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Impact of Tax and Equity on Revenue Growth of the Selected Banks in Botswana (2019-2022)

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ABSTRACT

The purpose of this study is to examine the impact of tax and equity on revenue growth of First National Bank Botswana (FNBB), ABSA Botswana, and Standard Chartered Bank in Botswana. The study analysed the secondary data obtained from Bank of Botswana reports.

The dependent variable is the Profit at the end of the year Y while the independent variables comprised internal factor which is equity(X2) and one external factor which is the Tax charged (X1) on the operating profits of the firm.

Using regression analysis, we analysed data from the financial statements of the three banks for the period of 2019 to 2022. The results indicate that tax has a negative impact on revenue growth, while equity has a positive impact on revenue growth.

The findings suggest that tax policies and equity management are important factors that affect the revenue growth of banks in Botswana.

Keywords: Tax, Equity, Revenue Growth, First National Bank Botswana, ABSA Botswana, Standard Chartered Bank, Regression Analysis

1.0 INTRODUCTION

The banking industry in Botswana has experienced significant growth over the past decade, with the First National Bank of Botswana (FNBB), ABSA, and Standard Chartered Bank being among the largest commercial banks in the country. However, the banking sector faces numerous challenges, including taxation policies and equity regulations, which can impact their revenue growth.

Botswana’s banking sector comprises 10 commercial banks and three statutory banks which is dominated by four commercial banks (Standard Chartered Bank Botswana Limited, First National Bank of Botswana Limited, Stanbic Bank Botswana Limited, and Absa Bank Botswana Limited), with a combined market share of about 80% in terms of both total commercial bank assets and deposits (BOB, 2021).

This research aims to investigate the impact of tax and equity on the revenue growth of FNBB, ABSA, and Standard Chartered Bank in Botswana. Specifically, the study seeks to determine the relationship between tax and equity policies and the revenue growth of these banks.

The research is significant because understanding the impact of tax and equity on revenue growth can help policymakers in Botswana to create policies that can promote economic growth and development. It can also help banks in the country to adjust their strategies to optimize their revenue growth.

To achieve these objectives, the study will use a quantitative research design and collect data from secondary sources such as the annual reports of the three banks. Multiple regression analysis will be used to examine the relationship between tax, equity, and revenue growth of these banks.

Overall, this research will contribute to the existing literature on the banking industry in Botswana and provide insights for policymakers, investors, and the general public on the impact of tax and equity policies on the revenue growth of banks in the country.

1.1 PROBLEM STATEMENT

The banking industry in Botswana is a crucial contributor to the country's economy, and the revenue growth of banks is critical to their sustainability and profitability. However, the impact of tax and equity on the revenue growth of banks in Botswana is not well understood. Therefore, this study aims to investigate the impact of tax and equity on the revenue growth of First National Bank Botswana, ABSA Botswana, and Standard Chartered Bank in Botswana. The findings of this study will provide insights into the factors that influence the revenue growth of banks in Botswana and inform strategic decision-making by bank management, policymakers, and other stakeholders in the banking industry.

1.2 OBJECTIVES

The objectives of the research are:

- To analyse the historical trend of revenue growth of the selected banks in Botswana.
- To evaluate the relationship between equity financing and revenue growth of the selected banks in Botswana
- To evaluate the impact of Tax on revenue growth of the selected banks in Botswana
- To provide recommendations for banks to optimize their revenue growth through effective tax and equity management

1.3 HYPOTHESIS

The hypothesis drawn for this study are:

Ho1: There is no significant relationship between tax and revenue growth for banks

Ha1: There is a significant negative relationship between tax and revenue growth for banks. Ho2: There is no significant relationship between equity and revenue growth for banks.

Ha2: There is a significant positive relationship between equity and revenue growth for the banks.

