THE EFFECT OF FINANCIAL MIX ON THE PERFORMANCE OF FINANCIAL FIRMS IN RWANDA: A COMPARATIVE STUDY OF ECOBANK RWANDA AND EQUITY BANK RWANDA

Mr. Seth Onchong'a Omao

University of Lay Adventists of Kigali, PO Box 6392 Kigali, Rwanda

Email: sethpero887@gmail.com

ABSTRACT

The impact of the financial mix on bank performance is of considerable significance to all banks. The research is focussed on setting up the effects of the financial mix on bank performance, a related report between Equity Bank Rwanda and Ecobank Rwanda within six years from 2010. The research was graphic and correlative. The study found a reliable positive correlation between debt level and return for both the Equity Bank Rwanda and Ecobank Rwanda. It will, in general, be more affordable and increasing it with a moderately low-debt cost, which prompts an expansion in return levels and thus performance. The sustainability indicators demonstrate that Ecobank Rwanda was truly steady within financial health. It had an average sustainable growth rate of 21% and Internal growth rate of 1.7%. Its rival Equity Bank Rwanda had an average sustainable growth rate of 10% and Internal growth rate of 0.6%. The debt levels are not affected by the minor shifts from both sustainable growth rate and internal growth rate. The research reasons that Ecobank Rwanda was the best financial performer than its rival, Equity Bank Rwanda.

Keywords*:* Financial mix, Bank performance, Debt, Equity, Debt ratio, the Equity ratio

INTRODUCTION

In any bank undertaking, the sources of assets depend on the relative simplicity with which holdings of various types are reachable. It is impacted by the character of the organization's benefits, the occasional and repetitive changes in its volume of banks. It is also affected by its growth rate, its steadiness of returns, and congruity of tasks. Another factor that affects the bank is its size, and level of activities which impacts its position as a potential borrower. These variables likewise determine its financial approach, making the service pick one source of financing as opposed to another.

Financial mix signifies a combination of the D/E, through which a bank is financed. It has been a fascinating issue for some researchers, wherein they endeavoured to depict the bank between financial mix and the performance of banks. The decision of how a bank will be financed is exposed to both the administrators of the firms and fund providers. If financing is realized by using an inaccurate combination of D/E, a negative impact is found in the presentation and even perseverance of a bank (Swamy, 2015). In this manner, to augment the bank worth, administrators need to painstakingly think about the financial mix decision, which is an intricate errand, as the utilization of impact changes starting with one bank then onto the next. Directors for the most sectors do attempt to accomplish the best combination of D/E in their financial mix.

The foundation to the hypothesis of capital structure can be followed to a paper introduced by Modigliani and Miller (MM) in 1958 on the equivalent. Modigliani and

Miller uncovered the conditions under which capital structure is important or immaterial to the financial execution of a firm cited in the protections trade. Bargeron, Denis and Lehn (2015) fight that issues, for example, cost, various assessments and loan fees are answerable for the variety in budgetary impact across firms.

The connection between capital blend and financial execution in firms has gotten impressive consideration in money writing lately. Creators have attempted to address addresses, for example, between debt holders and equity holders, who employs more power over the company's presentation. Earlier investigations additionally demonstrate that an association's capital structure impacts its corporate administration; a key issue influencing most state possessed endeavours both in the created world and creating economies.

In this unique situation, there has been limited research that attempted to assess the financial mix with the presentation of banks. Regarding this issue, Modigliani Miller expressed that, under splendidly competitive equity economic situations, the bank worth is free from the impact of financial mix decisions. Instead, they contended that the bank worth is resolved exclusively by its fundamental winning force. Afterward, they proposed, by producing the results of tax benefit on debt. The bank equity can be increased by combining more debt into the financial mix. In this way, the ideal financial mix of a bank ought to be comprised of 100% of the debt. It is questionable whether these presumptions hold in reality. A few investments, for example, the static trade-off hypothesis, pecking order hypothesis, and hypothesis of agency cost have risen to clarify the financial mix decisions with the bank performance.

The contention over the suspicions of Modigliani Miller brings about the static trade-off hypothesis. It expresses that, with the consolidation of tax into the Modigliani Miller hypothesis, the utilization of debt-equity can be connected to shield profit from high duties. As indicated by Janabi (2010), the ideal financial mix of a bank is controlled by the trade-off of the benefits of using debt. It is known as tax investment funds and the costs of debt, for example, agency costs. Besides, the trade-off hypothesis expresses that firms having increasingly physical assets should utilize extra debt-equity, as these physical assets would be security. What's more, the elusive asset worth is increasingly inclined to deteriorate on account of financial misery. Habrosh (2017) contended that equal treatment of D/E altogether builds bank equity ratios, driven by an expansion in like manner equity, which at last effects the equity selection of banks.

Studies by Beny and Erika (2018) show that the pecking order hypothesis by Myer (1977), has confidence in no ideal financial mix. It recommends that each bank has a progressive system for financing decisions. More often than not, it leans towards the internal financing instead of securing assets from outside the bank. Funding from external sources is required when all in-house assets are used. As per El-Masry (2016), in such a case, banks will lean toward debt over equity. Taking into account that debt is a vital variable, which makes contrasts in the objectives of investors with supervisors, the agency cost hypothesis by Jensen and Mackling (1976) is critical. The hypothesis clarifies that the income of a bank depends on its portfolio. The authors proposed that there ought to be the best combination of D/E that could psychologist total agency costs. The overarching agency cost determines how much debt ought to be brought into the financial mix. With regards

to a developing economy like Bangladesh, given overview information of non-financial firms, Lowama (2019) support the agency hypothesis.

