Financial Statements Analysis and Financial Performance of Commercial Banks in Rwanda

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ABSTRACT

The study about financial statements analysis and financial performance of commercial Banks in Rwanda was aimed at examining the contribution of financial statements analysis to the financial performance of commercial Banks in Rwanda and specifically aimed at establishing whether ratio analysis, vertical and horizontal analysis affects the financial performance of BPR Bank Ltd and how the Bank utilizes them in analyzing its financial statements, assessing if the financial statements analysis helps BPR Bank Ltd in its managerial decisions and assessing its contribution towards BPR Bank Ltd's financial performance. Both primary and secondary data was collected using a questionnaire and documentation review. A descriptive and correlation research design was adopted in the study. Descriptive and inferential statistics were used to analyze the data. The findings from the survey indicated a strong and positive relationship between financial statements analysis and financial performance as evidenced by an R-square of 0.842 and an adjusted R-square of 0.834. This means that the variation in the financial performance, 84.2% is caused by financial statements analysis. The results further revealed that only 15.8% of the variables are outside the variables that were tested.

Key Word: Financial statements analysis, Financial Performance, Commercial Bank

INTRODUCTION

A commercial bank is a dealer in capital or more property a dealer in money. He is an intermediate party between the borrower and the lender. He borrows from one party and lends to another and the difference between the terms at which he borrows and those at which he lends from the source of his profit. Prof. Gilbert.

Financial performance refers to the ability to operate efficiently, profitably, survive, grow and react to environmental opportunities and threats, Mawanda (2008). Return on Equity (ROE), Return on Assets (ROA) and Net Interest Margin (NIM) are often used to proxy the measurement of Financial Performance. Other than profitability other indicators of financial performance in the banking sector are; liquidity, loan disbursement, and customer netting. According to available literature, appropriate performance measures are those that enable organizations to direct their actions toward achieving their strategic objectives. For the sake of this research paper, the author will focus on the Return on investment (ROI), Return on equity (ROE), and Earning Per share (EPS).

Commercial banks play a vital role in the economic resource allocation of countries. They channel funds from depositors to investors continuously. They can do so if they generate the necessary income to cover the operational cost they incur in the due course. In other words, for sustainable intermediation function, banks need to be profitable. Beyond the intermediation function, the financial performance of banks has critical implications for the economic growth of countries.
Good financial performance rewards the shareholders for their investment. This, in turn, encourages additional investment and brings about economic growth. On the other hand, poor banking performance can

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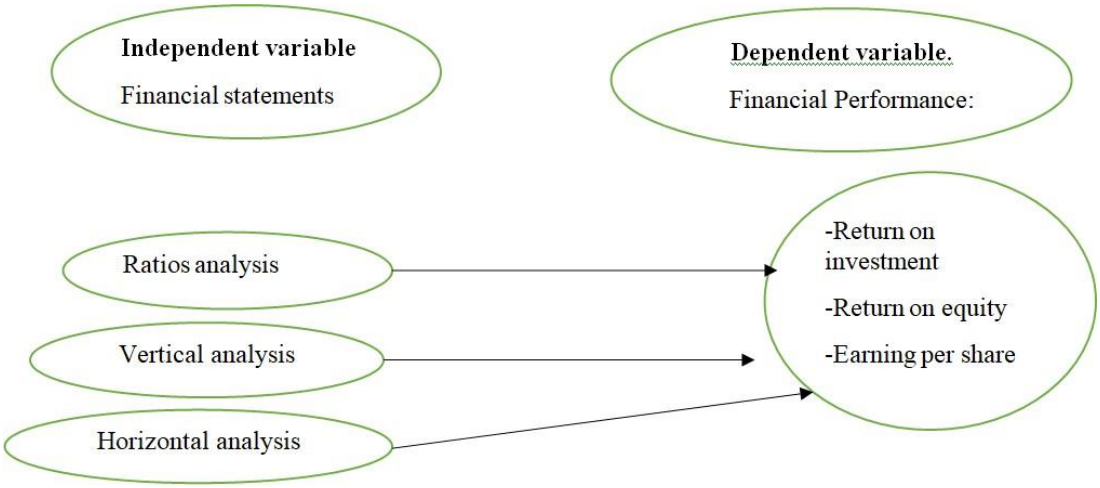
lead to banking failure and crisis which have negative repercussions on economic growth.

