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Effect of Capital Structure on Financial Performance of Selected Commercial Banks in Rwanda: A Case of Bank of Kigali, Equity Bank and I&M Bank

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Abstract

The global financial crisis of 2007-2009 highlighted the importance of bank Managerial efficiency and effectiveness. This study seeks to assess the effect of capital structure on financial performance of commercial banks in Rwanda. The aim of the study is to examine the effects of Capital structure on financial performance of listed commercial Banks in Rwanda, a case study of selected commercial banks in Rwanda (BK, I&M bank, Equity). It is important to distinguish the banking sector from the general financial sectors and other sectors. The banking industry being a key pillar in the financial industry and economy as a whole needed to be studied in this context. This study was prompted by the knowledge gap generated by the insufficient studies and inconsistent findings about the effects of capital structure. By shedding light on the impact of capital structure on the financial performance of listed commercial banks in Rwanda, the research study's findings were helpful to the management of BK, I&M Bank, and Equity, investors, shareholders, and academics, as well as the government of Rwanda, the Rwanda Stock Exchange (RSE), and the Capital Market Authority (CMA). Leverage level affects a listed commercial bank's financial performance, according to capital structure theories (including the irrelevance theory of capital structure, the Trade-off theory, the pecking order theory, and the agency cost theory that have been investigated). This study adopted descriptive research design. Therefore the overall annual financial reports of 10 of Commercial Banks formed the target population. The main source of data for the study was Secondary data. The financial and income statements panel data covering seven year period from 2016 to 2022 summarized and ratios calculate and analyse using SPSS version 20 to produce inferential statistics using multiple regression analysis so as to determine the relationships between dependent and independent variables. The multiple regression models used considered performance as the dependent variable and was measured in terms of ROA and ROE. Time series data from 2016 to 2022 extracted from the financial statement of the selected banks, and descriptive statistics, financial analysis techniques and ratios, correlation analysis and regression used to determine how capital structure affect the financial profitability of commercial banks. Different research findings revealed that films with a positive foreign equity share performed better after the global financial crisis, it was argued by literature that, this could be because FDI is the more stable source of financing for firms and is less prone to sudden outflow. Moreover, it could provide firms with access to an internal capital market when external markets are tight or distressed. The focus of this paper is selected Bank's equity share to the total foreign liabilities, the research findings shows that the selected banks grew by 18.8 percent on account of the growth of deposits and capital. The capital position of the

banking sector remained above regulatory requirements. As at end June 2022, the aggregate Capital Adequacy Ratio (CAR) of banks stood at 23.1 percent, higher than the minimum regulatory requirement of 15 percent. Selected Banks continue to hold adequate liquidity buffers both in short- and long-term perspective.as at the end of December 2022 The Liquidity Coverage Ratio (LCR) that measures the ability of banks to fund cash outflows for 30 days stood at 224.7 percent, well above the minimum requirement of 100 percent. During the same period, the Net Stable Funding Ratio (NSFR) that gauges whether banks hold enough stable funding to cover the duration of their long-term assets stood at 130.9 percent, higher than 100 percent minimum regulatory requirement. Despite the improvement in bank loan book indicators, credit risk remains the major risk facing the banking industry. The financial sector is expected to remain sound and stable on the back of sufficient capital and liquidity buffers. However, risks remain due to heightened uncertainties in global and domestic macroeconomic environment.

1. Introduction

The capital structure of a firm describes the way in which a firm raised capital needed to establish and expand its business activities. It is a mixture of various types of equity and debt capital a firm maintained resulting from the firm's financing decisions. Rwanda Stock Exchange has attracted few companies in East African market as compared to other stock exchange like Nairobi Stock market.

I the process of ensuring that these companies sustainably operate in the market, considering their relevance to RSE, platform there is a need to assess their capital structure as a way of promoting trade in Rwanda. Eldomiaty (2007) stated that such sort of market environment results in incomplete financial recessions. Therefore there is a need to investigate the impact of financial leverage level on financial performance in Rwanda as an example of developing economies.