Following the previously mentioned investments, a few studies have observed the effects of the financial mix on the performance of the bank, although a few discoveries repudiate it. This mixed proof incites the specialist to investigate and build up the impact of financial mix decision on bank performance. Notwithstanding, with regards to a developing nation like Bangladesh, there exist limited research that is identified with this topic; however, none of them are centred on the financial sector performance. Bagalaaliwo (2011), for instance, by using the information from 2008–2011, directed research on non-financial firms and observed a noteworthy negative correlation of financial mix with Return on Asset and Return on Sales. Habrosh (2017), researched the forerunners of the financial mix in Malaysia. In a comparative report, which barred the presentation of bank segment, Habrosh (2017) considered whether banks are impacted by financial mix. Harelimana (2017) examined the correlation of bank an incentive with financial mix decision. The author used information just over the time of 1994–2003 for non-financial firms and overlooked financial sector performance. Stidying the soundness of an economy can be practiced by examining the performance of its banks (Jouida and Hallara, 2015). Banking and financial industry have turned into a reality in the present economy, both regarding the number of such foundations, the measure of cash management or decent variety operations. Such to improve the nature of its services and products and decent variety and to keep ratio with the fast debts occurring on the planet in this field (Hajja, 2017). The broadly used measures to evaluate banks' performance return on total assets and return on equity. Researchers have used these measures and bank controllers to study industry performance. Secondly, it has been used in anticipating bank sector structure patterns (used to forecast bank disappointments and mergers). Finally, it's been used to determine different purposes where a productivity measure is needed. In recent years, increased consideration has been gotten by financial firms on performance research. Therefore, the exploration centre has been moved from portraying performance in fundamental ratios like return on assets or return on equity to a multidimensional framework's viewpoint (Ndikumana, 2014).

The Rwanda financial sector is, to a great extent, overwhelmed by the commercial division, which holds around 66.9% of the total financial sector assets. The returns subsector comes next, with 17.1%, protection firms hold 9.7%, and microfinance establishments represent 6.3% of total financial segment assets. The National Bank of Rwanda is the sole controller of the previously mentioned financial sector sub-segments. Other essential sectors of the financial segment in Rwanda are forex agencies; equity market and; payment framework (Musonera and Safari, 2018).

At present, the number of banks increased from 14 in June 2014 to 17 in June 2015. Three banks: BRD bank, Crane Bank, and AB Bank, combined the Rwandan financial industry. Altogether, the Current Rwandan financial framework is made out of 11 banks, four microfinance banks, one improvement bank, and one helpful bank. Microfinance sector was composed of 19 Limited Liability MFIs, 438 Savings and Credit Cooperatives (SACCOs) of which 416 are Umurenge SACCOs and 22 other SACCOs end June 2019, MFIs had 3,779,860 clients (i.e., 54 percent of the total

adult population). Insurance sector consisted of 14 insurance companies (12 private Insurers (9 non-life and 3 life Insurers) and 2 public health Insurers (RSSB Medical and MMI). The insurance sector also consists of agents, brokers and loss adjusters regulated by NBR. As at June 2019, the sector accounts for 707 agents, 17 brokers, and 19 loss adjusters (BNR, 2019). As of June 2015, near 61% of banking assets were locally claimed. Foreign assets were 39%. Private proprietorship remained at 55% of the total financial framework assets. Three of the outside banks are auxiliaries of large Kenyan banks, which were positioned among the leading 100 banks by profit for assets in Africa (Muheirwe, Memba, and Warren, 2013).

The closeness suspected between debt level and the performance of banks is an essential unsolved issue in the region of finance. Absence of concentrates on financial mix and performance of banks in Rwanda has spurred my research. Right now, the more significant sector of the banks has occupied with the growth program, which requires a large aggregate of equity. The use of financial mix shows mixed and clashing outcomes on bank performance. For example, Haener and Peiris (2015), uncovered that the increasing impact by taking debt empowers the bank to have positive ramifications on bank performance. Maredza and Ikhide (2013) certainly concur with Ross through their research on underestimated banks where they found a positive correlation between the utilization of debt finance and bank performance. On another hand, Ndebbio (2014) shows that Fama & French (1998) detailed the negative correlation between bank performance and financial mix.

This research tried to address this gap in information by leading similar research on two banks in Rwanda. The degree to which the debts impact the bank's performance was investigated. The research is centred around the financial firms in Rwanda, with a focus on Ecobank Rwanda and Equity Bank Rwanda.

1.1 Hypothesis:

H0: There is no correlation between debt markers and performance indicators for Ecobank of Rwanda and Equity Bank Rwanda.

H1: There is a correlation between debt indicators and performance markers for Ecobank of Rwanda and Equity Bank Rwanda.

1.2 Objectives

The essential target of this research is to break down the impact of the financial mix on the performance by looking at the banks in Rwanda, Ecobank of Rwanda, and Equity bank Rwanda. Explicitly

1. To evaluate the performance indicators of Ecobank of Rwanda and Equity Bank Rwanda,

2. To analyze the debt indicators of Ecobank of Rwanda and Equity Bank Rwanda,

3. To measure the correlation between debt level and performance for Ecobank of Rwanda and Equity Bank Rwanda.

METHODOLOGY

The research involves studying the impact of the financial mix on bank performance in Rwanda. This research used the near, graphic, and correlative research to acknowledge expressed targets. Near research, the configuration has been used to empower the researcher to look at the impact level recognized on both Ecobank of Rwanda and Equity Bank Rwanda. Moreover, the quantitative methodology as data gathering has maintained the

supposition of an empiricist worldview. The research is additionally spellbinding because the qualities of the zone of the research must be depicted. The portrayal has been used for frequencies, midpoints, and other measurable counts. The analyst has two quantitative variables from a similar subject's gathering. The analyst needs to see whether there is a correlation in the similitude between debt level and bank performance. A strategy, for example, informative have been used under this research, and optional information has been used.

