DETERMINANTS OF FINANCIAL PERFORMANCE: AN EVIDENCE FROM NEPALESE COMMERCIAL BANKS

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Abstract
This paper examines the determinants of financial performance of commercial bank in Nepal. In order to investigate the determinants of financial performance, 10 commercial banks have been taken as sample covering the period of time 2006/07 to 2016/17. Data are collected from annual report of the respective banks. Multiple linear regression models have been employed for the analysis of data. The result shows a positive relationship of return on assets with capital adequacy ratio, management efficiency and gross domestic product whereas negative with assets quality and liquidity management. It is evident from the findings that financial performance of commercial banks are strongly affected by capital adequacy ratio, management efficiency, gross domestic product, liquidity management and assets quality.

Keywords: Capital adequacy ratio, Management efficiency, Liquidity management, Assets quality and Gross domestic product.

JEL Codes: G21, E58.

1. Introduction

Financial sector is the backbone of economy of a country. It works as a facilitator for achieving sustainable economic growth through providing efficient monetary intermediation. A strong financial system promotes investment by financing productive business opportunities, mobilizing savings, efficiently allocating resources and makes easy the trade of goods and services. Banking system is considered as the heart of an economy because of its contribution toward the mobilization of savings and thus to the utilization of this country’s resources. Commercial banks play important role for the development of the countries through the resource mobilization. They channel funds from savers to borrowers continuously. They should generate sufficient income to cover their operational cost they incur in the due course. The financial performance of banks has critical implications for economic growth of countries. How well a financial institution is performing is of great importance for the resource providers for making correct investment decisions. Good financial performance rewards the shareholders for their investment. This, in turn, encourages additional investment and brings about economic growth. On the other hand, poor banking performance can lead to banking failure and crisis which have negative repercussions on the economic growth. Profitability of financial institution is one of the important parameters from which funds providers can understand performance of the institutions. Financial performance depends on various factors. Some of them are Capital Adequacy, Asset Quality, Management Efficiency, Liquidity, Gross Domestic Product etc. Therefore, in order to ensure sound financial performance banks should focus on the factors likely to affect profitability and the extent of their influence.

Financial performance analysis of commercial banks has been of great interest to academic research since the Great Depression Intern the 1940’s. In the last two decades studies have shown that commercial banks in Sub-Saharan Africa (SSA) are more profitable than the rest of the world with an average Return on Assets (ROA) of 2 percent (Flamini et al., 2009). The performance of commercial banks can be affected by internal and external factors (Al-Tamimi, 2010; Aburime, 2005). These factors can be classified into bank specific (internal) and macroeconomic variables. The internal factors are individual bank characteristics which affect the bank's performance. These factors are basically influenced by the internal decisions of management and board. The external factors are sector wide or country wide factors which are beyond the control of the company and affect the profitability of banks. Furthermore, Ho and Zhu (2004) have reported that the evaluation of a company’s performance has been focusing the operational effectiveness and efficiency, which might influence the company’s survival directly. The empirical results of the researches (Raza et al., 2011; Tarawneh, 2006) explained that a company, which has better efficiency, it does not mean that always it will show the better effectiveness. Alam et al. (2011) study concludes that ranking of banks differ as the financial ratio changes. Rahman et al. (2004) and Elyor (2009) noted that interest expenses divided to total loans can be
measured as the bank management quality. Ability to support the present and future operations of a bank depends on the quality of its earnings and profitability profile (Share et al., 2011). Tarawneh (2006) found that the banks having high total capital, deposits, credits, or total assets does not always mean that has healthier profitability and performance. The operational efficiency and asset management, in adding to the bank size, positively influenced the financial performance of these banks. Gopinathan (2009) has presented that the financial ratios analysis can spot better investment options for investors as the ratio analysis measures various aspects of the performance and analyzes fundamentals of a company or an institution. Banking has become an important feature, which renders service to the people in financial matters, and its magnitude of action is extending day by day. It is a major financial institutional system in Nepal, which accounted for more than 70% (Poudel, 2005) of the total assets of all the financial institutions. NRB uses return on total assets as an indicator of profitability of a commercial bank.

