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FINANCIAL STATEMENT ANALYSIS AND DECISION MAKING. A CASE STUDY OF THE BUSINESS HEIGHTS CENTER LTD, KIGALI-RWANDA

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ABSTRACT

The objectives of this study were major guiding principles in data analysis which deal on the conclusion as well as suggestions for further research. The specific objectives underlying this case study are: To determine the effects of Horizontal analysis on decision making at Business Heights Centre Ltd, To examine the effects of Vertical trend analysis on decision making at Business Heights Centre Ltd , To establish the effects of Ratio analysis on decision making at Business Heights Centre Ltd. For the case of this study, the population of the case study was finance officers, accountants and operation department officers equal to 47. The questionnaires distributed to 32 staffs, where the levels that used are mainly closed questions. With close questions, the collectors as respondents were limited to specific answers or choosing from a list of responses. The researcher used coefficient of determination that was obtained from the model summary in the table 4.9. Coffecient of determination was used to explain whether the model is a good predictor. From the results of the analysis, the findings show that the independent variables (Financial statement and lending decision) contributed to 69.5% of the variation in level of non-performing loan as explained by adjusted R^2 of 0.695 which shows that the model is a good prediction. The results of the simple regression model shows that there is a positive relationship between financial statement and creditor decision in BHC. This implies that a single unit increase in any of the independent variables results into a corresponding increase in creditor decision. The regression analysis was undertaken at 5% significance level. The criteria for comparing whether the predictor variables were significant in the model was through comparing the corresponding probability value obtained and $\alpha=0.05$. If the probability value was less than α, then the predictor variable was significant but from the above analysis. The results above shows that the variables were significant since their corresponding predictor values were below 5%. The relationship between financial statement and creditor decision was performed by using Pearson Correlation. However, the following comments concerned only the correlations which were found statically significant. The findings showed that there is a strong and positive correlation between financial statement and creditor decision ($r= 0.805$, $p=0.000<0.01$). All research objectives were achieved. Having gone through this study, the researcher suggests the following as a way of incurring that financial statement analysis plays a vital role on decision making of any company: BHC is advised to minimize its operation expenses in order to retain a great proportion of profit; moreover, it will attract more investors to extend the business. Every financial statement should ensure that all material fact is reflected in their financial statement. These should be prompt provision of the financial statement at the end of each financial year. Investment decision should not be on a vacuum or rule of thumb rather; the financial statements should be used as bedrock.

***Key words**: Financial statement analysis, Decision making*

INTRODUCTION

Financial statement analysis refers to the process of the process of examining and evaluating of both a firm's financial performance and its future prospects. Financial statements are all financial information of business enterprises presented in structure manner and in a form that is very easy to understand.

According to Sudip Das (2010), most of financial institutions emphasize on the analysis of its financial statements. The temporary ethic of financial institutions lies on the financial statement's analysis and the customer care. Financial statement analysis is a major tool to maintain financial institutions. Financial statement analysis is defined as the process of identifying financial strengths and weaknesses of the company by properly establishing relationship between the items of the financial position that is the profit and the loss account. It has a great role in performance of financial institutions and it has been used as one tool of measuring the financial activities in financial institutions. The financial institutions use all techniques to maximize their profits.

Analysis of financial statement is an attempt to assess the efficiency and performance of companying institutions, as it provides information on liquidity, profitability and solvency of the financial institutions. The analysis and interpretation of financial statement is very essential to measure the efficiency, profitability, financial soundness and future prospects of the business units (Lawrence, 2003).

Financial statement analysis is one of the most important elements in the decision making of an organization. Financial analysis helps an organization in knowing the financial health of it. In every organization, in every fiber, decision making is important. However, before creating such valuation decisions, it is also important that decision makers such as managers should have knowledge in terms of performance in an organization and creating new business ventures, it is emphasized that the use of financial statement of financial report can be a great source of crafting decision through the income statement, balance sheet, statement of owner's equity and cash flow. Managers or business leaders should analyze the figures in a more convenient way, in which the entire organization could be understood. Through examining the possible raison for changes, a leader could definitely come up with a brighter kind of idea (Frank W, 2011).

In modern business environment, which is becoming more competitive, the survival of firms, be it small or large; depend upon the strategic decisions made by the management. Nowadays, the major problem of companies is the lack of skilled managers to help those using ratios analysis in decision making. It is in this regard, that the research was motivated in find what the contribution would be for the managers of companies if they used ratio analysis in their decision making.

Rwandan companies are faced with increasing competition and rising costs as a result of regulating requirements, financial and technological innovation, and entry of large foreign companies in the retail business environment plus challenges of the recent crisis. These challenges had a dramatic effect in the performance of the business companies like BHC as well (Okeahalam, 2006).

The purpose of financial analysis is to help the management to run a comparative study of their performance, financial position and cash flow in different periods and make a comparison between various firms engaged in similar businesses especially case study of Business Heights Center Ltd.

Research objectives

The objectives of this case study are categorized into the following;

General objective

The major objective of this case study is to come up with verifiable effects of financial statements on decision making.