2.0 Literature Review

Botswana's banking sector comprises 10 commercial banks and three statutory banks, namely the Botswana Savings Bank, Botswana Building Society and National Development Bank ("NDB"). All of the commercial banks operating in Botswana are subsidiaries of major regional or international banking groups, and therefore, are subject to significant external direction. The sector is dominated by four commercial banks (Standard Chartered Bank Botswana Limited, First National Bank of Botswana Limited, Stanbic Bank Botswana Limited, and Absa Bank Botswana Limited), with a combined market share of about 80% in terms of both total commercial bank assets and deposits. The stability and franchise of these institutions pose a threat on smaller banks' ability to grow market share. (Makgosa R, 2022)

Several studies have examined the relationship between tax and equity and their impact on revenue growth in the banking industry. Some studies have found that corporate income tax has a negative impact on bank profitability, while others have found a positive impact. For example, Chen and Lin (2011) found that corporate income tax had a negative impact on the profitability of Taiwanese banks, while Shih et al. (2015) found a positive relationship between tax and revenue growth in Chinese banks.

Equity financing is an important source of funding for banks and can impact their growth and profitability. Studies have found that higher levels of equity financing are associated with higher profitability and growth in the banking industry. For example, Liu et al. (2016) found that equity financing had a positive impact on the profitability of Chinese banks.

Furthermore, the banking industry in Botswana is unique, with a few dominant players in the market and FNBB, ABSA, and Standard Chartered Banks are among the largest banks in Botswana which may have a significant impact on the overall performance of the banking industry in the country with FNBB being the highest performing bank currently.

2.1 IMPACT OF TAX ON TOTAL REVENUE OF THE BANK

Taxation is one of the significant factors that can impact the revenue of banks, the effect is usually negative as the amount of taxes paid by a bank can reduce its profits, affecting its ability to generate revenue. Research has shown that the impact of taxes on revenue can vary depending on a range of factors, including the tax rate, the bank's size, and its operating environment.

Amoako-Adu et al. (2019) investigated the impact of taxes on the profitability of banks in Ghana and the study found that taxes had a negative impact on bank profitability, with higher tax rates leading to lower profits. The authors suggest that banks should explore tax planning strategies to minimize the negative impact of taxes on their profits.

Another study by Dang and Kim (2020) examined the impact of tax reforms on the profitability of banks in Vietnam. The study found that tax reforms had a positive impact on the profitability of banks, particularly those that were able to adjust their business models and operations to take advantage of the new tax environment.

In addition to taxes on profits, banks may also be subject to other taxes, such as transaction taxes and property taxes. A study by Garg and Yan (2019) examined the impact of transaction taxes on the liquidity of banks in India. The study found that transaction taxes had a negative impact on bank liquidity, which in turn could affect their ability to generate revenue.

In conclusion, taxes can have a significant impact on the revenue of banks, and their impact may vary depending on a range of factors. Banks should be aware of the tax environment in which they operate and explore tax planning strategies to minimize the negative impact of taxes on their profitability.

2.2 IMPACT OF EQUITY ON TOTAL REVENUE OF THE BANK

Equity can have a positive impact on the revenue of a firm, particularly in the long run. Equity financing involves the sale of shares in the company to investors, which increases the capital available to the firm. This increased capital can be used to invest in growth opportunities, expand operations, and develop new products or services.

Research has shown that equity financing can lead to increased revenue growth for firms. A study by Hall and Lerner (2010) found that firms that raised equity capital experienced higher revenue growth rates than those that relied solely on debt financing. Another study by Dang et al. (2017) found that equity financing was positively associated with revenue growth in Chinese firms.

Equity financing can also improve a firm's financial position and reduce the risk of bankruptcy. This is because equity investors are not entitled to fixed payments like debt holders, and therefore, the firm has greater flexibility in managing its cash flow.

However, equity financing also has its downsides. The sale of shares can dilute the ownership of existing shareholders, which can lead to a loss of control and potential conflicts of interest. Additionally, equity financing can be expensive due to the costs associated with issuing shares and the need to pay dividends to shareholders.

In conclusion, equity financing can have a positive impact on the revenue of a firm, but the benefits need to be weighed against the costs and potential risks.

In the case of Botswana, few studies have specifically examined the impact of tax and equity on revenue growth of banks. However, studies have examined other factors that may impact bank performance, such as competition, interest rates, and economic conditions. For example, Mokgatlhe and Kaulihowa (2017) found that competition had a significant impact on the profitability of banks in Botswana.