Thus, the financial performance of commercial banks has been of great interest to academic research since the Great Depression Intern the 1940s. In the last two decades, studies have shown that commercial banks in Sub-Saharan Africa (SSA) are more profitable than the rest of the world with an average Return on Assets (ROA) of 2 percent (Flamini et al., 2009).

CONCEPTUAL FRAMEWORK

This conceptual framework as presented in Figure: 1 shows the relationship between the variables (independent and dependent variables and other variables that may intervene) of the current study.

Figure 1



Source: Researcher 2022

The conceptual financial performance is measured by the Return on investment (ROI), Return on equity (ROE), and the Earning per share (EPS).These measurement variable (Dependent variables) are influenced by the vertical, horizontal, and ratio analysis of financial statements(Independent variables).

REVIEW OF THE LITERATURE

Conceptual review

Vertical analysis and organizations' financial performance

Edwards & Pinkerton (2020), vertical analysis is conducted on financial statements for a single period of time only. Each item in the statement is shown as a base figure of another item in the statement, Facts (2019), for a given time period, usually for a year. Typically, this analysis means that every item on an income and loss statement is expressed as a percentage of gross sales, while every item on a balance sheet is expressed as a percentage of total assets held by the firm. Vertical analysis is also called static analysis because it is carried out for a single time period, Raju & Rao (2020).

Paniagua, Rivelles & Sapena (2018), vertical analysis only requires financial statements for a single reporting period. It is useful for inter-firm or inter-departmental comparisons of performance as one can see relative proportions of account balances, no matter the size of the business or department. Because basic vertical analysis is constricted by using a single time period, Kourtis, Kourtis& Curtis (2019), it has the disadvantage

of losing out on comparison across different time periods to gauge performance. This can be addressed by using it in conjunction with timeline analysis, which shows what changes have occurred in the financial accounts over time, such as a comparative analysis over a three-year period, Griffin & Mahajan (2019). This type of financial analysis consists of studying of a single financial statement in which each item is expressed as a percentage of the significant total for example of sale calculation (Kimmel, 2000).

Horizontal analysis and organization's financial performance

Analysis of an organization's financial statements for two or more successive period showing percentage and or absolute changes from the previous year. This type of analysis helps detect changes in a company's performance and highlight trend (Kimmel, 2000).

When financial statements for a certain number of years are examined and analysed, the analysis is called "Horizontal Analysis." Horizontal analysis is also called Dynamic Analysis, Roberts, Novicevic, Thomas & Kaše (2020). Grabner & Martin (2021), horizontal analysis is the comparison of financial information of a company with historical financial information of the same company over a number of reporting periods. It could also be based on the ratios derived from the financial information over the same time span in a given period. The main purpose is to see if the numbers are high or low in comparison to past records, which may be used to investigate any causes for concern.

This method of analysis simply groups together all information, sorting it by time period, weeks, months or years. The numbers in each period can also be shown as a percentage of the numbers expressed in the baseline or the earliest/starting year. The amount given to the baseline year is usually 100%. This analysis is also called dynamic analysis or trend analysis, Daryanto & Nurfadilah (2018).

Hashmi & Malik (2019), when the analysis is conducted for all financial statements at the same time, the complete impact of operational activities can be seen on the company's financial condition during the period under review. This is a clear advantage of using horizontal analysis as the company can review its performance in comparison to the previous periods and also be able to gauge how it's doing based on past results. A disadvantage of horizontal analysis, Meher & Zewudu (2020), is that the aggregated information expressed in the financial statements may have changed over time and therefore will cause variances to creep up when account balances which are compared across periods. Horizontal analysis can also be used to misrepresent results. It can be manipulated to show comparisons across periods which would make the results appear stellar for the company.

In this study the independent variable which is Financial statements analysis is expected to influence the dependent variable which organization' sation's financial performance through many ways and those considered are ratio analysis, vertical analysis and horizontal analysis. The dependent variable which is the organization's financial performance is seen in many areas like return on investment, return on equity, and earnings per share.

Ratio analysis and organization's financial performance

Ratio is relationship expressed in mathematical terms between figures which are connected with each other in some manner. They can be expressed in two ways: Times: when one value is divided by another, the unit used to express the quotient is termed as "Times" and Percentage, if the quotient obtained is multiplied by 100, the unit of expression is termed as "Percentage". Accounting ratio is therefore, mathematical relationships expressed between inter-connected accounting figures. Ratio analysis is an important and age-old technique. It is a powerful tool of financial Analysis. It is defined as "The indicated quotient of two mathematical expressions" and as "the relationship between two or more things". Systematic use of ratio is to interpret the financial statement so that the strength and weakness of a firm as well as its historical performance and current financial condition can be determined (Helfert, 2002).