Specific Objectives of the case Study

The specific objectives underlying this case study are:

1. To determine the effects of Horizontal analysis on decision making at Business Heights Centre Ltd
2. To examine the effects of Vertical trend analysis on decision making at Business Heights Centre Ltd
3. To establish the effects of Ratio analysis on decision making at Business Heights Centre Ltd

LITERATURE REVIEW

This section provides a theoretical and conceptual framework of the literature that relates to the study variables.

Theoretical Review

Theories are formed in order to help describe, understand and project the future of a given phenomenon of interest so as to test and increase the level of understanding on the phenomenon given relevant assumptions. This section is to discuss theories that help understand the concepts being studied in this research.

Single Person Decision Theory

This theory is based on the thought that even if financial statements are not correct in theory, they could be more useful. The utility of financial statements should extend beyond investors and creditors and should also find use by other stakeholders that require such information to improve on their decision making (Cartney, S.M., 2004 and Sharon G., 2007).

While relevance and reliability of financial statements are important determinants of the quality and usefulness of financial statements, a trade-off exists between these two. One cannot increase itself without compromising on the other. It is therefore argued that financial statement preparation tries to strike a balance between the two, such that both relevance and reliability meet an acceptable threshold. Many scholars are proponents of this theory and including

Information Theory

According to Sharon G. (2007) credit borrowers are supposed to be scrutinized by lenders by the conduct of credit assessments. The gathering of reliable information from potential credit seekers is important in conducting credit assessment as suggested by proponents of symmetric information theory. Although qualitative and quantitative techniques can be useful in making credit assessment of potential borrowers, qualitative methods are thought to be less reliable due to its subjectivity. To reduce costs subjectivity and bias in the potential approach is that of using qualitative models that assign numbers whose sum is compared to a threshold.

Rating systems become useful if they are successful in detecting changes in the magnitudes of credit loan loss. Quantitative models enable one to numerically determine the variables that explain the level of risk of default, to evaluate the relative importance of these variables, to improve the price to attach to default risk, to screen high risk borrowers and to compute the margins required to protect themselves from losses that might arise in future. Subjective decisions should be avoided at all time when making the decisions to lend or not and this can be aided by reliance on a rating and weighting mechanism as explained in information theory.

Signaling Theory

Dang D., *et al,* (2008) found that financial reports are one of the most important methods that enable parties to communicate reliably. So as to meet stakeholder needs, companies should have a signaling mechanism that informs their associates. People behave differently to different sets of information. The

party sending (e.g. company) has a choice of if and how to signal the other party, (e.g. creditor), while it is the latter's choice to decide on the manner he/she will use the information.
Additionally, existence of information asymmetry between two parties can be lowered by signaling (Dang D., *et al*, 2008). The party with greater access to information signals to the others. Delen, D., Kuzey, C. & Uyar, A. (2013) argues that the information asymmetry affects the lenders' ability to make decisions for fear of overpricing or underpricing a firm's profits. This can result into market failure and bad debts and therefore eventually cause cash liquidity constraint. If lenders (e.g. companies) lack access to information on the financial position of credit seekers, then they have to charge a higher cost on the loans.

Efficient Market Theory (EMH)
EMH holds that markets respond to available information, e.g., financial statements affect the stock markets (Williams, *et al*, 2008). This reaction affects both the characteristics and relevance of accounting data. Since the theory and accounting information are related by the fact that markets react to accounting data, accounting procedures provide a good base for the decision making.

EMH theory shows that credit institutions utilize available information in their decisions. In addition, under EMH, information is not free and therefore, marginal cost of information needs to be considered and whether certain information is useful given their cost of access. High value information tends to be free access information. Creditors lend by first using high value and less cost information, then the next set of information that is second in value relative to cost, and this continues until the marginal cost of the information is equal to its value at which point the creditors do not acquire any further information, because at this stage the cost of acquiring such information is higher than its value. Lenders view financial statements as communicating important information whose value is less than its costs (Ongore and Kusa, 2013).

Conceptual perspective
Berthilde, & Rusibana, (2020), say that financial statement analysis includes a review of the activities that involve the examination of financial and operational information, with the intent of deriving conclusions and presenting actionable recommendations to management. Financial statement information is normally used by decision makers for forecasting purposes and for assessing the financial health of an organization.

Horizontal analysis and decision making
With the use of the horizontal analysis, financial statements are compared with several years and based on that, a firm may take a decision that is well informed. Usually, the current year's figures are compared with the base year and will always show how the financial information changed from one year to another. According to Facts, (2019), Horizontal analysis is a technique for evaluating a series of financial statement data over a period of time usually a year. Its purpose is to determine the increase or decrease that has taken place in a given period, Hashmi & Malik (2019).

Horizontal analysis can also be described as a financial statement that shows changes in the amounts of corresponding financial statement items over a period of time, and this is a helpful tool to assess the trend situations over a given period. From this change, analysis could be made to see how the organization has performed, in addition to the development of the company from one period to another period which is usually a year.

