International Journal of Management and Economics
www.managementjournals.net
Online ISSN: 2664-7079, Print ISSN: 2664-7060
Received: 08-03-2022, Accepted: 23-03-2022, Published: 09-04-2022
Volume 4, Issue 1, 2022, Page No. 24-32

Examining the effect of capital structure on the banks' performance in Tanzania: A case commercial banks operating in Zanzibar

Hafidh Ali Hafidh
Zanzibar University, Tanzania

Abstract
The aim of this study is to determine capital structure and banks performance in Tanzania, a case commercial banks operating in Zanzibar. The study employed Secondary data from 2015 to 2020 whereby random effects panel regression model used for estimation in the linear equation econometric model. Descriptive research design was applied in the study The results of the analysis show that, the two independent variables (short term debt to equity DE ratio and equity to total asset ratio) have the positive and significant relationship with return on assets but only one independent variable (long term debts to total assets) found to have negative and significance relationship with return on assets.
Generally, the findings of this research confirmed a positive relationship between capital structure (short term debt to equity DE ratio and equity to total asset ratio ETA) and financial performance measured by ROA of the commercial banks operating Zanzibar. However, when ETA measured with ROA the resultant positive relationship shows a short-run impact meaning that there is less significant relationship due to their coefficient value as compared to the short-term debt to equity DE having coefficient of high value of increasing effect in financial performance measured by ROA, this making commercial to base more in capital structure of the short-term debt to equity.
When long term debts to total assets LDA measured with ROA the results were found to be negative and significant, leading the commercial banks to neglect the capital structure of form (debts to total assets LDA) since the more they base in this the less the financial performance is incurred and cause an adverse effect to the bank's profitability.

Keywords: capital structure; banks performance; long term debts

Introduction

Background of the study

The capital structure of a commercial bank lays the basis for the capital cost of the bank. The costs of debt and equity depend on the market conditions prevailing and the choice the company exercises impacts its performance over the long term (Varghese and Sahai 2021) [26]. According to Islam & Nasreen (2018) [12], capital structure of an institution is basically a mix of debt and equity which a firm deems as appropriate to enhance its operations.
Capital structure is therefore, a composition of long-term liabilities, specific short-term liabilities like bank notes, common equity, and preferred equity which makes up the funds with which a bank finances its operations and its growth. According to Kennon (2019), there are two forms of capital: equity capital and debt capital. Each type of capital has its benefits and drawbacks, and a substantial part of wise corporate stewardship and management is attempting to find the perfect capital structure regarding risk/reward payoff for shareholders.
Capital structure denotes the mode of finance, usually a blend of the loan and equity capital, through which a firm is financed (Siddik *et al*., 2017) [19]. Most of the effort of the financial decision making process is centred on the determination of the optimal capital structure; where the cost of capital is minimized and firms' value is maximized. Studying capital structure is important because it has an effect on the sustainability and outreach of commercial banks (Asefa T, 2017) [3].
Capital structure theory suggests that firms determine what is often referred to as a target debt ratio; which is based on various trade-offs between the costs and benefits of debt versus equity. The firm's management should take rational financing decisions regarding optimal capital structure which in turn would minimize its cost of capital (Goyal, 2013). Focusing on the unequal treatment of tax in debt financing and equity financing, Schepens (2016) [18] argued that more equal treatment of debt and equity significantly increases bank capital ratios, driven by an increase in common equity, which ultimately impacts the capital choice of banks.
Optimal capital structure, though not measurable within the existing framework of corporate finance, firms always try to set their optimal capital structure; this is why capital structure has attracted intense debate and scholarly attention in the financial management arena over the past four decades (Arikekpar, 2020) [2].

1. Financial Performance

Financial performance is an essential measure of the financial health, competitiveness, efficiency, cost effectiveness and productivity of commercial banks (Geresem and Michael, 2021) [9]. Invariably, financial performance is very instrumental in determining the growth and sustainability of microfinance institutions. Evidently, MFIs that experience sound financial performance exhibit high profits, portfolio quality and operational efficiency as well as improved competitive edge (Quayes, 2015).

