NEAR EAST UNIVERSITY
INSTITUTE OF GRADUATE STUDIES

THE ANALYSIS OF FACTORS AFFECTING BANK PROFITABILITY: EVIDENCE OF TANZANIA COMMERCIAL BANKS.

LISA ESTRADA NGWESHEMI

MASTER'S THESIS

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ACCEPTANCE/APPROVAL

We as the jury members certify the 'master dissertation' prepared by the Lisa Estrada Ngweshemi, defended on 29/01/2021 has been found satisfactory for the award of degree of Master

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DEDICATION

My whole heart (Getrude Angel Ng'weshemi)

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LIST OF EQUATIONS

List of Acronyms

(BFIA)-Banking and Financial Institutions Act

 (SCP)-Structure-Conduct-Performance

(MoFP)Ministry of Finance and Planning Tanzania

BOT- Bank of Tanzania

GDP- Growth Domestic Product

GMM-Generalized Moment Method

INFL- Inflation rate

NBFIs -Non- Bank Financial Institutions

ROA -Return on Asset

ROE- Return on Equity

TSH- Tanzania shilling)

ABSTRACT

Only a successful and consistent banking sector can play the role of financial intermediary in the economy properly. As an intermediary in the modern economy, the bank must be profitable. This profitability is based on a variety of factors. The general aim of this study focuses on the analyzing the factors that influences the profitability of private and public commercial banks in Tanzania.by make use of annual time series internal and external data for the period 2013 to 2019.

The research uses secondary data with a constructive a Quantitative approach methodology and a generalized moment process technique to calculate the effect of the determinants. The survey consists of eleven banks, tracked for seven years and sampled annually with a substantial impact on bank profit.

The results for bank-internal variables comprise of four statistically significant variables which are capital adequacy, Asset quality, Loan composition and Cost efficiency while the rest being insignificant. Likewise, the macro-economic determining factor consist of two non-significant variables (growth domestic product (GDP) and inflation rate).

In conclusion, the empirical results showed that profitability is more explained by internal bank-specific which are variables which bank specific factors are directly controlled by the Management as the variables that strongly and significant affect bank profit than the macroeconomic factor variables which are beyond reach of management control have not been significant to profitability.

KEY WORDS:

Bank Profitability, Tanzania banking sector, commercial banks, internal and external determinants on profitability, financial organization, bank performance, Generalized Moment Method.

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

Financial organizations are structures for important economic development in each and every region, because they undertake a vital role in broadening the financial services in a country(Dawood, 2014) .Financial institutions include depository institutions, i.e. commercial banks, various saving institutions that offer statutory contributions to clients such as a (insurance companies, pension funds) as well as fund intermediaries (investment firms, mutual funds, account companies) (Mishkin & Eakins, 2012).The predominant portion of financial institutions in many nations are commercial banks.

Commercial banks are financial institutions or business firms that deal with money, they receive money from the public and provide loans and advances. Their main activities are profit- based including granting loans, accepting deposits, and other financial services, such as electronic money transfer, overdraft facilities and foreign exchange. They are key component of the financial system as they allocate funds in an efficient manner.

The profitability of banks is of the utmost importance in modern economies. Commercial banks are incurring liability costs and receiving revenue from their investments. Consequently, bank profitability is greatly affected by the management of its liabilities and assets. Moreover, numerous bank business and macroeconomic factors also affect the banks' ability to make profits.

There are several dimensions of bank performance which can be assessed. This paper concentrate on the profitability performance of private commercial banks in Tanzania. As noted bank profitability provide important information about bank stability in its competitive financial environment (Tefera, 2014 January).The profits of financial institutions is not only vital to their stability, but also for the general productive growth of the economy that promotes the nation's general development. On the other side, weak performance of financial institutions will cause financial catastrophe, as the world saw in the financial crisis of 1997 and 2008. (San & Heng, 2013).

1.2. History of the banking industry in Tanzania

The history of Tanzania banking industry can be break into the following three different stages. These are (i) the colonial era and the pre-Arusha Declaration of 1967, (ii) the post-Arusha Declaration and the pre-1991 era, and (iii) the post-1991 era.

Colonial Era and the Period before Arusha Declaration in 1967

Way back in the early 1900s the growth of the banking industry in Tanganyika began in full swing. Throughout that timespan, commercial banks were the most prevailing financial institutions. It was as at this era Tanganyika was under the German rule and two commercial banks where formed namely the Deutsche Ostafrikanische Bank and the Handelsbank fur Ostafrika which were founded in 1905 and in 1919 respectively. These banks were originally designed to serve colonial leaders and a few number of companies.

In 1918, after the First World War, the colonial British leaders took over control of the country from the Germans and three commercial banks were introduced shortly to take place of the German banks. These banks were the Standard Bank, the National and Grindlays Bank and the Barclays Bank D.C.O. Other banks from India opened branches in Tanganyika In the early 1950s likewise other banks such as Anglo-French institution well-known as the Ottoman was formed in Tanganyika. Besides that, during the 1950s, specialized Non- Bank Financial Institutions (NBFIs) began to evolve.