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A ratio is only comparison of the numerator with the denominator. The term ratio refers to the numerical or quantitative relationship between two figures. Thus, ratio is the relationship between two figures and obtained by dividing a former by the latter. Ratios are designed show how one number is related to another (Brigham, 1989).

The data given in the financial statements are in absolute form and are dumb and are unable to communicate anything. Ratios are relative form of financial data and are very useful technique to check upon the efficiency of a firm. Some ratios indicate the trend or progress or downfall of the firm (Brigham, 1989).

EMPIRICAL METHODS AND DATA

Data set

Schuman (1974), the target population means all members of a specified group to which the study relates. In this research, the target population was comprised of 50 respondents.
For purpose of the study, since the population is small, the entire population was considered as the sample. Thus, a census sampling technique was used.

Table 1: Sampling frame

No	Departments	Targeted population	Simple size
01	Finance personnel	8	8
02	Operation personnel	12	12
03	Audit department	10	10
04	Managers	4	4
05	Credit and risk personal	16	16
Total		**50**	**50**

Source: Research, 2022

Data Collection Instruments

The self-administered questionnaires were used to collect primary data from the respondents. A review of different documentation including financial reports was also used to collect secondary data.

Validity and Reliability of Research Instruments

To ensure content validity, data collection instruments were constructed in such a way that they have an adequate number of items and that each item or question on the scale had a link with the objectives of the study and was covering a full range of issues being measured. Questions were re-phrased to ensure consistency in the responses of the participants. The respondents who participated in the study were well-informed and knowledgeable to provide reliable answers.

The reliability of the instruments was established after a pre-test in order to establish the fitness of the instruments in the study. For the reliability, experts in the field were consulted about the content of instruments, ambiguity of question items and their relevancy.

Sample Size and sampling method

Sampling is related with the selection of a subset of individuals from within a populationto estimate the characteristics of whole population (Ajay Shankar Singh, 2014).For purpose of this research, since the population is small, the entire population was considered as the sample. Thus, a census sampling technique was used.

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Descriptive statistics

Data analysis has been also done using the Statistical Package for Social Scientists (SPSS), which helped to summarize the coded data and this facilitated quick interpretation of the results. The frequency distribution, percentages, mean, and the standard deviation was used to determine the profile of respondents.

Inferential statistics

The inferential statistics were used to analyze the relationship between the study variable and to approve the study hypothesis. A multi-regression model was used to analyze the relationship of study variables. The relationship was considered strong if the Pearson correlation coefficient is above 50% and the variables were considered significant if the P-value is below 5%.

Analytical model

The independent variable was measured using vertical analysis (VA), horizontal analysis (HA) and ratio analysis (RA). On the other hand, the financial performance was measured using either return on assets (ROA), Return on equity (ROE), Earnings per shares (EPS).

Financial performance (FP) = F(VA, HA, RA)

Hence, $FP = \beta 0 + \beta 1VA + \beta 2HA + \beta 3RA + \alpha$
Where $\beta 0$ ……. $\beta 3$ are constants and $\alpha$is the error term

Hypotheses development

Based on the above literature review, the researcher developed the following hypotheses:

H01: Vertical analysis does not significantly affect the financial performance of commercial banks in Rwanda

H02: Horizontal analysis does not significantly affect the financial performance of commercial banks in Rwanda

Ho3: Ratio analysis does not significantly affect the financial performance of commercial banks in Rwanda

RESULTS DISCUSSION

Background of Respondents

This section describes the background of respondents by gender, age, level of education, experience and position of the respondents in the institution.

Table 2: Distribution of Respondents by Gender

Gender	Frequency	Percentage
Male	21	41.7
Female	29	53.3
Total	**50**	**100.0**

Source: Survey data, 2022.

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The results in Table 2 indicate that most of the respondents (53.3%of all respondents) were female while male was only 41.7% of all respondents. This indicates that both females and males participated in this study. However, the high percentage of females compared to male could be due to the willingness of financial institutions to employ females than males because generally the females have good customer care compared to males.

Table 3: Distribution of Respondents by Age

Age	Frequency	Percentage
20 – 39 years	27	54.2
40 – 59 years	19	37.5
60 years and above	4	8.3
Total	**50**	**100.0**

Source: Survey data, 2022

Regarding age of respondents in this study, most of respondents (27 respondents) belonged to the age group of 20 – 39 years old (54.2% of all respondents) and the other respondents were in age group of 40 – 59 years old (37.5% of all respondents) while the respondents aged above 60 years old were 2 respondents (8.3% of all respondents) implying that most respondents were not adults. This is true because, most of organizations require younger employee with updated skills to do things in new ways and few adult staffs with the highest degree of experience ready to serve and take mature decisions while training the young recruited.

