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Camel Model And Financial Performance Of Commercial Banks In Nepal

Rohit Kumar Shrestha [1] Bindu Gnawali ✉ [2]
[1]Associate Prof., Padma Kanya Multiple Campus, TU, Kathmandu
*[*2]Assistant Professor, Tribhuvan University*

Abstrak

CAMEL is an acronym for five key performance parameters. C stands for capital adequacy, A for asset quality, M for management efficiency, E for earnings ability, and L for liquidity status. The objective of the study is to examine the relationship between CAMEL and Return on Asset (ROA) and the effect of CAMEL on the ROA (profitability) of Nepalese commercial banks. This study used a descriptive research design. The study applied a quantitative research technique. Secondary financial data from yearly reports are employed for analysis. In total, there are 26 commercial banks in Nepal. Nabil Bank Limited, Nepal Investment Bank Limited, Century Commercial Bank Limited, Nepal SBI Bank Ltd., Nabil Bank Limited, Everest Bank Limited, and Prabhu Bank have been chosen as samples, applying a lottery system, for the study out of a total population of 26. The study covered the years 2011/12–2020/21. More precisely, the data related to CAMEL variables and annual reports for each bank during the study period were obtained from their official websites. Correlation and regression were used for data analysis. A mixed correlation has been found between the CAMEL framework and ROA. Capital adequacy and asset quality have a significant and negative effect on ROA. However, earning ability has a significant positive effect on ROA. Management efficiency and liquidity status have an insignificant and negative effect on ROA. Thus, it can be generalized that ROA (profitability) is driven by internal factors i. e. earnings quality and also by capital adequacy, and assets quality and is not driven significantly by management efficiency and liquidity status in Nepalese commercial banks. The practical implication of this study is to add equity to the entire capital fund due to the significant and positive correlation and effect of earning ability with ROA. Banks can increase the amount of capital adequately considering capital structure that should be subject to a strict policy of banks. Banks should attempt to decrease the non-performing loan ratio by decreasing poor asset quality.

Keywords*:* Asset Quality, Capital Adequacy- Earning Ability--Liquidity Status- Management Efficiency- Commercial Banks

✉ Corresponding author :
Email Address : bindu.mgmt87@gmail.com

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INTRODUCTION

Among financial sectors, the banking sector has become a rapidly growing sector in the world recently. Financial soundness and performance are essential to the stable and sustainable economic growth of a country (Roman & Sargu, 2013). For the economic advancement of the nation, a healthy banking initiative is inevitable because it helps to allocate scarce national resources optimally (Desta, 2016). Furthermore, the banks play the role of a mediator to all businesses like manufacturing, construction, poultry, textile, trading, service, agriculture, etc. (Rostami, 2015). In general, the word bank which means financial institution dealing with money is the backbone of the economy of a country (Kandel, 2019). Nepal is no exception. In the Nepalese economy, the financial sector is one of the fast-growing sub-sectors. Financial performance analyzes and evaluates a bank's financial health based on assets, liabilities, revenue, expenses, equity, and profitability. The commercial bank holds a large share of the economic activities of a country. Since commercial banks have been paying a large amount of tax every year, they have been major contributors to the revenue of the country. They also exert influence on the stock market. Thus, it is required to determine the positions of strengths, weaknesses, opportunities, and threats, in the SWOT analysis. The performance of the banks is a major concern for any country's trade and development. Industry-related stakeholders such s investors, stockholders, and other policymakers want to know about the financial performance of the bank.

Financial performance analysis is carried out to assess the firm's financial strengths and weaknesses. The practice of examining the strengths and weaknesses of a firm's financial status is known as financial performance analysis (Baral et al., 2007). Return on Assets (ROA) and Return on Equity (ROE), often known as return on investment, is the most frequently used performance metric. Both public and private banks' performance have been measured by researchers, academicians, and administrators using CAMEL variables in the past. However, such previous empirical researches are contradictable and conflicting about the effect of the CAMEL approach on the financial performance of the bank. Thus, universally accepted theory is still lacking. Therefore, this topic is still researchable ((Thisaranga & Ariyasena,2021)).