Financial performance and financial profitability are frequently used as interchangeable terms, (Burkhardt & Wheeler, 2013) [5]. With the increasing number of analyses and research papers referencing financial performances, there is a need to have a basic understanding of the definition of financial performance and its various measures, (Burkhardt, 2013) [5]. Therefore, choosing a particular measure of financial performance depends on how well it meets the intended purpose.

Financial performance of a bank is defined as its capacity to generate sustainable profitability, (European Central Bank (ECB), 2010). Therefore, we can say that financial performance of a bank is its ability to employ the available resources to increase shareholders' wealth and generate sustainable profits to strengthen its capital base through retained earnings to ensure future profitability.

2. The Current commercial Banking Industry in Tanzania

By mid-2020, the number of banks decreased to 49 with the merger of Mwanga Community Bank (MCBL), Hakika Microfinance Bank (HK MFB), and EFC Microfinance Bank. The newly formed bank was licensed in July 2020 and called Mwanga Hakika Microfinance Bank (MHB). There were 51 licensed banks in 2019 consisting of 38 commercial banks, 6 community banks, 5 microfinance banks, and 2 development banks.

The Tanzanian banking sector recorded a profit before tax of TZS 590 billion in 2019, compared to TZS 313 billion in 2018, representing an increase of 88%. In July 2020, there were 49 licensed banks in Tanzania versus 51 in 2019 and 38 in 2009. Total assets of the banking sector reached TZS 33 trillion in 2019, a growth of 9% from TZS 30 trillion in 2018 (BOT, 2020).

Capital structure decision is a vital decision in organization as it has a direct effect on a decision relating to profitability of any business enterprise. Thus, capital performs several indispensable functions in the operations of banks, among which are to mitigate against risk and fragility, maintenance of public confidence as well as enhancing deposits mobilization and efficiency.

To achieve this, banks needed to mix both debt and equity strategically to attain capital structure at an optimal level, Aremu *et al*. (2013) [1]. Among the key issues facing bank managers nowadays is to determine the right mix of debt and equity to attain optimal capital structure level for the business to reduce the company's cost of capital and consequently enhance return on investment to the shareholders.

Since the banking industry is one of the most important economic institutions, the optimal use of these funds in appropriate and profitable investments that result in benefit to the entire community, has been established for all developed and developing countries. So, considering the crucial role of banks in the economy of each country is of great importance to assess the impact of the capital structure of these institutions on its performance and creating an optimal balance between debt and equity to increase their performance.

21 Empirical literature reviews

The composition of capital structure depends on several external and internal factors, like the line of business, economic conditions, and the firm's strategy. Firms with low credit rating tend to have a multi-tiered capital structure consisting of different types of debt, (Christian Melsom Myhre, 2011).

Geresem and Michael, (2021) [9], examined the relationship between capital structure, credit risk management and financial performance of microfinance institutions (MFIs) in Uganda based on agency theory. The study adopted a cross–sectional research design to examine 64 MFIs in Uganda. Correlation and multiple regression analysis were performed to analyze the data. The results reveal that capital structure is not significantly related to financial performance. However, the structure of debt or equity does not necessarily affect financial performance. Hence, managers should endeavor to instill risk preventive and control mechanisms so as to mitigate credit risks and achieve positive financial performance of MFIs.

Niluthpaul Sarker & Roushanara Islam (2021) [15]. Their study is conducted on 28 commercial banks from 2009 to 2016 of panel data to infer the concurrent relationship between capital structure and profitability. The preliminary diagnoses picked up the Generalized Methods of Moments (GMM) method to address the endogeneity issue in dynamic panel data. Findings: The study found that the bank's capital structure is negatively associated with profitability and vice versa. Moreover, asset tangibility and regulatory capital harm banks' current capital structure, whereas tax shield and 1-year lagged capital structure have a positive influence. On the contrary, a bank's profitability is positively associated with bank growth, and 1-year lagged profit, while credit risk and liquidity are negatively affected. The study implies that banks should use an appropriate mixture of debt and equity; otherwise, immature decisions in capital structure may diminish banks' profitability, which will ultimately turn into bank failure.