The aim of this study is to empirically investigate the association among debt level and financial performance of firms of selected commercial banks in Rwanda from 2016-2022 using financial ratio, and Net profit Margin as performance measures. The significance of this study is that it helped the investors to create such a portfolio that yield them maximum profit. It enables them how a choice of capital structure effects the financial performance of the company. This study is a first effort to study the impact of capital structure on firms' financial performance in Rwanda.

The COVID-19 epidemic left scars on the economy that would probably take years to heal. Growth strongly recovered to 10.9 percent in 2021 thanks to government policy support. The pandemic issues are being exacerbated by the effects of the war in Ukraine, which are slowing down economic growth, putting more pressure on social demands and inflation, straining budgetary balances, and raising fears about rising food insecurity. It is anticipated that weaker external demand and increased global commodity prices will cause growth to reach 6% in 2022. The central bank's benchmark level of 5 percent will be exceeded by headline inflation, which is predicted to increase from 0.8 percent in 2021 to 9.5 percent in 2022. The National Bank of Rwanda (NBR) raised the policy rate by 50 basis points in February 2022. While the near-term outlook is marred by uncertainty from the geopolitical risks that could prolong the spillovers from the war in Ukraine, the medium-term outlook remains favourable, supported by the authorities' commitment to structural reforms. The change in World Bank financing terms under IDA20 will increase the volume of loans, hence the debt-to-GDP ratio for Rwanda, but given the higher concessionality of the loans, the expected impact on the present value of debt path is marginal (International Monetary Fund ,. R., 2022).

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1.1: The purpose of the study

The main purpose of this study is to fill the gap in the research evidence by investigating the effect of the capital structure on the financial performance of commercial banks in Rwanda.

1.2: Objective of the Study

The general objective of the study is to assess the effect of capital structure on the financial Performance of commercial banks in Rwanda .The focus of this paper is selected Bank's equity share to the total foreign liabilities.

Specific objectives:

i. To assess the financial performance of selected commercial bank in Rwanda.
ii. Assess the effect of equity capital on financial performance of selected commercial banks in Rwanda.
iii. Determine the effect of debt capital on financial performance of selected commercial banks in Rwanda.
iv. Determine the effect of capital structure on the financial performance of selected commercial banks in Rwanda.

1.3: Hypothesis

Following hypothesis are developed to investigate the impact of capital structure on banking performance.

Objective one:

H0 = There is no effect between equity Capital and financial performance of commercial banks in Rwanda.

H1=There are high correlation between equity capital and financial performance of commercial banks in Rwanda

Objective two

H0=There is no effect between debt capital and financial performance of commercial bank in Rwanda

H1: There is high correlation between debts capital and financial performance of commercial banks in Rwanda

Objective three

H0=There is no effect between capital structure and financial performance between capital structure and financial performance of commercial banks in Rwanda

H1 = there is high significant effect between debt capital and financial performance of commercial banks in Rwanda.

2. Literature review

In this chapter the researcher discusses the objectives of the study citing the work that other scholars who have published their evidence relating to the effect of capital structure on financial performance of commercial banks.

2.1: Empirical Review

Birru (2016) Conducted a research in 2016, The purpose of his paper was to investigate the impact of capital structure on financial performance of selected commercial banks in Ethiopia over the past five (5) year period from 2011 to 2015 using secondary data collected from financial statements of the commercial banks. Data was then analyzed on quantitative approach using multiple regression models. The study used two accounting-based measures of financial performance (i.e. return on equity (ROE) and return on assets (ROA)) as dependent variable

