Evaluating the Financial Solvency of Selected Commercial Banks of Nepal: An Application of Bankometer

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ABSTRACT

Banking industry of Nepal is moving towards the goal of integrated financial service because of competition, frequently changes in technology, and customers' expectations. Financial system is reflected through sound solvency position in the banking sector. Therefore, the aim of this study is to evaluate the financial soundness of joint venture banks and private sector banks in Nepal by using bankometer model for the period covering 2007-2012. The bankometer model was used developed according to International Monetary Fund guidelines. The study has found that all the private and joint venture banks are in sound financial position. The finding of the study reveals that private sector banks are financially sounder in comparison to joint venture banks. The study concludes that bankometer model will help the bank's internal management to mitigate the insolvency risk within proper control and supervision at the operational level.

KEY WORDS: Bankometer, capital adequacy, financial soundness, solvency

INTRODUCTION

Commercial banks are the important parts of the financial system of the country. Bank collects the fund from surplus sector of the economy by means of various deposit products. Bank supplies the fund to the deficit area of the economy through credit products. As bank is the bridge between depositors and borrowers, it is a backbone of financial systems in mobilizing funds in terms of loan, and investment. Banks must be able to maintain the solvency position with their readiness to return the deposit of depositors whenever asked. Similarly the bank management has the obligation to increase the shareholder's wealth by increasing the net profit of the bank. Thus, the banking relationship can improve the financial performance of the bank customers and increase the credit access to firms, borrowers in public debt and equity market.

In financial stability report (2012), Nepal Rastra Bank has stressed on the importance of financial sector in Nepalese economy which is dominated by the commercial banks that comprise more than 51% of financial system asset. Similarly, the ratio of total assets/ liabilities to GDP of commercial bank is 65.2%. As any issues related to the banks directly affect the national economy, the economy needs capable financial system to: (a) allocate resources efficiently between its activities and over time, (b) assess and manages financial risk, and (c) to absorb shocks. A stable financial system is then one that improves the economic performance and accumulation of wealth, while it is also possible to prevent effects caused by the impact of disruptive disorders (Schinasi, 2004).

Nepalese commercial banks need to maintain at least 6% Tier-1 capital and 10% total capital (Tier 1 and Tier 2), that is, core capital and supplementary capital respectively. Tier 1 capital consists of paid-up capital, share premium, non-redeemable preference share, general reserve fund, accumulated profit, capital redemption reserve, capital adjustment fund, and other free reserves. The Tier 2 capital comprises of capital comprises of general loan loss provision, assets revaluation reserve, hybrid capital instruments, subordinated term loan, exchange equalization reserve, excess loan loss provision, and investment adjustment reserve. These minimum capital adequacy requirements are based on the risk-weighted exposures of the banks (Nepal Rastra Bank, 2010). Financial performance is an output of a bank's policies and operation in terms of monetary value. This output is reflected in the bank's return on investment, return on asset and value addition etc.

Financial institutions around the world have experienced the substantial changes in the last few years. Technological progress, reduced information costs, competitions among the both banking and non-banking financial intermediaries, and ongoing deregulation have led to substantial changes in numerous financial systems (Hoque & Rayhan, 2013, p. 1). In this circumstance, Nepalese commercial banks aggressively increase the business through the introducing of new products and extensions of the branches in different parts of the country. A competitive banking system becomes a

catalyst to growth, but marketing power is necessary for stability in banking system. Fase and Abma (2003) argue that the expansion of the financial system can have a positive impact on the economic growth of a country. Levine (2005) has suggested five channels through which financial systems may have an effect on economic growth: financial intermediaries, monitoring investment, managing risk, mobilizing savings and facilitating the exchange of goods and services.

Banking system soundness matters because it gives some indication of how the financial problems may be transmitted to the real economy (Davies, 2011, p. 47). Financial performance of the bank helps to be a bank be financially sound. Financial soundness of the bank means the ability of the bank to meet its long term fixed expenses and accomplishing long term expansion and growth plans. Regulation has an effection solvency and liquidity within the financial institution. Diamond and Rajan (2000) show that bank capital affects bank safety, the bank's ability to refinance, and the bank's ability to extract repayment from borrowers or its willingness to liquidate them. Sound financial health of a bank is the guarantee not only to its depositors but is equally significant for the shareholders, employees and whole economy as well. (Aspal & Malhotra, 2013).