Research Design

A research design refers to plan that guide a researcher on how to organize the research activities. A research design presents a framework or arrangement of action for a study. The study adopted a descriptive research design. A descriptive research provides a comprehensive picture of a circumstance or a situation. It is normally done in order to determine and be in a position where one can describe features or characteristics of the given variable of interest for a certain situation.

Population and Sampling Design

Population of Study

According to Etikan (2016), population is the total compilation of elements from which inferences are made. The larger set of observation is called the population whereas the smaller set is known as the sample. The population of this study consisted of the two commercial banks in Rwanda. Ahmad and Roslyn (2012), describes target population as the focal point within which a researcher would like to use to generalize the results of a research.

Sampling Design

A sample is a ratio of the population being examined through a research study. Therefore, sampling design refers to the definite procedure that the researcher used in selecting the items from the population that will form the sample. For the purpose of this study random selection procedure was used as 2 firms were chosen randomly from the list of banks in Rwanda.

Sampling Frame

According to Teddlie and Yu (2007), sampling frame is the list of elements from which the sample is actually drawn. In essence, this is a complete and correct list of population members only. The sampling frame for this study was the commercial and service firms in Rwanda.

Sampling Technique

The method used in selecting elements from the population that represents the population is known as sampling technique (Etikan, 2016). In most cases, a researcher is required to describe how he/she would arrive at a sample size that was used in the research. Given that the study adopted census technique, two commercial banks were used in this study. McMillan and Schumacher (2014) define a census as a study where all members of the population take part in a study. Census increases the level of accuracy and reliability of a study.

Data Collection

Since the research is using just auxiliary information, there is no predetermined technique to gather them. The information was sourced from the concerned banks and are accessible to everybody. Information identified with Ecobank of Rwanda, was gathered from the site of Ecobank of Rwanda and information identified with Equity Bank Rwanda, was gathered from the site of Equity Bank Rwanda.

Data Analysis

This study employed a correlation analysis and a multiple linear regression method in analyzing the collected data. Regression was used to establish the relationship while correlation was utilized in determination of the nature as well as the degree of relationship that exists between the research variables.

Models

The different regression models were used to quantify the correlation between debt level and bank performance, as detailed as below:

$$LA_{it} = \beta_0 + \beta_1 DR_{it} + \beta_2 DTE_{it} + \mu_{it}$$
$$LD_{it} = \beta_0 + \beta_1 DR_{it} + \beta_2 DTE_{it} + \mu_{it}$$
$$ROE_{it} = \beta_0 + \beta_1 DR_{it} + \beta_2 DTE_{it} + \mu_{it}$$
$$ROA_{it} = \beta_0 + \beta_1 DR_{it} + \beta_2 DTE_{it} + \mu_{it}$$
$$SGR_{it} = \beta_0 + \beta_1 DR_{it} + \beta_2 DTE_{it} + \mu_{it}$$
$$IGR_{it} = \beta_0 + \beta_1 DR_{it} + \beta_2 DTE_{it} + \mu_{it}$$

Figure 1: Regression Models

Where β_1 to β_2 are the coefficients of the variables and μ it is the irregular mistake term. β_0 represents the catch term.

RESULTS

Debt ratio demonstrates how firms use cash to finance the total assets. The higher debt managers give the ratio, the to a greater extent a bank's benefits concerning proprietors. Debt managers incline toward a low or moderate ratio since it gives more assurance if a bank encounters a financial issue. The high ratio demonstrates a weak financial structure. The mean estimation demonstrates that Ecobank Rwanda with 81% Debt ratio is more financially more grounded than Equity Bank Rwanda with an average debt ratio of 86% for Debt ratio. Moreover, Ecobank Rwanda has figured out how to control its liabilities throughout the years as it has a less standard deviation of 0.7 comparing with Equity Bank Rwanda with a standard deviation of 1.9.

Debt to Equity ratio structures the correlation between two kinds of accounts; redistribute fund represented by total liabilities and internal finance represented by investor's equity. The high ratio shows a weak financial structure. Ecobank Rwanda creditors gave 4.5 Rwf in financing to each Rwf contributed by proprietors, comparing with 6.3 Rwf for Equity Bank Rwanda. Equity Bank Rwanda, with a standard deviation of 0.4, has figured out how to control the inconstancy of this ratio superior to its competing bank with a standard deviation of 0.6.

The debt to asset ratio measures the total debts remarkable as a level of total assets. The higher this ratio demonstrates a bank is lent up, and its liquidity is low. The higher the ratio, the less secure a bank might be to higher defaults. Dependent on results, it is moderate is the situation of Ecobank Rwanda. The bank has an average of 51% for debt to asset ratio. Equity Bank Rwanda has an average of 47% for debt to asset ratio. That is definitely not a good sign on the liquidity of the bank if it maintains the non-productive asset. It will hinder its profitability, consequently its performance. Based on standard deviation, the research demonstrates that Equity Bank Rwanda has a higher amount of scattering and the high rate of flimsiness with a standard deviation of 8.7. Ecobank Rwanda has a standard deviation of 5.7.