Table 4: Distribution of Respondents by Education Qualification

Level	Frequency	Percentage
Secondary Level	4	8.3
Diploma	2	4.2
Bachelor's Degree	40	79.2
Masters' Degree	4	8.3
PhD	0	0.0
Total	**50**	**100.0**

Source: Survey data, 2022.

Concerning level of education, results in the table 4.3 indicate that most of respondents hold the bachelor's degree (79.2% of all respondents), followed by the College Certificate holders) corresponding to 8.3% of all respondents and masters' degree holders corresponding also to 8.3% of all respondents while Diploma holders was one respondent corresponding to (4.2% of all respondents). This indicates that majority of the staff at BPR Bank Ltd highly educated and this gives them the competence to understand the research instrument and most important of all execute very well their duties.

Table 5: Distribution of Respondents by position

Position	Frequency	Percentage
Managerial staff	13	25.0
Operational staff	37	75.0
Other	0	0.0
Total	**50**	**100.0**

Source: Survey data, 2022.

For the position of respondents, most of respondents (37 respondents) corresponding to 75% of all respondents were operational staff including tellers, banking officers, supervisors and technicians while 13 respondents corresponding to 25% of all respondents were managerial staff. This indicates that this study involved all the key stakeholders in the Bank and this gives credibility to the findings.

Table 6: Distribution of Respondents by Experience

Experience	Frequency	Percentage
1 – 3 years	21	41.7
4 – 6 years	17	33.3
7 – 9 years	10	20.8
10 years and above	2	4.2
Total	**50**	**100.0**

Source: Survey data, 2022.

In line with experience, the study in the table 5 revealed that most of respondents (41.7% of all respondents) had experience ranging between 1 – 3 years, followed by the respondents with experience between 4 – 6 years (33.3% of all respondents), the other portion of respondents corresponding to 20.8% of all respondents were with experience between 7- 9 years while 4.2% of all respondents were with experience above 10 years.

Descriptive Statistics

This section shows the descriptive statistics related to the study objective

Descriptive Statistics on Vertical Analysis Practices

This section analyses the descriptive statistics on the Vertical analysis practices of commercial banks in Rwanda. Results are shown in the table below:

Table 7: Vertical Analysis Practices in BPR Bank Ltd

	N	Mean	Std. Deviation
The vertical analysis is understandable and relevant to the management	50	4.6125	.73766
Vertical analysis provides complete, timely and reliable information to management	50	4.8250	.38236
Vertical analysis helps to keep track on financing, and operating activities of your organization	50	4.4500	.70979
Vertical analysis helps the management to forecast (budget) the future operations basing on actual results	50	4.5125	.50300
Vertical analysis helps to predict with certainty the entity's future cash flow at a particular time	50	4.6500	.59746
Vertical analysis helps in strategic decision making	50	4.5750	.49746
Valid N (listwise)	50		

Source: Survey data, 2022.

From table 7, the respondents were asked to express their opinion on the vertical analysis practices. Concerning on whether vertical analysis is understandable and relevant to the management, findings show a mean of 4.6125 and standard deviation 0.73766. This means that majority of the respondents agreed that

vertical analysis is understandable and relevant to the management thus the data is homogeneous. On whether vertical analysis provides complete, timely and reliable information to management, the results show a mean of 4.825 and standard deviation 0.3823, this implies that majority of respondents agreed and there is a low deviation. Furthermore, the findings on whether vertical analysis helps to keep track on financing, and operating activities of your organization, the findings showed a mean of 4.450 and a standard deviation 0.7098 this implies that majority of respondents agreed.

The results further indicated that vertical analysis helps the management to forecast (budget) the future operations basing on actual results as evidenced by a mean of 4.125 and standard a deviation 0.503 which shows that data is homogeneous. On whether vertical analysis helps to predict with certainty the entity's future cash flow at a particular time, findings showed a mean of 4.650 and a standard deviation of 0.5795. This implies that the majority of respondents agreed that vertical analysis helps to predict with certainty the entity's cash flows. The findings on whether vertical analysis helps in strategic decision-making, the results from the survey show a mean of 4.575 and a mean of 0.4795 which implies that the majority of respondents agreed and the results are homogeneous.