Hajisaaid, A.M.S.A. (2020) [10] investigated the relationship between capital structure and profitability of eight companies working in the basic material sector in Saudi Arabia during the period 2009 to 2018. The statistical techniques used are regression analysis, fixed effect model, random effect model, and Hausman test. The dependent variable is the return on equity (ROE). In contrast, independent variables are a short-term debt to total

assets ratio (SDA), long-term debt to total assets ratio (LDA), and total debt to total assets ratio (DA). The results illustrate a negative relationship between short-term debt to total assets ratio (SDA) and profitability, this result means short-term debt to total assets ratio will cause to decrease in profitability.

Hajisaaid, A. (2020) [10], investigated the relationship between capital structure and profitability of eight companies working in the basic material sector in Saudi Arabia during the period 2009 to 2018. The statistical techniques used are regression analysis, fixed effect model, random effect model, and Hausman test. The dependent variable is the return on equity (*ROE*). In contrast, independent variables are a short-term debt to total assets ratio (*SDA*), long-term debt to total assets ratio (*LDA*), and total debt to total assets ratio (*DA*). The results illustrate a negative relationship between short-term debt to total assets ratio (*SDA*) and profitability, this result means short-term debt to total assets ratio will cause to decrease in profitability. Results show that, a negative relationship between long-term debt (*LDA*) and profitability this result means long-term debt will cause to decrease in profitability and positive relationship between total debt (*DA*) and profitability which complement with studies this result means total debt to will cause to increase in profitability.

Fahrul *et al*., (2019) determined the effect of equity to assets ratio (EAR), size and loan to assets ratio (LAR) to the Performance of Commercial Banks listed on the Indonesia Stock Exchange period 2012-2016. The independent variable used finance is equity to assets ratio (EAR), size or size of the company viewed from total assets and loan to assets ratio (LAR). The dependent variable used to measure bank performance is return on asset (ROA) and net interest margin (NIM). The population of this study are commercial banks listed on the Indonesia Stock Exchange with a total of 43 companies. By using purposive sampling method taken sample 29 companies. Analytical technique used is multiple linear regression analysis and hypothesis test and also conducted classical assumption test consisting of normality test, multicollinearity test, heteroscedasticity test and autocorrelation test. The results showed that the equity to assets ratio (EAR) had a significant positive effect on ROA and NIM, this positive relationship implies that increase in a unit of equity to assets ratio leads to the increase of ROA and NIM.

Isah Serwadda (2019) [11] conducted a study which aims to investigate the effects of capital structure on banks' performance on Ugandan banks for a ten years period, 2006-2015 with a sample of 20 commercial banks. The study employs four performance indicators of return on equity, return on assets, net interest margin and cost to income ratio to determine bank performance. Panel regression models are used to determine the effects of capital structure on bank performance. Results portray that there is a positive relationship between capital structure variables and bank performance. It's between long-term debts, total debt with net interest margin. There is also a positive relationship between total debt and return on assets. It is still the same between total debt and returns on equity. However, there is a negative relationship between short-term debt and return on assets. The findings propose that profitable banks rely more on debt financing as their financing option. This is advanced by the fact that approximately 68 % of total assets are represented by short-term debts for Uganda's commercial banks. This further implies that Ugandan banks largely depend on short-term debt financing for their business operations compared to long-term debt.

Sivalingam, L., & Kengatharan, L. (2018) [23] examine the relationship between capital structure and financial performance of listed licensed commercial banks in Sri Lanka. Panel data were used to conduct the empirical study which were extracted from the annual reports of 10 selected banks for the period from 2007 to 2016. Descriptive statistics, correlations, fixed effect and random effect models were used for the data analysis and then with the results of the Hausman Specification Test, the fixed effect model was considered as the most suitable model to examine the relationship between capital structure and ROA. According to the model, total debt to total assets ratio was significantly negatively related to ROA, however growth in bank deposit was significantly and positively related to ROA. Random effect model was considered as the most suitable model to examine the relationship between capital structure and ROE. As per the model, total debt to total assets ratio was significantly negatively related to ROE, while growth in bank deposit was significantly and positively related to ROE.