and five capital structure measures (including debt ratio, debt to equity ratio, loan to deposit, bank's size and asset tangibility) as independent variable. The results indicate that financial performance, which is measured by both ROA, is significantly and negatively associated with capital structure proxies such as debt to equity ratio (DER), SIZE and TANG whereas debt ratio (DR) have negative impact (Birru, 2016). The findings of the study shows that Debt ratio(DR), debt to equity ratio(DER), SIZE and TANG have statistically significant factors affecting financial performance measured by return on assets and return on equity at 1%, 5% and10% significant level and Loan to deposit (LD) is statically insignificant with its respective nature of impact. Based on the findings obtained from the results, the study suggests recommendations that the commercial banks of Ethiopia should focus on the proportion of debt used by the bank, the manner of utilizing the resources while expanding the banks and the amount of investment on fixed asset.

This study relied on the accounting measures of financial performance and capital structure which are subject to management manipulation and reporting policies. Therefore, further researches which use market based measures such as Tobin's Q are encouraged to provide more insights and truth on the subject. In addition, this study solely focused on the relationship between capital structure and financial performance and it did not attempt to ask whether the prevailing capital structure in the above banks are optimal. As such, researches on the capital structure optimality are needed to determine whether the held proportions of equity and debt are the most effective to the banks.

Hermansson, (2015), assessed the understanding the relationships between bank- non-financial performance and capital base in Stockholm. The study used multinomial logistic regressions, difference-in-difference regression, and structural equation modelling. The study found that Managerial implications include understanding the relational attributes that affect saving behavior, such as context, duration, and trust. Also, useful to know are the factors that can help to predict the probability of a customer's having a transactional or relational exchange form.

Matilda (2013), in her research on the effect of capital base efficiency on non-financial performance in Sweden found out that the post-merger analysis shows no remarkable improvements in bank technical efficiency after consolidation. These findings imply that decision makers ought to be more cautious in promoting mergers as a means of enjoying efficiency gains. The model proposed by them allows for time varying technical efficiencies in an unbalanced panel. This latter aspect is particularly important in the framework of this study since mergers and acquisition imply that banks disappear from the sample over time. Observation period from 1984 to 2002, 19 years banks studied were 157 in totals which had been involved in 28 mergers were studied with a maximum number of banks participating in a single merger being six. Results indicated the overall cost efficiency of Swedish savings bank is estimated to be 80%. This implies that banks can reduce their costs by 20% and still be able to produce the observed levels of output without any adjustment in input prices, output volumes or the branching network.

Azzam, (2014), discussed the impact of capital base management on non-financial performance in the banking industry a case of Jordan. The population of the present study is customers of Jordanian banks operating in Amman city, the capital of Jordan. 528 respondents were selected through convenient sampling and data has been collected through questionnaires which were self-administered by researcher. The statistical analysis revealed that there is a significant relationship between the independent variables.

Nsiah, and Mensah, (2014), assessed the effect of capital base and non-financial performance on customer retention in the banking industry in Ghana, a case study of Asokore rural bank

limited. The primary data were collected through administrating questionnaire. Convenient sampling procedure was used to obtain 100 responses from customers and 20 from employees of the bank. Correlation and multiple regressions were used to investigate the relationship between dependent and independent variables. The research findings also indicate offering high quality service increase customer retention, which in turn leads to high level of customer commitment and loyalty.

Pastory and Mutaju (2013) assessed The Influence of Capital Adequacy on Asset Quality Position of Banks in Tanzania in his paper has extensively analyzed the relationship between the capital adequacy and asset quality of commercial the banks in Tanzania. The study employed Panel secondary data from 33 banks in the period (2006-2011) and the linear Regression model was used to test for the relationship between the two variables. The findings indicate that capital adequacy has a great influence on the asset quality. The increase in capital ratios has sometimes reduced the asset quality productivity and in most cases the levels of non-performing loans and non-performing asset have been increased with the increase in capital ratios. CAEL analysis indicated the banks financial position to be stable and meet the regulatory requirements. It has been recommended that the bank of Tanzania (BOT) should foster their strength in supervision as the two categories have been viewed to be very crucial and do increase the stability of the banking system.

