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**Impact of Asset Diversification on the Profitability of Commercial Banks in Tanzania:
A Case of Large Banks in Tanzania**

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Abstract

Purpose: The study was conducted to examine the Impact of asset diversification on the profitability of selected large commercial banks in Tanzania. Specifically the study intended to examine the customer loans impact on the profitability of commercial banks in Tanzania, examine the bank assurance impact on the profitability of commercial banks in Tanzania and examine investment in Government securities' impact on the profitability of commercial banks in Tanzania.

Methodology: This study uses secondary data sources, mainly from annual reports of listed banks, financial reports in newspapers, and data from the Bank of Tanzania regarding the performance of the banking industry. The variables that were used include bank loan, bank assurance, inflation GDP and government. Data was analyzed using descriptive research design whereby Statistical Package for Social Science (SPSS) was used.

Findings: The study revealed that customers loan ($p=.0418$), investments in government securities ($p=.0399$), and Bank assurance ($p=.0348$) were significant in predicting the financial performance of commercial banks since all the p values were less than 0.05. Control variables were able to explain the results, Core capital to RWA ($p=.0318$), asset size ($p=.0255$), Liquid assets to total assets ($p=.0203$), Inflation rate ($p=.0219$), and GDP growth ($p=.0273$) significant as they were below 0.05. The study conclude that Asset diversifications have a significant relationship with the performance of commercial banks.

Unique Contribution to Theory, Practice and Policy: The study used portfolio Diversification theory. The study period, spanning from 2015 to 2020, witnessed a notable positive impact of bank assurance, customer loans and investment in Government securities on the performance of commercial banks. The demand for this asset type highly during this period, creating an active market that contributed to enhanced returns. The study recommended the need for collaboration by all stakeholders in the financial sector to review the regulations and establish a framework that supports the implementation of new asset development.

Keywords: Profitability, Commercial Bank, Loans, Bank Assurance, Investment

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INTRODUCTION

The banking industry is one of very imperative sectors in many countries. The sector is also referred to as the engine of the economy. Through the banking intermediation function, surplus spending units and deficit spending units are taken care of through borrowing and lending activities. Due to its undisputed role in the Tanzanian economy, different regulations have been enacted to make sure the country has a sound and stable banking industry (BAFIA, 2006). Also, banks have been looking for all possible opportunities available to make sure they improve their profitability through innovations such as introducing new products and leveraging technology.

As explained by Cernas (2011), asset diversification remains to be a key strategy employed by the majority of businesses globally in the recent past modern business world. Perez (2015) argues that commercial banks need to have assets that earn more income, especially in this period of increasing adoption and utilization of technology-enabled products and services. Different assets achieve different performances when subjected to different economic sceneries, and the performance realized from such assets appears to have not correlated to each other (Moudud-Ul-Huq, Ashraf, Gupta, & Zheng, 2018).

The evolution of commercial banks in Tanzania can be classified into two main phases, the 1967 to mid-1970 and the 1980s. During the nationalization policy (1967 to mid-1970's), most of the privately held commercial banks were nationalized. Later in the 1990s, Tanzania adopted a privatization policy which led to the emergence of privately owned banks mostly foreign-based (BOT, 2011). By ownership, most of the commercial banks in Tanzania currently are privately owned (Bank of Tanzania, 2020). Tanzania has a large percent of foreign-based banks, followed by private domestic banks and public owned as the last (Bank of Tanzania, 2016). Commercial banks in Tanzania fund their operations through customer deposits, equity issues, and debt financing optimize utilization of ICT and existing traditional communication methods that support rural farmers' environments.

Bank profitability is one of the measures of bank performance and it measures the return bank generates from operations. From a conceptual point of view, profitability represents the modality to achieve the major goal of a bank's activity, respectively the maximization of profit in minimization risk conditions (Caruntu & Romanescu, 2008). Bank profitability can be measured by Net Interest Margin (The difference between interest income and interest expenses), Return on Equity (Measure of net income per unit of shareholders equity), and Return on Assets which measures profit per unit of Assets (Mutenga, 2016).

Following the need for preserving and ensuring sound banking operations in terms of profitability and ensuring sustainable competitive advantage, managements of commercial banks seek efficiency and effectiveness ways to ensure banks continued profitable. Efficiency and effectiveness have been spearheaded by technological changes in the commercial bank industry including, digitalization of operations, development of applications, systems development, and fraud detection systems.

