Impact of Liquidity Management on Bank Profitability in Nepalese Commercial Banks

Radhe S. Pradhan
Uniglobe College, Kathmandu, Nepal
Email: rspkamal@gmail.com

Yooba Raj Gautam
Uniglobe College, Kathmandu, Nepal

Abstract: *This study examines the impact of liquidity management on the profitability of Nepalese commercial banks. The return on assets and return on equity are the dependent variables. The independent variables are the capital ratio, total deposits, current ratio, liquid asset ratio, quick ratio and investment ratio. This study is based on secondary sources of data that are collected for 18 commercial banks through 2009/10 to 2014/15, leading to a total of 120 observations. The data were collected from Quarterly Economic Bulletin and Bank Supervision Reports published by Nepal Rastra Bank and annual reports of the selected commercial banks. The regression models are estimated to test the significance of liquidity management on the profitability of Nepalese commercial banks.*

The result shows that capital ratio is positively related to return on assets. This indicates that higher the capital ratio, higher would be the return on assets. Likewise, the study reveals that investment ratio and current assets ratio are positively related to return on assets and return on equity. This indicates that increase in investment ratio and current assets ratio leads to increase in return on assets and return on equity. However, the study reveals that liquid asset ratio is negatively related to return on assets and return on equity. This indicates that higher the liquid asset ratio, lower would be the return on assets and return on equity. The regression result shows that beta coefficients are positive for current assets ratio and liquid asset ratio with return on equity. However, the study reveals that beta coefficients are negative for quick ratio with return on assets.

Keywords: *Current Ratio, Quick Ratio, Return on Assets, Return on Equity, Liquid Asset Ratio, Capital Ratio, Investment Ratio.*

Introduction

The banking industry contributes significantly to the effectiveness of the entire financial system. The banking institutions offer an efficient institutional mechanism through which resources can be mobilized and directed from less essential uses to more productive investments (Wilner, 2000). Some of the major corporate goals include the need to maximize profit, maintain high level of liquidity, and attain the highest level of owner's net worth. Profitability and liquidity are most important part of the banking sector. The importance of liquidity management is increasing day by day as it affects corporate profitability (Eljelly, 2004).

According to Vahid, et al. (2012), working capital management plays a significant role in determining the firm's profitability. Business success depends heavily on the ability of financial managers who can effectively manage the components of working capital (Filbeck and Krueger, 2005). A firm should ensure that it does not suffer from liquidity to meet its short-term compulsions. A study on liquidity is of major importance to both the internal and the external analysts because of its close relationship with day-to-day operations of a business (Bhunia, 2012).

The primary role of liquidity management is to assess the needs for funds to meet obligations

and ensure the availability of cash or collateral (Premalatha, 2015). The management of liquidity involves a daily analysis and detailed estimation of the size and timing of cash inflows and outflows to minimize the risk that savers will be unable to access their deposits in the moment of their need. Thus, liquidity is lifeblood of a banking system (Cucinelli, 2013). Biety (2003) and Anyanwu (1993) asserted that the objective of liquidity management is to gear the banks towards a financial position that enables them to meet their financial obligations.

According to Owolabi and Obida (2012), profitability is defined as an ability to make profit from all the business activities of an enterprise. It measures management efficiency in the use of organizational resources. The extension of influence of liquidity on performance of the firm has been arguable and no consensus has been reached (Umobong, 2015). Inadequate cash or liquid assets may force a company to miss the incentives given by the suppliers of credit, services, and goods as well. Loss of such incentives may result in higher cost of goods, which in turn affects the profitability of the business (Deloof, 2003). Every stakeholder has interest in the liquidity position of a company. Suppliers of goods will check the liquidity of the company before selling goods on credit. Employees should also be concerned about the company's liquidity to know whether the company can meet its employee related obligations. Thus, a company needs to maintain adequate liquidity (Farris, 2002).

Shim and Siegel (2000) identified accounting liquidity as the company's capacity to liquidate maturing short-term debt (within one year). Maintaining adequate liquidity is much more than a corporate goal, it is a condition without which the continuity of a business is at risk. Myers and Rajan (1998) emphasized the adverse effect of increased liquidity on financial performance.

According to Olagunju et al. (2011), liquidity is defined as the ability of a bank to guarantee the availability of funds to meet financial commitments or maturing obligations at a reasonable price at all times. Agbada and Osuji (2013) argued that corporate profit planning remains one of the most challenging aspects of bank management. Enough profit must be earned to sustain the activities of the business and be able to obtain funds for expansion and growth of the banks.