Mahmoud (2015) on his study impact of Capital Structure on Bank Financial Performance of Al Ahli Bank in Saudi Arabia he used Regression model to test the relationship between Capital structure and bank financial Performance and found that Alahli bank' accumulated capital structure, on average, had no relationship with banks' profitability and that accumulated capital structure had negatively affected banks' strategic performance measures, on average, increasing capital structure to revenues ratio, results in a decrease in banks' market share, productivity, growth, and investors' valuation of banks' stocks, in the same year of investment, while only decreasing banks' productivity and investors' valuation of banks' stocks, in the second and third years to investment.

Research design

The research design of this study is descriptive and conducted on the basis of time series approach covering years between 2015–2020, this is because if someone can carry out a study of this period, it provides a researcher with more observations and opportunity to see the impact of Capital structure on financial performance of commercial banks operating in Zanzibar as a specific bank within among commercial banks in Tanzania.

Model specification

This study have the interest of examining the impact of Capital Structure on the financial performance of commercial Bank, the basic model of this study is designed as follows: -

$$Y = f(X) \quad (1)$$

Where Y *is the* financial performance of a Bank and *X* refers to the Capital Structure, the financial performance was measured by ROA. Then the basic model to answer the objectives of this study transformed into the regression of the following form:

$$Y_t = \beta_0 + \beta_1 X_t + \varepsilon_t \quad (2)$$

Hence, the linear regression model is represented as follows:

$$logROA_t = \beta_o + \beta_1 logDE_t + \beta_2 logLDA_t + \beta_3 logETA_t + \varepsilon_t$$
$$logROA_t = \beta_o + \beta_1 logDE_t + \beta_2 logLDA_t + \beta_3 logETA_t + \varepsilon_t \quad (3)$$

Where β_0 is the constant term, $\beta_1$to β_3, are the parameters to be estimated, t = 1, 2… is the time index for the years from 2015 to 2020 in annual bases and ε is the stochastic error term. ROA represents financial performance of a Bank.

DE represents Debt to equity ratio; LDA represents long-term debt to total asset and ETA represents Equity to total assets.

The variables used in the econometric model in this study used the logarithms because to make them in the same units of numbers

Pre-test of the data analysis

The study under gone pre-test before the regression analysis in order to test for the normality of the data used in the study. The normality test is used to determine in a regression model whether the variables are normally distributed. The regression model is said to be good if the data is normally distributed. In this test using the histogram graph method and the Jarque Bera (JB) test with the following history-normality test.

a. If the probability value is< 0.05, the data is normally distributed.
b. If the probability value >0.05, then the data are not normally distributed.

Multicollinearity Test

The multicollinearity test is used to test for the presence of a high or perfect correlation between variables in the regression model. The regression model is said to be good if there is no correlation between the identified variables using the correlation value between the independent variables.

Multicollinearity exists when the predictive variables, in this case the chosen macroeconomic variables are correlated. Generally, the rule is that in a correlation matrix, a range of -0.70a and +0.70 is acceptable (Kuwornu, 2012). In order to check multicollinearity among independent variables, a suggested rule of thumb is that if the pairwise correlation between two regressors is very high in excess of 0.7, multicollinearity may pose serious problem.

The study used Variance Inflation Factor (VIF) as a measure of multicollinearity test.

Estimation Process

This study applied the panel data analysis as the study used cross-sectional for different banks and time series data where secondary data collected from the audited financial statement from the selected commercial banks operating at Zanzibar.

Panel Data Analysis Techniques

Panel data econometric technique namely pooled ordinary least squares (OLS), fixed effects (FE) and random effects (RE) applied in modelling the effects of capital structures on firm performance measures in Return on Equity. The general regression model is expressed as:

$$Y_{it} = \alpha + \beta X_{it} + \mu_{it}$$

Where *i* is firm and *t* is time;

Y_{it} = the dependent variable of bank *i* in year *t*;

X_{it} = K x 1 vector of explanatory independent variables

and; α=K x 1 vector of constants; μ_{it} =error term.

In the above linear model, if no observed heterogeneity is missing (i.e. no firm-specific effects) and the error term (μ_{it}) is not correlated with the predictor(s) (X_{it}), then estimating the model through OLS gives unbiased estimates that are consistent.

Regression Analysis for Fixed Effect Model and Random Effect Model

This section conducted panel regression analysis for the two models of Fixed Effect Model and Random Effect Model as proposed due the cross-sectional and time series of the sample used in this study

1. Fixed Effect Model

The Fixed Effect Model (FEM) assumes that there are differences in interceptions between commercial banks. The following are the results of the regression using the fixed effect model.