Empirical studies that focus on diversification have used numerous measures of bank performance, with the majority based on Tobin's q, which is the book value of asset to the replacement cost of the assets. Diversification statistics are frequently available in accounts records of various firms. For this study, the Specialization Ratio as the measure of diversification was used, as reasoned by (Perez, 2015), is a ratio of annual revenues from a particular asset to the total revenues of that particular firm.

Formula; Specialization ratio = Income from specific asset/ Total income

Should a commercial bank diversify, or focus has been one of the questions the banking industry grappling with continuously and this has been due to different empirical and theoretical support regarding the two. (Hayden & Porath, 2007) Finds two different results regarding the effects of portfolio diversification (loans portfolio) on the performance of Germany banks. Majority of the data shows that diversification reduces banks' profitability for healthy banks and very risky banks, diversification led to an increase in profitability. (Moudud-Ul-Huq, Ashraf, Gupta, & Zheng, 2018) Income diversification has a positive impact on the performance of the banks but asset diversification has different results depending on the country of operation

Also, some results have shown a negative relationship, for instance, loan diversification to different sectors results in a reduction in bank return (Acharya & Saunders, 2005) It was also found that all loans, assets, deposits, and geographical diversification led to a reduction in profit and an increase in costs for Chinese banks for the period of ten years from 1996 to 2006 (Berger & Hasan, 2010) Also in financial intermediation, there has been an emphasis for banks to diversify (Mutenga, 2016), especially creating a portfolio with a negative correlation that seems to have reduction effect on the risk hence reducing the risk return tradeoff (whereby high return be realized per unit of risk). Or focus as supported by corporate finance and the study done by (Acharya & Saunders, 2005) who come in contrast with the traditional theory regarding the benefits of diversification

There has been a lot of studies regarding diversification's effects on the performance of banks, (Moudud-Ul-Huq, Ashraf, Gupta, & Zheng, 2018) argued that asset diversification has different results in a different country due to different financial system. Also, a lot of studies have been done in well-developed countries and many of them focus on a specific dimension of diversification such as geographical diversification or revenue diversification. There are some studies that focus on all the dimensions of diversification but still do not touch the environment of commercial banks of developing countries specifically Tanzania which is unique and many successful businesses in the world failed to replicate their business in Tanzania. Following this, the study will focus on asset diversification impacts on commercial bank profitability in Tanzania

LITERATURE REVIEW

There have been contradicting results when it comes to the effect of diversification on the profitability of firms, although Markowitz's Portfolio theory (Markowitz, 1952) emphasizes the importance of diversification to the profitability, past research regarding diversification and profitability of commercial banks produces differing results which also aligns with how diversification theory contradicts with agency theory regarding effects of diversification. Empirical studies on diversification and banks' profitability report different and even conflicting results, and this makes this area of study conflict on whether banks should diversify or focus. Previous studies have looked at either one or more than one dimension of diversification, and analyses of effects on banks' performance; these studies include

Uddin, Majumder, Akter & Zaman (2021) analyzed the effects of income and asset diversification on the profitability of commercial banks in Bangladesh. The research study concluded that income and asset diversification have a significant positive effect on the profitability of commercial banks in Bangladesh. Liquidity, capitalization, concentration, and GDP provide a substantial positive effect on profitability in control variables. (Tariq, et al.,

2021). The study examines bank maturity, income diversification, and bank stability. The research study concluded that well-diversified bank has a higher chance of being more stable when and hence there is a significant relationship between income diversification and bank stability.

Berger & Hasan (2020) investigated the effects of focus versus diversification on bank performance, looking at Chinese commercial banks from the year 1996 to 2006, and the study looks at economies of diversification versus the effects of focus. The study investigates the sample of 88 Chinese banks from the year 1996 to 2006 with 464 investigations. The study applies the economies of diversification approach whereby they look at two areas economies of profit and economies of cost. In both cases, they look at the relationship between joint operation and specialized one, and then do regression analysis and the results suggest that more focus leads to more profit and fewer costs. The results show that focus improves the overall performance of the commercial bank as opposed to diversification. When they look at lending the model suggests that diversified banks earn 20% less profit compared to the bank which focuses on its lending function, also on geographical seems to have an increase in cost while the decrease in profits.