The main purpose of this study is to analyze the financial performance of commercial banks in Nepal. Specially, it examines the performance of commercial banks through capital adequacy ratio, liquidity ratio, management efficiency, asset quality and gross domestic product.

2. Literature Review
Several research works have been conducted on financial soundness and performance of banking sector throughout the world by using variety of approaches. The study of McKinnon (1973) and Levine (1997) have reported that the efficacy of a financial system to reduce information and transaction costs plays an important role in determining the rate of savings, investment decisions, technological innovations and hence the rate of economic growth. Hassan & Bashir (2002) conducted a study covering Islamic banks worldwide during 1994-2001 to identify the determinants of Islamic banks' profitability. The study concluded that high capital and loan-to-asset ratios lead to higher profitability and implicit and explicit taxes affect the bank performance measures negatively while favorable macroeconomic conditions impact performance measures positively. A study was carried out by Kosmidou et al. (2005) to examine the relationship between performance of UK banks and credit risk measured in terms of loan loss reserves. Findings indicate that loan loss reserves are positive on net interest margin, but have negative insignificant effect on bank profits.

Sufian & Habibullah (2009) examined the performance of 37 Bangladeshi commercial banks between 1997 and 2004. The study revealed that bank loans intensity, credit risk, and cost have positive and significant impacts on bank performance whereas bank size exhibits a negative impact on return on average equity (ROAE). Furthermore, the study also examined the impact of macroeconomic indicators and concluded that the variables have no significant impact on bank profitability except inflation which has a negative relationship with Bangladeshi banks profitability. Chowdhury & Ahmed (2009) concluded that the prospect of private commercial banks in Bangladesh is very bright as they have observed a stable growth of branches, employees, deposits, loans and advances, net income, earnings per share during the period of 2002-2006.

For assessing the financial performance of Palestinian commercial banks, Alkhatib & Harsheh (2012) took five Palestinian commercial banks listed on Palestine Securities Exchange covering the period 2005-2010. By employing the multiple regression, the study found statistically insignificant impact of bank size, credit risk, operational efficiency and asset management on financial performance of Palestinian commercial banks. Kolapo & Ayeni (2012) carried out an empirical investigation into the quantitative effect of credit risk on the performance of commercial banks in Nigeria over the period of 11 years (2000-2010). The results showed that an increase in non-performing loan and loan loss provision reduce profitability (ROA) of banks while an increase in total loan and advances lead to increase profitability. Choong et al. (2012) studied the Performance of Islamic Commercial Banks of Malaysia and analyze their performance. The empirical results indicated that credit risk, liquidity rate and concentration of Islamic commercial banking are the most contributing factors in the performance of local Islamic commercial banks in Malaysia.

Fantal et al (2013) assessed the relationship between selected internal and external corporate governance mechanisms, and bank performance as measured by return on equity (ROE) and return on assets (ROA) covering the period 2005 to 2011. The study indicated that board size and existence of audit committee in the
board had statistically significant negative effect on bank performance whereas bank size and capital adequacy ratio had statistically significant positive effect on bank performance. Ameur & Mhiri (2013) studied 10 commercial Tunisian banks during the period 1998 to 2011 period to identify factors explaining Tunisian bank performance. This study incorporated bank-specific as well as industry-specific and macroeconomic factors affecting bank performance. The findings suggested that the bank capitalization as well as the best managerial efficiency have positive and significant impact on the bank performance. The study also concluded that industry-specific factor such as the concentration has a negative and a significant impact on performance. Moreover, macroeconomic indicators do not have a significant impact on bank performance.

In the context of Nepal, Shrestha, (2015) found that that non-performing loan to total loan, capital adequacy ratio, GDP and inflation are the major determinants of bank profitability. Hakuduwal (2014) concluded that there is positive significant impact of total assets, total deposits and loan and advance on profitability indicator ROA in Nepalese finance companies.