Bourke (1989) found positive relationship between liquidity and profitability and argued that the relationship differs from a bank's business model and the state of the economy. However, Molyneux and Thornton (1992) and Goddard et al. (2004) found diverse evidence of a negative relationship between the two variables for European banks in the late 1980s and mid-1990s respectively.

According to Bassey and Moses (2015), there is a statistically significant relationship between bank liquidity and return on equity. Waithaka (2012) revealed that a negative relationship exists between the accounts collection period and financial performance.

Mehar (2001) showed that there is no long-run relationship between banks' profitability and liquidity and capital management. In the short-run, capital ratio was found to have significant positive effect on banks' profitability. However, liquidity does not have an effect on banks' profitability. This study concluded that capital adequacy is considered to be the most effective tool to ensure the safety and soundness of South African financial institutions. Majeed et al. (2013) revealed a negative relationship between cash conversion cycle and firm performance. The results suggested that managers can create value for their shareholders by reducing the number of days of accounts receivable.

Lamberg and Valming (2009) found that the adoption of liquidity strategies does not have significant impact on profitability as measured by return on assets. However, increased use of liquidity forecasting and short-term financing during the financial crises has a positive impact on return on assets. There is a positive correlation between profitability as measured by ROA of Saudi and Jordanian banks with some liquidity indicators (Almazari, 2014).

According to Saleem & Rehman (2011), there is positive significant relationship between return on assets and current ratio of the companies in Saudi Arabia. Further, the study revealed that there is negative but insignificant relationship of return on assets with quick ratio and investment ratio of the companies in Saudi Arabia. Kim et al. (1998) argued that companies maintain adequate liquidity to meet favorable future investment prospective. The study also suggested that a connection between financial constraints and firms' liquidity demand exists. Ismail (2016) found that liquidity variables

such as current ratio and the cash conversion cycle have significant positive impact on profitability (ROA). High current ratio and longer cash conversion cycle lead firms towards better performance.

In the context of Nepal, Karki (2004) found positive relationship between deposits and loan advances. Further, liquidity and bank loan are positively related to bank profitability (Joshi, 2004). Pradhan and Shrestha (2016) revealed positive and significant impact of capital adequacy on bank profitability. Shrestha (2012) found that total assets and liquidity position have positive relationship with the performance. The study found positive relationship of liquid ratio, capital adequacy ratio and firm size with bank profitability measured in terms of return on assets (Magar, 2016).

According to Paudel and Khanal (2015), the strong permanent capital base has significant positive influence on adequate liquidity of the cooperatives. Gautam (2016) revealed that bank size and inflation rate have a positive impact on liquidity. However, non-performing loans, profitability and GDP growth rate have negative impact on liquidity of Nepalese commercial banks. The study showed positive relationship between capital ratio and return on equity. The result showed that the correlation is found to be negative for quick ratio with return on equity (Pradhan and Shrestha, 2016).

The above discussion reveals that there is no consistency in the findings of various studies concerning factors influencing the profitability of banks.

The purpose of this study is to assess the impact of liquidity management on financial performance of Nepalese commercial banks. More specifically, it examines the impact of capital ratio, deposit, current ratio, liquid asset ratio, quick ratio and investment ratio on financial performance of Nepalese commercial banks.

The remainder of this study is organized as follows: Section two describes the data and methodology. Section three presents the empirical results and final section draws conclusion and discusses the implications of the study findings.

Methodological Aspects

This study is based on secondary data of 18 commercial banks of Nepal from 2009/10 to 2014/15, leading to a total of 120 observations. The main sources of data include Quarterly Economic Bulletin and Bank Supervision Reports published by Nepal Rastra Bank and annual reports of the selected commercial banks. Table 1 shows the number of commercial banks selected for the study along with the study period and number of observations.