In analyzing the financial performance of banks, several different tools and techniques have been adopted by different researchers and institutions in the world. Financial performance analysis consists of profitability analysis, working capital analysis, assets management analysis, financial structure analysis, and CAMEL factors which is a widely and internationally accepted system (Kadel, 2019 & Athanasoglou et al., 2011). CAMEL test is the most popular technique for examining the financial soundness of banks (Roman & Sargu, 2013). Analysts and regulatory bodies use this approach to assess the risk and performance of financial institutions. Even Sdin Nepal, the Nepal Rastra Bank also has used the widely accepted CAMEL rating approach when it comes to the supervision of commercial banks. Therefore, this study has concentrated on the CAMEL rating framework to evaluate the financial performance of Nepalese commercial banks.

The banking sector has been playing a pivotal role in economic growth through the creation of financial inclusion for its valuable customers. It has also been disclosing some critical problems. They are liquidity management problems, asset quality problems, capital adequacy problems, and so many more problems that hinder banks from achieving their planned objectives (Ngoboka & Gatauwa, 2020).

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Financial statements are typically used to only determine a company's profitability status, but it does not analyze the institution's overall performance. The performance of the banking industry is thought of as an exact reproduction of economic activity. A good indicator of the state of the economy is the financial sector's stage of development (Misra & Aspal, 2013). The risks include those related to credit, liquidity, interest rates, foreign exchange, operations, and insolvency, among others. Some financial institutions do poorly even when the CAMEL approach is used to evaluate them. In a similar vein, it appears that financial institutions lack a proper parameter for measuring financial performance. To the knowledge of the investigator, there is a lack of sufficient investigation into the association between the CAMEL model and profitability in the Nepalese banking sector. Whatever the investigation is found insufficient and contradictory too. On the other hand, State-Owned Enterprises (SOEs) in Nepal have become a financial and administrative burden to the country because of being economically, financially, and chronically loss-making enterprises and have poor service delivery to general people (Wagle et. al., 2013). Fiscal inefficiency and effectiveness, poor management, lack of clarity of commercial goals, etc., are among the key issues of the SOEs in Nepal (Ministry of Finance, 2018). Previous research has been showing conflicting results about the influence of the CAMEL approach on bank performance. Thus, this phenomenon is still a researchable area (Thisaranga & Ariyasena, 2021).

Hypothesis (H1): There is a significant relationship between CAMEL and ROA.
Hypothesis (H2): CAMEL has a significant effect on ROA.

REVIEW OF LITERATURE

The effectiveness of the company is mostly determined by its financial performance, including profit maximization, profit on assets maximization, and shareholder benefit maximization (Chakravarthy, 1986). The Uniform Financial Institutions Rating System (UFIRS), was established in US banking institutions in 1979 and introduced the CAMEL approach to analyze financial performance and operations (Sahajwala & Van den Bergh, 2000). Market power theory, efficiency theory, agency cost theory, and signaling theory can be linked in this study.

Mulalem (2015) carried out a study on "Analyzing Financial Performance of Commercial Banks in Ethiopia, Camel Approach"**.** The study used the CAMEL technique to examine the financial performance of 14 commercial banks between 2010 and 2014. The study found that capital adequacy, asset quality, and management efficiency have negative relationships with profitability i.e., ROA, whereas earnings and liquidity showed relationships with both profitability measures with strong statistical significance, except capital adequacy, which was insignificant for ROA.

Ahsan (2016) conducted a study on "Measuring Financial Performance Based on Camel: A Study on Selected Islamic Banks in Bangladesh". The objective of the study is to evaluate the financial performance of three particular Islamic banks in the banking sector of Bangladesh during eight years (2007-2014): Islamic Bank Bangladesh Limited, Export Import Bank of Bangladesh Limited, and Shahjalal Islami Bank Limited. Basically, this study used the publicly available financial accounts of banks and was quantitative, descriptive, analytical, and empirical in nature. This led to the use of the CAMEL rating analysis approach. The study found that all of the chosen Islamic banks have high positions and are strong in every manner on their composite

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rating systems in terms of capital sufficiency, asset quality, management quality, earning potential, and liquidity position.

Desta (2016) carried out a study on "Financial Performance of the Best African Banks: A Comparative Analysis Through Camel Rating". The research studied the African banks' financial results. Among the 30 finest banks in Africa as determined by the Global Finance Magazine, only seven banks were found. These banks' most recent three fiscal years' (2012 to 2014) worth of comprehensive and consolidated financial statements are available. The CAMEL composite and component rating has been used. The study found that banks are assessed as strong and good in terms of their ability to earn money and their capital adequacy ratio. When evaluated in terms of asset quality, management quality, and liquidity, however, they were classified as less satisfactory, deficient, and critically deficient.