It is clear from above discussion, that the role of banking is very significant for the economy. A sound banking system proves to be one of the pillars of economic, social and industrial growth of a country. Thus, the present study tries to evaluate the financial soundness of Nepalese commercial banks.

The study is organized as follows. The present part introduces the concept of the study and outlines the need for it; the second part reviews the literature available; the third part describes the methodology for the research; the fourth part analyzes and presents the results of the study and the fifth part concludes the study.

LITERATURE REVIEW

Baral (2005) has examined the financial health of joint venture banks in the CAMEL framework. The health check up conducted on the basis of publicly available financial data concludes that the health of joint venture banks is better than that of the other commercial banks. In addition, the perusal of the indicators of different components of CAMEL indicates that the financial health of the joint venture banks is not so strong in withstanding the possible large scale shocks to their balance sheet and that their health is merely fair. Accordingly CAMELS rating system shows that 3 banks are 1 or Strong, 31 banks were rated 2 or satisfactory, rating of 7 banks are 3 or fair, 5 banks were rated 4 or marginal and 2 banks get 5 or unsatisfactorily rating. 1 Nepalese Commercial Bank have unsatisfactorily rating and other 3 banks have marginal rating.

Olaniya (2006) have measured the bankruptcy status of Nigerian banks by using secondary data over a period of five years up to 2002, while the analysis was carried out through the use of multiple discriminate analysis. He has concluded that the bank has high potential failure as evidenced by poor operational performance, and low zeta score.

Sangmi and Nazir (2010) have analyzed the financial performance of commercial bank in India by using the CAMEL model. He has used the secondary data of two nationalized commercial bank in northern India. The data were related to five years (2001-2005) .This study has found that all the samples have been sound and satisfactory so far as their capital adequacy, management capacity and liquidity are concerned.

Tatom and Huston (December, 2011) have used the CAMELS rating system and national economic variables to forecast failure for the entire commercial banking industry in the United States. The model predicts failure (survival) accurately during both the saving and loan crises and the mortgage failure foreclosure crisis. He showed the insignificance of total assets, real prices of energy, currency ratio and interest rate spread.

Jha and Hukin (2012) have studied the comparison of financial performance of commercial banks of Nepal with the sample of 18 commercial banks from the period of 2005 -2010. They have collected the data through secondary source. The econometric model was used to estimate the

performance of sample banks. The result shows that public sector banks were significantly less efficient than their counter parties; however domestic banks were equally efficient to joint venture banks.

Makkar and Singh (2012) have evaluated the financial soundness of Indian commercial banks by using the bankometer model covering the period 2006/207 to 2010/2011. They have taken 37 Indian commercial banks as samples. They have used secondary data collected from various published sources. Bankometer ratios are derived from both CAMEL and CLSA stress test parameter with some modification. The study has found that all Indian banks are financially solvent. The finding of the study reveals that the private sector banks perform better well and are financially more sound than compared to public sector banks. The study concludes that bankometer will help the banks internal management to avoid insolvency issues with ease.

Gajurel and Pradhan (2012) have examined the structural performance relation in Nepalese banking industry for the period of 2001-2009 by using Bergern and Hannan (1993) empirical approach. From the result they conclude that traditional structure conduct performance hypothesis and quit life hypothesis have better concentrations probability relation in Nepalese banking industry.

Eari, Salim, Idrus, and Djumhir (2013) have examined financial performance of PT. Bank Papua by using CAMEL, Z-score and bankometer model. They have used secondary data from financial statement in 2003-2011. They have found that results of the above three models is similar, i.e., Bank Papua earned good profit during the analyzed period.

Being based on the above literature review, we can say that there are various studies about the banks in various countries; however a detailed study has not yet been conducted in Nepal by using the Bankometer model.

1.2 Objective of the Study:

1. To evaluate the financial soundness of Nepalese commercial banks.
2. To compare the joint venture and private sector banks on the basis of financial soundness.

Hypothesis:

H0: There are no significant differences in solvency of joint venture and private sector bank of Nepal.