The debt-to-deposit ratio (Debt-Deposit) demonstrates the capacity of a bank to utilize the client's deposit in offering debts. Based on the mean measure, it indicates that Ecobank Rwanda with average Debt-Deposit of 73% can use the client's deposits to provide debts with more than Equity Bank Rwanda with average Debt-Deposit of 60%.

Once more, a high ratio mirrors a lower level of liquidity. Dependent on standard deviation and coefficient of variety, there are a high scattering and instability levels of this ratio in Equity Bank Rwanda with a standard deviation of 10 than Ecobank Rwanda with a standard deviation of 7. The return on average equity estimates the regular commitment of overall gain per 1 Rwf contributed by the firms' investors. That's a ratio of the proficiency of the proprietors' provided equity. The research found the mean score of 26% of net gain. It comes back to investor's interest in Equity Bank Rwanda with a standard deviation of about four. 21% of total compensation that comes back to Ecobank Rwanda investors with a standard deviation of 2. It implies for the past six years, interest in Ecobank Rwanda returned limited quantity compared with Equity Bank Rwanda. It is observed that instability and scattering is because of the lower estimation of its standard deviation of 2.3 for Ecobank Rwanda comparing with 3.8 for Equity Bank Rwanda. The strength is a decent sign for the security interest later on. It implies Ecobank Rwanda ought to pull in more investors. It has to use its low standard deviation than Equity Bank Rwanda regardless of whether it could restore a high profit to its investors than Ecobank Rwanda.

Return on assets shows how profitable an organization is concerning its total assets. The higher the return, the more productive service is in using its return base. Ecobank Rwanda with an average return on assets of 3.8%, appears to have excellent service. It is using the its total assets for making a return more than it is done at Equity Bank Rwanda with an average return on assets of 3.4%.

Economic growth discloses to us how quick the bank can develop without increasing financial impact (Babirusa, 2017). It implies the growth by studying that assets in an organization are limited and that the ratio of asset exhaustion must be eased back to have long term growth. In light of the outcomes, Ecobank Rwanda can keep working and growth on its held profit up to the ratio of 21% instead of 10% for Equity Bank Rwanda. It implies Equity Bank Rwanda is by all accounts not steady enough on its side of equity source of the fund. It can't avoid as its rival if their Debt level remained consistent. Ecobank Rwanda can oppose multiple times the period Equity Bank Rwanda can stand up to. As an end, without increasing the impact, Ecobank Rwanda can financially develop quickly at the ratio of 11% more than Equity Bank Rwanda.

Internal Growth Rate is the most astounding rate a bank can increase or extend; however, not considering or not using the external sources of subsidizing. It shows the growth created with finance streams held by the bank. The most astounding ratio of internal growth demonstrates that a given bank is fit for arriving at a high financial level without external sources of subsidizing (Biabani, Giannini and Moabi, 2018). Ecobank Rwanda with Internal growth rate of 2.8% is stronger than its rival Equity Bank Rwanda with Internal growth rate of 1.7%. It can grow its bank at 1.1% more than Equity Bank Rwanda without using any outside deposit either equity or debt.

Correlation

The outcomes demonstrate that debt level has a substantial negative correlation to Liquidity of Equity Bank Rwanda with -0.915. It has a - 0.603 Pearson correlation equity for debt ratio to Debt-Deposit and Debt-Asset separately. It has - 0.181 and -0.535 Pearson correlation equity for debt-equity ratio to Debt-Deposit and Debt-Asset individually. Contrary to Ecobank Rwanda, Debt level has a huge weak positive correlation with its liquidity with Pearson correlation estimation of 0.055 and 0.015.

There is Pearson correlation estimation of 0.061 and 0.095 for debt-equity ratio to Debt-Deposit and Debt-Asset, separately. If Equity Bank Rwanda keeps on raising the degree of debt, the result will be a weak liquidity position as finance will be used to pay interest on debts. It implies that when Equity Bank Rwanda is exceptionally fluid, it appears to bring down debts as the need to raise momentary debt finance is low. The high liquidity could be used to reduce debt levels step by step. For Ecobank Rwanda, the weak correlation shows that the debt level has a moderately weak impact as resolved with a cross-segment fixed impacts model. Debt level on Profitability: Recall that return on equity alludes to the rate measures on profit for the possess ship intrigue (investors' equity) of regular investors. It demonstrates how well an organization utilizes investment assets to produce the growth of income.

For Equity Bank Rwanda, an R-square of 0.614 and a balanced R-square of 0.52, implying that varieties can clarify 52% of the change in return on equity in the red level. Durbin-Watson measurement is 2.20, meaning that the information is worthy because the outcomes are showing no autocorrelation. The quality of relating regression alludes to the estimation of the F-measurement, which is 5.30 and huge. For Ecobank Rwanda, the debt level strongly affects the return on equity by 81% of R2 and 69% of Adjusted R2 with no autocorrelation in the model. If the debt brings about increased income, the return on investment is exponential. Increased debt returns on equity during blast times yet harms return on investment during retreats. In light of this, we can affirm that Ecobank Rwanda is in blast period as opposed to Equity Bank Rwanda.

