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# Assessing the Contribution of Mergers and Acquisitions on the Performance of EAC Banks

# Murangira Philippe

Kigali-Rwanda, University of Kigali, Master's in Economics

#### Abstract

The progression of Mergers and Acquisitions (M&As) has gained substantial importance in today's corporate world. M&A has become the driving force of the world economy and played a significant role in the strategy of many companies in the last decade. The increased competition in the global market has prompted the EAC banks to go for M&A as an important strategic choice to increase their synergy and compete with other large corporations. Mergers and Acquisitions are the strategic growth devices in the hands of more and more corporations not only to stay in the competition but also to extend their margins, market share, capital and loans increased and became dominance on EAC region. The study assessed the contribution of M&A on the performance of EAC banks from the period 2007-2021 with 19 selected EAC Banks with 123 observations. The work focused on the current literature available on M&A from the recent past to portray unlike the methods used to gauge the performance of the EAC banks. The crosssectional model was used to analyze the data of M&A, and various theories were reviewed such as structure conduct performance theory, say's law and market concentration theory, and Contingency theory. The findings on assets acquisition, net profits and share equity were statistically significant (0.000), the pvalues were less than 0.05 and implied the improvement in the performance of the EAC Banks which led to significant upgrading on the performance of the merged banks through on share equity, net profits and assets acquisitions. The ECA member states recommended to strongly liaise with regulatory body mandated for mergers and acquisitions to review its notification and meet with other requirements.

Keywords: Mergers and acquisition, dominant enterprise, synergy, anti-competitive conduct.

#### 1. Introduction

Globalization pressures persist and the global competitive landscape becomes progressively more dynamic, merger and acquisitions continue to be a popular growth strategy among multinational corporations headquartered in every region of the world. Given the magnitude of this merger and the performance of the merged EAC banks, it is not surprising that bank merger and acquisition has gathered much attention from researchers and policy analysts. There are several potential benefits from the lifting of geographic barriers to competition in the banking sector and the associated trend of merger and acquisition activities including increased geographic diversification, access to resources and new markets, improved competition, elimination of the entrenched inefficient of self-serving managers of the banks (Andrew J. Sherman, 2017).

The Merger and acquisition volume and number of transactions in the United States and globally as well, the private equity transaction. The ongoing pandemic (COVID-19), disturbed the timing of transactions from remote to the conventional working arrangement, the volatile global economy, the supply chain of



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the goods and services, and more aggressive anti-trust enforcement.US and across Europe as vaccine programs were successfully moved out and receptivity in the markets to announce the transaction. Due to various dynamics changes caused by the pandemic, during 2021, total deal volume was the highest it has been since record keepers began tracking M&A volume with over \$5.8 trillion of the deals compared to the \$3.6 trillion recorded total deals in 2020 in the volume and increased over 50% relative to the 3.8 trillion recorded for the total deal volume in 2019. Over 63,212 transactions were announced and recorded in 2021, a 24% increase to the 50,871transaction announced and recorded in 2020. The merger is a corporate strategy to combine with another company and operate as a single legal entity.

In addition, a merger is called cross border merger if at least one of the business entities entering the restructuring scheme is registered in a foreign state (Krati Rajoria,2020).

Although Covid-19 restricted international travel from 2020, cross-border deal-making was exceptionally robust over the year, constituting 36% of the global M&E volume. Global cross-border M&E increased nearly 70 percent relative to the level of the deals in 2020 with 17,661 transactions announced throughout the year. Compared with domestic transactions, acquirers in cross-border deals need to navigate unfamiliar legal regimes, languages, accounting standards, or corporate cultures, while being located at geographic distance (e.g., Ragozzino and Reuer, 2011; Kang and Kim, 2008).

Mergers and Acquisition are two different terminologies but somewhere deal with the aspects. Conventional thinking in the business world is driven by the spirit of competitiveness, in the world of business, we are not conditioned or schooled to think in the terms of interdependence (Eva Pelechano-Barahona and Fernando E, 2020). The success of our business is typically depending on the complex cycle of the processes, operations, and as well as functions coming together and work closely.

Mergers and acquisitions were made to keep increasing and lead to the growth of the country. Mergers can be separated into different types as per market structure like horizontal mergers, where the mergers take place between companies having the same level of production or producing the same services.

In today's world, merger and acquisition should typically translate to a larger pool of shared resources. In business terms, political know-how, and cultural awareness in general for the organization should ideally mean a strong competitive advantage, bigger or stronger market shares, and a position they may not enjoy before.