Kandel (2019) carried out a study on "Analysis of Financial Performance of Commercial Banks of Nepal Using CAMEL Approach". The objective of the study is to analyze the capital adequacy, assets quality, management quality, earning capability and liquidity position of commercial banks. The CAMEL model has been used to judge the ROA. CAMEL approach and financial ratios with secondary data were applied. The population size of the study was 63 publicly listed ASEAN banks. Correlation and regression techniques have been applied to analyze the data. The study found that earning quality and adequate capital are the key factors determining both ROA and ROE. Asset quality and liquidity also have a moderating effect on bank performance. But the management efficiency had little effect on ROA.

Afroj performed a study (2022) on "Financial Strength of Banking Sector in Bangladesh: A CAMEL Framework Analysis". The study evaluated strength over the years 2010–2015 on 35 banks. Additive value function with CAMEL rating (capital strength, asset quality, managerial efficiency, earning ability, liquidity) has been employed to calculate banks' financial strength. And then, regression technique has been used to analyze data. The study discovered that the Islamic banks of Bangladesh are financially stronger and outperform higher liquidity. Private banks have more financial strength when measuring CAMEL parameters.

Shrestha and Pokharel (2021) conducted a study titled "Financial Performance of Public Enterprises (PEs) of Nepal". The goal of the study is to evaluate the financial performance of PEs in Nepal. Descriptive and quantitative research designs were applied to the study. Websites of the annual report by Nepal Rastra Bank were chosen to collect secondary data of selected PEs. The mean was calculated to analyze data. Profitability ratios were used to analyze the data. The study found that the financial performance of most Nepalese Public Enterprises is very poor. They are chronically sick.

Abebe (2022) conducted a study on "Does CAMEL Affect Financial Performance of Banks in Emerging Economy? From Post IFRS Adoption Audited Financial Statement". The objective of the study is to evaluate the effect of CAMEL on the financial performance of banks in an emerging economy. From a total of 22 banks, 13 were taken as a sample of the study based on the availability and accessibility of their data for the period from 2018 to 2021 which is post-IFRS adoption. Ordinary least square regression has been employed to assess the level of effect of independent variables (Capital adequacy, assets quality, management efficiency, earnings ability, and liquidity) on the dependent variable (ROA). The study found that capital

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adequacy, asset quality, and management efficiency have a statistically significant effect on performance measured by ROA. Earning ability and liquidity have no significant effect on performance measured by ROA. So, it is advisable for banks to give attention to capital adequacy, asset quality, and management efficiency to improve their performance.

Solanki & Aggarwal (2022) performed a study on "Impact of Bank Specific Variables on Financial Performance of Private Sector Banks in India". The objective of the study is to assess the effect of bank-specific variables on private sector banks. In this study, multiple regression analysis was employed. ROA was taken as dependent variable in this study. The independent variables employed capital adequacy, expense management, liquidity risk, solvency, credit risk, growth rate, and efficiency. Secondary data was collected for the period of 12 years (2008-09 to 2019-20) from the financial statements of selected banks. The study discovered that liquidity risk and expense management have an adverse effect, solvency has a positive effect, and capital adequacy has a positive impact on the financial performance of selected private sector banks in India.

Thisaranga, & Ariyasena (2021) conducted a study on "Effect of CAMEL Model on Bank Performance: with Special Reference to Listed Commercial Banks in Sri Lanka". The objective of the study is to determine the impact of the CAMEL parameters on the performance of Domestic Listed Commercial Bank in Sri Lanka from 2014 to 2017. only commercial banks listed in the Colombo Stock Exchange (11 Banks) are the population of the study. Amana bank and Cargill's bank were selected as samples due to insufficiency and unavailability of data. Secondary data has been used for the empirical analysis of this study. Data has been obtained from audited annual financial statements and the data was analyzed by applying multiple regression techniques. They found that management efficiency has a negative significant effect on bank performance while earning ability has a positive significant effect. However, capital adequacy and asset quality have an insignificant negative impact while liquidity has an insignificant positive effect.