Nguyen, Topaloglou & Walther (2020) have explained that diversification has a significant contribution towards the revenue growth of commercial banks. Authors have argued that income diversifications have a positive impact on the financial performance of banks, especially for banks that operate in less developed countries (Doumpos, Gaganis, & Pasiouras, 2016).

Nisar, Peng, Wang & Ashraf (2018) did a study in South Africa to examine the impact of revenue diversification on bank profitability and stability concluded that there is a relationship between revenue growth and diversification of revenue. Another study conducted by (Nguyen, Parsons, & Argyleb, 2020) examining the role of diversification on bank profitability and insolvency risk in 28 financially liberalized markets, has concluded that there is a generally inverse relationship between traditional and nontraditional incomes. While noninterest income share enhances bank earnings there is a significant negative effect of diversification into off-balance sheet activities on risk-adjusted profits in the period following the global financial crisis.

Ammar & Boughrara (2019) revealed that diversification, when taken as a whole, improves bank profitability. Also, split the non-interest income and we find that trading-generating business lines contribute the most to boosting profitability and stability. (Zahavi & Lavie, 2013) Examining the role of intra-industry diversification on firms' performance, the study analyses the impact of expanding the products that the company has within the core business of the company. The results were, over the short period the performance may be undermined due to the negative transfer effect (Cannibalization) but over the long term, the business performance improved due to economies of scope.

Kim, Batten & DoojinRyu (2020) investigated the effect of bank diversification on the financial performance of banks in OECD and the results showed that there is a significant nonlinear relationship between diversification and financial performance. The results concluded that a moderate level of diversification increased stability, but excess diversification has a negative effect on the performance of the banks.

Chen and Lai (2016) analyzed the dynamic effect of revenue diversification on bank risk and profitability. The study looks at both short- and long-term relationships that exist when the firm

undergoes revenue diversification to the risk and profitability of the bank and applies the pooled mean group model. The results on profitability suggested that the regression function for NIM, and in the long run revenue diversification leads to profit gain, and this translated into an increase in profit in the long run. The banks must go for revenue diversification, while in the short run the effects seem to be insignificant. The study also considers control variables whereby it finds that bank profitability is positively related to managerial capacity and market power in lending.

The study was conducted in Austria on the effects of both industries and loan diversification on bank performance. The results suggest that high concentration or Low diversification implies high risk hence negative profitability. This also supports the theory that the more banks diversify it reduced the less diversifiable risk hence, diversification leads to an increase in profitability (Rossi & Schwaiger, 2009). (Ashraf, Gupta, Moudud-Ul-Huq, & Zheng, 2018) analyzed the diversification heterogeneity affected the bank performance in emerging markets, the results showed that banks that have diversified have higher performance and lower risk, they added that while revenue diversification has a positive impact on performance, asset diversification showed different results depending on countries.

Conceptual Framework

This is the framework, which entails the description of the study variables both independent ones and the dependent variable vital in fostering knowledge gap filling. Thus, the description of the study variables is shown in Figure 2.

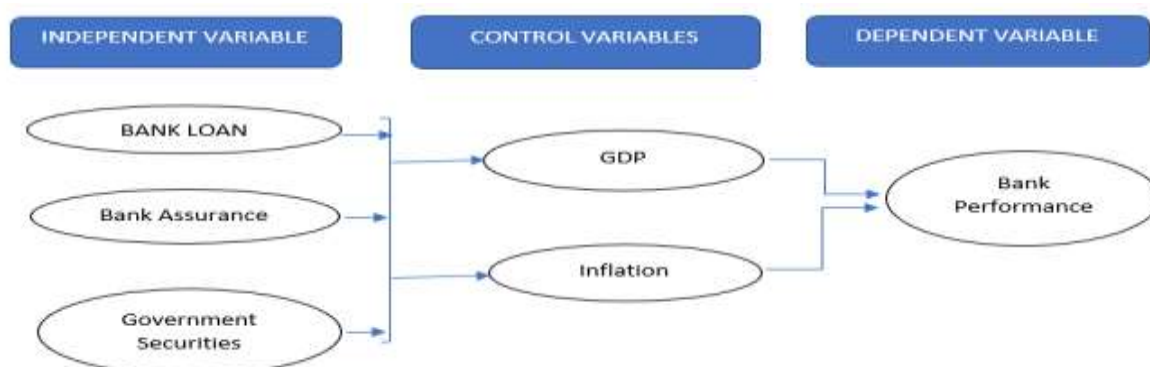


Figure 1: Conceptual Framework

Source: Researcher Conceptualization, (2023)

Theoretical Review

The study uses Markowitz Portfolio diversification theory where, an investor (individual or group) can diversify unsystematic risk by holding a diversified portfolio Markowitz (1952) The theory assumes that the returns of different assets are imperfectly correlated, therefore when the investor creates a portfolio by taking into consideration the correlation of returns of those assets, it may lead to having a diversified portfolio which led to return maximization at a given level of risks. According to Markowitz (1952) there is an efficient frontier in which an investor may choose at any point within a curve that maximizes return at a given level of risk.