Merger and acquisitions as the name suggest are two different terminologies but somewhere deal with the same aspect. the definition of merger and acquisition is very specific, sustainability remains an open concept that encompasses three interconnected pillars: Environmental, Economic, and Social (José-Luis, PELECHANO-BARAHONA, Eva, 2020).

The environmental pillar aims to preserve the resources for future generations. Through the economic pillar, firms should contribute to the external context in terms of prosperity for economic growth purposes, while the social pillar comes to refer to the provision of values to society. Mergers are the combination of two or more entities into one entity whereas acquisition is the concept where a company acquires the other company for their assets, liabilities, shareholders, etc, and functions as a single huge body however; acquisition leads to the formation of no new entity (CFI Team, May 1,)

Furthermore, the studies of M&A are highly relevant, as M&A represents a fundamental tool for corporate restructuring. For example, in 2017, worldwide M&A activity exceeded \$ 4.7 trillion (Statista.com, 2018). Put into terms of Gross Domestic Product (DGP), this makes M&A equivalent to the world's four largest economies (Focus Economics, 2017). The level of spending on M&A also exceeds worldwide on research and development (R&D). for example, R&D in 2017 was just over \$ 2 trillion (Riemschneider, 2017). On



the same note over two times as much money is spent on buying assets that exist using acquisitions than is invested in creating something new. This highlights the importance of M&A research in improving acquisition performance.

Lastly, Mergers and acquisitions on firm performance in East Africa have some of the fastest growing Mergers & Acquisition activities on the African continent. The EAC region encompasses some of the fastest-growing and most sophisticated economies in Africa, with Kenya leading in M&A operations (KPMG, 2014).

#### M&A in RWANDA

| S/N | Bank                                | Merged /Acquired by | Year of the deal |
|-----|-------------------------------------|---------------------|------------------|
| 1.  | ECOBANK                             | BCDI                | 2007             |
| 2.  | BRD Advisory Services (BAS Ltd) and | BDF Ltd             | 2011             |
|     | BRD Development Fund (BDF Ltd)      |                     |                  |
| 3.  | I&M BANK                            | BCR                 | 2012             |
| 4.  | BPR                                 | КСВ                 | 2021             |

ECOBANK officially took over the ownership of the Bank of Commerce, Development and Industry (BCDI in July 2007 to create Ecobank Rwanda, newly created corporate of Ecobank Rwanda brought new prospects to the country's banking sector. Its contribution of \$ 11.6 million partly covered negative equity and recapitalized to the new acquisition.

Since March 2021, BRD Advisory services (BAS Ltd) and BRD Development Fund (BDF Ltd) companies were merged to create a new company named BDF Ltd. The two former companies were in BRD wholly owned subsidiaries tasked with the mission of providing services and products that boost the development of SMEs in Rwanda. The new company remained a subsidiary of BRD and streamline the previous mission. The merger deal was decided by the Board of Directors meeting held on 17<sup>th</sup> March 2011 with the main aim of improving and promoting the efficiency of the operations, quality, and range of the services and products to be provided by the new company named BDF Ltd.

| S/N | Bank                  | Merged /Acquired with    | Year of the deal |
|-----|-----------------------|--------------------------|------------------|
| 1.  | I&M BANK              | GIRO COMMERCIAL BANK     | 2017             |
| 2.  | SBM BANK KENYA Ltd    | FIDELITY COMMERCIAL BANK | 2017             |
| 3.  | DIAMOND TRUST BANK    | HABIB BANK KENYA Ltd     | 2017             |
|     | KENYA Ltd             |                          |                  |
| 4.  | KCB GROUP PLC         | NATIONAL BANK OF KENYA   | 2019             |
|     |                       | LIMITED                  |                  |
| 5.  | EQUATORIAL            | SOUTHERN CREDIT BANKING  | 2010             |
|     | COMMERCIAL BANK       | CORPORATION              |                  |
| 6.  | SAVING AND LOAN (K)   | KENYA COMMERCIAL BANK    | 2010             |
|     | LIMITED               | LIMITED                  |                  |
| 7.  | CITY FINANCE BANK Ltd | JAMII BORA KENYA         | 2010             |

## M&A in KENYA

Kenya has experienced a considerable increase in M&A activities from the year 2010 to 2016 and the number of merger deals kept increasing. During the year under review, the competition authority of Kenya



received and processed 91 merger notifications (91) marking a decline from the previous year's twentyone (121) (KCA annual report, 2020/2021).

The formation of the Competition Authority of Kenya (CAK) under the Competition Act, Cap 504 laws of Kenya is associated with the inspiring growth in M&A.

