholders' funds contribute significantly to after-tax profit and that corporate restructuring positively affects the capital adequacy of commercial banks. Authors relate the improvement of merged entities to net gains from synergy. Tamragundi and Devarajappa (2016)[19] also find mergers to be useful through which banks can expand their operations, serve a larger customer base, and increase profitability, liquidity, and efficiency. To analyze the financial ratios Al-hroot (2015)[20] shows that the ROA and ROE of involved parties improved after the merger. However, M&As are not always favorable to parties involved in a merger. Ravichandran, Mat-Nor, and Mohd-Said (2010)[21] found no significant effect of the merger on the profitability and production efficiency of merged banks. In a case study examining the merger between ABN AMRO and Royal Bank of Scotland, Kemal (2011)[22] found that the financial performance of Royal Bank of Scotland did not improve significantly post-merger. Similarly, Naga and Tabassum (2013)[23] and Ojha and Walsh (2016)[24] report no significant changes in the financial indicators of merged financial institutions. Ferrer (2012)[25] finds a significantly negative impact of the merger on financial ratios such as ROE and ROA. Moctar and Chen (2014)[26] also report the negative impact of M&As on financial performance but only in the short run. In the end, the financial performance of the resulting entity improved. Even though mergers in the international market have been extensively studied, M&As in the Nepalese market have been scantly explored. Dwa and Shah (2017)[6] examine the merger between Nepal Bangladesh Bank and NIC ASIA bank and find that mergers do not play a significant role in improving operational ratios. Pathak (2016)[7] also reports similar findings with no change in profitability measures post-merger. However, none of these studies examine the effect of M&As driven by the guidelines brought by the Nepalese central bank to increase the total capital of commercial banks. We are the first study to examine how indirectly forced mergers to affect the financial performance of banks, particularly in the case of Nepal.

The financial market in Nepal

The Nepalese financial market is made up of commercial banks (Class A), development banks (Class B), finance companies (Class C), and microfinance institutions (Class D). The primary difference between the classes is paid-up capital. Class A BFIs have a minimum capital of NRs 8 billion (USD 93.72 million based on the average exchange rate of 2020), Class B 2.5 billion (USD 29.29 million), and C BFIs of NRs 0.8 billion (USD 9.37 million), and Class D BFIs of NRs 0.1 billion (USD 1.17 million). In addition to the capital, the purpose of each of these institutions differs. Class A BFIs focus on promoting trade and commerce, while Class B BFIs indulge in promoting certain sectors of the economy, such as agriculture, industry, or commerce. Class C BFIs focus on small private loans, while Class D focuses on supplying microcredit. The primary motive that connects these institutions together is that all classes provide banking and commercial services. The first national bank of Nepal was established in 1937 AD. Later in 1956, the central bank of Nepal, Nepal Rastra Bank (NRB) was established, and it started performing monetary policies for the country. Two more government-owned banks were established in 1967 and 1968. The number of banks started to increase only when the reform in the financial sector was initiated in 1984. The financial reform allowed the private sector to invest in commercial banks as well as also allowed foreign investment in the banking sector via a joint venture with a national bank. By 2011, there were 218 BFIs: 31 Class A, 87 Class B, 79 Class C, and 21 Class D. For a small country like Nepal (GDP of USD 21.57 billion in 2011), the number of BFIs was large but the capital of each FI was relatively smaller. To make these BFIs more competitive, WTO advised BFIs to increase their paid-up capital. IMF also suggested narrowing down the number of BFIs to 100. Following these suggestions, in 2010, NRB issued a guideline forcing Class A, B, C, and D BFIs to raise their capital to NRs 8, 2.5, 0.8, and 0.1 billion, respectively. To help increase the capital, NRB also suggested BFIs merge with other BFIs. This paved a wave of mergers in the financial sector. By Mid-July 2022, the number of BFIs decreased to 126 (from 218 in 2011). There are 26 Class A, 17 Class B, 17 Class C, and 66 Class D BFIs.

Hypothesis

After NRB proposed capital adequacy guidelines to Nepalese commercial banks, several banks started searching for merger partners. The central bank guided banks to increase their capital but did not force banks to merge with a particular type of BFI. Therefore, they are free to pursue any merger motive. They could potentially search for firms that align with their business strategies or identify firms that could provide their competitive edge by launching new products. If commercial banks give proper attention to their merger motives, they can gain from the merger and improve their financial performance. However, if they act under pure pressure from the guidelines and do not search for synergy gains, the resulting merger will not create value after the event. We argue that Nepalese commercial banks did not conduct due analysis before the merger and thus could not enjoy the benefits resulting from the merger. Thus, we hypothesize that: Involuntary mergers and acquisitions have no significant impact on the financial performance of Nepalese commercial banks.