METHODOLOGY

Description of the Population

The population takes consideration of large commercial banks in existence since 2015 and which have continued in operation through the year 2020. Based on the Directorate of banking supervision (BOT, 2020) there have been a lot of changes in the financial institutions' industry of Tanzania since the number of financial institutions dropped from 67 to 59. This decline was due to the closure of institutions with liquidity problems and mergers of Twiga Bancorp with Tanzania Postal Bank, bank M and Azania, and the closure of UBL bank and China Commercial bank. This cut the number of commercial banks to 37 as of 2020

Study Design and Sampling

This The study comprised the 10 largest commercial banks with asset-based above TZS 500 billion based on data collected from the year 2015 through 2020. For this study, the researcher used a purposive or judgmental sampling procedure to select the ten -commercial bank as the sample for this study which included Azania, Citibank, CRDB, EXIM, NMB, NBC, Standard chartered, DTB, TPB and Stanbic. Data was collected through random and purposive sampling techniques.

Data Collection Methods

The study applies secondary data. Secondary data are data that are readily available and are collected by other researchers or institutions (Kothari, 2004). Data for this study was collected from annual reports of commercial banks (published annual reports) for the listed banks, Financial reports in newspapers, and reports from the Bank of Tanzania regarding the performance of the banking industry in Tanzania (liquidity assets to total assets) explains the dependent variable (Bank profitability measured by net interest margin NIM). Findings will be presented in charts, tables, and figures from the model and researcher designs

Analytical Model

The analytical model refers to the study methodology that determines the relationship prevailing between the independent variables and dependent variables. The analytical model here has based on (Moudud-Ul-Huq, Ashraf, Gupta, & Zheng, 2018) who researched bank diversification heterogeneously and performance, and (Mutenga, 2016) who examined the effect of diversification on the financial performance of commercial banks in Tanzania.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Y = Commercial bank profitability measured by Net interest Margin

X_1 = Customer Loans measured as natural log of Customer Loans

X_2 = Bank assurance measured by bank capitalization

X_3 = Investment in Government securities measured as natural log of Investment in Government securities.

X_4 = Control Variables inflation

X_5 = control variable GDP

$\beta_1, \beta_2, \beta_3$ = coefficients associated with predictor variables

ε = Residual (error) term

FINDINGS

Descriptive Statistics

This section presents the descriptive statistics for the data analyzed and the derived statistics include mean, standard deviations, skewness, and kurtosis values. Table 1 below displays the results obtained.

Table 1: Descriptive Statistics

	N	Mean	Standard Error	Median	Standard Deviation	Kurtosis	Skewness
Net interest margin	10	0.0882	0.0047	0.0899	0.0115	-0.0513	0.0355
Loan to Customers	10	16.1808	0.0794	16.1525	0.1944	-0.4634	-0.0259
Bank assurance	10	12.1719	0.3264	12.0392	0.7995	0.4033	-0.1253
Investment in Government securities	10	15.0466	0.0697	15.0333	0.1706	-1.9682	0.1043
Inflation rate	6	0.0384	0.0044	0.0433	0.0108	-2.0943	0.0482
GDP Growth rate	6	0.0598	0.0033	0.0600	0.0082	-1.1462	-0.1964

Note: Inflation and GDP growth were yearly from 2015 to 2020 (6 years)

Throughout the study, the average Net interest margin was 0.0882, the Mean for Loan to customers was 16.1808, the mean for bank assurance was 12.1719, the Mean for investment in Government securities was 15.0466, the mean for Core capital to RWA was 0.1575, Mean for asset size was 16.8221.