The formation of the Competition Authority of Kenya (CAK) under the Competition Act Cap 504 laws of Kenya is associated with inspiring growth in M&A activities in the country (Onyuma and Muiru, 2014).

#### M&A in UGANDA

| S/N | Bank                      | Merged /Acquired with | Year of the deal |
|-----|---------------------------|-----------------------|------------------|
| 1.  | 8 MILES A LO NDON         | ORIENT BANK           | 2015             |
|     | HEADQUARTERED EQUITY FUND | UGANDA                |                  |
| 2.  | EXIM BANK Ltd             | IMPERIAL BANK Ltd     | 2016             |
| 3.  | DFCU BANK                 | CRANE BANK            | 2017             |

Uganda, the five-year national development plan of Uganda is to propel the country to middle-income status in the next five years. The country's vision is "Strengthening Uganda's Competitiveness for Sustainable Wealth Creation, inclusive Growth and Employment." According to the news by Economic Policy Research Center, there has been a big wave of mergers and acquisitions in Uganda (Pheona Nabasa Wall, November 2020), 8 Miles a London headquartered equity fund announced that it had acquired a 42 percent stake in Orient bank Uganda and other mergers were processed EXIM BANK Ltd merged with IMPERIAL BANK Ltd in 2016, DFCU BANK merged with CRANE BANK in 2017, and I&M Holdings PLC merged 2021.

#### M&A in TANZANIA

| S/N | Bank                  | Merged /Acquired with          | Year of the deal |
|-----|-----------------------|--------------------------------|------------------|
| 1.  | Azania Bank           | Bank M                         | 2019             |
| 2.  | TPB Bank              | Elite Group of Tanzanian banks | 2018             |
| 3.  | TPB Bank              | Tanzania Women's Bank          | 2018             |
| 4.  | TWIGA BANCORP LIMITED | TPB BANK PLC                   | 2018             |
| 5.  | TPB BANK PLC          | Tanzania Commercial Bank Plc   | 2017             |

Tanzania has a regulatory commission mandated to regulate Mergers and Acquisitions matters, the Commission successfully reviewed applications for entry and exit in the markets. The review aimed at ensuring all merger applications does not harm competition. A total of 73 merger applications (an increase of 20% from the previous year) in various markets were reviewed. The Commission's revenue, which amounted to TZS 10.15 billion for the 2018-2019 financial year, came from both internal (own) and external sources. The internal sources (TZS 7.12 billion) (70.15%) were: merger application fees, case settlement fees, standard form contracts, Counterfeit Penalty Fees, and Counterfeit Investigation Fees. The external sources (TZS 3.03 billion) (29.85%): Government subvention (TZS 1.03 billion) and Regulatory Authorities (TZS 2.00 billion). These generated revenues have contributed much to the Tanzanian Growth Domestic Product/GDP. Merge marks another step towards the establishment of a single state-owned commercial bank to compete and improve the operational efficiency of the banks with an increasing number of private banks in Tanzania.



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## 2. Literature review

The topic of mergers and acquisitions (hereinafter referred to as M&A) has been attracting many researchers in the two decades. This phenomenon attracted various business operators in various sectors of the markets (Kim et al., 2019, Faff et al., 2019). Business operators engaged in mergers and acquisitions opportunities for changing technological environments to enhance their performance which is possible through the application of mergers and acquisitions (Sujud and Hachem, 2018). The positive impact of mergers and acquisitions is to strengthen current sales by joining complementary product portfolios and to vertically or horizontally integrate into new potential growth or low-cost technologies and market segments (Benito-Osorio, D. García Moreno, January 2021).

According to the Adam Hayes, (March, 2023), **liquidity** is the ability of the organization to convert assets into cash quickly and cheaply to pay for short- and long-term obligations. The merged banks should have the ability to pay for its obligations. Also **liquidity** refers to how easily or efficiently cash can be obtained to pay bills and other short-term obligations. assets that be readily sold, like stocks and bonds are also considered to be liquid. Business needs enough liquidity on hand to cover their bills and obligations so that they can pay vendors, keep up payroll, and their operations going day-in and day out. **Efficiency** (Omer Karadum, October 2022) is explained as combination of the banks and perform their operations with least expenses to maximize profits. The more efficiency the merged banks work, the less banks fail to gain profits. Magnus Wilson (2018), Efficiency is defined as the ability to do something or produce something without wasting much more in the merged banks.