Descriptive Statistics on Horizontal Analysis Practices

This section analyses the descriptive statistics on the horizontal analysis practices of commercial banks in Rwanda. Results are shown in the table below:

Table 8: Horizontal Analysis Practicesin BPR Bank Ltd

	N	Mean	Std. Deviation
Horizontal Financial statements analysis helps BPR Bank Limited to assess theprofitability level	50	4.1125	.72903
Trend analysis helps to determine the liquidity position	50	4.5250	.50253
Horizontal analysis helps to determine long term position	50	4.5125	.65591
Horizontal analysis helps to determine the profitability	50	4.2375	.76710
Horizontal analysis helps to manage expenses	50	4.3625	.75042
Horizontal analysis helps to know the long term financial position	50	4.4125	.83732
Valid N (listwise)	50		

Source: Survey Data 2022

In table 8, the respondents were asked as to whether the horizontal analysis of financial statement helped in its financial performance. The results from the survey show that Horizontal Financial statements analysis helps BPR Bank Ltd to assess the profitability level as evidenced by mean of 4.113 and standard deviation of 0.729. This implies majority of respondents agreed and there is low deviation from the mean thus the findings are homogeneous. On whether trend analysis helps to determine the liquidity position, findings indicated a mean of 4.525 and standard deviation 0.5025 which implies that majority of respondents agreed and there is low deviation from the mean thus indicating the data is homogeneous. The findings further indicated horizontal analysis helps to determine long term position of business as indicated by a mean 4.513 and standard deviation 0.6559. This means that majority of respondents agreed and there is a low deviation from the mean thus, the data is homogeneous.

Furthermore, the findings on whether horizontal analysis helps to determine the profitability of the firm, a mean of 4.238 and a standard deviation of 0.7671 which implies that majority of respondents agreed that horizontal analysis helps to determine the profitability of the firm thus, the findings are homogeneous. On whether horizontal analysis helps to manage expenses, the findings indicated a mean of 4.363 and a standard deviation of 0.750. This implies that majority of respondents agreed and there is a low deviation from the

mean thus indicating that the data is homogeneous. The findings on whether horizontal analysis helps to know the long-term financial position of the company show a mean of 4.4125 and a standard deviation of 0.8373 were observed. This implies that majority of respondents agreed and there is a low deviation from. This means that the data is homogeneous.

Descriptive Statistics on Ratio Analysis Practices

This section analyses the descriptive statistics on the Ratio analysis practices of commercial banks in Rwanda. Results are shown in the table below:

Table 9: Ratio Analysis Practices in BPR Bank Ltd

	N	Mean	Std. Deviation
Ratio analysis helps to determine the liquidity position of the company	50	4.2375	.78343
Ratio analysis helps to determine the profitability of the company	50	4.5125	.72903
Ratio analysis helps in determining the level gearing	50	4.5125	.72903
Ratio analysis helps to know the management of working capital	50	4.2000	.80190
Ratio analysis helps in determining the sustainability of the firm	50	4.1125	.89998
Ratio analysis helps in determining cash flows	50	4.4500	.74460
Ratio analysis helps in determining value of the firm	50	4.4250	.59054
Valid N (listwise)	50		

Source: Survey data 2022.

In table 9, the respondents were asked on whether ratio analysis practices influence the financial performance of BPR Bank Ltd. The findings revealed that ratio analysis helps to determine the liquidity position of the company as evidenced by a mean score of 4.2375 and a standard deviation of 0.7834. This implies that majority of respondents agreed that analysis of liquidity using the ratio analysis influences the financial performance of BPR Bank Ltd. Furthermore, the findings on whether ratio analysis helps to determine the profitability of the company which enhances financial performance. A mean of 4.5125 and standard deviation of 0.729 were observed which implies that majority of respondents agreed and there is a low deviation from the mean thus, the findings are homogeneous. On whether ratio analysis helps in determining the level gearing of the company, the findings highlighted a mean of 4.5125 and standard deviation of 0.792. This implies that majority of respondents agreed and there is a low deviation from the mean, thus findings are homogeneous.