Overall, the literature suggests that tax and equity are important factors that can impact the revenue growth of banks, but the specific relationship may depend on various factors, including the country, banking regulations, and the specific bank being analysed. More research is needed to specifically examine the impact of tax and equity on revenue growth in the Botswana banking industry

3.0 RESEARCH METHODOLOGY

The following Flow Chart 1.0 Shows the summary of the Methodology that was undertaken in the research.

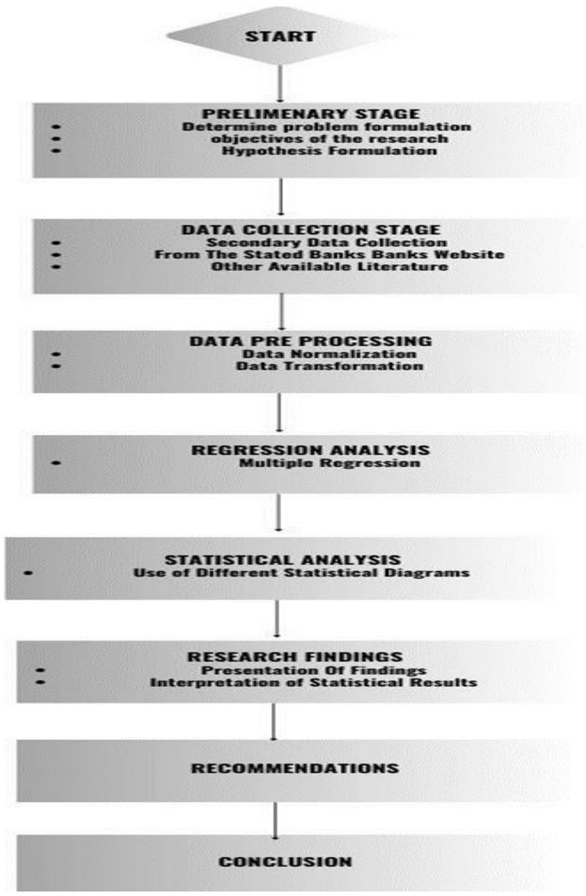


Figure 1.0 Research Methodology Flow Chart

Data Collection: Secondary data was collected from the financial statements and other financials for the period of 2019 to 2022.

Data Pre-processing: Pre-processing the collected data, including data cleaning, data transformation, and data normalization.

Regression Analysis: Performing multiple regression analysis to examine the relationship between tax, equity, and revenue growth of the three banks. The dependent variable would be revenue growth, and the independent variables would be tax and equity.

Statistical Analysis: Analysing the results of the regression and the correlation coefficients analysis using statistical software such as Excel. This would involve checking the model assumptions, estimating the coefficients, calculating the p-values, and interpreting the results.

Findings: Presenting the findings of the research, including the statistical results and the interpretation of the results.

Conclusion: Drawing conclusions based on the findings of the research, including the implications of the results for the banks, policymakers, and other stakeholders.

Recommendations: Making recommendations based on the research findings for improving the tax policies and equity management practices of the banks in Botswana. The directions for future research were provided for the potential future research.

3.1 RESEARCH DESIGN

A quantitative research design has been used for this study. This is because the research aims at measuring the impact of tax and equity on revenue growth, which requires numerical data to be analysed using statistical methods such as multiple regression analysis.

3.2 SAMPLING TECHNIQUE

A purposive sampling technique was used to select the banks to be used in this study. The criteria used was that; the banks should have been in operation for the past 10 years and have their annual statements published on an annual basis and available electronically for convenience. The selection was also based on the banks market share and financial performance in the industry.

3.3 SAMPLE SIZE

A total of three banks (FNBB, ABSA and Standard Chartered Banks) were selected as they are the top three players in the Botswana Banking Industry and have met the afore mentioned criterion.

The study is done on a four (4) year period, from 2019 – 2022.

3.4 DATA COLLECTION

Secondary data collection technique was used, which involved the collection of financial data from the banks' annual reports and other financial statements.