Intrepid Private Capital Group (May 2019), **Capitalization** generally refers to the initial funding used to start or launch a new business. Capitalization is simply the act of funding the new business for easy of an investor to cover the related expenses. In M&A, the companies should have their own capital to run their investments for easy of performing well in the market.

Loan ratio determines the maximum amount of a secured loan based on the market value of the asset pledged as collateral (Ailing Pan, 2019). It is an assessment of lending risk that financial institutions and other lenders examined before approving a mortgage. According to (Will Kenton, 2023) explained that the merged banks have to conduct the assessment to assess the risk before proving the loan to the clients. According to (Thomas Brock, 2023) credit risk was defined as the probability of a financial loss resulting from a borrower's failure to repay a loan. According to him, merger and acquisition is tool that limit the failure of paying back the loans. According to S.M Ikhtiar Alam (2022), Acquisition of assets, the Company directly attains the assets of another company, and the company whose assets are being acquired must get the approval from its shareholders. The purchase of assets is typical during bankruptcy proceedings, wherein other companies bid for various assets of the bankrupt company, which are liquidated upon the final transfer of assets to the acquiring firms. According to Jason Fernando (2022), the share equity referred to as the shareholders' equity (Owner's equity for privately held companies) represents the total amount of the money that would be returned to a company's shareholders if all of the assets were liquidated and all of the companies were paid off in the case of liquidation. Mergers and acquisitions catalyze the increase of the shares to the shareholders as the assets of the companies are all combined.

## 3. Methodology and Data

According to Harish K. Thakur, (2021), the research design is the blueprint for fulfilling objectives and answering questions. The study descriptive research design is focused on determining the contribution of



merger and acquisitions on the performance of EAC banks by considering the factors such as liquidity, efficiency, capitalization, loan ratio and credit risk. Descriptive research attempts to describe the characteristics of a sample and the relationships between phenomena, situations, and events observed by the researcher (Thyer, 2010).

#### 3.1. Model specification

In this study modelled the cross sectional model by econometric models (H.Liu, B.McCarthy,2018), this model was developed and used to observe many subjects at the one point or period of time. Variables such as liquidity, efficiency, capitalization, loan ratio and credit risks were used in the work. According to Victoria Collin (September 2021), the Merger model are constructed to simulate the impact of two companies merging or one company taking over the other. The analysis represents the potential combination of two companies that come together via an M&A process. The model helps to understand how a merger and acquisition would be facilitated and assesses the contribution on the performance of merged banks in EAC.

H0: There is no contribution of mergers and acquisitions on the performance of EAC banks.

H1: There is a contribution of mergers and acquisitions on the performance of EAC Banks. To verify the hypothesis t-test was conducted to understand the importance of mergers and acquisitions of companies for its contribution on the performance of the EAC Banks. The test was considered at 5% significance. (H0:  $\beta 1 = 0$  and H1  $\beta 1 \neq 0$ ). We reject null hypothesis when the p-value is less than or equal to the significance level (5% or 0.005) as we have sufficient evidence to reject the null hypothesis and accept the alternative hypothesis.

## Equation by using dummy variable

 $y_i = \beta_0 + \beta_k X_i + \varepsilon_i$ Where:

- $\beta_0$  is the constant term
- PoB is the performance of the banks
- $\beta_k$  is a matrix of coefficients of the model  $[\beta_1 \ \beta_2 \ \beta_3 \ \dots \ \beta_k] k = \{1, 2, \dots, k\}$
- $\varepsilon_t = \text{Error term variable}$

First, we determine the effect for each group For control group  $(X_i = 0)$ :

$$y_i = \beta_0 + \beta_k X(0) + 0$$

$$y_i = \beta_0$$

For treatment group  $(X_i = 1)$ :

$$y_i = \beta_0 + \beta_k X(1) + 0$$

 $y_i = \beta_0 + \beta_k$ 



- **Return on equity**:  $\beta_0 + \beta_1$  liquidity +  $\beta_2$  efficiency +  $\beta_3$  capitalization  $\beta_4$  loan ratio +  $\beta_5$  credit risk (1)
- Let's replace:  $\beta_0$  is constant, X =Liquidity, Y= Efficient, Z= Capitalization, M= Loan ratio, P= credit

# Equation:

risk

• **RoE**:  $\beta_0 + \beta_1 X i + \beta_2 Y i + \beta_2 Z i + \beta_3 M i + \beta_4 P i + \varepsilon_i$  (1)

The above model was used for the analysis and discussions purpose

Regression of the equation: RoE is the response as dependent variable,

 $\beta_1$  is the first coefficient of liquidity,  $\beta_2$  is the second coefficient of efficiency  $\beta_3$  is the third coefficient of capitalization,  $\beta_4$  is the fourth coefficient of loan ratio  $\beta_5$  is the fifth coefficient of credit risk and  $\varepsilon_t$  is the Error term variable Relationship between a dependent variable and independent variable

# **3.2. Measurement of the variables**

Variables were categorized into two categories, one is a dependent variable and the second is an independent variable, in this study, efficiency, credit risk, loan, as independent variable and Asset Acquisitions, Net Profit and Share equity as the dependent variables that contribute in the achievement of the dependent variable which is economic growth.