Table 1: Number of commercial banks selected for the study along with study period and number of observations

S. N.	Name of the banks	Study period	Observations
1	Bank of Kathmandu Limited	2009/10 - 2014/15	6
2	Citizens Bank Limited	2009/10 - 2014/15	6
3	Everest Bank Limited	2009/10 - 2014/15	6
4	Himalayan Bank Limited	2009/10 - 2014/15	6
5	Kumari Bank Limited	2009/10 - 2014/15	6
6	Laxmi Bank Limited	2009/10 - 2014/15	6
7	Lumbini Bank Limited	2009/10 - 2014/15	6
8	Machhapuchhre Bank Limited	2009/10 - 2014/15	6
9	Nabil Bank Limited	2009/10 - 2014/15	6
10	Nepal Bangladesh Bank Limited	2009/10 - 2014/15	6
11	Nepal Bank Limited	2009/10 - 2014/15	6
12	Nepal Credit and Commerce Bank Limited	2009/10 - 2014/15	6
13	Nepal Investment Bank Limited	2009/10 - 2014/15	6
14	Nepal SBI Bank Limited	2009/10 - 2014/15	6
15	NMB Bank Limited	2009/10 - 2014/15	6
16	Prime Bank Limited	2009/10 - 2014/15	6
17	Sanima Bank Limited	2009/10 - 2014/15	6
18	Siddhartha Bank Limited	2009/10 - 2014/15	6
19	Standard Chartered Bank Limited	2009/10 - 2014/15	6
20	Sunrise Bank Limited	2009/10 - 2014/15	6
	Total observations		**120**

Thus, the study is based on 120 observations.

The Model

The model estimated in the study assumes that the profitability of the banks depends on capital ratio, deposit, current ratio, liquid asset ratio, quick ratio and investment ratio. Therefore, the model takes the following forms:

Bank profitability = f (capital ratio, deposit, current ratio, liquid asset ratio, quick ratio and investment ratio).

More specifically, the given model has been segmented into following models:

$$ROA_{it} = \beta_o + \beta_1 CAPR_{it} + \beta_2 DEP_{it} + \beta_3 CURR_{it} + \beta_4 LIQ_{it} + \beta_5 QR_{it} + \beta_6 INV_{it} + \varepsilon_{it}$$

Where,

ROA = Return on assets defined as net income divided by total assets

ROE = Return on equity defined as net income divided by total shareholders' equity

$CAPR_{it}$ = Capital ratio defined as capital divided by total assets

DEP_{it} = Deposit to assets ratio defined as total deposit divided by total assets

$CURR_{it}$ = Current ratio defined as current assets divided by current liabilities

LIQ_{it} = Liquid asset ratio defined as liquid assets divided by total assets

QR_{it} = Quick ratio defined as quick assets divided by current liabilities

INV_{it} = Investment ratio defined as total loan divided by total deposit

Capital Ratio

Capital ratio is the ratio of total capital to total assets. Rasiah (2010) and Vong and Chan (2009) included capital ratio as a source of funds. Capital structure which includes shareholders' funds, reserves and retained profit affect the profitability of commercial banks because of its effect on leverage and risk. Berger (1995) argued that a higher equity-to-asset ratio increase profitability due to signaling issues or lower costs of financial distress. Molefe and Muzindusti (2015) revealed positive and significant relationship between profitability and capital ratio. Based on it, this study develops the following hypothesis:

H_1: *There is positive relationship between capital ratio and bank profitability.*

Deposit to Assets Ratio

Deposit to assets ratio is defined as the ratio of total deposit to total assets. Khrawish (2011) revealed positive and significant relationship between profitability and deposit to assets ratio. Similarly, Vong and Chan (2009) found the positive effect of deposits to total assets on profitability of Macau banks. Rasiah (2010) found positive relationship between deposit to assets ratio and profitability of the banks in Kenya. Based on it, this study develops the following hypothesis:

H_2: *There is a positive relationship between deposits to assets ratio and bank profitability.*

Current Ratio

Current ratio is a measure of a commercial bank's short term solvency and is calculated by dividing current assets by current liabilities incurred. The current assets are composed of cash and those assets which can be converted into cash in a short period which include marketable securities, receivables, inventories and prepaid expenses. Rennto (2010) revealed that the current ratio has a significant positive correlation with the profitability of the industry. Ofoegbu and Onodugo (2016) showed that the current ratio and profitability are significantly and positively related. The result showed that the significant and positive relationship between current ratio and profitability (Maqsood et al., 2016). Based on it, this study develops the following hypothesis:

H_3: *There is a positive relationship between current ratio and bank profitability.*