4.0 FINDINGS

Hypothesis Testing

Hypothesis 1 and 2

Ho1: There is no significant relationship between tax and revenue growth for banks Ho2: There is no significant relationship between equity and revenue growth for banks.

4.1 CORRELATION COEFFICIENT

The Pearson’s Correlation Coefficient, the R square values and the P-values, were used to test the relationship between the Total Tax, Total Equity and Total Profits of the three selected banks.

- **FNBB**

The results shows that there is a significant relationship between Total Tax and Profit of the Year. The correlation coefficient between these two variables is -0.977257489, which indicates a strong negative linear relationship. This means that as Total Tax increases, Profit of the Year tends to decrease.

The correlation coefficient between Total Tax and Total Equity is -0.290874967, which indicates a moderate negative linear relationship. This means that as Total Tax increases, Total Equity decreases but at a very lower percentage.

The correlation coefficient between Total Equity and Profit of the Year is 0.664160713. This indicates a moderate positive linear relationship between these two variables, which means that as one the Total Equity increases, Total Profits tends to increase.

	Total Tax	*Total Equity*	*Profit of the Year*
Total Tax	1		
Total Equity	-0.290874967	1	
Profit of the Year	-0.977257489	0.664160713	1

Table 1.0 Correlation Coefficient for FNBB Variables

- **ABSA**

The results shows that there is a significant relationship between Total Tax and Profit of the Year. The coefficient is -0.864974053, which indicates a strong negative linear relationship. An increase in Total Tax will result in a decrease in Profit of the Year.

The correlation between Total Tax and Total Equity is -0.274403962, which indicates a moderate negative linear relationship. This means that as Total Tax increases, Total Equity decreases but at a very lower percentage.

Correlation coefficient between Total Equity and Profit of the Year is 0.699704125. This indicates a moderate positive linear relationship between these two variables, which means that as one the Total Equity increases, Total Profits tends to increase.

	Total Tax	*Total Equity*	*Profit of the Year*
Total Tax	1		
Total Equity	-0.274403962	1	
Profit of the Year	-0.864974053	0.699704125	1

Table 1.1 Correlation Coefficient for ABSA Variables

- **Standard Chartered Bank**

The results shows that there is a significant relationship between Total Tax and Profit of the Year. The coefficient is -0.746898131, which indicates a strong negative linear relationship. An increase in Total Tax will result in a decrease in Profit of the Year.

The correlation between Total Tax and Total Equity is -0.239867812, which indicates a moderate negative linear relationship. This means that as Total Tax increases, Total Equity decreases but at a very lower percentage.

Correlation coefficient between Total Equity and Profit of the Year is 0.642354537. This indicates a moderate positive linear relationship between these two variables, which means that as one the Total Equity increases, Total Profits tends to increase.

	Total Tax	*Total Equity*	*Profit of the Year*
Total Tax	1		
Total Equity	-0.239867812	1	
Profit of the Year	-0.746898131	0.642354537	1

Table 1.2 Correlation Coefficient for Standard Chartered Variable

Given the above analysis, the results shows that there is a noticeable inverse relationship between Tax and Total Profits. This implies that we should reject the null hypothesis 1:

Ho1: There is no significant relationship between tax and revenue growth for banks and fail to reject the alternative Hypothesis:

Ha1: There is a significant negative relationship between tax and revenue growth for banks.

With regards to equity, the correlation coefficient results show a positive relationship between Equity financing and Total Profits, hence we reject the null hypothesis (Ho1):

Ho2: There is no significant relationship between equity and revenue growth for banks. And fail to reject the alternative hypothesis:

Ha2: There is a significant positive relationship between equity and revenue growth for the banks.

4.2 Regression Analysis

Multiple regression analysis was carried out after data normalisation of the three banks. In multiple regression, the aim is to predict the dependent variable *Yi* (score) in relation to the independent variables *Xi* are:

In this study, the dependent variable is *Yi* =Total Profits of the Year. The independent variables *Xi* are:

- $X1$ = Total Tax
- $X2$ = Total Equity

Results:

Regression Statistics	
Multiple R	0.927878976
R Square	0.925762451
Adjusted R Square	0.987287352
Standard Error	12735.80013
Observations	4

Table 1.3 Regression Analysis

	Coefficients	***P-value***
Intercept	384555.1381	0.24056299
Total Tax	2.901453917	0.052504024
Total Equity	-0.097229976	0.051863528

These results are from a regression analysis of the relationship between revenue growth and total tax and total equity for a sample of three banks.