3. Research methodology

This chapter present the methodologies that used for assessing the effect of Capital structure and financial performance of commercial banks in Rwanda case study of selected banks (Bank of Kigali, I&M bank and Equity bank).

3.1: Research Design

This study is descriptive and analytical, whereas a descriptive research also called statistical research. The main goal of this type of research is to describe data and characteristics of what is being studied, it is used when the researcher want to gain a better understanding of the topic while analytical research is a specific type of research that involves critical thinking skills and evaluation of fact and information relative to the research being conducted. For this study this design enables to describe and identify the effect of capital management of the financial performance of commercial banks in Rwanda. This research study used quantitative data. the quantitative approach is typically used to answer questions about the relationship among measured variables with the purpose of explaining, predicting and controlling phenomena. The quantitative approach is sometimes referred to as the traditional, the positivist, the experimental or the empiricist approach. Quantitative studies designs used to assess the effect of capital structure on financial performance of commercial banks in Rwanda of selected bank to be the representative element for all commercial banks.

3.2: Study Population

The target population of this study was all commercial Banks in Rwanda (10 banks).The entire target population of this study constituted of financial reports of all ten (10) commercial banks in Rwanda. In this study only three banks studied. Those include: Bank of Kigali PLC, I &M bank, Equity bank Rwanda. The reason for picking these three banks is that they are the major banks and are listed on capital market Agencies (CMA) in Rwanda. The population of the study comprises of all the fifteen (10) commercial banks reported by BNR period 2016 to 2023.Therefore, it was reasonable that these three banks provided the accurate representation of the commercial banking sector in Rwanda.

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3.3: Sampling

In Rwanda, there are fifteen commercial Banks operating in Rwanda, among them, three banks listed on the capital market Authority (CMA) i.e. BK. Equity Bank and I&M Bank were selected /taken for the study. They were purposively selected from the target population with the belief that it was adequate to carry out a study of this nature. The banks selected have complete data for the duration of the study from 2016 to 2022 and possess the following features: the financial accounting years and the brand names did not change during the period of the study. These banks selected because there are listed on CMA. In addition they are pioneers leading banks in the context of capital management, deposit collection and loan disbursement financial statement of last seven fiscal years from 2016 to 2022 were taken for evaluation these include (Bank of Kigali, I&M Bank, Equity bank). The financial statement and report of selected banks (Bank of Kigali, Equity and I&M banks analyzed in order to assess the effect of Capital structure on financial performance of commercial banks in Rwanda.

3.4: Data Collection Method and Tools

A source is one of the materials that the researcher has to use for collecting information during the investigation. The two major sources of data are primary and secondary source of information. The Secondary data enabled to draw reliable quantitative data towards the effects of capital structure on financial performance of commercial banks in Rwanda. Under this study, the financial Statement of selected banks (Bank of Kigali, Equity bank and I&M bank) were chosen to provide secondary data. The financial reports, journals and internet sources were also used for gathering secondary data. The hypothesis was formulated according to the objective of the study a conducted consistently. The data to be used in this study are secondary data obtained from annual financial reports of selected commercial banks in Rwanda. This research was mainly based on secondary data from three audited financial statements namely statement of financial position, income Statement, and statement of changes in Equity bank.

3.5: Data Analysis

Data analysis is a systematic process which applies statistic techniques to evaluate data through inspecting, transforming and modelling data to draw useful information for decision making. Time series, descriptive, inferential statistics (regression and correlation).