Liquid Asset Ratio

According to Rasiah (2010), commercial banks are required to hold a certain level of liquid assets. The reason behind this regulation is to make sure that the commercial banks always possess enough liquidity in order to be able to deal with bank runs. This ratio measures the ratio of liquid assets to total assets. Pasiouras and Kosmidou (2007) found a negative relationship between liquid asset ratio and profitability. Molyneux and Thorton (1992) and Guru (2002) found a negative

$$ROE_{it} = \beta_o + \beta_1 CAPR_{it} + \beta_2 DEP_{it} + \beta_3 CURR_{it} + \beta_4 LIQ_{it} + \beta_5 QR_{it} + \beta_6 INV_{it} + \varepsilon_{it}$$

relationship between liquidity and bank profitability. Based on it, this study develops the following hypothesis:

H_4: *There is negative relationship between the liquid asset ratio and bank profitability.*

Quick Ratio

The quick ratio is more conservative than the current ratio because it includes only the more liquid current assets in relation to current liabilities. Etale and Bingilar (2016) revealed that the quick ratio has positive and significant relationship with profitability. Majeed et al. (2013) showed that there is a positive and significant relationship between quick ratio and profitability. The result showed positive relationship between quick ratio and profitability (Niresh, 2012). Based on it, this study develops the following hypothesis:

H_5: There is positive relationship between quick ratio and bank profitability.

Investment Ratio

Investment ratio is termed as the ratio of total loans to total deposits. This is the most important ratio to measure the liquidity condition of the banks. Banks with low investment ratio are considered to have excessive liquidity, potentially lower profits, and hence less risk as compared to banks with high investment ratio. Rasiah (2010) asserted that the lower returns on liquid assets and excessive fund which has not been invested may also negatively affect the profitability of banks. Kosmidou et al. (2012) revealed that

investment ratio has a positive effect on profitability. Bourke (1989) showed positive and significant relationship with profitability. Based on it, this study develops the following hypothesis:

H_6: *There is positive relationship between investment ratio and profitability in the Nepalese commercial banks.*

Results and Discussion
Descriptive Statistics
Table 2 presents the descriptive statistics of selected dependent and independent variables during the period 2009/10 to 2014/15.

Table 2: Descriptive Statistics
This table shows the descriptive statistics of dependent and independent variables. The result is based on panel data of 20 commercial banks with 120 observations for the period 2009/10 to 2014/15 where ROA (return on assets is defined as net income divided by total assets, in percentage) and ROE (return on equity is defined as net income divided by total shareholders' equity in percentage) are dependent variables. The independent variables are CAPR (capital ratio is the ratio of capital to total assets, in percentage), DEP (Deposit to assets ratio is the ratio of total deposit to total assets, in percentage), CURR (current ratio is the ratio of current assets to current liabilities, in percentage), LIQ (liquid asset ratio is the ratio of liquid assets to total assets, in percentage), QR (quick ratio is the ratio of quick assets to current liabilities, in percentage) and INV (investment ratio is the ratio of total loan to total deposit, in percentage).

Table - 2

Variables	Minimum	Maximum	Mean	Std. Deviation
ROA	-0.99	8.15	1.60	1.00
ROE	-378.75	47.87	13.12	37.17
CAPR	-11.26	22.63	9.40	4.31
DEP	67.89	97.81	86.32	4.15
CURR	83.94	295.38	108.41	19.68
LIQ	4.39	40.32	15.93	5.74
QR	4.95	47.89	18.13	6.66
INV	45.35	100.23	75.10	10.61

Correlation Analysis

Having indicated the descriptive statistics, the Pearson correlation coefficients have been computed and the results are presented in the Table 3.

Table 3: Pearson correlation matrix for selected Nepalese commercial banks

The table shows the bivariate Pearson correlation coefficients between different variables used in the study. The correlation coefficients are based on the data from 20 sample banks for the period 2009/10 to 2014/15.

Table - 3

Variable	ROA	ROE	CAPR	DEP	CURR	LIQ	QR	INV
ROA	1							
ROE	0.235**	1						
CAPR	0.326**	0.234*	1					
DEP	-0.263	0.010	-0.656**	1				
CURR	0.122*	0.020	0.247**	-0.252**	1			
LIQ	-0.089**	-0.080**	0.018	-0.026	-0.012	1		
QR	-0.134	-0.071	0.132	-0.142	0.025	0.990**	1	
INV	0.033*	0.082*	0.539**	-0.557**	0.185*	0.228*	-0.160	1

Correlation is significant at the 0.01 level (2-tailed)

Correlation is significant at the 0.05 level (2-tailed)