Materials and methods

We hand-collect financial data of NEPSE-listed sample companies for the period of 2011 to 2019 from the website of each individual company and/or Nepal Rastra bank. We supplement any missing information using data provided by the Securities Board of Nepal. Our sample period includes seven mergers among eighteen financial institutions that occurred between 2014 and 2016. Therefore, 2014, 2015, and 2016 are considered event years for M&As. For comparison of financial performance, pre-merger years are from Mid-July 2011 to Mid-July 2014, and post-merger years are from Mid-July 2016 to Mid-July 2019. The mergers resulted in seven big commercial banks. We examine the financial performance of these seven banks before and after the merger. The sample period ends in Mid- July 2019 to remove an unwanted worldwide effect of COVID-19 and Russia and Ukraine war on the performance of banks. To make the banks more competitive in the international market, seven commercial banks in Nepal merged with other financial institutions. Two big commercial banks merged with similarly categorized commercial banks, while other commercial banks merged with development banks or finance companies. Prabhu Bank, possessing a capital of NPR 3.2 billion (equivalent to USD 37.49 million), consolidated with Grand Bank, which had a capital of NPR 2 billion (USD 23.43 million). This merger led to the formation of a unified entity named Prabhu Bank. Additionally, the Bank of Kathmandu, with a capital of NPR 2.12 billion (USD 24.84 million), merged with Lumbini Bank, holding a capital of NPR 2.33 billion (USD 27.3 million). We focus our analysis on the long-term effect of M&As on the financial performance of commercial banks. Thus, we conduct a mean difference test of financial variables three years before and three years after the mergers. To do so, we use six financial measures - return on assets (ROA), return on equity (ROE), earning per share (EPS), net worth per share, non-performing loan, and weighted average interest rate spread (IRS). We measure ROA as the ratio of net income to total assets, ROE as the ratio of net income to total equity, EPS as the ratio of net income to total shares outstanding, net worth per share as the ratio of total net worth to total shares outstanding, non-performing loan (NPL) as gross non-performing to gross loans and advances, and IRS as the difference between an average interest rate of loan & investment and average interest rate of deposit & borrowing.

Commercial banks	Merged or acquired BFIs	Name after merger	The transaction starts with a new name
Citizens' Banks International Ltd. (A)	Nepal Housing & Merchant Fin. Ltd. (C) Peoples' Finance Ltd. (C)	Citizens Bank International Ltd.(A)	15/9/2014
NMB Bank Ltd. (A)	Pathibhara Bikas Bank Ltd. (B-3) Bhrikuti Bikas Bank Ltd. (B-10) Clean Energy Development Bank Ltd.(B) Prudential Finance Co. Ltd. (C)	NMB Bank Ltd. (A)	18/10/2015
Prabhu Bank Ltd. (A)	Grand Bank Nepal Ltd. (A)	Prabhu Bank Ltd. (A)	12/2/2016
Mega Bank Nepal Ltd. (A)	Paschimanchal Development Bank Ltd. (B-10)	Mega Bank Nepal Ltd. (A)	25/4/2016
Siddhartha Bank Ltd.(A)	Business Universal Development Bank Ltd. (B)	Siddhartha Bank Ltd.(A)	21/6/2016
Sunrise Bank Ltd.(A)	Narayani National Finance Ltd.(C)	Sunrise Bank Ltd.(A)	14/7/2016
Bank of Kathmandu Ltd.(A)	Lumbini Bank Ltd, (A)	Bank of Kathmandu Lumbini Ltd.(A)	14/7/2016

Table 1: Sample banks and financial institutions

Results

We first conducted paired sample t-test of the mean value of financial ratios three years before and three years after the merger for all companies in our sample. This analysis helps us examine whether the guidelines of the central bank to increase capital via merger are effective. Second, because mergers happen among various types of BFIs, we analyze each transaction. Only two transactions involve the merger of commercial banks. Three events involve commercial banks and development banks, while the rest (two) involve commercial banks and finance companies. The different BFIs have a different financial capital, market, and capabilities, and thus a merger involving these institutions may bring in differing levels of synergies or different amounts of wealth transfer.