Trend analysis and regression analysis were used to synthetize and analyze gathered data. Trend analysis used in assessing the capital structure and financial performance of commercial banks in Rwanda while regression analysis used in explore whether there is a statistical significant relationship between capital formation and business performance in banking sector. Statistical Package for Social Sciences (Spss.20) Statistical Computing used as a statistical tool in analysing the collected data. The multiple Leaner regression models used considered performance as the dependent variable and was measured in terms of ROA and ROE (Gaytan *et al*., 2022).

$$y = \beta 0 + \beta 1x1 + \beta 2x2 + \beta 3x3 + \varepsilon$$

Y=financial performance
β0=intercept
X1, X2, and X3= capital structure
β1, β2, β3=coefficients
ε=error term

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4. Research findings

4.1. Objective number one: effect of equity capital & financial performance of commercial banks in Rwanda

To measure the relationship between equity capitals with financial performance of commercial banks, the net profit (Y) has been assumed to be the dependent variable on equity capital (X), independent variable. Then the correlation coefficient and regression line calculated in the appendix have been summarized below.

Table 1: Effect of Equity Capital & Financial Performance

Bank	R	r-sq	p-value	Remark	Regression equation
BK	-0.92	0.851	0.009	Significant	NP=235.55-0.1617EC
I&M	0.03	0.001	0.956	Insignificant	NP=435.02+0.005EC
EQUITY	0.53	0.281	0.279	Insignificant	NP=-64.14+0.1207EC

The relationship between the capital structure and the net profit after taxes is displayed in the above table. The table shows a correlation between the capital structure and the net profits of BK, I&M Bank, and Equity Bank. Changes in net capital structure have been attributed to the negative connection between net profit and the capital structures of BK and I&M as well as equity, which is 0.53 and -0.92 respectively. In the cases of Bank of Kigali, I&M bank, and Equity bank, the p-values for the correlation between these two variables are 0.009, 0.956, and 0.279, respectively. It can be assumed that the relationship between net profit and capital structure in Bank of Kigali, I&M bank and Equity bank is statistically significant because the value of p-value for Bank of Kigali, I&M bank is less than the significance level. As a result, net profit rises when net working capital falls and vice versa. The statistical relationship between net profit and net working capital is not significant in the cases of Bank of Kigali, I&M Bank, and Equity Bank, and as a result, net profit does not increase with an increase in net working capital and vice versa. On the other hand, the p-value of the remaining banks is greater than the 0.05 significance level. Additionally, the regression line between net profit and net working capital shows that, provided the other variable in each bank's equation is constant, net profit in BK falls by AFN 0.1617 for every AFN reduction in net working capital.

4.2. Objective number two: Financial Performance & Debt Capital

Let the net profit be the dependent variable and short-term debt is the independent variable. Then the relationship between them in terms of the correlation coefficient and the regression Line has been presented in the table below.

Table 2: Financial Performance & Debt capital

Bank	R	r-sq	p-value	Remark	Regression equation
BK	0.46	0.653	0.052	Significant	NP=1696-0.0286DC
I&M	0.38	0.143	0.818	Insignificant	NP=3.95+0.0084DC
EQUITY	-0.76	0.573	0.081	Insignificant	NP=217.7-0.0266DC

The above table measures the relationship between net profit and short-term debt. The table depicts that BK, I&B, Equity Bank, and have a perfect positive relationship between net profit & short-term debt and in the case of Bank of Kigali, Equity bank, I&M bank, The correlation coefficient is higher, i.e. 0.76 in Equity bank, and lower 0.38 in I&M bank and 0.46 in Bank of Kigali. Further, the coefficient of determination indicates that 65.3%, 14.3%, 57.3%, 66.5%, 0.4%, 49.8%, 57.8%, and 86.8% variation in net profit of Bank of Kigali, I&M bank and Equity bank, has been caused by deviation in the short-term debt. Also, the p-value is 0.052 in BK, 0.818 in I&M bank, 0.081 in Equity, since the p-value is smaller than the 0.05 significance

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level certainly there exists a statistically significant relationship between net profit and short-term debt in these two banks.