Ngoboka & Gatauwa (2020) conducted a study on "Camel Rating System and Financial Performance of Rwandan". The objective of the study is to assess the impact of the CAMEL rating model on the financial performance of commercial banks in Radwan for the period ranging from 2014 to 2018. This study covered 11 commercial banks and a census has been applied. Secondary data were used for the study. A descriptive research design was chosen to figure out accurate, reliable, and valid elements that are related to phenomena. The CAMEL rating technique was used as a method to examine the soundness and health of those financial institutions. Correlation and regression were employed to examine the data. They concluded that CAMEL variables influence financial performance in Rwandan commercial banks. Capital adequacy, asset quality, and management efficiency have a statistically significant impact to explain ROA. However, earnings and liquidity position are negative insignificant correlations.

Many investigators have already performed studies on the themes like the relationship between share capital, earnings per share, non-performing loans, the profitability of the bank, and net interest margin. Past analyses of literature in the effect of the CAMEL model on a bank's performance are still contradictable (Thisaranga & Ariyasena, 2021). Nepalese commercial banks have no exception. In other words, the studies which have previously been carried out using the analysis of CAMEL

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parameters with Nepalese organizations are found conflicting. Thus, this is a researchable area. Therefore, the goal of this study is to fill this knowledge gap through effective analysis.

RESEARCH METHODOLOGY

To address the problems related to the association between CAMEL factors and profitability in Nepalese commercial banks, this study used a descriptive research design. It is applied research with a quantitative research technique. Secondary data from the annual report are employed for analysis. In this sense, the study's analysis of the relationship and impact of CAMEL variables on ROA is considered. In total, there are 26 commercial banks in Nepal. Nabil Bank Limited, Nepal Investment Bank Limited, Century Commercial Bank Limited, Nepal SBI Bank, Nabil Bank Limited, Everest Bank Limited, and Prabhu Bank have been chosen as samples, applying a lottery system, for the study out of a total population of 26. The study covered the years 2011/12–2020/21. More precisely, the data related to CAMEL variables and annual reports for each bank during the study period were obtained from their official websites. Correlation and regression techniques were used for data analysis.

Theoretical framework

closer to their customers and heighten customers' deposits. In the end, future researchers and academicians are**Theoretical Framework**

Based on the past literature review and studies the theoretical framework has been devised to investigate the targeted study issue in the following diagram. The diagram reflects a relationship and effect between CAMEL variables and profitability**.** Profitability includes ROA only. The study adopted the CAMEL model. The schematic representation of the theoretical framework has been depicted in the following manner:

Figure 1: Theoretical framework

Table 1. *Correlation between CAMEL and ROA*

Variables		C	A	M	E	L	ROA
C	Correlation Sig.(2-tailed)	1					
A	Correlation 0.001	-.402**	1				

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M	Correlation	-.035	-.231	1			
	Sig.(2-tailed)	0.773	0.056				
E	Correlation	-.357**	-.221	.047	1		
	Sig.(2-tailed)	0.002	0.068	0.697			
L	Correlation	.554**	-.197	.187	-.345**	1	
	Sig.(2-tailed)	0.000	0.105	0.122	0.003		
ROA	Correlation	-.504**	-.262**	.110	.668**	-.402**	1
	Sig.(2-tailed)	0.000	0.030	0.365	0.000	0.001	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 1 shows that the correlation coefficient of ROA with capital quality (C), assets quality (A), management efficiency (M), earnings quality (E), and liquidity (L) resulted in-.504, -.262, .110 and .668 and -402 respectively and p-value of the respective correlation coefficient resulted in .000, .030, .365, .000 and .001 at 5% significance level respectively.

Table 2. *Regression analysis: ROA versus C, A, M, E, L*

Predictors	Coefficient	SE Coefficient	T	P
Constant	4.472	1.001	4.47	0.000
C	-0.170	0.041	-4.15	0.000
A	-0.137	0.036	-3.82	0.000
M	-.002	0.051	-0.05	0.963
E	0.016	0.004	4.27	0.000
L	-0.011	0.013	0.88	0.381
R= 0.784	**R^2=0.614**	**Adj R^2= 0.584**	**F Stat = 20.08**	**F Sig = 0.000**

Predictors: (constant), Capital adequacy (C), Asset quality (A), Management efficiency (M), Earning ability (E), Liquidity status (L)

Table 2, shows all variables were involved in the regression analysis. R is multiple correlations between the joint effect of independent variables i. e. CAMEL and dependent variable i. e. ROA. The values of R, R^2 square, and adjusted R^2 are 0.784, 0.614, and 0.584 respectively. This table depicts the multiple linear regression model (F = 20.08, p-value < 0.05) that predicts that ROA is significantly well-fitted to the given dataset.