Review of previous literatures reveal that number of studies has been done in the context of financial performance. However, in the context of Nepal no sufficient studies have been found. Hence, an attempt has been made to fill this research gap. Therefore, the objective of this study is to identify the determinants of the financial performance of commercial banks operating in Nepal.

3. Research Methodology

A sample of 10 commercial banks from banking industry has been taken for the purpose of the study. In this study, secondary data has been used. All required secondary data for this study has been taken from annual report of concerned banks and web site of Nepal Rastra Bank. The data covers a ten-year period starting from 2006/07 to 2016/17. Multiple linear regression model has been employed for the analysis of data.

3.1. Model Specification

The following model has been used to study the determinants of financial performance of commercial banks. According to this model, financial performance is a function of capital adequacy ratio, management efficiency, asset quality, liquidity ratio and gross domestic product (GDP). Hence, the models take the following form:

\[ \text{ROA} = \beta_0 + \beta_1 \text{CA} + \beta_2 \text{AQ} + \beta_3 \text{ME} + \beta_4 \text{LM} + \beta_5 \text{GDP} + e \]

Where,

\( \text{ROA} \) = Performance of Bank i at time t as expressed by return on assets

CA = Capital Adequacy of bank

AQ = Asset Quality of bank

ME = Management Efficiency of Bank

LM = Liquidity Ratio of Bank

GDP = Gross Domestic Product

\( \beta_0 \) = Constant

\( e \) = Error

\( \beta_1, \beta_2, \beta_3, \beta_4, \beta_5 \) are parameters of the independent variables.

Variable defined

The explained variable in this study is financial performance which is defined as ratio of net income to total assets that is return on assets (ROA). ROA indicates the profitability of a bank. It measures the ability of the bank management to generate income by utilizing company assets at their disposal. In other words, it shows
how efficiently the resources of the company are used to generate the income. It further indicates the efficiency of the management of a company in generating net income from all the resources of the institution (Khrawish, 2011). Wen (2010), state that a higher ROA shows that the company is more efficient in using its resources.

Moreover, following explanatory variables have been used:

**Capital Adequacy Ratio**
Capital is one of the bank specific factors that influence the level of bank profitability. Capital is the amount of own fund available to support the bank's business and act as a buffer in case of adverse situation (Athanasoglou et al. 2005). Banks capital creates liquidity for the bank due to the fact that deposits are most fragile and prone to bank runs. Moreover, greater bank capital reduces the chance of distress (Diamond, 2000). Capital adequacy ratio is determined by the total capital to total asset.

\( H_1: \text{CAR has positive relationship with ROA} \)

**Assets Quality**
The bank's asset is another bank specific variable that affects the profitability of a bank. The bank asset includes among others current asset, credit portfolio, fixed asset, and other investments. Often a growing asset (size) related to the age of the bank (Athanasoglou et al., 2005). More often than not the loan of a bank is the major asset that generates the major share of the banks income. Loan is the major asset of commercial banks from which they generate income. The quality of loan portfolio determines the profitability of banks. The loan portfolio quality has a direct bearing on bank profitability. The highest risk facing a bank is the losses derived from delinquent loans (Dang, 2011). Thus, nonperforming loan ratios are the best proxies for asset quality. Different types of financial ratios used to study the performances of banks by different scholars. It is the major concern of all commercial banks to keep the amount of nonperforming loans to low level. This is so because high nonperforming loan affects the profitability of the bank. Thus, low nonperforming loans to total loans shows that the good health of the portfolio a bank. The lower the ratio the better the bank performing (Sangmi and Nazir, 2010). Assets quality is determine by non-performing loan to total loan.