And, thus net profit increases/decreases with the decrease/increase in short-term debt. Thus, the bank will earn more profit by using lesser short-term debt to finance the working capital. The statistical relationship between net profit and STD is not significant in the case of Equity bank, I&M bank, and Bank of Kigali, and as a result, net profit does not increase with an increase in net working capital and vice versa. In contrast, the p-value of the remaining banks is greater than the 0.05 level of significance. The net profit of the Bank of Kigali reduces by AFN 0.0242, and Equity decreases by AFN 0.0758, according to the regression line of net profit on short-term debt, assuming the corresponding variable remains constant.

4.3. The Effect of Capital structure on Financial Performance of Commercial Banks in Rwanda (Bank of Kigali, Equity bank, I&M bank)

Table 3: Correlation

Correlations

		TOTAL EQUITY	TOTAL LIABILITIES AND EQUITY	Profit After Tax
TOTAL EQUITY	Pearson Correlation	1	.954*	.987**
	Sig. (2-tailed)		.012	.002
	N		5	5
TOTAL LIABILITIES AND EQUITY	Pearson Correlation		1	.955*
	Sig. (2-tailed)			.012
	N			5
Profit After Tax	Pearson Correlation			1
	Sig. (2-tailed)			
	N			

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

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

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.988[a]	.976	.953	1586490.044

a. Predictors: (Constant), TOTAL LIABILITIES AND EQUITY, TOTAL EQUITY
b. Dependent Variable: Profit After Tax

In a competitive business environment, it is imperative for managers to choose an optimal capital structure which is a key decision for the growth, stability and going concern of a business enterprise so as to maximize the return on investment to various stake holders in the business and will also have a great impact in any decision relating to the performance of an organization. Following the reviewed literature above, we modeled the research in line with the work of (Kipesha & Moshi, 2014) which was specified and modified as:

$\text{CBP} = f(CS)$

$CBP = f(TDE, TDA, LDE, SDE, LDA, SDA + \mu)$

$PAT = f(\alpha + \beta 1TDE1, \beta 2TDA2, \beta 3LDE3, \beta 4SDE4, \beta 5LDA5, \beta 5SDA5 + \mu)$

$EPS = f(\alpha + \beta 1TDE1, \beta 2TDA2, \beta 3LDE3, \beta 4SDE4, \beta 5LDA5, \beta 5SDA5 + \mu)$

Where:

CBP= Commercial Bank Performance (PAT, EPS)
CS= Capital Structure
PAT= Profit after Tax
EPS= Earnings per share
TDE= Total Debt to Equity
TDA= Total Debt to Total Asset
LDE= Long - Term Debt to Equity
SDE= Short - Term Debt to Equity
LDA= Long - Term Debt to Total Asset
SDA= Short - Term Debt to Total Asset
μ error term
α constant
A priori expectation is that $\beta 1, \beta 2, \beta 3, \beta 4, \beta 5, \beta 5 > 0$
Decision rule: null hypothesis should be rejected if the prob (p-value) is < 5% significance level, otherwise it should be accepted.

4.4. Interpretation of the regression results for profit After Tax (PAT)

According to the data in the table above, the performance of commercial banks is inversely correlated with the ratios of total debt to equity, long-term debt to equity, and long-term debt to assets. It follows that a rise in these factors will result in a fall in profit after taxes. The findings from the two models show that short-term debt to total asset and total debt to total asset are positively correlated with profit after tax, i.e., an increase in the variables would result in an increase in profit after tax and vice versa.

All the factors, however, are statistically significant, according to the findings of both fixed effect and random effect models. Total debt to equity and long-term debt to equity are important at a 10% level of significance whereas long-term debt to equity and short-term debt to equity are significant at a 1% level of significance.