Table 3 shows that there is positive relationship of return on assets with capital ratio, current ratio and investment ratio. This indicates that higher the capital ratio, current ratio and investment ratio, higher would be the return on assets. However, liquid asset ratio, deposit to assets ratio and quick ratio have a negative relationship with return on assets. This indicates that an increase in liquid asset ratio, deposit to assets ratio and quick ratio leads to decrease in return on assets. The return on equity is positively related to capital ratio, deposit to assets ratio, current ratio and investment ratio. It indicates that higher the capital ratio, deposit to assets ratio, current ratio and investment ratio, higher would be the return on equity. Furthermore, return on equity is negatively related to liquid asset ratio and quick ratio. This indicates that higher the liquid asset ratio and quick ratio, lower would be the return on equity.

Regression Analysis

Having indicated the correlation coefficients, the regression analysis of return on assets on capital ratio, current ratio, investment ratio, liquid asset ratio, deposit to assets ratio and quick ratio has been performed and the results are presented in Table 4.

Table 4: Estimated regression results of capital ratio, current ratio, investment ratio, liquid asset ratio, deposit to assets ratio and quick ratio on return on assets

The result is based on panel data of 20 commercial banks with 120 observations for the period of 2009/10 to 2014/15. The model is,

$$ROA_{it} = \beta_o + \beta_1 CAPR_{it} + \beta_2 DEP_{it} + \beta_3 CURR_{it} + \beta_4 LIQ_{it} + \beta_5 QR_{it} + \beta_6 INV_{it} + \varepsilon_{it}$$

Where, ROA (return on assets is defined as net income divided by total assets, in percentage) is dependent variable. The independent variables are CAPR (capital ratio is the ratio of capital to total assets, in percentage), DEP (Deposit to assets ratio is the ratio of total deposit to total assets, in percentage), CURR (current ratio is the ratio of current assets to current liabilities, in percentage), LIQ (liquid asset ratio is the ratio of liquid assets to total assets, in percentage), QR (quick ratio is the ratio of quick assets to current liabilities, in percentage) and INV (investment ratio is the ratio of total loan to total deposit, in percentage).

Table - 4

Model	Intercept	CAPR	DEP	CURR	LIQ	QR	INV	R²	SEE	F-value
1	4.72 (5.21)**	0.41 (3.31)**						0.31	2.11	1.72
2	5.70 (24.01)**		-0.01 (-0.07)					0.06	2.12	0.99
3	.026 (3.75)**			0.22 (2.49)*				0.42	0.63	33.84
4	5.92 (6.44)**				-0.46 (-4.46)**			0.53	0.84	19.87
5	5.68 (8.03)**					-0.12 (-1.49)		0.13	0.74	3.11
6	5.84 (6.18)**						0.29 (2.02)*	0.50	0.86	6.77
7	5.91 (3.25)**				-0.25 (-2.79)**		0.31 (2.20)*	0.70	0.67	10.84
8	1.16 (19.76)**			0.49 (1.55)*	-0.19 (-1.06)			0.40	0.13	21.80
9	0.85 (4.81)*	0.31 (3.03)**	-0.18 (-0.84)	0.34 (2.25)*	-3.51 (-6.44)**			0.42	0.13	13.96
10	0.036 (3.57)**	0.29 (3.21)**		0.37 (2.10)*	-0.13 (-2.98)**		0.22 (2.18)*	0.69	0.18	6.53

*** and * sign indicates that the results are significant at 1 percent and 5 percent level of significance respectively.*

The result shows that beta coefficient is positive for current ratio and investment ratio with return on assets. This indicates that increase in current ratio leads to increase in return on assets. This finding is similar to the findings of Oegbu and Onodugo (2016). Likewise, higher the investment ratio, higher would be the return on assets. This finding is similar to the findings of Kosmidou et al. (2012).

The study also reveals that the beta coefficient is negative for liquid asset ratio and quick ratio with return on assets. This indicates that increase in liquid asset ratio leads to decrease in return on assets. This finding is consistent with the findings of Pasiouras and Kosmidou (2007). Likewise, higher the quick ratio, lower would be the return on assets. This finding is not consistent with the findings of Etale and Bingilar (2016).

The regression results of return on equity on capital ratio, current ratio, investment ratio, liquid asset ratio, and deposit to assets ratio and quick ratio are presented in Table 5.