According to Li, (2019), Horizontal analysis involves the study of trends across periods of time, commonly referred to as horizontal analysis. The analysis involves the review of a company's ratios and trends over time. This method of analysis requires the selection of a base year, and then each item of a statement is then compared to the base year value as a percentage Facts.

The method of analysis provides trend information, which can be used to observe the growth or decline in a particular line item of a financial statement in a given firm.

It is therefore important to compare trends of a given line of items on financial statements that bear a logical relationship to one another. Using this method, the trend is only relevant when compared to another related trend Hashmi & Malik (2019). For example, sales and cost of goods sold are related in that when sales increases, cost of goods sold are also expected to do the same.

Vertical trend analysis and decision making

In reference to Berthilde & Rusibana (2020), with the vertical analysis, financial statements do measure the quantity relationship of the various items in the financial statement on a particular period. It is also called static analysis, because this analysis helps to determine the relationship with various items that would appear in the financial statement. According to Sang (2020), vertical analysis is a technique that expresses each financial statement item as a percentage of a base amount in a given period of time.

The Vertical analysis, Tsadira-Pocha (2020), will depict each amount of the financial statement as a percentage of another item in a given period. The vertical evaluation of the balance sheet means every amount that belongs to the sheet is shown as a percentage of total assets while vertical analysis of liabilities in balance sheet means every amount belonging to liability is restricted to the percentage of total liabilities, Enyi, (2019).

While making a Vertical analysis, Abenova (2019), of an income statement, every income statement amount will be represented as a percentage of sales. In the cash flow statement, total cash inflow is set as a parameter to each post that form the cash inflow in the statement, and total cash-out is set as a parameter for each post that form cash out. The cash and cash equivalents specified as a parameter of each post that form of cash and cash equivalents will be shown in the cash flow statement.

Vertical trend analysis provides proportional information to the financial statement. This information is valuable when studying a company's current financial health andat the same time when making comparisons between companies in the same industry, Abenova, M. H.
(2019)

Ration analysis and decision making

McCosker, (2021), Financial ratios are data points derived from the financial statements that provide the end users with quick access to determining the financial health of a company.
They do not always provide end users with final answers to the company's true financial health. Ratios will often help to identify strong and weak areas associated with a company's financial statements. Financial ratios should be viewed as the initial step to analyzing the financial health of any company since more investigations may sometimes be necessary as to why the organization is performing the way it may be. Therefore, developing a greater understanding of a company's financial health is critical to both management and shareholders.
The ratio analysis uses the ratios, the ratios are used to identify specific relationships between different categories of financial data, Islahuzzaman, (2021). With the use of ratios, the users may find a relationship between the denominator and numerator when analyzing ratios (Lev, 1974).

The data obtained from ratios will tend to possess some form of economic and functional relationship Guerard, Saxena & Gultekin (2021). Financial managers need to use ratios to convert financial data into useable information regarding the direction of the company, Guerard, Saxena & Gultekin (2021). Financial ratios have many other uses which could include company acquisition, company financial planning and stock portfolio planning (Rist & Pizzica, 2015).

The major objective of ratio analysis is the facilitation of financial statement interpretation which is considered to be a major objective in financial management. (Lev, 1974), in Javadian Kootanaee, Poor Aghajan & Hosseini Shirvani (2021).

Financial analysis literature views ratios as indicators of company deficiencies, such as poor liquidity and low profitability. Therefore, if the negative function of ratios is emphasized, a favorable ratio may mean nothing, and then an unfavorable ratio may be deemed significant. Javadian Kootanaee, Poor Aghajan & Hosseini Shirvani (2021), says that, financial ratios are not intended to provide definite answers, but rather their real value is derived from the questions that may arise from the analysis. Ratios display an outcome between a company and its economic conditions at that time, in which, the end users may want to utilize the results as guidelines while conducting financial analysis on a given company, Karmańska & Wiśniewska (2020).

According to Berthilde, & Rusibana (2020), the importance of ratio information is limited not by the availability of the underlying numbers needed for their computation, but by the willingness of managers to put those numbers to work.

According to Gates (1993), "Company ratios are well known for their ability to answer questions like, "**Can the company pay its bills in any difficult moment in a financial period?''**

By keeping a greater understanding on where the company stands with its current ratio, Agustina & Suprayitno (2020), return on net worth and inventory turnover, managers may be able to determine the financial health of the company in a given financial period.
Palepu, Healy, Wright, Bradbury & Coulton (2020), describes financial ratio analysis as involving comparisons of relationships between two or more financial statement accounts or comparisons of account balances to nonfinancial data.

Financial ratios may be classified by sources of data such as balance sheet ratios, income statement ratios and statement of cash flow ratios.

The ratios can also be classified according to the different economic aspects of the company's operations to include short-term solvency ratios like the long-term solvency ratios, efficiency or activity ratios and the commonly used ratios to determine fraud, Nugraha, Puspitasari, & Amalia (2020).

McCosker, P. (2021), using operating ratio analysis would be one of the most reliable methods of detecting financial statement fraud in an organization. These ratios are most likely to detect fraud when the fraud impacts the numerator and denominator in a proportion that differs from the normal. Financial statement interpretation is considered to be a major objective of ratio analysis. This process is easily conducted by reducing the large number of financial statement categories into relatively small sets of ratios, McCosker, P. (2021).