RESEARCH METHOD

Following IMF (2000) recommendations, and Shar, et. al. (2010) and Makkar and Singh (2012), the researcher have used the procedure of Bankometer to measure the performance of commercial banks. This procedure has the quality of minimum number of parameters with maximum accurate results.

Parameters of Bankmeter,

1. Capital Adequacy Ratio: 40 %≤CAR≥10%
2. Capital to Assets Ratio Capita / Asset: ≥04%
3. Equity to total Assets Equity / Asset: ≥ 02%
4. NPLs to Loans NPLs / Loans: ≤5%
5. Cost to Income ratio Cost / Income: ≤40%
6. Loans to Assets Loan / Asset: ≤ 65%

These percentages explain a bank that;

- has capital adequacy ratio between 10% to 40%,
- has more than 4% capital to assets ratio,
- has equity to assets ratio greater than 2%,

- has controlled non-performing loans (NPLs) ratio below 5% and
- has maintained liquidity by controlling loans to assets ratio below 40%,

The performance of the banks can be measured under bankometer procedure by measuring their respective solvency. The ability to predict which banks are vulnerable to financial distress is of critical importance to central banks, creditors and to equity investors. When a bank goes insolvent, creditors often lose portion of principal and interest payments, while equity investors can potentially lose all of their investment. Additionally, even if the bank survives after a financial distress, the survival costs will significantly reduce the future growth outlook. It is therefore important for the management to focus more on correct prediction by using bankometer ratio (IMF, 2000, Sher, et.al. 2010; Makkar and Singh 2012) which is:

S = 1.5* CA+1.2* EA +3.5 * CAR+0.6*NPL+0.3*CI+04*LA

Where 'S' stands for solvency

CAR stands for capital adequacy ratio

CA stands for capital assets ratio

EA stands for equity to assets

NPL stands for non-performing loans to loans

CI stands for cost to income

LA stands for loans to assets

All banks having 'S' value greater than 70 are solvent and termed as super sound banks, while those banks having 'S' value below 50 are not solvent. The area between 50 and 70 is defined as gray area because of the susceptibility to error in classification (Sher, et.al. 2010). Capital adequacy parameter is revised to 10% to 40% as per NRB directives to the commercial banks and NPLs to total loan ratio is less than 5% on the basis of international industrial benchmarks.

Data Collection

To conduct this research, the secondary data were derived from statistics bulletin of Nepal Rastra Bank, and financial statements of banks. Further data were collected through published annual reports of commercial banks. In this study, 5 year (2007 to 2012) data have been used for analysis.

FINDING AND DISCUSSION

In this study to assess the financial solvency of the banks, solvency has been measured by using the bankometer technique as under

Capital to Asset Ratio (CA): The ratio revealed the promotion of the total assets has been used in capital. The capital to asset ratio measure whether the bank has sufficient capital to support its assets. The higher the ratio indicates that the more of the internal and external source of fund have been used for investment in assets. As per IMF guidelines the bank should have capital asset ratio more than 4%. In present study, Mega Bank (35.99) has higher capital asset ratio followed by Nabil Bank (33.72), Century Bank (22.8) and Commerz and Trust Bank (22.55). Everest Bank (3.05) and Standard Chartered Bank (3.39) have the capital asset ratio below the prescribed minimum limit. Rest of the other banks have maintained the CA ratio at a comfortable level.

Equity to Asset Ratio (EA): The equity to asset ratio is one of the financial ratios used to evaluate the financial health and long term profitability of the banks. Higher EA ratio is treated as an indicator of sound financial position of the bank. Large proposition of assets provided by equity reveals that the bank is less dependent on external sources of funds. According to the IMF guideline EA ratio must be more than 2%. In the present study, Maga bank (37.9) has highest equity asset ratio and followed by Century Bank (24.15) and Commerz and Trust Bank (23.16). Nepal SBI Bank Limited (6.83) has

lowest ratio followed by Everst Bank Limited (7.35) and Laxmi Bank Limited (7.42). It seems that all sample banks maintained the equity asset ratio as per prescribed by IMF.