The result shows that beta coefficients for liquid asset ratio and quick ratio are negative. The results indicate that higher the liquid asset ratio, lower would be the return on equity. This finding is consistent with the findings of Molyneux and Thorton (1992). Similarly, the negative coefficient of quick ratio with return on equity indicates that higher the quick ratio, lower would be the return on equity. This finding contradicts the findings of Majeed et al. (2013).

Table 5: Estimated regression results of capital ratio, current ratio, investment ratio, liquid asset ratio, deposit to assets ratio and quick ratio on return on equity

The result is based on panel data of 20 commercial banks with 120 observations for the period of 2009/10 to 2014/15. The model is,

$$ROE_{it} = \beta_0 + \beta_1 CAPR_{it} + \beta_2 DEP_{it} + \beta_3 CURR_{it} + \beta_4 LIQ_{it} + \beta_5 QR_{it} + \beta_6 INV_{it} + \varepsilon_{it}$$

Where, ROE (return on equity is defined as net income divided by total shareholders' equity in percentage) is dependent variable. The independent variables are CAPR (capital ratio

is the ratio of capital to total assets, in percentage), DEP (deposit to assets ratio is the ratio of total deposit to total assets, in percentage), CURR (current ratio is the ratio of current assets to current liabilities, in percentage), LIQ (liquid asset ratio is the ratio of liquid assets to total assets, in percentage), QR (quick ratio is the ratio of quick assets to current liabilities, in percentage) and INV (investment ratio is the ratio of total loan to total deposit, in percentage)

Table - 5

Model	Intercept	CAPR	DEP	CURR	LIQ	QR	INV	R²	SEE	F-value
1	0.47 (22.51)**	-0.65 (9.58)**						0.33	0.63	91.77
2	0.40 (1.46)	0.20 (1.61)						0.11	0.62	2.27
3	0.44 (0.35)			0.17 (1.01)				0.13	0.57	1.17
4	0.36 (40.17)**				-0.73 (11.94)**			0.43	0.57	12.65
5	0.42 (2.30)*				-0.11 (-1.88)			0.06	3.39	3.67
6	7.78 (6.93)**						0.65 (10.77)**	0.38	0.60	15.92
7	0.43 (30.05)**			0.32 (1.85)		-0.27 (-1.40)	0.26 (3.30)**	0.50	0.54	6.91
8	0.46 (16.71)**	0.43 (2.33)*	0.02 (1.01)					0.52	0.83	6.23
9	0.49 (16.55)**	0.45(2.50)*	0.016	0.08 (0.78)	(1.77)		0.14	0.92	6.94	
10	8.42 (11.63)**	0.51 (4.12)**	0.02 (0.35)	0.19 (1.21)	-0.48 (-3.27)**	(2.65)**	0.17	0.56	0.37	28.21

**and * sign indicates that the results are significant at 1 percent and 5 percent level of significance respectively.

Likewise, the results show that beta coefficients for capital ratio, deposit to assets ratio, current ratio and investment ratio are positive with return on equity. It indicates that higher the capital ratio, higher would be the return on equity. Similarly, increase in deposit to assets ratio leads to an increase in return on equity. These findings are similar to the findings of Rasiah (2010). Likewise, higher the current ratio, higher would be the return on equity. The finding is consistent with the findings of Renato (2010). Similarly, increase in investment ratio leads to an increase in return on equity.

Summary and Conclusion

In modern world, banks play a very significant role for the growth and development of various sectors such as trade, industry, service, etc. Moreover, banks play a role of financial intermediary, which transfer funds from surplus facing unit to deficit facing units. Profitability is the major reason behind every one to take greater amount of risk and make business successful. The bank profitability is largely determined by liquidity management factor that relate to the internal organization of banking firms.

The study attempts at examining the impact of liquidity management on bank profitability of Nepalese commercial banks. The study is based on secondary data of 20 commercial banks for

the period of 2009/10 to 2014/15, leading to a total of 120 observations.