The multiple R value of 0.927 indicates a strong positive correlation between the independent variables (total tax and total equity) and the dependent variable (revenue growth). The R- squared value of 0.926 suggests that approximately 93% of the variability in revenue growth can be explained by the independent variables in the model.

The adjusted R-squared value of 0.987 suggests that the model has a high degree of goodness of fit, and that the independent variables explain a large proportion of the variance in revenue growth.

The standard error of 12735.80013 indicates the average difference between the actual revenue growth and the predicted revenue growth values based on the model.

The p-values for the coefficients of the independent variables are 0.0525 and 0.0519 for total tax and total equity respectively. These p-values are very close to the commonly used significance level of 0.05, indicating that there is some evidence of a relationship between total tax and revenue growth, and between total equity and revenue growth.

With the above analysis, the results shows that there is noticeable evidence of the relationship between Tax, Equity and Total Profits.

This implies that we should reject both the null hypothesis 1 and 2:

Ho1: There is no significant relationship between tax and revenue growth for banks Ho2: There is no significant relationship between equity and revenue growth for banks and fail to reject the alternative Hypothesis:

Ha1: There is a significant negative relationship between tax and revenue growth for banks.

Ha2: There is a significant positive relationship between equity and revenue growth for the banks.

4.2.1 Limitations of the Multiple Regression

- Omitted variables: Other important variables that could affect revenue growth, such as macroeconomic factors or industry-specific variables, may not have been included in the model, leading to biased results.

- Limited sample size: The model is based on only 3 observations, which may not be representative of the entire population, and may not provide enough statistical power to make accurate predictions.
- Non-linearity of the relationships: The relationships between the independent variables (tax and equity) and the dependent variable (revenue) may not be linear, which can affect the accuracy of the model.
- Multicollinearity: The independent variables (tax and equity) may be highly correlated with each other, which can make it difficult to isolate their individual effects on revenue growth.
- Endogeneity: The independent variables may be endogenous, meaning that they are influenced by the dependent variable (revenue), which can bias the results of the model.

4.3 Comparison of The Tax, Equity and Profitability

The following Tables shows comparison of the Banks Tax Charged, Equity and the total revenue over the four-year period used in the survey.

Table 1.4 Comparison of Total Tax Charged on the Banks in 2019-2022

ABSA experienced a huge decline in Taxes in 2020 from 1,56,964.00 to 67,197.00 in 2019 and 2020 and experience high taxes of 2,07,942.00 in the year 2022.

Standard Chartered Bank on the other hand records the lowest Taxes with the highest taxes charged being in 52,397.00 in 2020. In overall FNBB is the highest taxed bank of the three.

In Terms of Equity, FNBB still shows to be a great player in the industry as shown on