\( H_2: \text{AQ has negative relationship with ROA} \)

**Management Efficiency (ME)**
Management Efficiency is one of the key internal factors that determine the bank profitability. It is represented by different financial ratios like total asset growth, loan growth rate and earnings growth rate. Yet, it is one of the complexes subject to capture with financial ratios. Moreover, operational efficiency in managing the operating expenses is another dimension for management quality. The capability of the management to deploy its resources efficiently, income maximization, reducing operating costs can be measured by financial ratios. One of this ratios used to measure management quality is operating profit to income ratio (Rahman et al. 2009; Sangmi and Nazir, 2010). The higher the operating profits to total income (revenue) the more the efficient management is in terms of operational efficiency and income generation. The other important ratio is that proxy management quality is expense to asset ratio. The ratio of operating expenses to total asset is expected to be negatively associated with profitability. Management quality in this regard, determines the level of operating expenses and in turn affects profitability (Athanasoglou et al. 2005). It determines by total operating revenue to total profit

\( H_3: \text{ME has positive relationship with ROA} \)

**Liquidity Management (LM)**
Liquidity is another factor that determines the level of bank performance. Liquidity refers to the ability of the bank to fulfill its obligations, mainly of depositors. According to Dang (2011) adequate level of liquidity is positively related with bank profitability. The most common financial ratios that reflect the liquidity position of a bank according to the above author are customer deposit to total asset and total loan to customer deposits. Other scholars use different financial ratio to measure liquidity. It measure by total loans to total customer deposit.

\( H_4: \text{liquidity management has positive relationship with ROA} \)

**Gross Domestic Product (GDP)**
GDP refers to the value of a country’s overall output of goods and services during one fiscal year at market prices excluding net income from abroad. A higher GDP is an indication of increase in purchasing power and for that matter the ability of investors increase to invest in stocks. It is natural to think that stock returns react to the state of the economy.

H₅: The GDP has positive relationship with ROA.

Operationalisation of the Study Variables
This section presents the measurements that were used to operationalize the study variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>Total income to its total asset</td>
</tr>
<tr>
<td>CA</td>
<td>Total Capital to Total Asset</td>
</tr>
<tr>
<td>AQ</td>
<td>Non-performing loans to total loans</td>
</tr>
<tr>
<td>ME</td>
<td>Total Operating Revenue to Total Profit</td>
</tr>
<tr>
<td>LM</td>
<td>Total Loans to Total Customer Deposit</td>
</tr>
<tr>
<td>GDP</td>
<td>Yearly Gross Domestic product</td>
</tr>
</tbody>
</table>

4. Result and Discussion

4.1. Descriptive Statistics
Table 4.1 illustrates the descriptive statistics for the selected variables considered in this study. Return on assets ranges from 0.00 percent to 18.04 percent with mean 2.0733 percent and standard deviation 1.850411 percent. Similarly, capital adequate ratio has average of 12.0726 percent with minimum percent -23.55 percent and maximum 30.24 percent.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Asset (%)</td>
<td>107</td>
<td>.00</td>
<td>18.04</td>
<td>2.0733</td>
<td>1.850411</td>
</tr>
<tr>
<td>Capital Adequacy Ratio (%)</td>
<td>107</td>
<td>-23.55</td>
<td>30.24</td>
<td>12.0726</td>
<td>5.67544</td>
</tr>
<tr>
<td>NPLTL</td>
<td>107</td>
<td>6.80</td>
<td>52.96</td>
<td>27.8782</td>
<td>14.42750</td>
</tr>
<tr>
<td>Management Efficiency</td>
<td>107</td>
<td>.00</td>
<td>39.76</td>
<td>2.2700</td>
<td>5.37881</td>
</tr>
<tr>
<td>Liquidity Management</td>
<td>107</td>
<td>39.27</td>
<td>101.25</td>
<td>74.1374</td>
<td>12.26821</td>
</tr>
<tr>
<td>Gross Domestic Product</td>
<td>107</td>
<td>10.33</td>
<td>23.32</td>
<td>17.5453</td>
<td>3.96026</td>
</tr>
</tbody>
</table>

Source: SPSS

Likewise, non-performance loan to total loan ranges from 6.80 percent to 52.96 percent with average value of 27.8782 percent. The management efficiency has maximum value of 39.76 percent with the average value of 2.2700 percent. The average value of liquidity management is 74.1374 percent with maximum value of 101.25 percent and minimum value of 39.27 percent. The Gross domestic product growth rate has maximum value of 23.32 and minimum value of 10.33 percent with the average value of 17.5453 percent during the study.