The study shows that capital ratio has positive impact on return on assets. However, the study shows that total deposits ratio has negative impact on return on assets. Likewise, the study reveals that investment ratio and current assets ratio have positive impact on return on assets and return on equity. This indicates that increase in investment ratio and current assets ratio leads to increase in return on assets and return on equity. However, the study reveals that liquid asset ratio and quick ratio have negative impact on return on assets and return on equity. The study concludes that liquid asset ratio, investment ratio and capital ratio are the most influencing variables to determine the profitability of Nepalese commercial banks

Reference

Agbada, A. O. & C. C. Osuji (2013). The efficacy of liquidity management and banking performance in Nigeria. *International Review of Management and Business Research*, 2(1), 223-233

Almazari, A.A. (2014). Impact of internal factors on bank profitability: Comparative study between Saudi Arabia and Jordan. *Journal of Applied Finance and Banking*, 4(1), 125-140

Anyanwu, J. C. (1993). Assessing the impact of liquidity and profitability ratios on growth of profits in pharmaceutical firms in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 3(1), 97-114

Bassey, G. E. & C. E. Moses (2015). Bank profitability and liquidity management: A case study of selected Nigerian deposit money banks. *International Journal of Economics, Commerce and Management,* 3(4), 1-24

Berger, A. N. (1995). The relationship between capital and earnings in banking. *Journal of Money Credit and Banking*, 27(1), 432-456

Bhunia, A. (2012). The impact of liquidity on profitability: A case study of FMCG companies in India. *Research and Social practices in Social Sciences,* 7(2), 44-58

Biety, M. (2003). Liquidity and asset liability management in saving services for the poor, an operational guide. *Journal of Business and Management,* 16(1), 104-112

Bourke, P. (1989). Concentration and other determinants of bank profitability in Europe, North America and Australia. *Journal of Banking and Finance*, 13(1), 65-79

Cucinelli, D. (2013). The determinants of bank liquidity risk within the context of Euro area. *Interdisciplinary Journal of Research in Business*, 2(10), 51- 64

Deloof, M. (2003). Does working capital management affect profitability of Belgian firms? *Journal of Business Finance Accounting*, 30(1), 573-588

Eljelly, A. M. (2004). Liquidity-profitability tradeoff: An empirical investigation in an emerging market. *International Journal of Commerce and Management*, 14(2), 48-61

Etale, L. M., & P. F. Bingilar (2016). Liquidity management and profitability: A study of selected food and beverage companies in Nigeria. *International Journal of Management Sciences*, 7(4), 217-225

Farris, M. (2002). Cash-to-cash: The new supply chain management metric. *International Journal of Physical Distribution & Logistics Management*, 32(4), 288-298

Filbeck, G. & T. M. Krueger (2005). An analysis of working capital management results across industries. *American Journal of Business*, 20(2), 11-20

Gautam, R. (2016). The determinants of banks liquidity: Empirical evidence on Nepalese commercial banks. *Journal of Interdisciplinary Studies*, 2(2), 69-78

Goddard, J., P. Molyneux, and J. Wilson (2004). The profitability of European bank: A cross sectional and dynamic panel analysis. *International Research Journal of Finance and Economics*, 74(3), 363-381

Guru, B. K. (2002). Determinants of commercial bank profitability in Malaysia. *Journal of Money, Credit, and Banking*, 5(17), 69-82

Ismail, R. (2016). Impact of liquidity management on profitability of Pakistani firms: A case of KSE-100 index. *International Journal of Innovation and Applied Studies*, 14(2), 304-323

Joshi, R. K. (2004). Liquidity ratio and profitability of the banks. *The Journal of Nepalese Business Studies*, 2(4), 12-18

Karki, H. (2004). Credit risk and the performance of Nepalese banks. *Journal of Nepalese studies*, 2(1), 12-30

Khrawish, H. A. (2011). Determinants of commercial banks performance: Evidence from Jordan. *International Research Journal of Finance and Economics*, 81(1), 148-159

Kim, C. S., D. S. Mauer, & A. E. Sherman (1998). The determinants of corporate liquidity: theory and evidence. *Journal of Financial and Quantitative Analysis*, 33(3), 335-359

Kosmidou, K., S. Tanna, & F. Pasiouras (2012). Determinants of profitability of domestic UK commercial banks: panel evidence from the period 1995-2002. *In Money Macro and Finance (MMF) Research Group Conference*, 45(1), 1-27

Lamberg, S. & S. Valming (2009). Impact of liquidity management of profitability: A study of the adaptation of liquidity strategies in a financial crisis. *Journal of Finance and Accounting*, 2(2), 222-284

Magar, G.T. (2016). Liquidity management and bank profitability: A case of Nepalese commercial banks. *Nepalese Journal of Management*, 3(4), 55-70