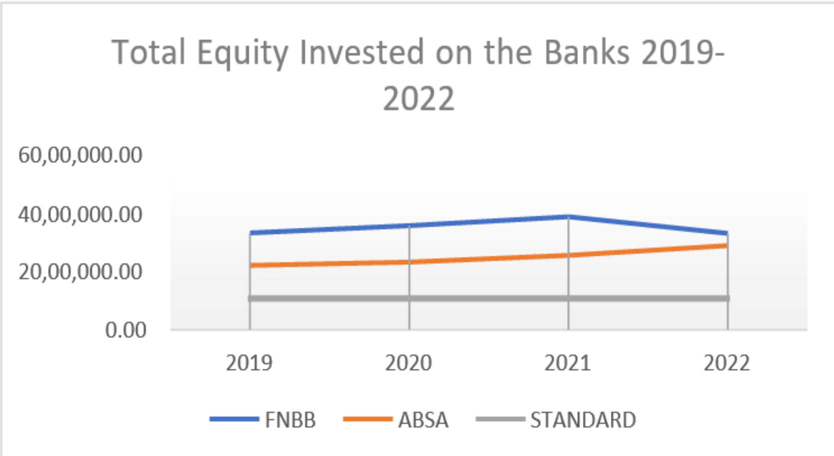
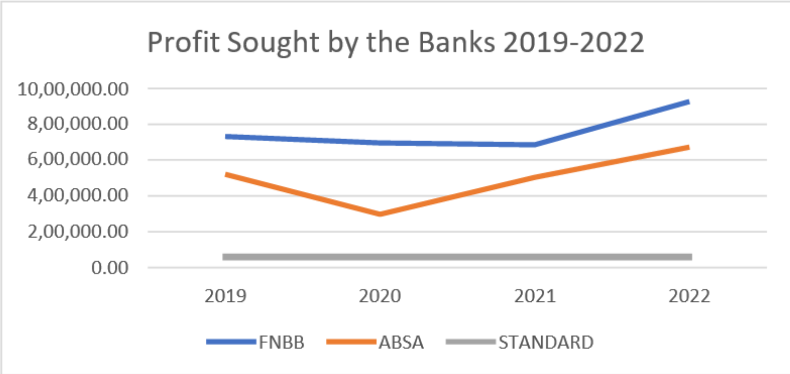


Table 1.4. Even though there are some hardly noticeable variations on the total Equity, FNBB has registered the highest equity total of 38,97,339.00

Table 1.5 Comparison of Total Equity On the Banks in 2019-2022.

ABSA bank has recorded almost the same equity throughout the years, with a very slight increase noticeable in 2022. Standard Chartered Bank on the other hand has been keeping an arguably constant equity totals in all the four years recorded.



The Profit of ABSA Bank drastically declined from 3,97,339.00 in 2019 to 2,96,746.00 in 2020. This could possibly be to other factors both the

Table 1.6 Comparison of Profit Gains by the Banks in 2019-2022

Internal and external factors that are not considered in this study. The Bank improved its profit from 2,96,746.00 in 2020 to 6,72,080.00 in 2022, which is a very impressive increase.

Standard Chartered Bank on the other hand experienced arguably constant Profits over the four-year period. FNBB still tops the charts in the profit sought, even though it experienced some slight decrease in profits between 2019 and 2019, it went on to register the profits of 9,26,743.00 in 2022, which is the profit recorded between 2019 and 2022