4.2. Correlation Analysis
Pearson correlation coefficients have been computed and the results are presented in Table 4.2.

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>CAR</th>
<th>AQ</th>
<th>ME</th>
<th>LM</th>
<th>GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAR</td>
<td></td>
<td>0.65**</td>
<td>-0.45*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AQ</td>
<td>-0.61*</td>
<td></td>
<td>0.58*</td>
<td>0.42</td>
<td>0.55**</td>
<td></td>
</tr>
<tr>
<td>ME</td>
<td>0.62**</td>
<td>0.794*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LM</td>
<td>0.64*</td>
<td>0.55*</td>
<td>0.63</td>
<td>0.634</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>0.52**</td>
<td>0.58*</td>
<td>0.42</td>
<td>0.55**</td>
<td>0.44</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 4.2 shows the Pearson correlation coefficient between variables taken in the study. It reveals that the return on assets is positively related with capital adequacy ratio, management efficiency, liquidity management, and gross domestic product. It reveals that higher the capital adequacy ratio, management efficiency, liquidity management and gross domestic product higher would be return on assets. On the other hand, return on assets is negatively related with assets quality and liquidity management. It indicates that higher the assets quality lower would be return on assets.

4.3. Regression Analysis
The regression of dependent variable and independent variable are presented in Table 4.3. The result shows that beta coefficient for capital adequacy ratio, management efficiency and gross domestic product are positive which indicates that larger the capital adequacy ratio (CAR), management efficiency (ME) and gross domestic product(GDP) higher would be return on assets (ROA).

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.843</td>
<td>1.303</td>
<td>.196</td>
</tr>
<tr>
<td>CAR</td>
<td>.048</td>
<td>.951</td>
<td>.004</td>
</tr>
<tr>
<td>AQ</td>
<td>-.014</td>
<td>-1.149</td>
<td>.072</td>
</tr>
<tr>
<td>ME</td>
<td>.151</td>
<td>2.737</td>
<td>.007</td>
</tr>
<tr>
<td>LM</td>
<td>-.004</td>
<td>-.289</td>
<td>.007</td>
</tr>
<tr>
<td>GDP</td>
<td>.002</td>
<td>.036</td>
<td>.009</td>
</tr>
<tr>
<td>R</td>
<td>0.761</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>0.5791</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Likewise, the beta coefficient of assets quality (AQ) and liquidity management (LM) are negative to ROA, which implies that larger the beat coefficient of AQ and LM lower would be return on assets (ROA). Since the p-value of CAR, LM, ME and GDP are less than 5 percent, these results are statistically significant at 1 percent. The R² is 0.5791 or 57.91 percent which means 57.91 percent of the variation in return on assets is explained by the predictors like capital adequacy ratio, assets quality, management efficiency, liquidity management, and gross domestic product.

5. Conclusion
Financial performance is one of the most important factors having impact on the decision making of the resource providers. Thus to ensure the existence in the ever growing competitive business environment, every institution should be more concerned about the factors affecting their financial performance. This paper specially emphasizes on identifying the determinants of the financial performance of the commercial banks operating in Nepal. An attempt has been made to identify determinants of financial performance of commercial banks. For this purpose ten commercial banks have been taken covering the period from 2006/07-2016/17. To draw conclusion a multiple regression model has been used by considering financial performance (ROA) as dependent variable and capital adequacy ratio, management efficiency, assets quality, liquidity management and gross domestic product. The result shows positive relationship of return on assets with capital adequacy ratio, management efficiency and gross domestic product are positive which indicates that larger the capital adequacy ratio, management efficiency and gross domestic product higher would be return on assets. Likewise, there is negative relationship of return on assets with assets quality and liquidity management which implies that larger the beat coefficient of AQ and LM lower would be return on assets (ROA). The beta coefficients of CAR, LM, ME and GDP are statistically significant at 1 percent. It can be concluded that capital adequacy ratio, assets quality, liquidity management, management efficiency and gross domestic product have significant impact on the return on assets in Nepalese commercial banks.
Reference