Majeed, S., M. A. Makki, S. Saleem, & T. Aziz (2013). The relationship of cash conversion cycle and profitability of firms: an empirical investigation of Pakistan firms. *Journal of Emerging Issues in Economics, Finance and Banking*, 1(1), 35-51

Maqsood, T., M. A. Anwar, A. Raza, M. Ijaz, & U. Shouqat (2016). Impact of liquidity management on profitability in banking sector of Pakistan. *International Review of Management and Business Research*, 5(2), 643-652

Mehar, A. (2001). Impacts of equity financing on liquidity position of a firm. *Journal Applied Financial Economics*, 15(21), 425-438

Molefe, B. & P. Muzindusti (2015). Effect of capital and liquidity management on profitability of major South African banks. *International Business and Economics Research Journal*, 14(3), 453-461

Molyneux, A.,& G. Thorton (1992). Determinants of profitability in Turkish banking sector. *International Research Journal of Finance and Economics,* 3(2), 55-86

Myers, S. C. & R. G. Rajan (1998). Banking sector liquidity and financial crisis in Nigeria. *International Journal of Economics and Finance*, 3(5), 3-11

Niresh, J. A. (2012). Trade-off between liquidity & profitability: A study of selected manufacturing firms in Sri Lanka. *Researchers World*, 3(4), 34-52

Ofoegbu, G. N. & V. A. Onodugo (2016). Liquidity management and profit performance of pharmaceutical manufacturing firms listed in Nigeria Stock Exchange. *International Journal of Management Sciences and Business Research*, 5(7), 1-13

Olagunju, A., O. D. Adeyanju, & O. S. Olabode (2011). Liquidity management and commercial banks' profitability in Nigeria. *Research Journal of Finance and Accounting*, 2(7), 24-38

Owolabi, S. A. & S. S. Obida (2012). Business Management Dynamics. *International Journal of Business and Social Science*, 2(2), 10-25

Pasiouras, F. & K. Kosmidou (2007). Factors influencing the profitability of domestic and foreign commercial banks in the European Union. *Research in International Business and Finance*, 21(2), 222- 237

Paudel, G. P. & S. Khanal (2015). A study of liquidity and interest spread in Nepalese Cooperative Societies.*International Journal of Economics, Finance and Management Sciences*, 4(6) 1-19

Pradhan, R. S. & D. Shrestha (2016 Impact of liquidity on bank profitability in Nepalese commercial banks. *Nepalese Journal of Business*, 3(4), 1-15

Premalatha, D. (2015). A study on liquidity and profitability of Indian private sector banks. *International Journal of Marketing, Financial Services and Management Research*, 4(1), 67-74

Rasiah, D. (2010). Theoretical framework of profitability as applied to commercial banks in Malaysia. *European Journal of Economics, Finance &Administrative Sciences*, 19(19), 75-97

Renato, S. V. (2010). The relationship between liquidity and profitability. *International Research Journal of Applied and Basic Sciences*, 4(6), 1624-1631

Saleem, Q. & R. U. Rehman (2011). Impacts of liquidity ratios on profitability. *Interdisciplinary Journal of Research in Business*, 1(7), 95-98

Shim, J. K. & J. G. Siegel (2000). Budgeting. *Budgeting Basics and Beyond*, 3(1), 13-23

Shrestha, D. (2012). The relationship between risk and capital in commercial banks. *Journal of Banking & Finance,* 16(2), 439-457

Staikouras, C. K., and G. E. Wood (2004). The determinants of European bank profitability. *International Business and Economics Research Journal,* 3(6), 57-68

Umobong, F. (2015). Liquidity management and profitability of manufacturing companies in Nigeria. *Journal of Business and Management*, 9(1), 13-21

Vahid, T. K., A. K. Mohsen, & E. Mohammadreza (2012). The impact of working capital management policies on firm's profitability and value: evidence from Iranian companies. *International Research Journal of Finance and Economics*, 88(1), 155-162

Vong, P. I. & H. S. Chan (2009). Determinants of bank profitability in Macao. *Macau Monetary Research Bulletin*, 12(6), 93-113

Waithaka, A. (2012). The relationship between working capital management practices and financial performance of agricultural companies listed at the Nairobi securities exchange. *Interdisciplinary Journal of Research in Business*, 3(2), 1-10

Wilner, B. (2000). The exploitation of relationships in financial distress: The case of trade credit. *International Journal of Advances in Management & Economics*, 1(5), 31-36

www.manaraa.com