Capital Adequacy Ratio (CAR): Capital adequacy ratio is the measure of the amount of Bank's capital exposure as a percentage of its risk weighted capital exposures. This ratio is used to protect the interest of depositors and promote the stability and efficiency of commercial bank in the financial market. Nepal Rastra Bank has prescribed a total capital fund of not less than 10% of its total risk: weighted exposures. This provision is guided by the Basel Accords to maintain the minimum capital requirement of the bank. Janata Bank Limited (36.09) reserved the top position on the basis of capital adequacy ratio during the analyzing period. Mega Bank Limited was perched at a second position in this category followed by Century Bank Limited (22.8) and Commerz and Trust bank Limited. Nepal Bangaladesh Bank Limited (5.72) has below the capital adequacy ratio as per regulatory guidelines. Rest of the other banks have maintained the capital adequacy ratio more than 10% .

Non-performing Loan to Total Loan Ratio (NPL): Non-performance loan ratio is a performance indicator of bank efficiency. The lower the ratio, the more efficient the bank. Similarly, higher ratio is a symbol of the inefficient management of the bank. Nonperforming loan ratio up to 5% is acceptable as per the international banking practices. In present study, Janata Bank Limited (0.06) has lowest non- performing loan ratio followed by Century Bank Limited (0.1) , Civil Bank Limited (0.2) and Commerz and Trust Bank Limited (0 .4). Nepal Bagaladesh Bank Limited (11.75) has highest ratio followed by Lumbini Bank Limited (5.13). Rests of the other banks have been maintaining the non-performance loan ration within 5%.

Loan to Asset Ratio (LA): This ratio is a one indicator of the bank's liquidity. Higher ratio is good as it increases the profitability of the bank, but banks have limitation to maintain the liquidity for day to day transactions and to maintain CRR as per NRB directives. According to IMF guidelines this ratio should be below 65%. In present study, Siddhartha Bank Limited (176.26) has higher loan asset ratio followed by Kumari Bank Limited (72.85), Grand Bank Limited (69.97) and Bank of Kathmandu Limited (69.75). Standard Chartered Bank Limited (36.01) followed by Nepal Credit and Commerce Bank Limited (43.31), Nepal SBI Bank Limited (43.7), and Nepal Bagaladesh Bank Limited (49.16).

Cost to Income Ratio (CI): The cost to income ratio is a key financial measure, particularly important in valuing banks. It shows a company's costs in relation to its income. To get the ratio, divide the operating costs (administrative and fixed costs, such as salaries and property expenses, but not bad debts that have been written off) by operating income. The lower the ratio, the higher will be the profitability of the banks and higher the ratio, the lower the profitability. According to the IMF guidelines, the cost income ratio should be below 40%. Standard Chartered Bank Limited (36.01) has maintained the cost income ratio below the prescribed limit. Rest of the other banks have not maintained the minimum limit of cost income ratio.

Solvency (S): The solvency refers to the availability of the cash over the long terms to meet the financial commitment. The results of the solvency should that all the sample banks have sound financial position in the study period (2007-2012) , The private sector banks and joint venture banks have solvency score (bankometer) more than 70%. Mega bank limited (275.67) occupies the first position followed by Janata Bank (245.47), Century Bank (200.16), and Commerz and Trust bank (193.77). Similarly, Nepal SBI Bank (87.5) occupies least position followed by Himalayan Bank (88.38), and Laxmi Bank (95.95). On the basis of solvency ratio, it is established that the private sector banks have sounder solvency position in comparison to joint venture banks.

Table no. I Comparison of Private and Joint Venture Banks:

t-Test: Two-Sample Assuming Unequal Variances		
	Joint Venture Bank	*Private sector Bank*
Mean	99.8698	142.6867
Variance	233.524	2519.0465
Observations	6	22

Hypothesized Mean Difference	0	
Df	25	
t Stat	-3.45677	
P(T<=t) two-tail	0.001967	
t Critical two-tail	2.059539	

The result of the above table shows that, the t- value of -3.457 falls within the critical region defined by critical value ±2.059 and the p-value of 0.00019, which is lesser than α =0.05. Therefore, null hypothesis is rejected. Hence, there is a significant difference in the mean solvency of private sector and joint venture commercial banks in Nepal. The mean value of bankometer reveals that private sector banks (142.69) have stronger solvency position in comparison to joint venture banks (99.87).