The regression model in this study is:

$$Y = \alpha + \beta_1 C_1 + \beta_2 A_2 + \beta_3 M_3 + \beta_4 E_4 + \beta_5 L_5 + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{I}$$

Where
Y = Profitability measured by return on asset α = Constant β = Coefficient
C = Capital quality measured by capital adequacy ratio
A = Asset quality measured by non-performing loan
M = Management efficiency measured by profit per employee
E = Earning quality measured interest income to loan and advance
L = Liquidity measured by cash reserve ratio ε = Error terms

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Taking CAMEL as an independent variable the equation is constructed as $Y= \infty +\beta_1X_1+ \beta_2X_2+ \beta_3X_3+ \beta_4X_4+ \beta_5X_5+e$. Based on the coefficients, the regression equation can be written as $Y= 4.472-0.170C_1-0.137A_2-0.002M_3+0.016E_4-0.011L_5$. The above table shows the coefficient for the predictors. The results reveal that capital adequacy, assets quality, management efficiency, earnings ability, and liquidity status are -0.170 with p-value 0.000, -0.137 with p-value 0.000, -0.002 with p-value 0.963, 0.016 with p-value .000 and -0.011with p-value 0.381 respectively.

Discussion

The correlation table shows that a significant negative correlation was found between capital adequacy and Return on Asset (ROA) as their correlation -.504 with a p-value of 0.000 at a 5 % significance level. It can be generalized that despite the negative correlation there is a significant relationship between capital adequacy and ROA. Correlation between asset quality and ROA was also found significantly negative as their correlation was -.262 with a p-value of 0.30. It also can be generalized that despite the negative correlation there is a significant relationship between asset quality and ROA. An insignificant and positive correlation was found between management efficiency and ROA as their correlation was 0.110 with a p-value of 0.365. It can be interpreted that despite the positive correlation between them management efficiency cannot enhance ROA. A high correlation was found between earning ability and ROA as their correlation was 0.668 with a p-value of 0.000. Since there is a high positive correlation between earning ability and ROA, it can be interpreted that earning ability can strongly enhance ROA. A significant and negative correlation was found between liquidity status and ROA as their correlation was -0.402 with a p-value of 0.001 at a 5 % significance level. It can be generalized that despite the negative correlation there is a significant relationship between liquidity status and ROA.

The correlation between ROA and earning ability is the highest significant positive (.668) among all variables. The correlation between liquidity status and asset quality is found second highest (.554) which was positive and significantly moderate. Similarly, the correlation between management efficiency and asset quality is the highest negative (-.231) and insignificant. Management efficiency and asset quality have the second highest negative (-.221) and insignificant correlation. In regression analysis, R is multiple correlations between the joint effect of independent variables i. e. CAMEL and dependent variable i. e. ROA. The values of R, R^2 and adjusted R^2 are 0.784, 0.614, and 0.584 respectively. The R^2 is the square of the multiple correlations. It is 0.614 or 61.4 %. It shows that there is a 61.4 % variation explained jointly in the total variation of the ROA by CAMEL. The rest 38.6 % is unexplained in this research. Multiple linear regression model ($F = 20.08$, p-value < 0.05) that predicts that ROA is significantly well fitted to the given dataset. Because $p = 0.000$, which is less than 0.05 indicates the statistical and significant prediction of the outcome variable in the regression model. So, the CAMEL is significant in explaining the variance of ROA. Capital adequacy has a negative significant coefficient of -0.170 ($t = -4.15$, p-value < 0.05). Since the p-value is less than 0.05, the contribution of capital adequacy is statistically significant to the model. So, capital adequacy has negative and statistically significant effect on ROA. It indicates that ROA can increase by -0.170 when the capital adequacy score increases by 1 score on average keeping the other variables constant. This variable of finding is

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consistent with the studies of Abebe (2022), Ngoboka & Gatauwa (2020). However, this variable of finding contradicts the study of Thisaranga & Arryasena (2021)