Furthermore, the findings on whether Ratio analysis helps to know the management of working capital, the findings revealed a mean of 4.200 and standard deviation 0.8019. This implies that majority of the respondents agreed and there is a low deviation from the mean thus, indicating the findings are homogeneous. On whether, ratio analysis helps in determining the sustainability of the firm, the findings highlighted a mean of 4.1125 and standard deviation of 0.8998. This means that findings are homogeneous since the majority of the respondents agreed and there a low deviation from the mean. The findings further revealed that ratio analysis helps in determining cash flows. This was evidenced by a mean of 4.4500 and standard deviation of 0.7446 which implies that majority of respondents agreed and there is a low deviation from the mean. On whether, ratio analysis helps in determining value of the firm, the findings indicated mean of 4.425 and a standard deviation of 0.5905. This show that majority of respondents agreed and there is a low deviation from the mean, thus, indicating that the findings are homogeneous.

Inferential Statistics

This section analyses the relationship between the study variables. The analysis was done using correlation coefficient and linear regression as presented in the tables below:

Effect of Vertical Analysis on the Financial Performance

The first objective of the study aimed at examining the effect of vertical analysis on the financial performance of BPR Bank Ltd. The null hypothesis was that Vertical analysis does not significantly affect the financial performance of BPR Bank Ltd. The results are presented in the tables below:

Table 10: Model Summary: Effect of VerticalAnalysis and Financial Performance of BPR Bank Ltd

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.752[a]	.566	.544	12.38337

a. Predictors: (Constant), track on financing, and operating activities, Management of activities, reliable and timely information.

In table 10, the researcher tested the null hypothesis which was that vertical analysis does not significantly affect the financial performance of BPR Bank Limited. The findings from the survey showed R-square of 0.566 and adjusted R-square of 0.544. This implies that 56.6% of the variation in the financial performance is as of vertical analysis. This means that vertical analysis positively and significantly affects the financial performance. Therefore, the researcher rejected the null hypothesis and accepted the alternative hypothesis.

Table 11:ANOVA[a]: Fitness of model of Vertical Analysis and Financial Performance of BPR Bank Ltd

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11784.479	3	3928.160	25.616	.000[b]
	Residual	9047.521	59	153.348		
	Total	20832.000	62			

a. Dependent Variable: Return on asset

b. Predictors: (Constant), track on financing, and operating activities Management of activities, reliable and timely information.

Table 11, tests the fitness of the model to predict the relationship between vertical analysis and financial performance of BPR Bank Ltd. The results indicated F-statistics of 25.616 and P-value of 0.000. This means that the model is fit to predict the relationship between the study variables.

Table 12: Coefficients[a] for Determinants of Vertical Analysison Financial Performance of BPR Bank Ltd

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	90.673	35.138		2.580	.012
	Management of activities	10.930	2.097	.477	5.213	.000
	Reliable information	-19.389	4.256	-.443	-4.556	.000
	Track financing and operating activities	.147	3.696	.004	.040	.969

a. Dependent Variable: Return on asset

In table 12, the researcher tested the significance of the determinants of vertical analysis in explaining the relationship between the study variables. The findings from the survey show a positive and significant relationship between management of activities and financial performance and a negative and significant relationship between reliable information and financial performance as indicated by a P-value of 0.000 which is less than 5%. The findings further revealed a positive but not significant relationship between tracking financing and opera ting activities and financial performance since the P-value is above 5%

Effect of Horizontal Analysis on financial performance

The second objective of the study examined the effect of horizontal analysis on the financial performance of BPR Bank Ltd. The independent variable was measured using profitability analysis, current position analysis and long-term position analysis. The dependent variable was measured using return on equity. The null hypothesis was that horizontal analysis does not significantly affect the financial performance of BPR Bank Ltd. The findings are presented in the tables below:

Table 13: Model Summary: Effect of Horizontal Analysis on Financial Performance of BPR Bank Ltd

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.823[a]	.678	.661	10.66782

a. Predictors: (Constant), profitability, current financial position, long term position

In table 13, the researcher tested the null hypothesis which was that horizontal analysis does not significantly affect the financial performance of BPR Bank Ltd. The findings from the survey showed R-square of 0.678 and adjusted R-square of 0.661. This implies that 67.8% of the variation in the financial performance is as of horizontal analysis. This means that horizontal analysis positively and significantly affects the financial performance. Therefore, the researcher rejected the null hypothesis and accepted the alternative hypothesis.

Table 14: ANOVA[a] effect of Horizontal Analysis on Financial Performance of BPR Bank Ltd

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14117.654	3	4705.885	41.351	.000[b]
	Residual	6714.346	59	113.802		
	Total	20832.000	62			

a. Dependent Variable: Return on equity
b. Predictors: (Constant), profitability, current financial position, long term position

Table 14tests the fitness of the model to predict the relationship between horizontal analysis and financial performance of BPR Bank Ltd. The results indicated F-statistics of 41.351 and P-value of 0.000. This means that the model is fit to predict the relationship between the study variables.