Table 1: Return on Equity

Equity Bank Rwanda	Ecobank Rwanda
$ROE = -132.33 + 2.1\ DR + 4.4\ DER + \mu_{it}$	$ROE = 168.24 + 12\ DR + 8.4\ DER + \mu_{it}$

As indicated by Humphrey (2011), his research underlined that debt does not affect productivity either in a direct manner or in a non-straight way. The consequences of these two models repudiate Masen's discoveries. For example, 1% change for debt ratio, incites an expansion of 12% to return on average equity of Ecobank Rwanda and 2.1% to Equity Bank Rwanda. An increase of 1% for debt-equity ratio could make a raise of return on equity up to 8% for Ecobank Rwanda and 4.4% to Equity Bank Rwanda. The outcome is likewise in conflicting with Abor (2005) who found that negative effect of long-term debt on return on equity, however a positive effect from momentary debts. Mwangi and Murigu (2015) additionally had recognized the negative effect of financial liabilities on return on equity for 100 firms in Kenya. This research certainly concurs with Ncube (2009) through their research on underestimated banks where they found a positive correlation between the utilization of debt finance and bank performance.

Debt level on Return Average Asset: Return on assets indicates how beneficial an organization's returns are in developing income. Return on assets is one of the most broadly used productivity ratios. It is identified with both overall revenue and asset turnover. It demonstrates the rate of return for the two debt managers and financial specialists of the organization. Return on assets shows how well an organization controls its costs and uses its assets.

Infinite regressions were led to look at whether debt level could affect productivity as return on assets level of Equity Bank Rwanda and Ecobank Rwanda. The outcome acquired from the regression conditions demonstrates a fundamentally positive correlation between Debt level and return on assets of two banks under the research. The general model disclosed 63% changes to return on assets of Ecobank Rwanda are from financial mix comparing with 54% changes from Equity Bank Rwanda. The Durbin-Watson estimations of 2.24 and 1.91 show that there is no indication of autocorrelation. Henceforth debt fund is spent to build the generation of banking items, and it prompts fundamentally increased incomes. In this way, the increased debt builds return on average assets. It implies that the Ecobank Rwanda utilizes debt to put the acquired assets in the profitable venture than Equity Bank Rwanda does.

Table 2: Return on Assets

Equity Bank Rwanda	Ecobank Rwanda
$ROA = 21.717 + 0.24\ DR + 0.008\ DER + \mu_{it}$	$ROA = 3.23 + 0.16\ DR + 0.748DER + \mu_{it}$

The yield demonstrates that debt level positively affects the return on asset and factually critical at 5% (P=0.000<0.05), implying that the expansion of debt level will pitifully increase the ROA. For example, a development of 1% on debt ratio clarifies an expansion of return on assets up to 0.24% for Equity Bank Rwanda and 0.16% for Ecobank Rwanda. In opposition to the outcomes of Margaret (2015), which is all the ratio of the financial mix, including debt to equity and Debt ratio, have an altogether negative effect on return on assets. The expansion in long term debt will prompt a reduction in return on assets due to the more significant cost of intrigue contrasted with momentary debt (El-Masry, 2016). Marwaha (2017), explored the effect of debt level on bank return on assets. He found that the expansion in the debt deposit fundamentally reduces the net income of banks. It affects the productivity of firms. It turns out to be progressively extreme with high debt level as costs increase, and profitability reduces.

Debt level on Liquidity: The debt to deposit ratio is used to ascertain a creditor's capacity to cover withdrawals made by its clients. A bank that acknowledges deposits must have a specific ratio of liquidity to keep up its ordinary day by day activities. Debts given to its clients are for the most sector not considered liquid, implying that they are investments over a more extended timeframe.

Liquidity performance estimates the capacity to meet financial commitments as they become due and is critical to the supported feasibility of banking firms. The regression yield demonstrates that debt level is factually immaterial to Debt-Deposit of Ecobank Rwanda because of the p-estimation of 0.130, which is higher than 0.05. As opposed to Equity Bank Rwanda, the outcome demonstrates that the debt level is measurably critical (P-estimation of 0.000 < 0.05) and determinedly impact the Debt-Deposit. It is explained by how a 1% possibility of debt ratio would bring about 43% of Debt-Deposit and one% expansion in the debt-equity ratio will increase by about 14% of Debt-Deposit. The Durbin-Watson equity demonstrate that there is no autocorrelation (2.24 for Equity Bank Rwanda and 1.790 for Ecobank Rwanda).

Table 3: Debt Deposit

Ecobank Rwanda	Equity Bank Rwanda
$LD = -848.23 + 43.553\ DR + 14\ DER + \mu_{it}$	$LD = -670.58 + 9.5\ DR + 4.5\ DER + \mu_{it}$

Given the positive centrality found on Equity Bank Rwanda, we could state that the bank acquired cash is re-credited at higher rates so that it stops depending total deposits alone. It negates with the discoveries of Ndikumana (2014) that the expansion in the debt-to-equity ratio will decrease bank liquidity. On another hand, the bank utilizes the clients' deposit to make debt where the bank returns by obtaining at one ratio of premium and loaning at a higher rate. The client deposits are the least expensive source of assets for a bank. In this way, if the debt level explains 75% of changes on Debt-Deposit, it implies that 25% is clarified by client deposit. It is not a sign on the financial health of Equity Bank Rwanda. That is because, in case of bad debt, Equity Bank Rwanda will lose cash loaned. It will also be obliged to reimburse its creditors the debt which was re-lent to its awful indebted individuals. For better health, Equity Bank Rwanda must hold down that unreasonable impact of debt level to Debt-Deposit to move toward becoming illiquid sooner rather than later.

Debt level and Debt to Asset Ratio

Debt level is measurably irrelevant to Debt-Asset for both Equity Bank Rwanda and Ecobank Rwanda as the P-equity are 0.620 and 0.052, and all are more noteworthy than to 0.05. The end is that Debt level has no measurable effect on Debt-Asset of both Equity Bank Rwanda and Ecobank Rwanda. Liquidity issues are explained by the debt fund or equity support or even a mix of both. Given the research results, it appears that another source of the deposit like equity financing is used to explain the issue of liquidity in the banks under the research.