Asset quality has a negative significant coefficient of -0.137 (t = -3.82, p-value < 0.05). Since the p-value is less than 0.05, the contribution of asset quality is statistically significant to the model. So, asset quality has a negative and statistically significant effect on ROA. It indicates that ROA can increase by -0.137 when the asset quality score increases by 1 score on average keeping the other variables constant. The variable of finding is consistent with the findings of Abebe (2022), Ngoboka & Gatauwa (2020). However, the variable of the finding is not consistent with the finding of Thisaranga & Arryasena (2021). Management efficiency has a negative insignificant coefficient of -0.002 (t = -0.05, p-value > 0.05). Since the p-value is greater than 0.05, the contribution of management efficiency is statistically insignificant to the model. So, management efficiency has a negative and statistically insignificant on ROA. It indicates that ROA can increase by -0.002 when the management efficiency score increases by 1 score on average keeping the other variables constant. This variable of finding is consistent with the findings of Abebe (2022). However, this variable of finding is inconsistent with the findings of Solanki & Aggrawal (2022), Ngoboka & Gatauwa (2020), Thisaranga & Arryasena (2021). Earning ability has a positive significant coefficient of 0.016 (t = 4.27, p-value < 0.05). Since the p-value is less than 0.05, the contribution of earning ability is statistically significant to the model. So, earning ability has a positive and statistically significant effect on ROA. It indicates that ROA can increase by 0.016 when earning ability score increases by 1 score on average keeping the other variables constant. This variable of finding is in line with the study of Thisaranga & Arryasena (2021), however, the finding contradicts the studies of Abebe (2022), Ngoboka & Gatauwa (2020).

Liquidity status has a negative insignificant coefficient of -0.011 (t = 0.88, p-value > 0.05). Since the p-value is greater than 0.05, the contribution of liquidity status is statistically insignificant to the model. So, liquidity status has a negative and statistically insignificant effect on ROA. It indicates that ROA can increase by -0.011 when the liquidity status score increases by 1 score on average keeping the other variables constant. This variable of finding is consistent with the finding of Niroula, B. (2021), Ngoboka & Gatauwa (2020). However, this variable of finding contradicts the studies of Abebe (2022) and Solanki & Aggrawal (2022). The results show that the ROA of Nepalese commercial banks has been negatively affected by capital adequacy, asset quality, management efficiency, and liquidity status. In other words, when capital adequacy, asset quality, management efficiency, and liquidity status increase by one unit, then the ROA will be changed by -0.170, -0.137, -0.002, and -0.011 respectively. The negative effect of capital adequacy, assets quality, management efficiency, and liquidity status on profitability reveals that profitability will be lower when the banks have inadequate capital, poor asset on loans provided, management inefficiency, and poor liquidity. However, ROA has been positively affected by earning ability. This indicates that profit will be higher. Similarly, the constant value of 4.472 indicates that if the selected predictors are held constant, the ROA will be positive. However, capital adequacy, asset quality, and earning ability have a significant effect on ROA because the probability value of the rejection area of the null hypothesis is found to be less than or equal to 0.05 at a significance level of 5 %. On the other hand, the management efficiency and liquidity status have an insignificant effect on ROA because the probability value of the rejection area of the null hypothesis is found to be more than 0.05 at the significance level of 5 %.

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It can be generalized that profitability is really driven by internal factors i.e., capital adequacy, asset quality, and earning ability in Nepalese commercial banks. It can be interpreted that sufficient capital, productive use of banking resources, and quality of loans and advance enhance return on equity (profitability) in the banks. On the other hand, the effect of management efficiency and liquidity status on ROA (profitability) are negative insignificant effects at a 5% significance level. It can be generalized that profitability is not driven significantly by internal factors i.e. management efficiency and liquidity status in Nepalese commercial banks. It can be interpreted that management inefficiency and weak liquidity position cannot enhance the return on equity.

CONCLUSION

The principal purpose of this research is to measure the relationship and effect of the CAMEL model on Return on Asset (ROA) in Nepalese commercial banks. ROA is significantly and positively high associated with earnings quality, however statistically insignificant and positive association with management efficiency. Similarly, ROA is a significant and negative relationship with capital adequacy, asset quality, and liquidity status. Thus, mixed relationship has been found between CAMEL variables and ROA. Capital adequacy and asset quality have a significant and negative effect on ROA. However, earning ability has a significant positive effect on ROA. Management efficiency and liquidity status have an insignificant and negative effect on ROA. Thus, it can be generalized that ROA (profitability) is driven by internal factors i. e. earnings quality and also by capital adequacy, assets quality, however, is not driven by management efficiency and liquidity status in Nepalese commercial banks.