Table 15: Coefficients[a] of the Determinants of Horizontal Analysis and Financial Performance of BPR Bank Ltd

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	257.260	23.576		10.912	.000
	Current financial position	-9.788	3.313	-.254	-2.955	.004
	Long term position	-28.825	4.042	-.675	-7.131	.000
	Profitability	-5.088	2.540	-.199	-2.003	.050

a. Dependent Variable: Return on equity

In table 15, the researcher tested the significance of the determinants of horizontal analysis in explaining the relationship between horizontal analysis and financial performance of BPR Bank Ltd. The findings from the survey show a negative and significant relationship between current financial position, long term financial position, profitability and financial performance as indicated by a P-value of 0.000 which is less than 5%. The most significant variable in explaining the relationship is long term financial position followed by current financial position.

Effect of Ratio Analysis on financial performance of BPR Bank Ltd

The third objective of the study aimed at examining the effect of ratio analysis on the financial performance of BPR Bank Ltd. The null hypothesis was that ratio analysis does significantly affect the financial performance of BPR Bank Ltd. The findings are presented in the table below:

Table 16, Model Summary: Effect of Ratio Analysis on the Financial Performance of BPR Bank Ltd

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.944 a	.891	.881	6.31151

a. Predictors: (Constant), cash flows, working capital management, gearing, sustainability, company value,

In table 16, the researcher tested the null hypothesis which stated that ratio analysis does not significantly affect the financial performance of BPR Bank Ltd. The findings from the survey showed R-square of 0.891 and adjusted R-square of 0.881. This implies that 89.1% of the variation in the financial performance is caused by ratio analysis where only 10.9% of the variables not tested in the model. This means that ratio analysis positively and significantly affects the financial performance. Therefore, the researcher rejected the null hypothesis and accepted the alternative hypothesis

Table 17: ANOVA[a] model fit Ratio Analysis and financial performance on Financial Performance of BPR Bank Ltd

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18561.393	5	3712.279	93.191	.000 b
	Residual	2270.607	57	39.835		
	Total	20832.000	62			

a. Dependent Variable: Return on equity

b. Predictors: (Constant), cash flows, working capital management, gearing, sustainability, company value.

Table 17 tests the fitness of the model to predict the relationship between ratio analysis and financial performance of BPR Bank Ltd. The results indicated F-statistics of 93.191 and P-value of 0.000. This means that the model is statistically fit to predict the relationship between the study variables.

Table 18: Coefficients[a] determinants of Ratio Analysis and Financial Performance of BPR Bank Ltd

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	95.293	35.138		2.712	.009
	Cash flows	-3.903	1.800	-.147	-2.168	.034
	Working capital management	5.107	1.946	.215	2.624	.011
	Gearing	-5.121	2.283	-.187	-2.243	.029
	sustainability of the firm	8.102	2.940	.413	2.756	.008
	Value of the firm	-13.319	2.917	-.563	-4.566	.000

a. Dependent Variable: Return on equity

In table 18, the researcher tested the significance of the determinants of ratio analysis in explaining the relationship between ratio analysis and financial performance of BPR Bank Ltd. The findings from the survey show a negative and significant relationship between cash flow analysis, gearing analysis, value of the firm and financial performance as indicated by a P-value of 0.000 which is less than 5%. The results further indicated a positive and significant relationship between working capital management, sustainability and financial performance. The most significant variable in explaining the relationship is value of the firm analysis, sustainability analysis, working capital management gearing and cash flow analysis as evidenced by the P-values.

General model: Effect of Financial Statement Analysis on Financial Performance ofcommercial banks in Rwanda

The main of the objective of the study was to examine the effect of financial statement analysis on the financial performance of BPR Bank Ltd. The independent variable was measured using ratio analysis, vertical analysis and horizontal analysis while the dependent variable was measured using the Return on investment, Earning per share, and the Return on equity.

Table 19 Model Summary: Effect Financial Statements Analysis on Financial Performance of commercial banks in Rwanda

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.918[a]	.842	.834	7.46153

a. Predictors: (Constant), Ratio analysis, Vertical analysis, Horizontal analysis

In table 19, the researcher tested the effect of statement analysis on the financial performance of BPL Bank Ltd. The findings from the survey indicated a strong and positive relationship between financial statements analysis and financial performance as evidenced by R-square of 0.842 and adjusted R-square of 0.834. This means that the variation in the financial performance, 84.2% is caused by financial statement analysis. The results further revealed that only 15.8% of the variables are outside the variables that were tested.