CONCLUSION

This study examines the financial solvency of the 6 joint venture banks and 22 private sector banks of Nepal over the period of 2007 to 2012 by using bankometer model. The bankometer shows that all the sample banks are financially sound as none of the banks has solvency score of bankometer below 70%. The top financial sound banks include Mega Bank Limited, Janata Bank Limited, Century Bank Limited and Commerz and Trust Bank Limited. Those banks are youngesr bank in the banking industry of Nepal. On the basis of individual variables only 11 commercial banks have loan to asset ratio below than 65% as prescribed by IMF guidelines. Loan asset ratio of the rest of the banks is more than 65% and Siddhartha Bank Limited is the institution worst among these banks. The study concludes that private sector banks are in sound solvency position in comparison to joint venture banks. The bankometer model helps to manage internal control system for sound financial efficiency at the operational level. The study suggests that joint venture banks require some corrective actions to improve their financial ratio to compete in the banking industry.

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Annex -1

Table: I Bankometer Final Results for 2007-2012								
Percentage		40%≤CA≥8%	≥04%	≥02	≤05	≤40	≤65	70 %
Variable		CAR	CA	EA	NPL	CI	LA	S
Joint venture Bank								
1	Nabil Bank Ltd.	11.20	33.72	7.97	1.54	55.21	62.91	127.81
2	Standard Charted Bank Ltd.	14.32	3.39	15.07	0.73	43.52	36.01	106.18
3	Himalyan Bank Ltd.	11.43	3.50	7.47	2.89	59.09	53.52	88.38
4	Nepal Bangaladesh Bank Ltd.	5.72	11.95	8.32	11.75	60.45	49.16	96.88
5	Nepal SBI Bank Ltd.	12.01	4.18	6.83	1.85	73.75	43.70	87.65
6	Everest Bank Ltd	11.24	3.05	7.35	0.52	61.53	68.32	92.32
Private Sector Bank								
7	Nepal Investment Bank Ltd.	11.35	4.63	8.52	1.42	61.77	67.67	98.85
8	Bank of Katmandu Ltd.	11.63	5.12	8.49	1.71	60.69	69.75	100.43
9	Nepal Credit and Commerce Bank Ltd.	12.22	10.88	10.49	6.18	69.77	43.31	110.06
10	Lumbini Bank Ltd.	18.60	15.39	15.77	5.13	66.97	69.07	152.36
11	NIC Asia Bank Ltd.	12.76	5.79	8.94	0.91	67.61	68.73	105.70
12	Machhapchhare Bank Ltd.	12.18	7.09	8.18	2.64	80.29	69.47	108.84
13	Kumar Bank Ltd.	12.75	6.71	9.34	1.42	74.86	72.85	112.31
14	Laxmi Bank Ltd.	11.88	6.04	7.42	0.52	70.48	58.76	95.98
15	Siddhartha Bank Ltd.	10.94	13.06	19.71	1.04	74.82	176.26	194.65

16	Global IME Bank Ltd.	11.23	7.88	8.37	1.28	76.53	57.75	102.41
17	Citizen International Bank Ltd.	13.08	8.88	9.75	0.92	124.9	67.40	129.39
18	Grand Bank Ltd.	21.09	16.20	17.77	2.0	73.96	69.97	164.64
19	NMB Bank Ltd.	19.21	10.66	12.31	1.2	72.98	52.45	128.31
20	Prime Commercial Bank Ltd.	12.71	8.46	9.30	0.6	44.97	71.96	104.38
21	Sunrise Bank Ltd.	12.63	9.94	10.58	3.1	80.57	58.19	117.21
22	KIST Bank Ltd.	14.41	11.22	11.78	3.0	81.09	66.00	128.80
23	Janata Bank Ltd.	36.09	29.77	31.18	0.06	74.46	60.26	245.47
24	Mega Bank Ltd.	31.74	35.99	37.90	1.4	104.21	50.32	275.67
25	Civil Bank Ltd.	20.00	16.46	16.88	0.2	80.31	49.21	152.70
26	Century Bank Limited	25.85	22.80	24.15	0.1	81.81	62.15	200.16
27	Commerze and Trust Bank ltd.	22.56	22.55	23.16	0.4	81.29	67.87	193.77
28	Sanima Bank Ltd.	18.87	13.77	9.81	0.5	73.97	38.44	117.00