# 3.3. Data Collection

The study assessed the contribution of M&A on the performance of EAC banks from the period of 2007-2021 with 19 selected EAC Banks. The work focused on the current literature available on M&A from the recent past to avoid the inaccuracy and poor quality of data. The cross-sectional model was used to analyze the data of M&A, and various theories were reviewed such as structure conduct performance theory, say's law and market concentration theory, and Contingency theory.

to avoid inaccuracy and poor quality of data and the data were available banks websites under the annual financial performance reports.

|               | Table               | 2: Regression | on Asset Acqu | isition |         |           |       |
|---------------|---------------------|---------------|---------------|---------|---------|-----------|-------|
|               | Asset acquisition b | oefore M&A    |               |         |         |           |       |
|               |                     |               | Standardized  |         |         | Collinea  | rity  |
|               | Unstandardized C    | Coefficients  | Coefficients  |         |         | Statisti  | CS    |
| Model         | В                   | Std. Error    | Beta          | T-test  | P-value | Tolerance | VIF   |
| Constant      | 151967045.1         | 57882036.7    |               | 2.625   | 0.013   |           |       |
| Liquidity     | 5689302.9           | 4289783.5     | 0.271         | 1.326   | 0.193   | 0.488     | 2.050 |
| Efficiency    | -3840369.2          | 2549922.5     | -0.241        | -1.506  | 0.141   | 0.800     | 1.250 |
| Capitalizatio | 0.098               | 0.082         | 0.231         | 1.193   | 0.241   | 0.547     | 1.827 |
| n             |                     |               |               |         |         |           |       |
| Loan ratio    | -5682026.3          | 3093669.3     | -0.286        | -1.837  | 0.075   | 0.842     | 1.187 |
| Credit risk   | -1.141              | 1.114         | -0.157        | -1.024  | 0.313   | 0.869     | 1.151 |



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| Asset acquisition after M&A |                |                |              |        |         |           |       |  |  |
|-----------------------------|----------------|----------------|--------------|--------|---------|-----------|-------|--|--|
|                             |                |                | Standardized |        |         | Collinea  | arity |  |  |
|                             | Unstandardized | d Coefficients | Coefficients |        |         | Statist   | ics   |  |  |
| Model                       | В              | Std. Error     | Beta         | T-test | P-value | Tolerance | VIF   |  |  |
| Constant                    | 148636918.5    | 1299143755.5   |              | 0.114  | 0.909   | )         |       |  |  |
| Liquidity                   | -688648765.9   | 600744745.5    | -0.105       | -1.146 | 0.256   | 0.510     | 1.962 |  |  |
| Efficiency                  | 29624627.3     | 79142290.8     | 0.026        | 0.374  | 0.709   | 0.904     | 1.106 |  |  |
| Capitalizatio               | 32.797         | 2.577          | 0.848        | 12.726 | 0.000   | 0.973     | 1.028 |  |  |
| n                           |                |                |              |        |         |           |       |  |  |
| Loan ratio                  | 643442178.9    | 1020298216.9   | -0.060       | -0.631 | 0.530   | 0.474     | 2.112 |  |  |
| Credit risk                 | -1.102         | 1.859          | -0.040       | -0.593 | 0.555   | 0.931     | 1.074 |  |  |

Using the linear regression analysis from SPSS data base, the number of business merger and acquisitions in regard to the asset's acquisitions after M&A were regressed to find out how they impacted on the performance of the banks. Table above show the test of variable with p-value of 0.000 and indicates strong relationship between the variables; capitalization with p-value of 0.000, the p-value is less than 0.05 which mean there is a significant relationship on the performance of the merged banks. Under the time dummy variables, which is a way of modeling and testing for the differences in intercept terms or slope coefficients with total value of -688648765.9 as liquidity with p-value 0.256, 29624627.3 as efficiency with p-value 0.709, loan ratio with slope 643442178.9 which indicate the positive impact on the increase of loan because banks were trusted after being merged, credit risk reduced and shows negative relationship with coefficient of -1.1. for these variables so, after the M&A there is no significant difference in the performance of the banks in EAC s and H0 is not accepted and H1 is accepted. While the capitalization has 32.7 as coefficient and t-test 12.726 with p-value 0.000. so, for this variable there is significant relationship in performance of the banks and H0 is rejected and H1 is not rejected.