The table 1 show that all variables are positive and significant relationship with ROA, meaning that an increasing of these variables by one unit leads to an increase in ROA of the selected commercial banks. Whereas, Long-term debt to total assets found to be negative and insignificant relationship with ROA at 5% level of significance, this implies that increase in one unit of this variable cause the ROA to decrease due to the inverse relationship as found in the table 1 below.

Table 1: Results of Panel Data Regression Model Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.721	1.601	2.324	0.0310
LOGDE	1.102	0.485	2.272	0.0470
LOGLDA	-0.281	0.204	-1.377	0.0519
LOGETA	0.514	0.241	2.132	0.0481
Adjusted R-squared = 0.719201				

Source: Author 2021

2. Random Effect Model

The Random Effect Model (REM) is a regression estimation model assuming constant slope coefficients and different interceptions between individuals and over time. The following are the results of the regression using the random effect model.

In table 2 show that all variables are significant relationship with ROA, but variables such as DE and ETA are positively related with ROA meaning that an increasing of these variables by one unit leads to an increase in ROA of the selected commercial banks. While, LDA found to be negatively related with ROA at 5% level of significance, this implies that increase in one unit of this variable cause the ROA to decrease due to the inverse relationship. The following are the results of the regression using the random effect model.

Table 2: Panel data regression analysis by using random effect model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.649	1.802	1.469	0.1427
LOGDE	1.470	0.575	2.556	0.013
LOGLDA	-0.399	0.181	-2.204	0.0285
LOGETA	0.535	0.162	3.302	0.0001
Adjusted R-squared = 0.741390				

Source: Author 2021

3. Hausman Test

Panel data regression can be done in either fixed effect or random effect. The choice of the model depends on the assumptions used by the fulfilment of the correct statistical data processing requirements so that it can be accounted for statistically. Therefore, the first step to take is to choose a model from the fixed effect or random effect available.

The Hausman test aims to determine the choice of the model used, namely between the random effect model and the fixed effect model. Panel data is used in this study, so the data is analyzed whether through random effect or fixed effect. The Hausman test was an appropriate econometric test to be performed before performing fixed effect and random effect. In using this test, if Hausman Chi-square statistics is greater than the probability therefore fixed effect model is favored and if the Hausman Chi-square is less than the probability, random effect model is favored.

According to the guideline of the Hausman test the following hypothesis were considered:

H_0: Random Effects model is consistent and efficient.

H_1: Random Effects model is inconsistent.

Table 3 describes that the p value is not significant that means it is greater than 0.05 (5% level of significance). So null hypothesis is accepted and alternative hypothesis is rejected. According to the Hausman test, random effect model is appropriate in this study.

Table 3: Hausman Test Results for Model Test

Correlated Random Effects- Hausman Test Pool Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.005920	7	0.91000

Source: Authors' Computation (2021)

Therefore, the researcher used the random effect model for the interpretation of the study findings since it is best model that can explain the relationship between capital structure and commercial banks profitability. The study performed a panel regression analysis based on the random effect model. This model presents performance as a function of capital structure.

4. Panel data regression analysis by using random effect model

This section presenting the results of analysis based on the random effect model as proposed by the Hausman test, also presenting the discussions of the results of the data used in the study. Panel data regression analysis aims to test the extent of the influence of the independent variables on the dependent variable where there are several banks in several time periods.

Table 4 depicts the results of the analyses where all independent variables (debt to equity DE, long term debt to total asset LDA and equity to total assets ETA) with their coefficients value and probabilities as benchmark for interpretations of the results.

Table 4: Panel data regression analysis by using random effect model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.649	1.802	1.469	0.1427
LOGDE	1.470	0.575	2.556	0.013
LOGLDA	-0.399	0.181	-2.204	0.0285
LOGETA	0.535	0.162	3.302	0.0001
Adjusted R-squared = 0.741390				

Source: Author 2021

Based on the table 4 above, the coefficient of determination seen from adjusted R^2 is 0.741390 or 74.1390%, which means that all independent variables are able to explain the variation of the dependent variable by 74.1390% while the remaining 25.861% was explained by other independent variables that are not included in this research mode.