The mean the inflation rate was 0.0384 and the mean for the GDP growth rate was 0.0598 for the period of 6 years (2015-2020). This indicates the large banks reported an average of 8.82 percent in net interest margins with a standard deviation of 0.0115. The model shows that there is little variability (measured by standard deviation) in the performance of the commercial banks (measured by Net interest margin) and earning assets such as Customer loans, bank assurance, and investment in government securities including the control variables above.

Furthermore, the model was tested for kurtosis which obtained the following -0.0513, -0.4634, 0.4033, -1.9682, -1.8788, -0.0064, 2.6559, -2.0943, and -1.1462 for commercial bank performance, Customer loans, bank assurance, investment in government securities, core capital to RWA, Asset size, Liquid asset to total assets, inflation rate and GDP growth rate respectively. The value of kurtosis is within the acceptable range of 3 and -3 which implies that the normally distributed dataset. The results were a follow 0.0355, -0.0259, -0.1253, 0.1043, -0.1114, -0.1596, 0.1255, 0.0482, and -0.1964 for commercial bank performance, Customer loans, bank assurance, investment in government securities, core capital to RWA, Asset size, Liquid asset to total assets, inflation rate and GDP growth rate respectively. The positive skewness was with the Inflation rate, Liquid assets to total assets, and investment in Government securities while the negative skewness was with the loan to customers, bank assurance, GDP growth rate, asset size, and a liquid asset to total assets. The skewness was between 0.2 and -0.2 which shows that data was symmetrical and hence normally distributed

Table 2: Test for Multicollinearity

Model	Collinearity statistics	
	Tolerance	VIF
Customers Loan	.765	1.045
Bank assurance	.589	1.997
Investment in Government securities	.654	1.402

Dependent Variable of study: Commercial Bank Profitability Measured by NIM

From the model the tolerance value obtained were as follows; 0.765, 0.589, 0.654, 0.388, 0.873, 0.611, 0.557, and 0.723 for Customer loans, bank assurance, investment in government securities, core capital to RWA, Asset size, Liquid asset to total assets, inflation rate and GDP growth rate respectively. This indicates that there was no multicollinearity problem as the value of tolerance was not close to 0.

Variance inflation factor (VIF) which is above 10 and Tolerance close to 0 indicates that there might be multicollinearity within the model. The study noted that the VIF of the study was 1.045, 1.997, 1.402, 2.567, 1.003, 1.551, 2.274 and 1.374 for Customer loans, bank assurance, investment in government securities, core capital to RWA, Asset size, Liquid asset to total assets, inflation rate and GDP growth rate. This concludes that there we no multicollinearity.

Table 3: Serial Correlation

Model	R	R square	Adjusted R square	Std. Error of estimate	Durbin-Watson
1	.809 ^a	.654	.613	0.0047201	1.899

Predictors:(Constant),Customer loans, bank assurance, investment in government securities, core capital to RWA, Asset size, Liquid asset to total assets, inflation rate, and GDP growth rate.

The research findings revealed that the DW value is 1.899 which was computed from the model. Therefore, the study concluded that there was no autocorrelation between variables such as Customer loans, bank assurance, investment in government securities, core capital to RWA, Asset size, Liquid asset to total assets, inflation rate, and GDP growth rate towards commercial bank profitability measured by net interest margin. Since the DW is approximately equal to 2 it concludes that there is no serial correlation/ autocorrelation

Table 4: Model Summary

Model	R	R square	Adjusted R square	Std. Error of estimate
1	.809 ^a	.654	.613	0.0047201

Predictors: (Constant), Customer loans, Bank assurance, investment in government securities, core capital to RWA, Asset size, Liquid assets to total assets, inflation rate, and GDP growth rate.

As shown in the model above the coefficient of determination measured expressed as the explained variations to total variations was 65.4% accounting for asset diversifications in Customer loan, bank assurance, and investment in Government securities as the main variables.

And including control variables such as asset size, Liquidity ratio, inflation rate, and GDP growth rate. The results obtained explain that the interest income change during the period under analysis was explained 65% by the Customer loans, bank assurance, investment in government securities, core capital to RWA, Asset size, Liquid asset to total assets, inflation rate, and GDP growth rate.

Table 5: ANOVA Results

Model	ANOVA				
	df	SS	MS	F- Value	P-Value
Regression	8	.098916	.01236	33.41757	.000 ^b
Residual	1	.000370	.00037		
Total	9	.099286			

As shown above, the model predicting the relationship between asset diversification and the performance of commercial banks is statistically significant. The significant p-value was 0.000.