The fixed effect model's coefficient sizes indicate that for each unit increase in long-term debt to total assets, short-term debt to total assets, total debt to equity, short-term debt to total assets, and long-term debt to equity, the commercial banks in Rwanda will see a corresponding increase in profit after tax of approximately 0.000080%, 0.12%, 0.14%, 0.62%, 0.091%, and 0.82%. According to the random effect model, the independent variable increases will result in an increase in the PAT of 0.000096, 0.097, 0.094, 0.62, 0.075, and 0.80 percent, respectively. The fixed effect and random effect models have r squared values of 0.475 and 0.4664, respectively. These show that, for the two models, changes in the independent variables account for around 47.5% and 46.64%, respectively, of variations in profit after tax. The models therefore fit well. This suggests that the models' explanatory power is strong, and the conclusions are thus appropriate for drawing conclusions about policy. This finding is in line with the work of Zeitun & Tian (2007), Eriotis *et al.* (2007), Nireh (2012), Khalaf (2013), and Meero (2015).

Both models' regression results, which are shown in table above, indicate that while all other variables are favorably associated to EPS, the ratios of long-term debt to total assets, total debt to equity, total debt to total assets, and short-term debt to equity are inversely connected to it. However, the variables are statistically significant because the lower half of each coefficient is higher than its standard errors. Similar to the linear effect model, the only significant variables in the random effect model are long-term debt to total asset, short-term debt to total asset, and short-term debt to equity, with coefficients of 0.00057, 0.038, and -0.092 with standard errors of 0.000038, 0.010, and 0.035, respectively. Therefore, the only significant factors affecting

the owners' wealth of commercial banks in Nigeria are long-term debt to total asset, short-term debt to total asset, short-term debt to equity, and long-term debt to equity. In other words, the capital structure of commercial banks in Nigeria has a significant impact on shareholder wealth. According to the fixed effect model, an increase in the ratio of long-term debt to total assets and short-term debt to equity, respectively, causes a fall in EPS of 0.00064 and 0.072 units, respectively. On the other side, an increase in the ratios of long-term debt to equity and short-term debt to total assets, respectively, led to 0.084 and 0.50 increases in EPS. In the random effect model, a unit rise in the ratios of short-term debt to equity and long-term debt to total assets causes losses in the EPS of 0.00057 and 0.092, respectively. On the other hand, a rise in the ratio of short-term debt to total assets causes an increase in EPS of 0.038. According to the R2 statistics, changes in the independent variables account for 69.2% (for fixed effect models) and 66.31% (for random effect models) of the variation in a firm's EPS. This demonstrates that the model's estimates are reliable and consistent for drawing conclusions about policy. This is in accordance with the empirical research of Bevan & Danbolt (2002), Awunyo-Vitor & Badu (2012).

Table 5: ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	207042994021164.470	2	103521497010582.230	41.130	.024[b]
	Residual	5033901322344.369	2	2516950661172.185		
	Total	212076895343508.840	4			

a. Dependent Variable: Profit After Tax
b. Predictors: (Constant), TOTAL LIABILITIES AND EQUITY, TOTAL EQUITY

Table 6: coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3450946.731	2900208.341		1.190	.356
	TOTAL EQUITY	.134	.057	.851	2.343	.144
	TOTAL LIABILITIES AND EQUITY	.004	.010	.142	.392	.733

a. Dependent Variable: Profit After Tax

5. Conclusion

This study used information from three commercial banks listed on the Rwanda Stock Exchange for a period of seven years to assess the impact of capital structure on the performance of commercial banks in Rwanda (2017 - 2022). The study used panel data regression to evaluate the data and discovered a substantial correlation between Rwandan commercial banks' profitability and debt levels. The main findings showed a negative and statistically significant relationship between the capital structure of commercial banks, as measured by their long-term debt to equity ratio, total debt to equity ratio, total debt to assets ratio, and short-term debt to equity ratio for earnings per share, respectively. On their profitability for PAT and EPS, respectively, there was a positive and substantial association between capital structure proxy as total debt to total asset, short-term debt to equity, short-term debt to total asset, and long-term debt to equity, short-term debt to total asset. The result, in comparison, supports agency cost theory and pecking order.