According to the test results above, the panel data regression equation can be described as follows:

$$ROA = 2.649 + 1.470\text{DE} - 0.399\text{LDA} + 0.535ETA + \varepsilon_t$$

The regression results in table 4 reveals that, the constant value is 2.6492.649, which implies that if debt to equity ratio DE, long term debt to total asset LDA ratio and equity to total asset ratio ETA are considered constant (value = 0), then the return on asset value is 2.6492.649.

Then the regression results from the table 4 depicts that, all the independent variables were significance at 5% because their probability value is less than 0.05, also the results show that the positive relationships were found between debt to equity ratio DE with return on asset ROA, also results exhibit positive association between equity to total asset ETA with return on asset ROA, whereas the negative relationship is found between long term debts to total assets ratio LDA and return on asset ROA.

Examine the relationship between debt to equity (DE) and Return on Asset ROA

From the table 4 the value of the debt-to-equity DE ratio regression coefficient is 1.470 with the p-value of 0.013 which is less than 0.05 (5% level of significance), this positive value and p-value (which is significant at 5%) of DE indicate that it has positive and significance relationship with return on asset ROA. Such findings means that each one unit increase in the short-term debt to equity DE ratio will cause to increase ROA value by 1.470.

These implies financial performance measure by ROA of commercial banks raised by 1470% from the short-term debt to equity ratio, therefore the degree to which a commercial bank is financing its operations through debt versus wholly owned funds. More specifically, result reflects the ability of banks shareholder equity can cover all outstanding debts and making banking performance to be increase.

These findings were also found from the study done in Kenya by Mugun *et al* (2019) exained Effect of Debt-to-Equity Ratio on Financial Performance of Microfinance Institutions in Kenya they found the similar results. The results of this study are in line with the results of research conducted by Nikoo (2015), Salteh *et al*. (2012) which states that short term debts to equity ratio have the positive effects on return on assets of commercial banks. But the results of this study are not in line with research conducted by Hajisaaid, A.M.S.A. (2020) [10] who found that the short-term debt have negative relationship with return on assets, also in the study of Salim and Yadav (2012) which states that short term debts to equity ratio has no effect on return on asset.

Analysing the relationship between long term debt to total asset (LDA) and Return on Asset of commercial banks operating in Zanzibar

The table 4 shows that there is negative and significance relationship between long term debts to total assets ratio LDA and return on asset ROA. Its coefficient and p-value were -0.399 and 0.0285 respectively which is significance at 5% level. Long term debts to total assets ratio LDA regression coefficient with a negative coefficient, which illustrates that each one unit increase in long term debts to total assets ratio LDA will reduce the return on asset ROA value by 0.399 (39.9%). This result implies that long term debts to total assets ratio LDA courses the return on asset ROA to be smaller for the selected commercial banks under this study.

The long-term debt-to-total-assets ratio LDA is a coverage or solvency ratio used to calculate the amount of a commercial banks' leverage. The LDA ratio results in this study implies that, the percentage of a commercial bank's assets it would have to liquidate to repay its long-term debt. A negative relationship is between long-term debts to total assets ratio (LDA) and return in asset ratio (ROA). This result implies that the more commercial banks use long-term debts to total assets leads to the decrease in return on assets ROA. The findings are complements with studies like Hajisaaid, A. (2020) [10] and El-Sayed Ebaid (2009).

Evaluate the relationship between equity to total assets (ETA) and Return on Asset of commercial banks operating in Zanzibar

The evaluated equity to total assets (ETA) and Return on Asset of commercial banks. The results in the table 4 depicted statistical tests value of coefficient and the probability results show that it is smaller than the significance level (5% significant value). That's equity to total asset ETA ratio, the table 4 shows that ETA has positive and significance relationship with return on assets, and its coefficient is 0.535 and p-value of 0.0001 which is lower than 0.05(5% level of significance). The positive equity to total asset ETA regression coefficient value illustrates that each one unit increase in equity to total asset ETA ratio will increase the return on assets value by 0.535 (53.5%).