All sample banks

Variables	Pre-merger Mean (SD.)	Post-merger Mean (SD.)	T-stats	P-value (2-tailed)
Return on assets (%)	0.87 (1.07)	1.64 (0.19)	-2.165	0.074*
Return on equity (%)	7.33 (15.40)	13.26 (1.53)	-1.026	0.344
Earnings per share (Rs)	13.26 (15.72)	20.28 (3.59)	-1.265	0.253
Net worth (Rs)	126.29 (32.85)	155.16 (22.52)	-2.677	0.037**
Non-performing loan (%)	3.88 (4.38)	1.72 (1.10)	1.694	0.141
Weighted average interest rate spread (%)	4.28 (0.22)	4.08 (0.57)	0.946	0.381

Table 2: Impact of merger on the financial position of overall sample commercial banks

Table 2 shows the comparative financial situation of all banks in our sample. When two or more financial institutions merge, their size is bound to increase. On average, BFIs in our sample had a net worth of NRs 126.29 before the merger. After the merger, the net worth increases significantly to NRs 155.16. This increase in size is also supplemented by the increase in profitability. ROA increases significantly from 0.87% to 1.64%. However, we do not observe any significant changes in other profitability measures such as ROE or EPS. Furthermore, mergers do not create a significant impact on operational effectiveness. Even though the percentage of non-performing loans and weighted average interest rate decreased, the effect is not significant. These insignificant changes in the financial ratios support our hypothesis. M&As do not significantly affect the financial situation of the companies. This could potentially be due to the strategies of commercial banks to use the merger to increase capital without considering any synergy gains resulting from the mergers.

Citizens Bank International

Variables	Pre-merger Mean (SD.)	Post-merger Mean (SD.)	T-stats	P-value (2-tailed)
Return on assets (%)	1.57 (0.31)	1.71 (0.09)	-0.636	0.590
Return on equity (%)	15.1 (4.56)	11.5 (0.39)	1.357	0.308
Earnings per share (Rs)	18.02 (6.65)	17.71 (2.46)	0.062	0.956
Net worth (Rs)	117.67 (11.72)	140.75 (7.38)	-9.004	0.012**
Non-performing loan (%)	2.47 (0.80)	1.54 (0.45)	1.352	0.309
Weighted average interest rate spread	4.56 (0.60)	3.39 (0.39)	3.356	0.078*

Table 3: Pre- and post-merger financial performance of Citizens Bank International Ltd

In September 2014, Citizens Bank International (a Class A FI) merged with Nepal Housing and Merchant Finance (a Class C FI), resulting in a new entity named the former. The new enterprise is worth NRs 140.75. This value increased significantly from a pre-merger value of NRs 117.67. The merger helped increase the company's net worth. After the merger, the bank is able to decrease the interest spread by 1.17%, thereby favoring both the deposit and loan customers. However, the merger does not create value in terms of profitability or operational effectiveness. The bank's ROA increases from 1.57% to 1.71% but not significantly. Similarly, ROE and EPS do not show a significant change. In terms of operational effectiveness, the bank is able to decrease the percentage of non-performing loans, but the change is not significant. Analyzing the ratios together, we conclude that the merger has a statistically insignificant impact in the case of Citizens Bank International. Merging a commercial bank (class A) with a finance company (class B) may not bring in significant net gains from synergy.

NMB Bank

Variables	Pre-merger Mean (SD.)	Post-merger Mean (SD.)	T-stats	P-value (2-tailed)
Return on assets (%)	1.02 (0.65)	1.67 (0.02)	-1.690	0.233
Return on equity (%)	10.58 (4.56)	14.45 (0.39)	-0.749	0.532
Earnings per share (Rs)	13.71 (9.69)	22.55 (0.88)	-1.636	0.243
Net worth (Rs)	125.06 (14.06)	188.85 (25.03)	-3.858	0.061*
Non-performing loan (%)	1.6 (0.97)	1.13 (0.48)	1.265	0.333
Weighted average interest rate spread	3.96 (0.35)	3.63 (0.23)	0.992	0.426

Table 4: Pre- and post-merger financial performance of NMB Bank Ltd

In November 2015, NMB Bank (a Class A FI) merged with three development banks and a finance company. The merged entity was named NMB Bank with a combined net worth of NRs 188.85, an increment of 51% from the three years a pre-merger average of NRs 125.06. We find no significant impact on profitability and operational effectiveness. This insignificant impact of the merger could potentially be due to the mismatch of the functions performed by the involved parties. NMB bank specializes in investment banking. On the other hand, three development banks and finance companies only provide commercial banking. Due to the mismatch of the functionalities, there is no gain from synergy.