4.4 EVALUATION OF THE BANKS IN TERMS OF TAX, EQUITY AND PROFIT

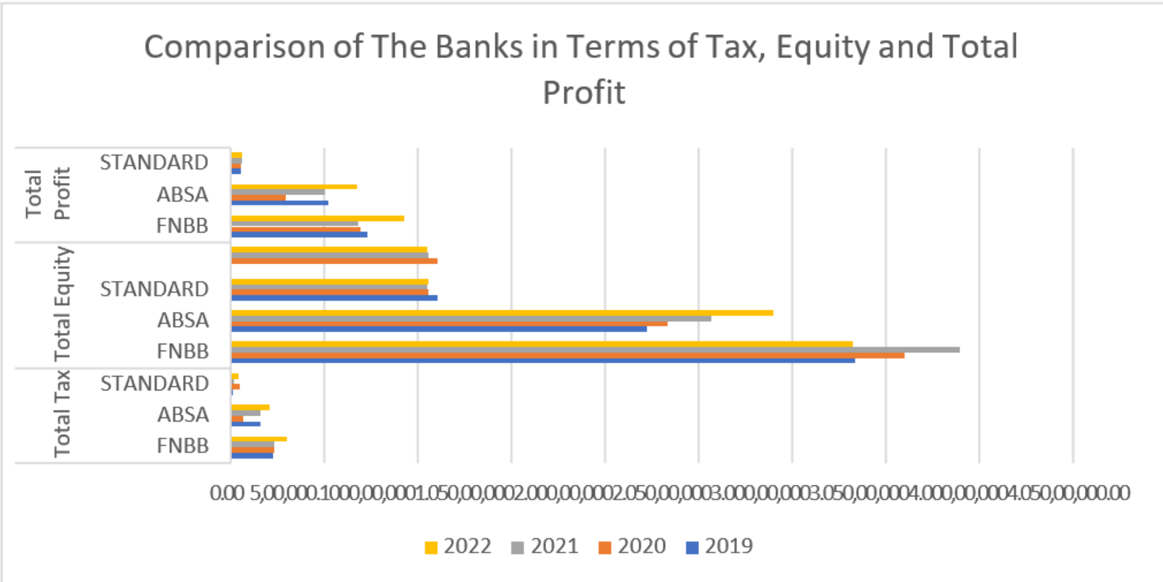


Table 1.7 Comparison of The Banks In Terms Of Tax, Equity and Total Profit

The Table 1.7 Shows that FNBB has Invested more Equity compared to all the other banks across the period of 2019 and 2022. Even though it has been charged higher taxes than all the other banks, it managed to make the highest profits than all the other banks.

With thing having being said, the question still remains is there a relationship between tax and Total Profit of the Bank?

This implies that we now fail to reject the null hypothesis 1:

Ho1: There is no significant relationship between tax and revenue growth for banks Based on the evidence from the graph

With regards to equity, the results shown on the graph shows a positive relationship between Equity financing and Total Profits, hence we reject the null hypothesis (Ho1):

Ho2: There is no significant relationship between equity and revenue growth for banks. And fail to reject the alternative hypothesis:

Ha2: There is a significant positive relationship between equity and revenue growth for the banks.

5.1 CONCLUSION AND SUMMARY

In conclusion, based on the analysis of the findings above, the study shows without doubt that there is a positive relation relationship between total Equity and Total Profits of the year. This means that the more prepared the bank is to invest on its assets and shareholders' equity it is highly likely to reap its benefits of investment, Return on Equity (ROE), in the form of higher profits. This was supported by the hypothesis testing, where in all the test the null hypothesis (Ho1), was rejected, which says that there is no relationship between the total Equity and Profits of the Bank.

In the case of relationship between tax and the Total Profit, we can conclude that there is no enough evidence to conclude on the relationship between tax charged and the Profit of the Bank. Even though the Regression and the correlation coefficients, showed the probable inverse relationship, the comparison on the Tax, Equity and Total Profits as on table 1.7, which is a real-life practical situation, shows different results.

The historical trend of the bank Profits the banks shows that FNBB has been able to over the years maintain a comparatively higher profit margin compared to all the banks, the followed by ABSA.

In summary, equity management is crucial for banks to optimize their revenue growth. By developing a clear tax strategy, monitoring tax legislation, focusing on equity management, and optimizing revenue streams, banks can improve their profitability and achieve sustainable growth in the long run

5.2 LIMITATIONS OF THE STUDY

In order to ensure the validity and reliability of the study's findings and recommendations, It is important to acknowledge and address these limitations:

The period of 4 years was used on the analysis, which is a very short time period for the study to be comprehensively done on.

Limited sample size: Since model is based on only 3 observations, these may not be representative of the entire population, and may not provide enough statistical power to make accurate predictions.

Time constraints: The study was done within a limited time period and hence the available time was not sufficient for data collection and analysis, which have resulted in some discrepancies, incomplete or insufficient data.

Omission of some factors: most of the factors that affect the banking industry both internal and external, such as changes in government policies, economic conditions, or global financial crises, to mention a few, where omitted, which may skew the result.

5.3 DIRECTIONS FOR FUTURE RESEARCH

The following recommendations were drawn:

Other important variables that could affect revenue growth, such as macroeconomic factors and other industry-specific variables, should be included in the model in order to avoid biasness in the results.

A Resource Based View (RBV) Theoretical Framework work which is a widely used approach for analysis of the competitive advantage of Banks should be included as it measures other factors that are not covered by other frameworks.

The study should be inclusive of the entire industry banks, and cover a larger scope in terms of time period to reduce biasness and make it easier for the results to be generalized to the entire Industry in Botswana, and possibly other countries in the region.

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