The results implies that the Equity-To-Asset ratio is a measure of solvency and is determined based on information derived from a commercial banks operations balance sheet. The Solvency refers to the ability of a bank to pay all of its debt if it were to have to immediately sell the business or banking operation. Similar results are reported by Fahrul *et al*., (2019) [8] who showed that the equity to assets ratio (EAR), where they found similar results as shown in this study.

The results of the analysis show that, the two independent variables (short term debt to equity DE ratio and equity to total asset ratio) have the positive and significant relationship with return on assets but only one independent variable (long term debts to total assets) found to have negative and significance relationship with return on assets. This study is similar with the study done by

Generally, the findings of this research confirmed a positive relationship between capital structure (short term debt to equity DE ratio and equity to total asset ratio ETA) and financial performance measured by ROA of the commercial banks operating Zanzibar. However, when ETA measured with ROA the resultant positive relationship shows a short-run impact meaning that there is less significant relationship due to their coefficient value as compared to the short-term debt to equity DE having coefficient of high value of increasing effect in financial performance measured by ROA, this making commercial to base more in capital structure of the short-term debt to equity.

When long term debts to total assets LDA measured with ROA the results were found to be negative and significant, leading the commercial banks to neglect the capital structure of form (debts to total assets LDA) since the more they base in this the less the financial performance is incurred and cause an adverse effect to the bank's profitability.

Recommendations

It is recommended that the commercial banks operating in Zanzibar to establish specific capital structure requirements policy to be followed for consistence capital nature and financial improvement.

It is suggested that further research addressing a longer period of time with having a broader selection of capital structure and banks performance measures can expose some new issues.

It can be observed that the capital structure has a little relationship on the performance commercial banks. Therefore, other stakeholders of these selected banks in Tanzania which are operating in Zanzibar should strive to carry out researches in other areas in order to be able to identify which the major area are relating to the performance of Commercial banks.

The study also shows that the relationship of capital structure and financial performance is very minimal and therefore, other researchers should concentrate on other areas which may have major relationship. These areas may include the development of new products or increased marketing and they should not concentrate much on the capital structure.

Areas for further studies

The study is limited to the sample of ten commercial banks operating in Zanzibar. Future research should increase the sample and investigation of multiple sectors. Also, it is suggested that further research addresses a longer period of time by having a broader selection of capital structure and profitability measures that can expose some new issues.

Since financial performance is such an important element for commercial banks to grow, further research should be devoted towards the exact mechanism by which it influences countries economy. In this regard, further studies should include other indicators of financial performance used in the literature such as the EPS and revenue ratio as proxies for financial performance. This might provide better results about the causality relationship between capital structure and financial performance. The same study can be conducted after two years to provide best results as well after the increase in the observations in long term debts.