Prabhu Bank

Variables	Pre-merger Mean (SD.)	Post-merger Mean (SD.)	T-stats	P-value (2-tailed)
Return on assets (%)	-1.48 (1.94)	1.30 (0.45)	-3.241	0.083*
Return on equity (%)	-26.28 (30.50)	13.14 (5.83)	-2.764	0.110
Earnings per share (Rs)	-16.83 (22.66)	20.26 (7.32)	-4.186	0.053*
Net worth (Rs)	79.59 (28.02)	151.52 (10.14)	-3.274	0.082*
Non-performing loan (%)	13.61 (10.21)	4.10 (0.41)	1.555	0.260
Weighted average interest rate spread	4.32 (0.81)	4.84 (0.22)	-0.883	0.470

Table 5: Pre- and post-merger financial performance of Prabhu Bank Ltd

Prabhu Bank (Class A FI) merged with Grand Bank Nepal (Class A FI) in February 2016. The resulting entity had a combined three-year post-merger net worth of NRs 151.52, a 90% increment from the pre-merger net worth of NRs 79.59 of Prabhu Bank. Since both banks provided commercial banking services and were similar in size (in terms of market capitalization and market share), they ripped the benefit of synergy. The result was a significant increase in ROE and EPS. Prabhu bank reported financial losses with ROA of -3.43 and -1.44 two and one years prior to the event. The merger helped the bank streamline its services. The bank was able to reduce the percentage of non-performing loans from 13.61% to 4.10%. However, when we consider the effect on the combined entity, the decrease does not represent a significant change.

Mega Bank Nepal

Variables	Pre-merger Mean (SD.)	Post-merger Mean (SD.)	T-stats	P-value (2-tailed)
Return on assets (%)	1.13 (0.45)	1.92 (0.36)	-2.348	0.143
Return on equity (%)	7.47 (3.56)	12.02 (1.57)	-1.767	0.219
Earnings per share (Rs)	8.38 (4.40)	15.27 (2.28)	-2.226	0.156
Net worth (Rs)	110.75 (6.35)	126.82 (3.67)	-8.753	0.013**
Non-performing loan (%)	1.61 (0.97)	1.05 (0.27)	0.782	0.516
Weighted average interest rate spread	4.12 (0.73)	4.03 (0.26)	0.221	0.846

Table 6: Pre- and post-merger financial performance of Mega Bank Nepal Ltd

In April 2016, Mega Bank Nepal (Class A FI) merged with Paschimanchal Development Bank (Class B FI). The Mega Bank Nepal was a national bank, had a bigger market share, and focused on providing loans to a diverse range of people (from small farmers to big corporate houses), while Paschimanchal development bank was a regional bank focused on providing loans to medium-sized corporate houses. The sole reason for the merger was to increase the capital of the merged entity, and thus the merger could not bring in financial improvements. The only measure that has significantly changed is net worth. The Mega Bank Nepal increased its net worth by 14%, a comparatively smaller increment compared to the overall sample (23% increment across all mergers).

Siddhartha Bank

Variables	Pre-merger Mean (SD.)	Post-merger Mean (SD.)	T-stats	P-value (2-tailed)
Return on assets (%)	1.43 (0.31)	1.53 (0.06)	-0.504	0.665
Return on equity (%)	19.27 (4.12)	15.86 (0.49)	1.348	0.310
Earnings per share (Rs)	29.61 (9.11)	26.35 (0.31)	0.601	0.609
Net worth (Rs)	151.67 (15.28)	166.25 (3.84)	-1.600	0.251
Non-performing loan (%)	2.22 (0.63)	1.05 (0.27)	2.266	0.152
Weighted average interest rate spread	4.29 (0.42)	3.58 (0.13)	3.731	0.065*

Table 7: Pre- and post-merger financial performance of Siddhartha Bank Ltd

In June 2016, Siddhartha bank (class A FI) merged with Business Universal Development Bank (class C FI). The development bank was much smaller compared to the large commercial bank. Thus, we do not observe any significant increment in the net worth of Siddhartha bank. As in the case of previous mergers for other BFIs, this merger does not improve the profitability of the merged entity. ROA, ROE, and EPS do not change significantly. The only improvement is in the interest rate spread, which decreases significantly by 16%.