The main implication of this study is the validation of the applicability of financing and capital structure theories to commercial banks in Rwanda. The commercial bank will be significantly impacted by the capital structure decision. The study also discovered that shareholder wealth and liquidity might have a big impact on debt. Few studies have been conducted on commercial banks in Rwanda, and the majority of empirical research that examined the impact of capital structure on organizational performance has focused on non-financial industries. As a result, the current study fills a gap in the literature and provides evidence by using contemporary data on the impact of capital structure on the performance of commercial banks. This essay offers proof that the choice of the financing mix that affects the performance of commercial banks and is consistent with the theoretical background supported by the literature review is aided by financial theory.

Therefore, the study suggests the following actions: First off, the level of leverage incurred by commercial banks in Rwanda, whether highly geared or weakly geared, should always be taken into consideration because it is a significant factor in their performance. Last but not least, according to the pecking order theory, management of commercial banks should not rely on debt capital as a source of funding the organization capital structure, but rather employ retained earnings of the business and view debt as the least alternative.

The sample emphasis of this study is limited to commercial banks that are listed on the Rwandan stock exchange. Other components of financial organizations, such as mortgage banks, microfinance banks, and insurance businesses, are largely present in the stock market. As a result, our findings might not be indicative of what will happen to other financial institutions in Rwanda. To obtain a thorough conclusion on capital structure and corporate performances, additional variables, such as macroeconomic conditions and corporate governance structure, which are not included in our models, should be taken into account for further research. Additionally, this study can be reproduced with different industries, and future researchers may take these findings into account with regard to other potential variables.

It was noted that Bank of Kigali continues to hold the top spot among all other banks in Rwanda, holding a market share of 35%, dominating in terms of clients (27%), and leading in terms of branches (10.8%). However, with 28.5% of the total agencies, Equity Bank Rwanda dominates BK. These three commercial banks are all publicly traded in Rwanda. The main stock exchange in Rwanda is called the Rwanda Stock Exchange (RSE). In January 2011, it was established. The Rwandan Capital Market Authority (CMA) had oversight over the RSE. 2011 saw the opening of the exchange's doors for trading.

If certain economic activity sectors significantly decline, maintaining robust capital levels will be the banks' biggest issue moving ahead. An important indicator of banks' ability to sustain unforeseen losses caused by credit and market risks is the industry's solid capital position. Despite the banking sector's high capital adequacy ratio, the National Bank of Rwanda is constantly watchful in its prudential supervision to make sure that any early issues, regardless of their severity, are found and properly handled.

The proper running of any corporate organization depends on working capital, which is regarded as the heart and soul of a company. It is risky for a business to under- or over-allocate working capital in order to accomplish its main goals. As a result, maintaining an ideal level of working capital, which is closely tied to the trade-off between risk and return, is the root of the issue. Major conclusions include the following:

i. Only at Bank of Kigali only in certain banks can net working capital have a considerable impact on profitability; in other banks, it has little to no impact.
ii. On the profitability of equities and I&M banks, short-term debt has a considerable effect. The profitability is not significantly impacted by the short-term debt of other banks.
iii. The assumption is that the negative and significant link between net profit and net working capital exists only in Bank of Kigali, and as a result, net profit rises or falls in direct proportion to changes in net working capital.
iv. Only in the case of Equity and I&M bank does a negative and significant relationship between net profit and short-term debt exist.

6. Recommendations

The responsibility of top-level management should be more liable than lower-level management in managing the required capital structure. Further, the bank should be a risk taker and should adopt the aggressive policy for the sustainability of the bank in long run, since the working capital has a crucial impact on the profitability and risk.

Based on the findings obtained from the results, the study suggests recommendations that the commercial banks of Rwanda should focus on the proportion of debt used by the bank, the manner of utilizing the resources while expanding the banks and the amount of investment on fixed asset.
The authors developed the recommendations to the regulator to increase the practice of advance payments of income tax due to the benefits of this for both parties.

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8. References

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