Debt level and sustainability

Debt level and Sustainable growth rate growth ratio which the most reasonable measure of the increase in an organization's income, expecting that the organization does not modify its financial mix. The outcomes demonstrate that the joined impact of indicators of debt level is measurably not critical to a sustainable growth rate of both Equity Bank Rwanda with P-estimation of 0.120 which is higher than 0.05 and Eco bank Rwanda with P-equity of 0.450 likewise higher than 0.05.

Debt level to the internal growth rate: Debt level isn't measurably affecting internal growth rate for both Equity Bank Rwanda and Ecobank Rwanda since the P-equity are 0.077 and 0.351 and all are higher than to 5%.

Hypothesis testing

The understanding is depending for the most sector on the correlation impact and significances. Relationship impact demonstrates the sense and bearing of the correlation between variables where significance demonstrates the measurable centrality and acknowledgment, and it reflects the qualification of independent variables to anticipate independent variety variables. In light of discoveries, there is a presence of a correlation between debt level and performance for Equity Bank Rwanda an Ecobank Rwanda. Thus the correlation impact shows up on Debt-Asset, sustainable growth rate and Internal growth rate are factually not critical (P-estimation of both Equity Bank Rwanda and Ecobank Rwanda are more noteworthy than 5%), and naturally it was disregarded, the existed correlation between debt level and performance is inevitable because of the way that the

correlation impacts are enormous and positive for all of two banks under the research. From these, the Null Hypothesis is dismissed as the presence of the correlation between debt level and performance for Equity Bank Rwanda and Ecobank Rwanda were determined.

Table 4: Descriptive Statistics

	Loans/ Deposits	Deposits/ Assets	NPM	ROD	ROA	ROE	TAT	Provision/ Loans	Provision/ Assets
Mean	1.186640	0.201940	0.301420	0.067800	0.017680	0.027200	0.046520	0.041320	0.010340
Median	0.822300	0.255400	0.331500	0.053900	0.014500	0.020400	0.054600	0.037500	0.010300
Maximum	3.302100	0.349500	0.568500	0.143400	0.036600	0.054700	0.092700	0.095200	0.020600
Minimum	0.000000	0.000000	0.000000	0.000000	-0.001200	-0.001100	0.000000	0.000000	0.000000
Std. Dev.	1.244901	0.136324	0.203629	0.053123	0.016082	0.025890	0.036531	0.042025	0.009626
Skewness	1.113021	-0.535857	-0.274397	0.232639	0.097793	0.159196	-0.073182	0.203985	0.000957
Kurtosis	2.869176	1.977131	2.425957	2.125452	1.431274	1.291546	1.714098	1.452909	1.276420
Jarque-Bera	1.035911	0.457257	0.131396	0.204441	0.520658	0.629206	0.348952	0.533319	0.618903
Probability	0.595737	0.795624	0.936414	0.902830	0.770798	0.730079	0.839897	0.765934	0.733850
Observations	5	5	5	5	5	5	5	5	5

Sources: The estimates are computed by the author

These studies are in affirmation with Janabi (2010), who found that the rising debt asset ratio in the assurance of return is altogether positive with debt financing bank administrators to back their undertaking and boost the performance.

Correspondingly, Siddik, Kabiraj, and Joghee (2017) research on debt motivating forces, and performance found a positive correlation between debt and bank performance. About the quality, Ecobank Rwanda returns were more from financial mix, particularly on return on assets where 63.5% of variety clarified by obtained funds, implies that the adequacy and efficiencies utilization of acquired deposit in the profitable asset is more than it is done from Equity Bank Rwanda and about the supportability, Ecobank Rwanda is truly steady than Equity Bank Rwanda where the outcomes demonstrate that if Ecobank Rwanda keep on winning the return on equity of 21% And 25% for Equity Bank Rwanda, the extension and growth of Ecobank Rwanda will be 11% quicker than it is on Equity Bank Rwanda.

DISCUSSION

Segments of capital structure utilized by firms

The examination discovered that the two significant segments of capital structure are D/E. How a firm adjusts the blend of D/E in its capital structure is the central issue in capital structure writing. Exact investigations have demonstrated that there is no ideal capital structure since various organizations have distinctive capital structure needs.

The examination established that D/E are the significant parts of capital structure in all the two organizations in the investigation. This is predictable with Ahmad and Roslan (2012) paper on a review of capital structure choices. From this investigation, it was established that organizations are financed by either debt or equity. It is hence basic that administration determines the best blend of D/E for a firm at some random point in time.

The two firms are foreign subsidiaries operating in Rwanda. This implies the organizations are better set to acquire from people in general through the stock trade contrasted with other financial firms. The

examination concurs with Etikan (2016), in their investigation of financing choices relevant in listed and non-listed firms in Ghana. The investigation discovered that the Ghanaian Stock Exchange contributed enormously towards the financing of listed firms rather than non-listed firms.

The two firms in the examination utilized fluctuating blend of D/E quite a long time after year to back their separate capital structures. Fosu (2013) recommend that for a firm to accomplish an ideal capital structure, there is requirement for trade-off among the impacts of expenses, both corporate and individual, and office costs, and so on. The exchange off hypothesis prescribes that organizations ought to consider having debt in their capital structure at sensible extents and endeavour to accomplish and keep up that over the long haul. By so doing, a firm stands to profit gigantically from the favourable circumstances related with utilization of debt as a source of account. One of the advantages of utilizing debt is the upside of getting a charge out of expense reserve funds. Notwithstanding, utilization of a lot of debt in an association's capital structure may prompt financial trouble costs. Along these lines, as the name recommends, there ought to be an exchange off between charge advantage and the risk related with the capability of high budgetary pain costs.