Table 6: Coefficients

	Standard			
	Coefficients	Error	t Stat	p-values
Intercept	-.0949	.0142	-6.6830	.0000
Loan to Customers	.0367	.0064	1.1819	.0418
Bank assurance	.0249	.0058	2.0839	.0348
Investment in Government securities	.0091	.0077	1.2857	.0399
Inflation	.0257	.634	-0.657	0.4470
GDP Growth rate	.0008	.0003	2.6667	.0273

a. Dependent Variable: Net interest margin

From Table 6 the regression model therefore becomes:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

$$Y = -0.0949 + 0.0367(X_1) + 0.0248(X_2) + 0.0091(X_3)$$

Holding other factors constant, the change in one unit of Customer loans would change the financial performance by 0.0367 units, a unit change in the bank assurance would change the bank performance by 0.0249 and a unit change in the investment in government securities would change the commercial bank performance measured by net interest margin by 0.0091. Hence, the findings revealed that customers loan (p=.0418), investment in government securities (p=.0399) and bank assurance (p=.0348) were significant in predicting the financial performance of commercial banks since all the p values were less than 0.05. Control variables were able to explain the results, but the significance was lower compared to the main variables.

Discussion of Findings

From the findings in the above table, the value of R squared was 0.654. This can be interpreted that the total variation of the outcome can be explained by the independent variables by around 65%. The findings agree with (Ashraf, Gupta, Moudud-Ul-Huq, & Zheng, 2018) who researched the impact of diversification on improving developing institutional profitability.

The results showed that the model is significant in explaining the relationship between profitability and asset diversification at a 5% level of significance. Analysis of Variance shows that F-stat is greater than the significant level which is 33.41757. This implies that the regression equation was well specified and therefore the co-efficient of the regression shows that there is a strong relationship between Asset diversification and bank profitability.

The study revealed that asset diversification has a positive significant relationship with commercial bank performance measured by NIM. It concluded that any upward change in the main variables has a positive impact on the bank's performance. These findings concur with Laurie (2013) who concluded that asset diversification improves the worth of the company. The same findings are buoyed by (Cernas, 2011) who confirm that an increase in a company's financial assets, results in to increase in the net worth of the company.

The study revealed that investment in government securities has a positive significant relation with the performance of the banks. This is in line with the (Teixeira, Vieira, & Ferreira, 2021) who examined the impact of government bonds on bank liquidity risk and bank performance; the results showed that government securities have a positive impact on the profitability of banks but have no effect on bank liquidity risk.

The study results showed that banks' profits are highly contributed by customer loans as this asset comprised about 70% of the bank's assets. This is in line with (Bhowmik & Sarker, 2021) who examined loan growth and banks' risk; the results showed that loan growth induces banks' risk, and hence increased risk led to increasing in the profitability of the bank.

Asset Growth vs Profitability

From 2015 to 2020, the large bank's cohort has been growing at a CAGR of 11.3% while the overall banking sector assets have been growing at a CAGR of 8.96%. This indicates that the sector growth has been attributed to the growth in the larger banks cohort. Zooming specifically into banks; Tanzania Commercial Bank (TCB) formerly known as Tanzania Postal bank grew assets at a CAGR of 71.36% thanks to a merger with TIB Corporate bank in 2019. Azania Bank's assets grew at a CAGR of 27.49% during the period, and this was attributed to the merger with Bank M Tanzania Limited in 2018. DTB bank was the third growing bank in the larger banks' cohort which grew assets at a CAGR of 14.18%.

Stanbic Bank Tanzania assets grew at a CAGR of 12.85%, NMB bank plc assets grew at a CAGR of 12.83%, CRDB bank plc assets grew at CAGR of 10.97%, Citibank grew assets at a CAGR of 10.92%, NBC bank assets grew at CAGR of 5.86%, Exim bank assets grew at CAGR of 4% and lastly Standard Chartered Bank realized a slower growth of 1.07%. The growth of the bank's assets can be categorized as organic growth, such as growth due to business growth, or can be categorized as inorganic growth mainly attributed to the mergers and acquisitions (M&A) which were witnessed during the period. During the period the Returns on assets (ROA) declined to 1.10%, Return on equity declined to 7.37% and the Net interest margin declined to 7.52% despite the tremendous asset growth during the period.