The line equation is indicated as RoE=  $\beta_0 + \beta_1 X i + \beta_2 Y i + \beta_3 Z i + \beta_4 M i + \beta_5 P i + \varepsilon_i$ 

if we substitute, we come up with the following equation:

**Let's** replace:  $\beta_0$  is constant, X =Liquidity, Y= Efficient, Z= Capitalization, M= Loan ratio, P= credit risk RoE=148636918.5 - 688648765.9 $\beta_1$ +29624627.3  $\beta_2$ +35.064 $\beta_3$ +643442178.9 $\beta_4$ +1.549 $\beta_4$ + $\varepsilon_i$ 

## **Regression of the equation**

**RoE** is the response as dependent variable with the following independent variables

 $\beta_1$  is the first variable of liquidity,  $\beta_2$  is the second variable of efficiency,  $\beta_3$  is the third variable of capitalization,  $\beta_4$  is the fourth variable of loan ratio,  $\beta_5$  is the fifth variable of credit risk and  $\varepsilon_t$  is the Error term variable.

## Then the equation:

**RoE**= 148636918.5 -688648765.9 (Liquidity)+ 29624627.3 (Efficient)+35.064 Capitalization +643442178.9 Loan ratio-1.549 Credit risk +  $\varepsilon_i$ 

The model summary indicates that the R2 of the equation was 0.928 which means that in linear regression the model is 92% which indicate that it is able to explain the variables.

According to the Rossazana Ab-Rahim, (2012), Tobit model, regression analysis is undertaken to identify the determinants of various measures of banking efficiency. The data show that the efficiency is positively affecting the performance of the merged banks to achieve its development. Tobit model (Wanke et al.,



2016a), individually designed to handle dependent variables bounded in 0 and 1 are combined by means of stochastic non-linear programming and bootstrapping.

| Net Profits Before M&A |             |             |              |        |         |           |       |  |  |
|------------------------|-------------|-------------|--------------|--------|---------|-----------|-------|--|--|
|                        | Unstand     | lardized    | Standardized |        |         | Colline   | arity |  |  |
|                        | Coeffi      | icients     | Coefficients |        |         | Statis    | tics  |  |  |
| Model                  | В           | Std. Error  | Beta         | t-test | P-value | Tolerance | VIF   |  |  |
| Constant               | 783714496.8 | 416300096.5 |              | 1.883  | 0.068   |           |       |  |  |
| Liquidity              | -6629997.5  | 32148910.8  | -0.051       | -0.206 | 0.838   | 0.448     | 2.23  |  |  |
| Efficiency             | -838851.302 | 23022860.45 | -0.007       | -0.036 | 0.971   | 0.743     | 1.34  |  |  |
| Capitalization         | -0.170      | 0.5         | -0.065       | -0.287 | 0.775   | 0.546     | 1.83  |  |  |
| Loan ratio             | -31270235.3 | 22252014.7  | -0.251       | -1.405 | 0.169   | 0.862     | 1.16  |  |  |
| Credit risk            | -4.3        | 8.004       | -0.097       | -0.543 | 0.590   | 0.869     | 1.15  |  |  |

#### Table 3: Regression on Net Profits Before and After M&A

| Net Profits After M&A |             |              |              |        |         |           |       |
|-----------------------|-------------|--------------|--------------|--------|---------|-----------|-------|
|                       | Unstand     | lardized     | Standardized |        |         | Colline   | arity |
|                       | Coeffi      | Coefficients |              |        |         | Statis    | tics  |
| Model                 | В           | Std. Error   | Beta         | T-tes  | P-Value | Tolerance | VIF   |
| Constant              | 180666536.3 | 328024921.9  |              | 0.551  | 0.584   |           |       |
| Liquidity             | 9848808.8   | 185918747.9  | 0.011        | 0.053  | 0.958   | 0.335     | 2.986 |
| Efficiency            | -72704714.4 | 265387034.1  | -0.065       | -0.274 | 0.785   | 0.280     | 3.568 |
| Capitalization        | 0.073       | 0.663        | 0.015        | 0.110  | 0.913   | 0.900     | 1.111 |
| Loan ratio            | 165341981.8 | 279314987.2  | 0.117        | 0.592  | 0.556   | 0.402     | 2.485 |
| Credit risk           | -0.008      | 0.458        | -0.002       | -0.017 | 0.987   | 0.937     | 1.068 |

In regard to the table above, the net profits were regressed to find out how they impacted on the performance of the banks. the t-test of each variable with p-value of 0.000 and indicates strong relationship between the variables.