The colonial banking sector had characteristics that includes the following: supremacy of foreign commercial banks, these banks were unable to organize available savings sufficiently and to deploy funds to productive sectors of the economy plus these banks concentrated only in urban areas such as Dar es Salaam, Kigoma, Mwanza, and Moshi. Until the time of independence in 1961, the country's banking industry was comprised of National and Grindlays Bank, Standard Bank of South Africa, Ottoman Bank and Barclays Bank DCO. Others were Commercial Bank of Africa, Bank of India, Bank of Baroda and the National Bank of Pakistan.

Subsequently in the event of independence, the Government introduced fresh financial institutions to supplement those existing at that time. The Tanzania Bank of Commerce (TBC) was founded in the year 1965 and the Zanzibar Government established the

People's Bank of Zanzibar in 1966 to function as a government's bank (Government Banker) and at the same time provide funding to nation owned companies in Zanzibar. Other specific financial institutions had also been involved, they were established by aid from the Government and external donors to enable sectors considered to be vital for the development of the country. These institutions were established in 1962 like Agriculture Credit Agency, which later were changed to National Development and Cooperative Bank in 1964.

Post Arusha Declaration and the Period Prior to 1991

In1967, as a result of the Arusha Declaration, all privately owned commercial banks were nationalized and their assets and liabilities were combined into a single major commercial bank, namely the National Bank of Commerce (NBC), which is entirely owned by the Government.

The phase following the Arusha Declaration was exhibited by the prompt growth of non-bank financial institutions and the growth of financial institutions. It was due to the more intense involvement of the government sector in growth with the urge to raise long-term capital to fund the multiple productive sectors of the country. Tanzania Investment Bank (TIB) was founded in 1970 to offer financing for the country's productive sectors, mostly the large-scale industries. Some other non-bank financial institution was the Tanzania Rural Development Bank (TRDB), founded in 1972 to provide financing to the rural sector. During the same year, the Tanzania Housing Bank (THB) was founded to specialize in financing rural and urban housing, office and commercial buildings. Other non-bank financial institutions that had been created are the Pension Funds, the National Insurance Company, and the Postal Office Savings Bank.

At some point in this phase of the development of the financial sector, another interesting component here is that every financial institution was still managed by its own statute, whereas the Bank of Tanzania had a limited supervisory role over the financial system.

The Period After 1991

In 1988, the Government formed a Presidential Commission on Banking. The justifications for the basis of this Commission were threefold; first of all, the banking sector performed very poorly as there was Increase of losses and non-performing assets

(NPAs), It was primarily the result of loans to financially distressed public sector and cooperatives. Second, there had been a rise in subsidies to banks that have been a heavy responsibility to the government the third cause was a non-declaration of dividends distribution by the banks. Because the Government already engaged in these banking institutions activities, it was presumed to give a return on the investments. Fortunately, due to inadequate performance, government-owned banks and other financial institutions were unable to declare profits earned and pay dividends.

Regarding the Commission's recommendation, the Banking and Financial Institutions Act (BFIA) was introduced in 1991 to regulate the conduct of banking sector in Tanzania. The Act empowered the Bank of Tanzania to authorize, control and supervise banks and other financial institutions. It permitted domestic and foreign private banks to enter the market. The Act provided for supervision, control and licensing of banks and financial institutions by the Bank of Tanzania. Many of the individual laws that set up the financial institutions have been revoked and others have been revised accordingly. This was the beginning of a successful supervisory and regulatory banking system in Tanzania.

The NBC was reformed in 1997 and three different entities were created: In 1997, and Consolidated Holdings Corporation, National Microfinance Bank Limited (NBC). The Cooperative and Rural Development Bank also became a private bank in 1996, and CRDB Bank Limited was given a new name. Afterwards, this bank changed its name to CRDB Bank PLC. Since the ratification of BFIA. BFIA was modified in April 2003 to give the Bank of Tanzania powers to lay down a lower capital limit for the institutions.

The liberalization of the banking sector in Tanzania had resulted in various huge benefits. First; a major improvement in the quality of banks' assets, which result into to greater profitability; second, it allowed the sector to increased competition has resulted to greater use of Information and Communication Technology (ICT), through use of ICT, it enabled banks to deliver quality services and new products to their customers.; third, Increased lending to private sector.

As of December 31 2010, the banking sector was comprised of 42 banking institutions. The overall number of bank branches and agencies nationwide was 475, most of which were located in Dar es Salaam. The total in Dar es Salaam was 156, Representing 33%

of all departments and agencies around the world. There were 34 branches each in Arusha and Mwanza, making up 7% of all branches and agencies nationally.1.3. Problem statement

The Tanzanian banking sector decided to embark on a financial liberalization plan in the 1990s to safeguard the economic growth of the country. As a result, new merchant banks, commercial banks other financial institutions joined the market. Yet as of 2018 January, Tanzania Central Bank's outgoing Governor Prof Benno Ndulu announced it had revoked the business licenses of the five banks under decision taken to fulfil requirements of the Banking and Financial Institutions Act of 2006 concerning bank failures (non performing banks). Bank failure in the financial system may have a significant economic effect on the economy at large. Due to the extreme changing of the banking environmental conditions, banks have been put under extreme pressure.