Bank Profitability

The study intended to examine bank profitability which was measured by Net interest margin. This indicator has been used as they are key to best evaluating performance of the banks since banks collect deposits from the public at a cost and lend them at profit to customers, so it was very important to consider the net interest margin in the analysis. Net interest margin declined to an average of 7.52% in 2020 from 7.63% in 2015, the slight decline can be due to economic

factors rather than sector-specific factors because during the time the economy was in recession, and hence the banking sector remained resilient. On the other hand, large banks wouldn't see a higher impact on this ratio because they had access to cheap deposits which gave them a competitive edge unlike medium banks and small banks.

CONCLUSION AND RECOMMENDATIONS

Conclusions

Asset diversifications have a significant relationship with the performance of commercial banks. This shows that the way banks continue to diversify their assets result edit increased performance. Customer loans have a significant impact on the net interest margin of the banks this also shows that loan is the biggest asset the bank has and hence it's the biggest contributor to the income of banks

Bank assurance showed a positive significant relationship with the performance of commercial banks measured by net interest margin. Banks earn interest income through lending to each bank through the interbank platform; it's mainly for liquidity purposes. For this study, the banks under study were large banks with a strong liquidity position and strong financial muscles to mobilize deposits to maintain their liquidity within the central threshold. Therefore, banks under this category lend much to other banks than how they need to borrow from other banks hence their positive significant relationship with banks 'profitability is justified by the bank's ability to manage liquidity and hence borrow less from other banks and lend more.

Finally, the research study concluded that investment in Government securities has a significant relationship with the performance of commercial banks. Banks invest in these assets for different purposes such as trading purposes also known as held for trading assets and others take that position just for income generation and balance sheet enhancement also known as held to maturity. The impact of mark to market with the change in interest rate is the factor that led to investment in government securities is the lowest contributor to the financial performance of banks compared to customer loans and bank assurance. This is mainly due to uncertainties existing in the financial markets that would impact returns from investments due to interest changes. As for macroeconomic factors, the GDP and inflation are shown to be positively correlated with the bank performance. This shows that in when the economy is thriving, banks have better performance and better results

Recommendations

The study revealed that investment in Government securities has a positive significant impact on the performance of commercial banks. But during the period 2015-2020, there has been a higher demand for this asset which created an active market. Therefore, the returns realized during the period could be due to the limited investment opportunities in the market, hence pushing the bond market to be more vibrant for banks to realize more income in this asset class. It is recommended that banks should have strategies in place to counter any impact of decreasing demand for these instruments since in failure to do that, banks may hold assets that have no value and are difficult to sell in the market.

Further, the research study revealed that customer loans have a significant relationship with the performance of commercial banks. Due to the data challenges the researcher was not able to get the composition of the loan portfolio either retail or corporate are the large banks composted. Therefore, it is recommended for banks to have a look at the loan composition with the risk inherent in that loan portfolios to make sure that loan composition aligns with the banks'

risk appetite and banks' long-term growth strategy. This must go together with identifying and combining portfolios by client segmentation with the negative correlation among each other or combining loans portfolio into sector that have a negative correlation to each other to attain diversification advantage.

Bank assurance have been the second contributor to bank profitability for 2015-2020; therefore, it is recommended that banks should have a risk management framework and model that monitor all banks' performance for lending to each other. This must go with the establishment of the limits depending on the bank's performance on selected performance indicators approved by the central bank to be the measure of bank financial soundness.

Lastly, asset diversification support by the Government, especially the development of framework and regulations for new asset classes to our market like REIT's, Commercial papers, derivative instruments, and private equity investments. The study recommended the need for collaboration by all stakeholders in the financial sector to review the regulations and establish a framework that supports the implementation of new asset development.

The study revealed that during the period investment in Government securities increased and many banks used them as an alternative way of being profitable when there are limited investment opportunities. Also, the model has shown that increase investments in Government securities by one unit led to change in profit by 0.091 which is lower than customer loans and bank assurance. Therefore, this indicate that there is a need to study this specific asset class by looking at tenure's composition of the Government securities investments that would bring great performance for trading purposes given the change in the interest rate and held to maturity for balance sheet growth.

The study further revealed that 65.4% of the variations in commercial bank performance were explained by asset diversification, i.e., investment in Government securities, Customer loans, and bank assurance. Further research should be carried out to establish the factors affecting the remaining 34.6% variation in bank profitability.

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