Sunrise Bank

Variables	Pre-merger Mean (SD.)	Post-merger Mean (SD.)	T-stats	P-value (2-tailed)
Return on assets (%)	0.85 (0.34)	1.74 (0.08)	-5.599	0.030**
Return on equity (%)	9.03 (3.79)	13.67 (0.79)	-1.767	0.219
Earnings per share (Rs)	10.67 (4.98)	18.61 (2.13)	-2.982	0.096*
Net worth (Rs)	116.16 (8.15)	136.46 (17.29)	-3.581	0.070*
Non-performing loan (%)	4.07 (0.76)	1.21 (0.17)	5.305	0.034**
Weighted average interest rate spread	4.22 (0.59)	4.36 (0.18)	-0.335	0.770

Table 8: Pre- and post-merger financial performance of Sunrise Bank Ltd

In July 2016, Sunrise Bank (Class A FI) acquired Narayani National Finance (Class C FI). Both BFIs operated at a national level and provided similar banking services. Thus, when Sunrise acquired the finance company, we found significant improvement in profitability and operational effectiveness measures. ROA and EPS increase by 104% and 74%, respectively. These increments are also followed by a significant reduction in non-performing loans. Before the merger, the percentage of non-performing loans was 4.07%, and after the merger, the percentage decreased to 1.21%. Overall, the net worth of the combined entity increased significantly by 17%. These statistics support the findings of Oloye and Osuma (2015)[18] and Tamragundi (2016) [19]. A merger creates value when the merging entities use the merger as a strategic tool.

Bank of Kathmandu

Variables	Pre-merger Mean (SD.)	Post-merger Mean (SD.)	T-stats	P-value (2-tailed)
Return on assets (%)	1.55 (0.79)	1.63 (0.22)	-0.145	0.898
Return on equity (%)	16.12 (7.97)	12.12 (1.31)	0.757	0.528
Earnings per share (Rs)	29.26 (13.87)	21.23 (2.08)	0.877	0.473
Net worth (Rs)	183.12 (13.99)	175.46 (1.97)	0.906	0.461
Non-performing loan (%)	1.62 (0.63)	1.96 (0.95)	-0.455	0.694
Weighted average interest rate spread	4.54 (0.35)	4.73 (0.29)	-4.856	0.040**

Table 9: Pre- and post-merger financial performance of Bank of Kathmandu Ltd

In July 2016, the Bank of Kathmandu (Class A FI) merged with Lumbini Bank (Class A FI). Both are national banks and provide commercial banking services. However, they have different origins and cultures. Bank of Kathmandu was established in the capital city, whereas Lumbini Bank was established in a different region. The merger between these two commercial banks does not bring in any significant improvements. In contrast, the interest rate spread increases after the merger. This case clearly indicates the importance of synergy when choosing merger partners.

Discussion

Nepalese central bank released a guideline for all Class A financial institutions to increase their capital to NRs 6 billion to NRs 8 billion by 2016. Many Class A BFIs did not have sufficient capital to reach the target as set by the central bank and thus were forced to merge with other BFIs. Some Class A banks merged with similar-sized Class A banks, whereas others merged with Class B or C BFIs. To examine whether these forced mergers create value for the combined entity, we hand-collect financial data from the website of each individual company or from the central bank. Then, we conduct mean difference tests of several financial measures during the three years before and three years after the merger. Our results show that the net worth of the merged entity increased significantly during the three years after the merger. The increase in size helps these banks raise their capital to the required amount. The overall sample shows some increase in ROA. However, a deeper analysis of each transaction indicates that the increase in profitability is limited to a few commercial banks, particularly Prabhu and Sunrise Bank. Both banks merged with other BFIs that provide similar financial services and had similar national presence and culture. With similar business strategies/values in the parties involved, the merger process was conducted smoothly, and the merged new entity was able to enjoy the benefits from synergy. Other mergers do not create value for the resulting merged entity. Therefore, we recommend that Nepalese financial institutions consider any gain from synergy before approaching other financial institutions for a merger. The central bank enforced the guidelines to help increase the capital of Class A commercial banks, but the commercial banks always have the flexibility to decide which BFIs to approach for M&As.

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Author’s contribution to the paper

Author 1: Conceptualization, Data collection, Modeling, Writing. **Author 2:** Conceptualization, Writing, Revision, Supervision.

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