They continue to say that financial statements are not intended to provide definite answers, but their real value is derived from the questions that arise from the analysis. Ratios display an outcome between a company and its economic conditions, in which, end users may utilize the results as guidelines when conducting financial analysis on a company. Nugraha, Puspitasari, & Amalia (2020), the usefulness of ratio information is limited not by the availability of underlying numbers needed for their computation, but by the willingness of managers to put those numbers to work.

The financial ratio analysis, McCosker, P. (2021) may be used in two different but equally useful ways. One can use them to examine the current performance of the company in comparison to past periods of time, and from the prior quarter to years ago. This analysis can help management identify problems that need fixing at any moment in time. It can direct one's attention to potential problems that can be avoided. In addition, you can use these ratios to compare the performance of your company against that of your competitors or other competitors within the industry, Rao, Bedia & Shrivastava (2020).

Review on decision making

Bark et al. (2002) decision making should start with the identification of the decision maker(s) and stakeholder(s) in the decision, reducing the possible disagreement about problem definition, requirements, goals and criteria.

Kepner and Tregoe (2005) they further denote that the first step in decision making, is identifying the problem, is the most important step. According to these authors, providing a good definition of the problem affects the quality of the decision. Their method suggests that it is often easier to define what the problem is not, rather than what it is. Also, the problem and its solution are prioritized with other problems, to clarify its relative importance. The final step is searching for cause-effect relationships. In summary, their method of problem analysis includes: (1) problem identification, (2) definition of what the problem is and is not,
(3) prioritizing the problem, and (4) testing for cause-effect relationships.

Types of decision making

A BHC secures funds and employs them in activities, which generate returns. The four major decision areas arising include the following

Investment Decision

The first and perhaps the most important decision that any organization has to make is to define the business or business that want to be in. this decision has a significant bearing on how capital is allocated in the organization. Investment decision allocation of resources to long term assets to create capacity to produce the required goods and services. This is the important decision because it involves present commitment of funds in anticipation future returns, which can't be predicted with certainty because of uncertainty investment decision, are risk decision which must be carefully appraised in terms of risk (Robert, 1998).

Financial Decision

Once an organization decided the investment projects it wants to undertake. It has to figure out ways and means of financing them. The financing decision involves decision about where, what and when to acquire funds to meet the organization's investment needs. This important to maximize the objectives of an organization since the use of debt affect the returns and risk of the shareholders the proper balance should be struck between the risk and returns of shareholders (Robert, 1998).

Working Capital Management Decision

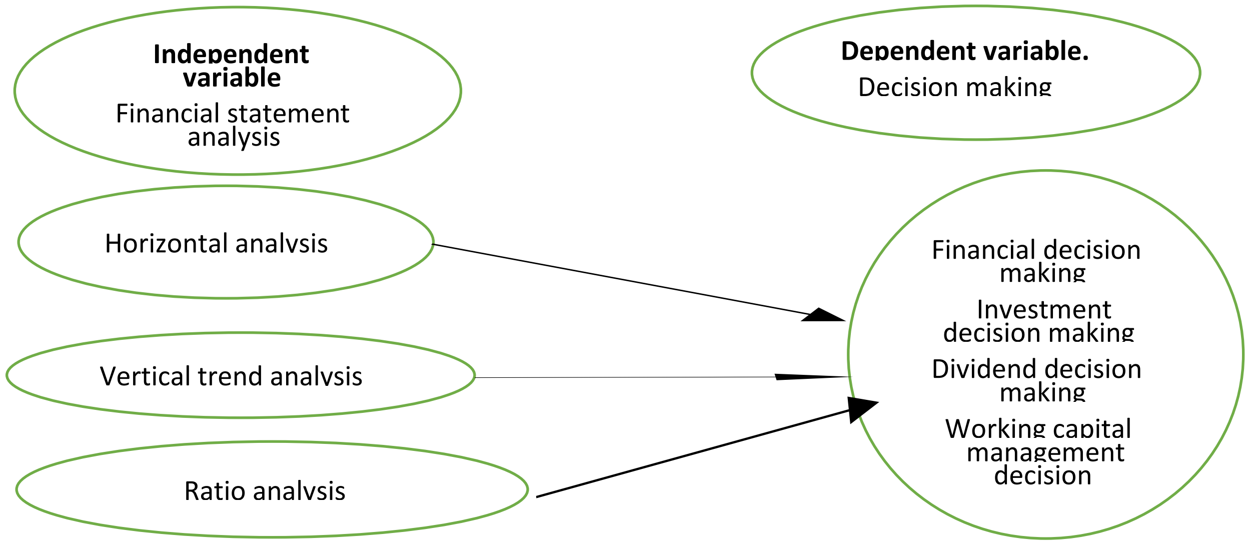
Working capital management decision also referred to as short- term financial management, this refers to the day financial activities that deal with current assets and current liabilities (Robert, 1998).
The key issues in working capital management are: What is the optimal level of inventory for the operations of the organization? Should the organization grant credit to its customers and, if so on what terms? How much cash should the organization carry on hand? Where should the organization invest its temporary cash surplus? And what sources of short-term finance are appropriate for the organization?