References

Abebe, G. (2022). *Does CAMEL affect financial performance of banks in emerging economy? From post IFRS adoption audited financial statement.* https://doi.org/10.21203/rs.3rs

Ahsan, M. K. (2016). Measuring financial performance based on camel: A study on selected Islamic banks in Bangladesh. *Asian Business Review*, 6(13).

Afroj, F. (2022). Financial strength of banking sector in Bangladesh: A CAMEL framework analysis. *Asian Journal of Economics and Banking,* 112-136.

Baral, K. J., Gautam, R. R., Poudel, R. B., & Rana, S. (2007). *Corporate financial management.* Asmita publication.

Echekoba, F. N., Egbunike, C. F., & Ezu, G. K. (2014). Determinants of bank profitability in Nigeria: using camel rating model (20001-2010). *IOSE Journal of Business and Management*, 16(9), 44-50.

Desta T. S. (2016). Financial performance of the best African banks: A comparative analysis through camel rating. *Journal of Accounting and Management*, 6(1), 1-22.

Everest Bank Limited (2016). *Annual report 2015/16*. https://everestbankltd.com/wp-content/uploads/2018/07/22nd_Annual_Report_2015_2016_English.pdf

Everest Bank Limited (2021). *Annual report 2020/21.* https://everestbankltd.com/wp-content/uploads/2021/12/27th-Annual-Report-2020-2021.pdf

DOI: 10.37531/sejaman.vxix.346

Kandel, S. (2019). Analysis of financial performance of commercial banks of Nepal using CAMEL approach. *IEEE-SEM,* 10 (6). https://www.ieeesem.com/researchpaper/

Levine, R. (1997). Financial development and economic growth: Views and agenda. *Journal of Economics Literature*, 35(2), 688-726.

Misra, S. K., & Aspal, P. K. (2013). A camel model analysis of state bank group. *World Journal of Social Science,* 3(4), 36-55.

Mulalem, M. (2015). *Analyzing financial performance of commercial banks in Ethiopia, camel approach.* (Master thesis, Addis Ababa University).

Niroula, B. (2021). Stock Price Behavior of Commercial Banks in Nepal. *Patan Pragya*, *8*(01), 27–36. https://doi.org/10.3126/pragya.v8i01.42333

Ngoboka, J. P. H., & Gatauwa, J. (2020). Camel rating system and financial performance of Rwandan. *IOSR Journal of Economics and Finance (IOSR-JEF),* 11(6), 1-13. https://www.researchgate.net/publication/349570395

Roman, A., & Sargu, A. C. (2013). Analyzing the financial soundness of the commercial Banks in Romania: An approach based on the Camel framework. *Procedia Economics and Finance,* 703-712.

Rostami, M. (2015, Oct). Determination of Camels model on bank's performance. *International Journal of Multidisciplinary Research and Development,* 2, 652-664.

Rajan, R. G., & Zingales,L. (1998). *Financial dependence and growth.* (National Bureau of Economic Research Working Papers No. 5758]. Cambridge, MA.

Sahajwala, R.., & Van, D. B. P. (2000). *Supervisory risk assessment and early warning systems.* (Basle Committee on Banking Supervision Working Papers No. 4). Bank of International Settlements.

Shrestha, R. K., & Pokharel, S. P. (2021). Financial performance of public enterprises of Nepal. *Patan Pragya,* 8(1), 163-173. https://doi.org/10.3126/pragya.v8i01.42431

Solanki, H., K. & Aggarwal, J. (2022). Impact of bank specific variables on financial performance of private sector banks in India. *International Journal of Multidisciplinary,* 7(1), 40-45.

Thisaranga, K.D.I.U., & Ariyasena, D.L.M.N.K. (2021). *Effect of camel model on bank performance: with special reference to listed commercial banks in Sri Lanka.* International Conference on Business Research University of Moratuwa, December 3. 188-213. http://dl.lib.uom.lk/bitstream/handle/

WAGLE, B., ACHARYA, K., AND SAPKOTA, S. (2013). *ACCOUNTING FOR FINANCIAL ANALYSIS AND PLANNING*. KHANAL PUBLICATION PVT. LTD.