Table 20, ANOVA[a Model] fitness of Financial Statement Analysis and Financial Performance of commercial banks in Rwanda

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17547.205	3	5849.068	105.058	.000[b]
	Residual	3284.795	59	55.674		
	Total	20832.000	62			

a. Dependent Variable: Return onequity

b. Predictors: (Constant), Ratio analysis, Vertical analysis, Horizontal analysis

Table 20 tests the fitness of the model in explaining the relationship between financial statement analysis and financial performance. The results from the survey showed a P-value of 0.000 which is below 5%. This implies that the model is significant to explain the relationship between the study variables.

Table 21 Coefficients[a] determinants of Financial Statement Analysis Financial Performance of commercial banks in Rwanda

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	76.353	21.489		3.553	.001
	Vertical analysis	5.584	2.714	.153	2.057	.044
	Horizontal analysis	7.632	3.783	.198	2.018	.048
	Ratio analysis	16.634	2.077	.849	8.009	.000

a. Dependent Variable: Return on equity

In table 21, the researcher tested the significance of the determinants of financial statements analysis in explaining the relationship between financial statements analysis and financial performance of BPR Bank Ltd. The findings from the survey show a positive and significant relationship between vertical analysis (VA), horizontal analysis (HA), ratio analysis (RA) and financial performance as indicated by a P-value of 0.000 which is less than 5%. The most significant variable in explaining the relationship is ratio analysis followed by vertical analysis and horizontal analysis. Therefore, **ROE = 76.356 + 5.585VA + 7.632HA+16.634RA**. This means that an increase in vertical analysis, horizontal analysis, and ratio analysis by 5.584, 7.632 and 16.634 respectively, the financial performance will increase by 76.353.

TEST OF HYPOTHESES

Vertical Analysis on the Financial Performance

The first objective of the study aimed at examining the effect of vertical analysis on the financial performance of commercial banks in Rwanda. The null hypothesis was that Vertical analysis does not significantly affect the financial performance of commercial banks in Rwanda.

In table 10, the researcher tested the null hypothesis which was that vertical analysis does not significantly affect the financial performance of BPR Bank Limited. The findings from the survey showed R-square of 0.566 and adjusted R-square of 0.544. This implies that 56.6% of the variation in the financial performance is as of vertical analysis. This means that vertical analysis positively and significantly affects the financial performance. Therefore, the researcher rejected the null hypothesis and accepted the alternative hypothesis.

Effect of Horizontal Analysis on financial performance

The second objective of the study examined the effect of horizontal analysis on the financial performance of commercial banks in Rwanda.The null hypothesis was that horizontal analysis does not significantly affect the financial performance.

In table 13, the researcher tested the above hypothesis which was that horizontal analysis does not significantly affect the financial performance commercial banks. The findings from the survey showed R-square of 0.678 and adjusted R-square of 0.661. This implies that 67.8% of the variation in the financial performance in commercial banks is as of horizontal analysis. This means that horizontal analysis positively and significantly affects the financial performanceof commercial banks in Rwanda. Therefore, the researcher rejected the null hypothesis and accepted the alternative hypothesis.

Effect of Ratio Analysis on financial performance

The third objective of the study aimed at examining the effect of ratio analysis on the financial performance of commercial banks in Rwanda. The null hypothesis was that ratio analysis does significantly affect the financial performance of commercial banks in Rwanda.

In table 16, the researcher tested the null hypothesis which stated that ratio analysis does not significantly affect the financial performance. The findings from the survey showed R-square of 0.891 and adjusted R-square of 0.881. This implies that 89.1% of the variation in the financial performance is caused by ratio analysis where only 10.9% of the variables not tested in the model. This means that ratio analysis positively and significantly affects the financial performance. Therefore, the researcher rejected the null hypothesis and accepted the alternative hypothesis

CONCLUSION

The first objective the study examined the effect of vertical analysis on the financial performance of commercial bank. The findings indicated vertical analysis affects the financial performance of positively. This occurs when all the information is captured and accurately recorded as is taken into consideration in preparation of the financial statements. Such as income statement, balance sheet, cash flow statement and statement of retained earnings among others and such information are used in analysis of the financial statements. The results further indicated that horizontal analysis and ratio analysis significantly and positively affect the financial performance of commercial bank. Therefore, financial statement analysis is a key component in explaining the financial performance of commercial bank.

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