Dividend Decision

Dividend decision concerns the appropriation of earning of a firm. The financial manager should determine the proportion of earning that should retain and that should be distributed to shareholders as dividends. Considering the objectives of the organization on one hand the interest of shareholders on the other hand, so it answers the question of how much, when to pay, and in what form (Robert, 1998).

Conceptual framework

Figure 1: Conceptual framework



Source: Researcher 2021

Financial statement analysis is very important in the making of decisions by the firm. The analysis done horizontally, vertically and the ratio analysis would help the firm to make decisions that relate to the organization in areas like financial decision making, investment decision making, dividend decision making and working capital management decision making. It is assumed that a firm's financial reporting methods would be critical in aiding the relationship between the firm's financial statement analysis and the decision making of the firm. A firm with a good financial reporting would have ease when it comes to making decision that affect the firm either financial, investment wise or divined decision.

RESEARCH METHODOLOGY

The current is an empirical study i.e., any conclusions drawn must be based upon hard evidence gathered from information collected from real life experiences or observations.

Research design

According to Soeters, *et al,* (2014), a research design can be explained as the "detailed blueprint" used to guide a research study toward its objectives. Research design provides "the glue" that holds the research project together. In this study, a mixture of descriptive and explanatory research design adopted.

In this study, the researcher used both qualitative and quantitative research designs because of the nature of the topic. The qualitative method helped a researcher in analyzing information that relates to the appreciation, feelings of respondents' ideas, attitudes of respondents and thereafter to their meaning and interpretation. Qualitative research includes designs, techniques and measures that do not produce discrete numerical data. The quantitative method allows socio-economic researchers to focus on variables of interests and the values of mathematical symbols and permit economical summary information in BHC. The quantitative method based on the measurement of quantity or number of variables. It is applicable to the phenomena that can be expressed in terms of quantity within BHC.

Population of the study

According to Kara H. (2012), a population is a universe or a sum total of all units of analysis. Population is the total number of items in a specified group and he added that population is an asset of cases about which one wishes to draw some conclusions.

According to Snelson, Chareen L. (2016), a population can be defined as the totality of persons or objects with which a study is concerned. Population refers to all the events, things or individuals that are the object of the investigation. For the case of this study, the population of the case study was finance officers (21), accountants (15) and operation department officers (16) equal to 47.

The researcher purposively picked 32 respondents to form the sample size using the census sampling method. The technique was purposive since the researcher only selected the individuals that were deemed to have the required information. In this regard, finance officers, accountants and operation department officers of BHC were studied. For the case of this study, Sample size of the study was finance officers (15), accountants (5) and credit department officers (12) equal to 32.

Table 1: Sampling structure

Position	**Population**	**Sample size**	**Sampling method**
Finance officers	21	15	Census sampling
Accountants	10	5	Census sampling
Operation department	16	12	Census sampling
Total	**47**	**32**	

Source: Researcher, 2021

This is where the investigation decides without the use of any scientific technique to select certain items from his or her sample. Personal purposes, judgment and beliefs are the guidelines. According personal purposes, judgment and beliefs; the researcher would use purposive sampling to Staff and random sampling to client.

Data collection instruments

In order to facilitate the study to be well accomplished, each objective of the case study should be investigated by using specific questions. The study applied the following tools of data collection; documentary study and questionnaires.

Documentation technique

Wilson, *et al,* (2013) defined documentation as the careful reading; understanding and analysis of written documentation for some purposes of social research. Documentation is the technic used to collect secondary data. Secondary data is the data that is collected by someone other than the user, and they are available for researchers.

During the process of documentary analysis, the researcher uses some documents and after understanding and analyzing the relevance of texts to this study, he/she classes them down on manuscripts and then types them on a computer for compilation. This is important because it would review the literature and try to locate global perspectives in order to make a comparative framework for analysis and evaluation for readers. The researcher uses this method to conduct and get secondary data

Questionnaire technique

A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. Questionnaire is a formalized framework consisting of a set of questions and scales designed to generate primary data. Questionnaire construction involves taking established sets of scale measurements and formatting them into an instrument for collecting raw data from respondents.

By rating scale researcher, means that the scales that are usually used to measure attitudes in an object, the degree to which an object contains a particular attribute, (Like or dislike), toward some attribute, or the importance attached to an attribute.

Analytical model

As per the SPSS generated output as presented in table above the coefficients were used to answer the following regression model which relates the predictor variables (independent variables) and the dependent variables.