The line equation is indicated as RoE=  $\beta_0 + \beta_1$  liquidity  $+\beta_2 efficient + \beta_3 capitalization + \beta_4 laon ratio + \beta_5 credit risk + \varepsilon_i$ 

## **Regression of the equation**

RoE is the response as dependent variable with the following independent variables

 $\beta_1$  is the first variable of liquidity,  $\beta_2$  is the second variable of efficiency,  $\beta_3$  is the third variable of capitalization,  $\beta_4$  is the fourth variable of loan ratio,  $\beta_5$  is the fifth variable of credit risk and  $\varepsilon_t$  is the Error term variable.

if we substitute, we come up with the following equation:

Let's replace: β<sub>0</sub> is constant, X =Liquidity, Y= Efficient, Z= Capitalization, M= Loan ratio, P= credit risk



• RoE=22891538.014 $\beta_1$ +8807486.519 $\beta_2$ +.127 $\beta_3$ +11784378.850 $\beta_4$ +0.101 $\beta_4$ +47455390.765 (Constant)

Then: RoE=22891538.014(Liquidity)+8807486.519(Efficient)+0.127 (Capitalization)+11784378.850 (Loan ratio) + 0.101(Credit risk) +47455390.765 (Constant). The model summary indicates that the R2 of the equation was 0.928 which means that in linear regression the model is 92% which indicate that it is able to explain the variables. The model summary indicates that the R2 of the equation was 0.999 which means that in linear regression the fitness of the model.

|                |                         |             | Standardized |        |       | Colline   | arity |
|----------------|-------------------------|-------------|--------------|--------|-------|-----------|-------|
|                | Unstandardized C        | oefficients | Coefficients |        |       | Statis    | tics  |
|                | Share equity before M&A |             |              | P-     |       |           |       |
| Model          | В                       | Std. Error  | Beta         | T-test | value | Tolerance | VIF   |
| Constant       | 7069992.74              | 10158390.01 |              | 0.696  | 0.491 |           |       |
|                |                         | 5           |              |        |       |           |       |
| Liquidity      | 2183907.14              | 752863.882  | 0.431        | 2.901  | 0.006 | 0.488     | 2.050 |
| Efficiency     | 51674.39                | 447515.490  | 0.013        | 0.115  | 0.909 | 0.800     | 1.250 |
| Capitalization | 0.04                    | 0.014       | 0.432        | 3.080  | 0.004 | 0.547     | 1.827 |
| Loan ratio     | 137348.71               | 542943.92   | 0.029        | 0.253  | 0.802 | 0.842     | 1.187 |
| Credit risk    | -0.019                  | 0.196       | -0.011       | -0.095 | 0.925 | 0.869     | 1.151 |

| Table 4: | Regression | on Share | equity |
|----------|------------|----------|--------|
|          | Regression | on bhait | cyuny  |

|                | Share Equity After M&A |                |          |        |        |         |                         |  |
|----------------|------------------------|----------------|----------|--------|--------|---------|-------------------------|--|
|                |                        |                | Standar  |        |        |         |                         |  |
|                |                        |                | dized    |        |        |         |                         |  |
|                |                        |                | Coeffici |        |        |         |                         |  |
|                | Unstandardize          | d Coefficients | ents     |        |        | Col     | llinearity Statistics   |  |
|                |                        |                |          |        |        |         | Variance Inflation      |  |
|                |                        |                |          |        |        |         | Factor/ VIF to          |  |
|                |                        |                |          |        |        |         | measure the severity    |  |
|                |                        |                |          |        | P-     | Toleran | of multicollinearity in |  |
| Model          | В                      | Std. Error     | Beta     | T-test | Value. | ce      | regression analysis.    |  |
| Constant       | 360580771.5            | 305472411.5    |          | 1.180  | 0.242  |         |                         |  |
| Liquidity      | -122335299.4           | 141255304.01   | -0.135   | -0.866 | 0.390  | 0.510   | 1.962                   |  |
| Efficiency     | -6010570.370           | 18609015.6     | -0.038   | -0.323 | 0.748  | 0.904   | 1.106                   |  |
| Capitalization | 2.178                  | 0.606          | 0.405    | 3.594  | 0.001  | 0.973   | 1.028                   |  |
| Loan ratio     | 76534791.500           | 239906442.6    | 0.052    | 0.319  | 0.751  | 0.474   | 2.112                   |  |
| Credit risk    | -0.343                 | 0.437          | -0.090   | -0.785 | 0.435  | 0.931   | 1.074                   |  |