References

1. Aremu MA, Ekpo IC, Mustapha AM, Adedoyin SI. Determinants of Capital Structure in Nigerian Banking Sector, International Journal of Academic Research in Economics and Management Sciences,2013:2(4):27-43. http://dx.doi.org/10.6007/IJAREMS/v2-i4/50
2. Arikekpar Obaima. Capital Structure and Firm Performance: An Empirical Study of Manufacturing Companies in Nigeria. World Journal of Finance and Investment Research E-ISSN 2550-7125 P-ISSN 2682-5902, 2020, 5(1). www.iiardpub.org
3. Asefa T. Determinants of Capital Structure Decisions among Ethiopian Micro Finance Institutions: Panel Data Evidence. J Bus Fin Aff,2017:6:302.doi: 10.4172/2167-0234.1000302
4. BOT, "Directory of Banks Operating In Tanzania" (PDF). Bank of Tanzania (BOT). Retrieved 7 November 2014.
5. Burkhardt JH, Wheeler JC. Examining Financial Performance Indicators for Acute Care Hospitals. Journal of Health Care Finance,2013:39(3):1-13.
6. Ebaid IEl-S. The Impact of Capital-Structure Choice on Firm Performance: Empirical Evidence from Egypt. The Journal of Risk Finance,2009:10:477-487.
7. European Central Bank. Beyond ROE, How to Measure Bank Performance, 2010.
8. Fahrul, Puas Sriawan, Rio Prabowo, Halim Buyung, Sarita Syaifuddin, Dedy Takdir Sujono, *et al*. Effect of Equity To Assets Ratio (EAR), Size, And Loan To Assets Ratio (LAR) On Bank Performance.2019:9:1-16. 10.9790/487X-2006070xxx.
9. Geresem O, Michael O. Capital structure, credit risk management and financial performance of microfinance institutions in Uganda. Journal of Economics and International Finance,2021:13(1):24-31. January-March 2021 DOI: 10.5897/JEIF2020.1096 Article Number: C28FCA865659 ISSN 2006-9812
10. Hajisaaid AMSA. The Effect of Capital Structure on Profitability of Basic Materials Saudi Arabia Firms. Journal of Mathematical Finance. Journal of Mathematical Finance, 2020, 10.
11. Isah Serwadda. The Effects of Capital Structure on Banks' Performance, the Ugandan Perspective. Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis. Acta Univ. Agric. Silvic. Mendelianae Brun,2019:67:853-868. DOI: 10.11118/actaun201967030853
12. Islam MA, Nasreen F. The Effects of Capital Structure on the Performance of Microfinance Institutions in Bangladesh. Journal of Business Studies,2018:39(1):202-224.
13. Mugun, Wycliffe, Odhiambo, Scholastica Momanyi, Gideon. Effect of Debt to Equity Ratio on Financial Performance of Microfinance Institutions in Kenya. International Journal of Research and Scientific Innovation (IJRSI) | Volume VI, Issue VII, July 2019 | ISSN 2321–2705
14. Nikoo, Seyedeh Farokh. Impact of Capital Structure on Banking Performance: Evidence from Tehran Stock Exchange. International Research Journal of Applied and Basic Sciences,2015:9:923-27.
15. Niluthpaul Sarker, Roushanara Islam. "Issues on Bank's Capital Structure and Profitability: A Developing Country Context," International Journal of Economics & Business Administration (IJEBA),2021:0(1):86-104.
16. Orua E. The Relationship between capital structure and financial performance of micro finance institutions in Kenya. Small Business Economics,2017:5:5.
17. Salim Mahfuzah, Raj Yadav. Capital structure and firm performance: Evidence from Malaysian listed companies. Procedia - Social and Behavioral Sciences,2012:65:156-66.
18. Schepens, Glenn. Taxes and bank capital structure. Journal of Financial Economics,2016:120:585–600.
19. Siddik Md Nur Alam Kabiraj, Sajal; Joghee, Shanmugan. Impacts of capital structure on performance of banks in a developing economy: Evidence from Bangladesh, International Journal of Financial Studies, ISSN 2227-7072, MDPI, Basel,2017:5(2):1-18, http://dx.doi.org/10.3390/ijfs5020013
20. Singer AE. Re-interpreting European business episodes: a dialectical approach. Business History and Europe Conference. NCRE, University of Canterbury, 2003, 26-37.
21. Skirbekk G, Gilje N. History of western thought: an introduction to the philosophical roots of modernity. New York: Taylor & Francis Books Ltd, 2001.
22. Safiullah M. Superiority of conventional banks & Islamic banks of Bangladesh: a comparative study. International Journal of Economics and Finance, 2010, 2(3).
23. Sivalingam L, Kengatharan L. Capital Structure and Financial Performance: A Study on Commercial Banks in Sri Lanka. Asian Economic and Financial Review,2018:8:586-598.
24. Taiwo Adewale Muritala. An Empirical Analysis of Capital Structure on Firms Performance in Nigeria: International Journal of Advances in Management and Economics.
25. Tobias A, Swai Impact of Capital Structure on the Portfolio Behaviour of Commercial Banks in Tanzania. African Journal of Economic Review, 2019, 7(2).

26. Varghese, Sahai. Impact of Capital Structure on the Financial Performance of Firms: A Study of BSE Listed Selected Pharmaceutical Companies. Business and Economics Journal. Research Article Business and Economics. Journal Volume,2021:12:S2:2021.
27. The Banking System: Commercial Banking - Key Ratios/Factors | Investopedia http://www.investopedia.com/university/banking-system/bankinsystem9.aspixzz4cvWDGbHW.
28. The Banking System: Commercial Banking - Key Ratios/Factors | Investopedia http://www.investopedia.com/university/