$Y= \alpha + \beta 1At + \beta 2\ Bt+ \beta 3\ Ct +\varepsilon i$
Where:
Y = Decision making (Financial decision, investment decision, dividend decision and working capital decision)
α = constant
β1, β2, β3,= Regression coefficients
At = Horizontal analysis at time t
Bt = Vertical analysis at time t
Ct = Ratio analysis at time t
εi = Error term

Ethical consideration
Research ethics is about the responsibility of the researcher for being honest and respectful to all individuals who may be affected by the research done on the case study results. For this case study, both quantitative technique (which collect variables and quantities) and qualitative technique (which collect attributes and qualities) of data analysis were adopted. The researcher followed the freedom of expression by respecting the rights and privacy of the respondents. The ethical conduct is a must in regards to a research involving human beings. For instance, asking permission and informing concerned persons of these research objectives were applied. Humble request of participant's time and willingness to respond, addressing to them in appropriate approaches to gain people's respect practiced. Selecting respondents did freely and fairy with no discrimination based on religion, sex, race, etc. The information provided in this research was kept confidential and the results of the research were used for the objective of this research study as mentioned in introduction.

RESULTS AND DISCUSSION

This section presents the findings of the study, the analysis and interpretation of the results Findings were derived from the questionnaires to employees of BHC. It attempts to analyze data generated from the study which include qualitative and quantitative information collected from the respondents.

Analyze the effectiveness of financial statement of BHC
Financial statement analysis is the process of reviewing and analyzing a company's financial statements to make better economic decisions. These statements include the income statement, balance sheet and statement of changes in equity. Financial statement analysis is the process of reviewing and analyzing a company's financial statements to make better economic decisions. These statements include the income statement, balance sheet and statement of changes in equity. Accounting ratios, also known as financial ratios, are used to measure the efficiency and profitability of a company based on its financial reports. They provide a way of expressing the relationship between one accounting data point to another, and are the basis of ratio analysis.

Table 2: Vertical analysis

Vertical analysis	Frequency	Percent
To a little extent	1	2.5
To moderate extent	3	10.0
To a great extent	23	70.0
To a very great extent	5	17.5
Total	**32**	**100.0**

Source: Primary data, February 2021

As reflected in **Table 2**, it indicates 70.0% show a great extent to which vertical analysis is used in BHC, 7.5% for a very extent and 17.5% demonstrated a moderate extent vertical analysis is adopted in BHC. Finally only 10.0% of respondents evidenced a little extent to which the vertical analysis is applied in the BHC and only 2.5 did not want to reveal the extent to which they agree with the statement. Means that each line item listed in the financial statement of BHC is listed as the percentage of another line item. For example, on an income statement each line item will be listed as a percentage of gross sales. This technique is also referred to as normalization or common-sizing

Table 3. Horizontal analysis

Horizontal analysis	Frequency	Percent
To no extent	3	10.0
To a little extent	6	20.0
To a moderate extent	4	12.5
To a great extent	17	52.5
To a very great extent	2	5.0
Total	**32**	**100.0**

Source: Primary data, February 2021

Results in table 3 indicate that 52.5% show a great extent to which horizontal analysis is used by BHC, 5.0% for a very extent and 12.5% demonstrated a moderate extent horizontal analysis is adopted by BHC. Finally only 20.0% of respondents evidenced a little extent to which the horizontal analysis is applied in the BHC and only 10.0% did not want to reveal the extent to which they agree with the statement. Means that compares financial information over time, typically from past quarters or years. Horizontal analysis in BHC is performed by comparing financial data from a past statement, such as the income statement. When comparing this past information one will want to look for variations such as higher or lower earnings.

Ratios analysis

Accounting ratios, also known as financial ratios, are used to measure the efficiency and profitability of a company based on its financial reports. They provide a way of expressing the relationship between one accounting data point to another, and are the basis of ratio analysis.

Return on equity

The return on equity ratio or ROE is a profitability ratio that measures the ability of a firm to generate profits from its shareholders investments in the company. In other words, the return on equity ratio shows how much profit each dollar of common stockholders' equity generates.

Table 4: Return on equity ratio from 2018 up to 2020

Years	Net income	Equity	ROE
2018	1,591,914	11,540,763	0.053
2019	1,368,740	21,869,887	0.043
2020	4,271,124	25,584,332	0.023

Source: BHC annual report, 2018-2020

The table 4 shows the return on equity of BHC was 5.3%, 4.3% and 2.3% in 2018, 2019 and 2020 respectively. This means that the higher the return Equity ratio, the more efficient the company is at using its stockholder's equity to generate more income but the ROE was generally good in the period of study because all ROE was positive and the management should utilize more stockholders' equity in order to generate more income. The return on equity is the best measure of the return, since it is the product of the operating performance, asset turnover, and debt-equity management of the firm. If a firm can borrow money and use it to achieve a higher return than the cost of the debt, then the leveraging creates additional revenue that accrues to stockholders as increased equity.

Return on assets

The return on assets ratio, often called the return on total assets, is a profitability ratio that measures the net income produced by total assets during a period by comparing net income to the average total assets. In other words, the return on assets ratio or ROA measures how efficiently a company can manage its assets to produce profits during a period.