In regard to the tables above representing, the share equity before and after M&A were regressed to find out how merger and acquisition contribute to the performance of the banks especially on share equity. the t-test of the variables including liquidity, capitalization with p-value of 0.000 and indicates strong relationship between the variables with statistically significant. The null hypotheses are rejected for these



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variables.

Also, the results of the above table show insignificant different between Pre and Post M&A on the performance of the banks because P-value is greater than 0.005 on the variable of efficiency, loan ratio and credit risk. so, after the M&A there is no significant difference in the performance of the banks in EAC s and H0 is accepted.

The model summary indicates that the  $R^2$  of the equation was 0.809 which means that in linear regression the model is 80% which indicate the fitness of the model. Slope coefficients with total value of 2183907.147 as liquidity which indicate that there is a varying influence on bank profitability with p-value 0.006 which is statistically significant, test shows that the liquidity stand at 2.901 and standard error of 752863.882. Efficiency has 51674.396 as coefficient with p-value of 0.115 and t-test stand at 0.909 with standard error of 447515.490. the coefficient value of the capitalization stands with p-value of 0.004 which indicate that the variables are statistically significant with t-test of 3.080 and standard error of 0.014. on the variable of loan ratio, the results show that the slope 137348.71 which indicate the positive impact on the increase of loan because banks were trusted after being merged with p-value of 0.802 and t-test with 0.253. credit risk with coefficient of -0.019 with p-value of 0.925 and t-test -0.095 this indicate that risk was reduced because the merged banks had put in place strong credit risk management to maximize the bank's risk adjusted rate and maintained the credit risk exposure with the acceptable parameters.

Also, the merged banks had based on the lessons from past experience to mitigate the credit risk. Merged banks operated under the sound, well-defined credit granting criteria and they have established the overall credit limits at the level of individual borrowers and counterparties, and group of connected counterparties that aggregate in a comparable and meaningful manner different types of exposures both in the banking and trading book and on and off-balance sheet.

#### 4. Conclusion and recommendations

Upon the findings and cross-sectional model used, there was a positive correlation of M&A on the performance of the EAC merged banks with the use timeframe from 2007 to 2021. The findings show that M&A has a great contribution on the performance of the merged banks in terms of net profits, and increase value of the share equity and asset acquisitions. And the rates of return were utilized to gauge the profitability of the merged EAC banks.

H0: There is no contribution of mergers and acquisitions on the performance of EAC banks.

H1: There is a contribution of mergers and acquisitions on the performance of EAC Banks. To verify the hypothesis t-test was conducted to understand the importance of mergers and acquisitions of companies for its contribution on the performance of the EAC Banks. The test was considered at 5% significance. (H0:  $\beta 1 = 0$  and H1  $\beta 1 \neq 0$ ). We reject null hypothesis when the p-value is less than or equal to the significance level (5% or 0.005) as we have sufficient evidence to reject the null hypothesis and accept the alternative hypothesis.

The study would recommend that the commercial banks have to strongly liaise with regulatory body mandated for mergers and acquisitions to review their notifications.

Banks to protect consumers or customer's rights through standardizing its documentation to avoid customers signing some documents by not knowing what exactly the content is. First, customers requesting for loan where it seems very hard to read the terms and conditions in the contract, second, Central Bank to set up harmonized font size of the documents especially documents used by customers/consumers and Central Bank in collaboration with regulatory body mandate for consumer rights



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protection to investigate the commercial banks on compliance of these regulatory regulations.

Prior effective evaluation and analysis of the financial standing, asset quality and competitive nature of the acquired and target banks before merger and acquisitions are important to reduce the liabilities and mismatch investment failure among the banks. Top Managers of the banks should also evaluate the quality of the assets merging firm before entering into mergers and acquisitions process.

Under the Merger notification approved with conditions, the merged banks should comply with the conditions for the successful of the mergers and acquisitions.

Based on various reports reviewed on M&A applications received and handled, some reports do not indicate sectors of each notification, this study recommends that each institution should indicate sector of each M&A notification.

This study also recommends further researches on EAC region by focusing on the following sectors: energy, health, tourism, manufacturing, telecommunication, agriculture and other sectors,

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