As to hierarchy hypothesis, Ahmad and Abdul Rahim (2013) established that organizations lean toward the utilization internal money for example, utilization of held profit over outside financing for example, debt financing. In the event that outer source of financing is received by a firm, at that point measures ought to be set up to limit the potential expenses related with outside financing. In this way the financing prone to take the accompanying request; debt money first, trailed by the issuance of favoured offers lastly issuance of conventional offers. Experimental examinations did in the past help the two hypotheses.

When firms with Retained Earnings (Deficit) were thought about, Equity Bank of Rwanda had the most reduced normal Retained Earnings with a shortfall of 29 Billion Rwanda Franc for the period 2012-2016. Shockingly, the organization had the most minimal Debt to Equity ratio. The investigation consequently repudiates the hierarchy hypothesis which stipulates that a firm should depend on more debt if internal sources of funds are insufficient (Myers, 2001).

The investigation anyway is in concurrence with Espieh and Moridipour (2013) explore on the clarification of capital structure by the hierarchy hypothesis. The examination discovered that a company's capability to develop is determinedly related with its capital structure. Along these lines, developing firm's interest for accounts is high. These organizations will select to go for outer sources of financing to cross over any barrier.

Impact of Capital Structure on firms' productivity

Regression investigation of the examination showed that the connection between capital structure and Return on Equity was high and there was critical measurable relationship between the two factors. Concerning, the connection between financial impact and both Pre- and After-Tax benefits was high. Accordingly, charge affects financial impact. Be that as it may, as respects to the degree with which the needy variable can be clarified by the autonomous variable estimated by R Squared, the connection was low for both Pre- and After-Tax benefits.

The exploration established that there was feeble to-no connection between capital structure and firms' productivity for the business and service firms in Rwanda. This was landed at subsequent to breaking down the weighted normal Debt to Equity ratio and Return on Equity and productivity ratios of the two firms utilized in the investigation for the period 2012-2016. This was couple with an investigation on non-financial firms listed on the Cairo Stock Exchange, Egypt during the period 1997-2005. The investigation portrayed a feeble to-no effect connection between financial impact and firm execution.

The examination uncovered that organizations with more debt and less equity performed ineffectively as far as productivity. This implied firms like Eco bank and Equity bank Rwanda had an inappropriate blend of D/E in their individual capital structures consequently, horrid execution. The investigation is in concurrence with examine on the connection between capital structure and budgetary execution of Nigerian Quoted aggregates.

On the flipside, the investigation built up how a firm deal with its Debt to Equity ratio over a specific timeframe assumes a vital job in deciding future execution. This suggests a well-overseen blend of D/E will yield better outcomes. This agrees with the investigation such that the accountant's fundamental job in an association is to viably oversee it. By so doing, the investor's riches are boosted as reflected by improved benefit (Bargeron, Dennis and Lehn, 2015).

Blend of D/E in an association's capital structure determines the risks and returns. From the investigation, firms with high debt levels in the capital structure are presented to high dangers. This agrees with (Fredrick, 2015) study which uncovered that although debt financing builds a company's risk for future speculations, it additionally impacts the company's productivity.

The examination is in concurrence with Fosu (2013) inquire about on the triangle relationship identifying with size of the firm, execution and financial impact of firms situated in Turkey. The examination established that the impact of firm size on firm execution and manageability is straightforwardly relative with the method of financing for development. The examination discovered that in spite of the fact that debt financing builds firms' risk introduction, it expands a company's desires for better returns. What's more, on the off chance that the risk exposure isn't satisfactorily secured by positive returns, at that point the business endeavour is probably going to get twisted up. On the flipside, if the pattern can be switched, the firm will report great execution and can draw in financial specialists.

Impact of Capital Structure on firms' offer execution

Income per Share is a part of an association's profit that is inferable from every normal investor, after all the important assessments have been deducted and favoured profits paid. When processing, the figure is landed at by essentially isolating benefit after duty earned in a given time of concentrate by the absolute number of exceptional offers during a similar period. Since the quantity of remarkable offers continue fluctuating, a weighted normal is typically utilized.

As indicated by the regression investigation, there is no huge connection between capital structure and Earnings per Share of the business and administration firms in Rwanda. There was likewise no noteworthy factual connection between the two factors. This is apparent from the examination of the Debt to Equity ratio and Earnings per Share of the two firms utilized in the investigation

during the period 2012-2016. The investigation agrees with Etikan (2016) study on the effect of impact on income per offer and offer cost of 20 firms in Sri Lanka listed on the Colombo Stock Exchange (CSE). The investigation was directed somewhere in the range of 2007 and 2012.

References

Ahmad, N., & Abdul Rahim, F. (2013). Theoretical Investigation on Determinants of Government-Linked Companies Capital Structure. *Journal of Accounting, Finance and Economics*, *3*(2), 72–85.

Ahmad, Z. & Roslan, S. (2012). Capital Structure Effect on Firms Performance: Focusing on Consumers and Industrials Sectors on Malaysian Firms. *International Review of Business Research Papers*, *8*(5), 137–155.

Babirusa, R. (2017). *Macroeconomic and Financial Soundness Indicators: An Empirical Research*, International Financial Fund.