Table 5: Variation of Return on Asset ratio

Years	Net income Rwf (000)	Total assets Rwf (000)	ROA
2018	1,591,914	42,771,389	0.036
2019	1,368,740	76,676,646	0.031
2020	4,271,124	87,899,874	0.016

Source: BHC annual report, 2018-2020

The table 5 showed ROA ratio indicated the amount of net income generated by 100 Rwf invested in assets of BHC from the year 2018 to 2020. Means that to invest 100 Rwf in asset the BHC investors gained 3.6 Rwf as return during the period ended 2018, 3.1 Rwf as return during the period ended 2019 and 1.6 Rwf as return during the period ended 2020. These higher values of return on assets show that business is more profitable. The ratio should be only used to compare companies in the same industry. An increased trend of ROA ratio indicates that the profitability of the company is improving.

Debt to assets ratios

The debt to assets ratio indicates the proportion of a company's assets that are being financed with debt, rather than equity. The ratio is used to determine the financial risk of a business. A ratio greater than 1 shows that a considerable proportion of assets are being funded with debt, while a low ratio indicates that the bulk of asset funding is coming from equity. A ratio greater than 1 also indicates that a company may be putting itself at risk of not being able to pay back its debts, which is a particular problem when the business is located in a highly cyclical industry where cash flows can suddenly decline. A company may also be at risk of nonpayment if its debt is subject to sudden increases in interest rates, as is the case with variable-rate debt.

Table 6: Debt to asset ratio from 2018 up to 2020

Years	Total liabilities	Total Assets	Debt ratio
2018	34,474,107	42,771,389	0.194
2019	54,806,759	76,676,646	0.196
2020	62,315,542	87,899,874	0.137

Source: BHC annual report, 2018-2020

This ratio indicates that BHC has more assets than debits (Liabilities) because debt ratio is less than 100 for all this period but it seems like most of BHC 's assets are financed through debt since the ratio is greater than 10% ,as in 2018 was 19.4% it shows that 19.4% of the BHC 's assets are financed by the creditors or debt (and therefore 80.6% is financed by owners), in 2019 was 19.6% it shows that 19.6% of the BHC 's assets are financed by the creditors or debt (and therefore 80.4% is financed by owners), in 2020 was 13.7% it shows that 13.7% of the BHC 's assets are financed by the creditors or debt (and therefore 86.3 % is financed by owners). The higher is the ratio, the more leveraged the company and the greater its financial risk. In this case is indicated that higher portion of BHC 's assets are claimed by its creditors which means higher risk in operation since the business would find it difficult to obtain loans for new projects.

Degree of usefulness of each financial statement in decisions making

BHC goes through a series of thorough analyses before approving a loan, extending a credit line or increasing a customer's credit profile. It does so to reduce credit risk, monitor debt levels and ensure that borrowers are forthcoming with performance data when they submit financial statements and accounting ratios.

Table 7: Analysis on degree of usefulness of each financial statement in decision making.

	Mean	Std. Deviation	Interpretation
Repayment ability is determined by previous financial performance of the borrower	4.6250	0.70711	Very strong mean and heterogeneity of responses
Cash flow information is more useful when making decisions than both income and sheet statements	4.5938	0.61484	Very strong mean and heterogeneity of responses
Balance sheet information is more useful when making decisions than both income statement and cash flow information	4.1563	0.95409	Strong mean and heterogeneity of responses
Income statement information is more useful when making decisions than both balance sheet and cash flow statement	4.7500	0.50800	Very strong mean and heterogeneity of responses
The three financial statements are important in creditor decision making	4.4375	0.91361	Very strong mean and heterogeneity of responses

Source: Primary data, February 2021

Table 7 presents the results showing item descriptive statistics (Mean and Standard deviation) on degree of usefulness of each financial statement in creditor decision in BHC are shown.

It is clear from the results that most commonly practiced items were: Repayment ability is determined by previous financial performance of the borrower (Mean=4.6250, SD=0.70711) this shows that there is very strong mean and strong evidence of the existence of the fact, Cash flow information is more useful when making creditor decisions than both income and sheet statements (Mean=4.5938, SD=0.61484) this shows that there is very strong mean and strong evidence of the existence of the fact, Balance sheet information is more useful when making creditor decisions than both income statement and cash flow information (Mean=4.1563, SD=0.95409) this shows that there is very strong mean and evidence that the fact appears more, Income statement information is more useful when making creditor decisions than both balance sheet and cash flow statement (Mean=4.7500, SD=0.50800) this shows that there is very strong mean and strong evidence of the existence of the fact.

The three financial statements are important in lending decision making (Mean=4.4375, SD=0.91361) this shows that there is very strong mean and strong evidence of the existence of the fact and Inadequate financial statement analysis skills among loan officers lead to high levels of NPLs (Mean=4.7188, SD=0.63421) this shows that there is very strong mean and strong evidence of the existence of the fact. BHC use Financial Statements to decide whether to grant a loan to a business. BHC assesses the financial health of a business to determine the probability of a bad debt. Any decision to create receivables is supported by a sufficient asset base and liquidity.

Regression Analysis

A study was conducted on the relationship between financial statement in decision making on level of non-performing loan of commercial BHCs. The analysis applied the statistical package for social sciences (SPSS) version 22.0 to compute the measurements of the multiple regressions for the study. The findings are provided below:

Table 8: Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.851[a]	.724	.695	1.97706
a. Predictors: (Constant), Financial statement, decision making				

Source: Primary data, February 2021

In order to explain the percentage of variation in the dependent variable level of decision making as explained by the independent variables. The researcher used coefficient of determination that was obtained from the model summary in the table 8. Coefficient of determination was used to explain whether the model is a good predictor. From the results of the analysis, the findings show that the independent variables (Financial statement and decision making) contributed to 85.1% of the variation in level of significance as explained by adjusted R^2 of 0.695 which shows that the model is a good prediction.

Table 9: ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	287.430	3	95.810	24.512	.000[b]
	Residual	109.445	29	3.909		
	Total	396.875	32			
a. Dependent Variable: Level of decision making(Financial decision, investment decision, dividend decision and working capital decision)						
b. Predictors: (Constant), vertical analysis, horizontal analysis and ratio analysis						

Source: Primary data, February 2021

The test for the analysis of variance (ANOVA) showed that regression coefficients indicate that the significance of the sig is 0.00 which is less than 0.05. This indicates that the regression model statistically significant predictor of the outcome variable. There is therefore a significant relationship between financial statement analysis and decision making.

Table 10: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	Sig.(p)
	B	Std. Error	Beta	
(Constant)	.544	.210	-	.035
Vertical analysis	.682	.019	.230	.000
Horizontal analysis	.631	.121	.088	.000
Ratio analysis	.899	.073	.041	.000

Source: Elaborated by using SPSS Program, 2022

Dependent Variable: Decision making (Financial decision, investment decision, dividend decision and working capital decision)

Based on these coefficients, the regression model therefore becomes;

Y= 0.682*At + 0.631*Bt+ 0.899*Ct + εi

A unit increase in horizontal analysis in one unit, while holding the other factors constant would lead to an increase in decision making by a factor of 0.682 units; A unit increase in vertical analysis in one unit while holding the other factors constant would lead to an increase in decision making by a factor of 0.631units. A unit increase in ratio analysis in one unit while holding the other factors constant would lead to an increase in decision making by a factor of 0.899 units.

The results of the simple regression model shows that there is a positive relationship between financial statement and decision making in BHC. This implies that a single unit increase in any of the independent variables results into a corresponding increase in decision making. The regression analysis was undertaken at 5% significance level. The criteria for comparing whether the predictor variables were significant in the model was through comparing the corresponding probability value obtained and α=0.05. If the probability value was less than α, then the predictor variable was significant but from the above analysis. The results above show that the variables were significant since their corresponding predictor values were below 5%.

Table 4.11: Correlations

		Financial statement	Creditor decision
Financial statement	Pearson Correlation	1	.815**
	Sig. (2-tailed)		0
	N	32	32
Creditor decision	Pearson Correlation	.815**	1
	Sig. (2-tailed)	0	
	N	32	32

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

Source: Primary data, February 2021

Table 4.11 presents also the correlation between financial statement and creditor decision. The relationship between financial statement and creditor decision was performed by using Pearson Correlation. However, the following comments concerned only the correlations which were found statically significant. Table 4.16 showed that there is a strong and positive correlation between financial statement and creditor decision (r= 0.805, p=0.000< 0.01).

CONCLUSION AND RECOMMENDATIONS

The major objective of this study is to come up with verifiable effect of financial statement on decision making. For the case of this study, the population of the study was finance officers, accountants and operational department officers equal to 47. The questionnaires distributed to 32 staffs, where the levels that used are mainly closed questions. With close questions, the collectors as respondents were limited to specific answers or choosing from a list of responses. The researcher used coefficient of determination that was obtained from the model summary in the table 4.9. Coffecient of determination was used to explain whether the model is a good predictor. From the results of the analysis, the findings show that the independent variables (vertical analysis, horizontal analysis and ratio analysis) contributed to 69.5% of the variation in level of decision making as explained by adjusted R^2 of 0.695 which shows that the model is a good prediction.

The results of regression indicated that a unit increase in horizontal analysis in one unit, while holding the other factors constant would lead to an increase in decision making by a factor of 0.682 units; A unit increase in vertical analysis in one unit while holding the other factors constant would lead to an increase in decision making by a factor of 0.631units. A unit increase in ratio analysis in one unit while holding the other factors constant would lead to an increase in decision making by a factor of 0.899 units.

The results of the simple regression model show that there is a positive relationship between financial statement and decision making in BHC. This implies that a single unit increase in any of the independent variables results into a corresponding increase in decision making. The regression analysis was undertaken at 5% significance level. All research objectives were achieved and alternative hypotheses were confirmed and verified.

Having gone through this study, the researcher suggests the following as a way of incurring that financial statement analysis plays a vital role on decision making of any company.

1. BHC is advised to minimize its operation expenses in order to retain a great proportion of profit; moreover, it will attract more investors to extend the business.

2. Every financial statement should ensure that all material fact is reflected in their financial statement. These should be prompt provision of the financial statement at the end of each financial year.
3. Investment decision should not be on a vacuum or rule of thumb rather, the financial statements should be used as bedrock.

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