Bagalaaliwo, A. (2011). Cross-Listing in Sub-Saharan Africa: An Event-Study Examining Cost-Of-Equity and Liquidity Effects. *SSRN Electronic Journal*.

Bargeron, L, Denis, D, & Lehn, K. (2015). Investment, Taxes, and Capital Structure: A Study of U. S. Firms in the Early 1900s.

Beny, K. & Erika, H. (2018). Institutional Ownership, Profitability, Tangibility, and Liquidity on Firms' Equity Structure. *Proceedings of the 7th International Conference on Entrepreneurship and Business Management*.

Biabani, S., S. Giannini & H. Moabi (2018). "Assessment of Effective Variables on Non- Performing Debts Creation: Empirical Evidence from Iran (2006-2011)." *Journal of Basic and Applied Scientific Research*: 2.

El-Masry, A. A. (2016). Equity Structure and Performance of the Middle East and North Africa (MENA) Banks: An Assessment of Credit Rating. *Banks and Bank Systems, 11*(1), 77-91.

Espieh, G & Moridipour, H. (2013). Investigation of the relationship between capital structure and profitability of firms listed in Tehran stock exchange (TSE), *2013*(6), 100–105.

Etikan, I. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, *5*(1), 1. https://doi.org/10.11648/j.ajtas.20160501.11

Fosu, S. (2013). Capital structure, product market competition and firm performance: Evidence from South Africa. *The Quarterly Review of Economics and Finance*, *53*(13), 140–151. https://doi.org/10.1016/j.qref.2013.02.004

Fredrick, O. (2015). Determinants of Bear Market Performance at the Nairobi Securities Exchange in Kenya. *Universal Journal of Accounting and Finance*, *3*(4), 146–152. https://doi.org/10.13189/ujaf.2015.030403

Habrosh, A. A. (2017). Impact of Cash Flow, Profitability, Liquidity, And Equity Structure Ratio on Predict

Financial Performance. *Advanced Science Letters, 23*(8), 7177-7179.

Haener, D. & S. Peiris (2015). "Bank Efficiency and Competition in Low-Income Countries: The Case of Uganda."

Hajja, Y. (2017). Impact of Credit Risk and Equity on Liquidity Risk of Malaysian Banks.

Harelimana, J. B. (2017). The Effect of Non-Performing Debts Management on the Financial Performance of Commercial Banks in Rwanda: A Case Study of ECOBANK Rwanda. *Enterprise Risk Management, 3*(1), 19.

Humphrey, B. (2011). "The Dominance of Inefficiencies over Scale and Product Mix Economies in Banking." *Journal of Financial Economics* 28 (1): 117-148.

Janabi, M. A. (2010). Incorporating Asset Liquidity Effects in Risk-Equity Modelling. *Review of Middle East Economics and Finance, 6*(1). Doi:10.2202/1475-3693.1258

Jouida, S., & Hallara, S. (2015). Equity Structure and Regulatory Equity of French Banks. *Procedia Economics and Finance, 26*, 892-902. Doi: 10.1016/S2212-5671(15)00901-6

Lowama, M. (2019). Effect of Liquidity Management on Performance of Commercial Banks in Kenya. *European Journal of Business and Management*.

Maredza, A. & S. Ikhide (2013). "Measuring the Impact of the Global Financial Crisis on Efficiency and Productivity of the Banking System in South Africa." *Mediterranean Journal of Social Sciences* 4 (6): 553-568.

Margaret, B. (2015). *Ownership and Control: Rethinking Corporate Governance for the Twenty-First Century.* Washington, DC: Brookings Institution.

Marwaha, K. (2017). *Selected Papers of Lawrence R Klein: Theoretical Reflections and Econometric Applications*, World Scientific.

Muheirwe, D., Memba, F. & Warren, J. (2013). An Assessment of The Variables That Affect the Financial Performance of The Cross-Listed Companies in The Rwanda Stock Exchange, *European Journal of Accounting, Auditing, And Finance Research, 3*(10), 34 -57

Musonera, E., & Safari, V. (2018). Establishing a Stock Exchange in Emerging Economies: Challenge and Opportunities. *The Journal of International Management Studies*, *3*(2), 1-11.

Mwangi, M., & Murigu, J. W. (2015). The Determinants of Financial Performance in General Insurance Companies in Kenya. *European Scientific Journal*, *11*(1), 67- 79.

Ncube, M. (2009). Efficiency of the Banking Sector in South Africa, University of the Witwatersrand-Http://Www.Afdb.Org/Fileadmin/Uploads/Afdb/Documents/Knowledge/2009percent20aec-

Ndebbio, J. (2014). Financial Deepening, Economic Growth, and Development: Evidence from Selected Sub-Saharan African Countries. *AERC Research*

Paper 142. Rwanda, African Economic Research, and Consortium.

Ndikumana, L. (2014). "Financial Determinants of Domestic Investment in Sub-Saharan Africa: Evidence from Panel Data." *World Development* 28 (2): 381-400.

Siddik, M., Kabiraj, S., & Joghee, S. (2017). Impacts of Equity Structure on Performance of Banks in a Developing Economy: Evidence from Bangladesh. *International Journal of Financial Studies, 5*(2), 13.

Swamy, V. (2015). Equity and Liquidity Requirements: Impact on Bank Lending Spreads. *International Journal of Banking, Accounting, and Finance, 6*(1), 53.

The National Bank of Rwanda, (BNR), (2019). *2018-2019 Annual Report: Impacting People's Lives*.