Despite sluggish global economic conditions. The domestic financial system remained resilient, efficient and effective during 2019, which dominates provision of financial services, was sound, stable, profitable and liquid as of 2019, BOT details, Tanzania's banking sector consists of 51 licensed banks consisting of 38 local and foreign-dominated commercial banks. Currently there is a rapid increase in numbers international banks and other financial institutions, to a large extent the performance is good for five of Tanzania's eight largest banks as they raised up their profits through cutting nonperforming loans while steadily improving their financial environment (Chisimbili, 2015) which is why profitability is regarded to be among of the most crucial factors for evaluating bank performance to ensure the protection of the stability of the banking system in the country.

Moreover, components in profit determination from most of the studies carried out in the field of commercial banking profitability and its predictor have taken the significance of the study at global level. The study results for both internal and external determinants, have verified a strong correlation between determinants and commercial bank industry profitability (Issaya, 2013). However according to (Flamini et al., 2009) said that the elements of profit make a fascinating debate as they vary from time-to-time, from place to place with the essence of the bank operation (Issaya, 2013).

To sum up, numerous earlier studies have added their own contribution, most studies have been oriented towards the developed economy and less developing economies. Including Tanzania, less attention is received in various literatures on this topic. As there is no exact particular accepted determinant universally that should be certainly used to decide the profitability of a bank, as countries vary according to their financial structures, economies political systems and operating environments. In this observation, some bank-specific (internal) micro-economic factors and macro-economic factors will be analyzed, these determinants will determine what affects bank profit of commercial banks operating in Tanzania, basing on the selected theoretical literature and past empirical studies.

1.4. OBJECTIVES OF THE STUDY
1.4.1. General objective of the study
The general aim of this study focuses on the analysis of factors that influences the profitability of private and public commercial banks in Tanzania. Furthermore, the purpose seeks to investigate whether the observations gotten from previous researches and studies on profitability in other jurisdictions may be replicable in Tanzania

1.4.2. Detailed objective of the study
These research objectives are explicitly detailed below;

- Analyzing the impact of the bank internal (specific factors) on profitability for commercial banks.
- Analyzing the influence of inflation and GDP levels in the banking sector on profitability of commercial banks.
- Intended to contribute to the limited literature on the impact that the internal and external factors have on banks profit.

1.5. Hypothesis of the study
Thus the following hypotheses under investigation were developed in line with the general purpose statement. The study's hypotheses are based on the theories about the profitability of a bank established over the years by researchers in the banking field and past empirical studies related to the profitability of a bank. Using internal bank factors and other macroeconomic variables, the findings of the literature review (to be set out in the next chapter) were used to formulate expectations of factors affecting bank profitability.

The present research, therefore, seeks to test the following five hypotheses, based on the objective:

Hypothesis 1: An important association is expected exist between a bank's capital adequacy and the profitability of the bank.

Hypothesis 2: An important association is expected exist between a bank's asset quality and the profitability of the bank.

Hypothesis 3: An important association is expected exist between a bank's deposit ratio and the profitability of the bank.

Hypothesis 4: An important association is expected exist between Loan composition and the profitability of the bank.

Hypothesis 5: An important association is expected exist between a bank's cost efficiency and the profitability of the bank

Hypothesis 6: An important association is expected exist between inflation and the profitability of the bank

Hypothesis 7: An important association is expected exist between gross domestic product growth and the profitability of the bank.

1.6. Significance of the Study
The importance of this research incorporates the following: First, it expected to add to already available information to the management of private commercial banks in Tanzania by taking steps to protect their banks from various risks and maintaining a stable and safe financial system through effective and accurate balance sheet management. Secondly, it helps other researchers as a reference source for those who subsequently want to do further study on the field. At the end, it offers all stakeholders in the region the chance to acquire in-depth information about the balance sheet relationship, external factors and profitability.

1.7. The scope of Study
The scope of the analysis is limited to factors influencing the profitability of Bank of Tanzania registered private and public commercial banks in Tanzania that have data of

at least eight years, i.e. 2013-2019.It also includes the country's eleven leading private commercial banks, in terms of both branch network and market share, namely Cooperative Rural Development Bank (CRDB), National Microfinance Bank (NMB), Exim Bank (EXIM), Akiba Commercial Bank (ACB), Amana Bank (ACB), Azania Bank, Amana bank, DTB bank, Mkombozi bank, Exim bank, I&M and International commercial bank.

1.8. Limitation of the study

The major limitations of the study were encountered in the course of obtaining the published financial statement of the enlisted commercial banks of Tanzania to be used in this study. Financial annual reports of some commercial banks were missing and involves requesting the bank to make them available electronically. Precise evaluation and calculation of commercial bank profitability performance is not an easy task. Other challenges is that evaluation and calculation of commercial bank profitability performance is not an easy task. Banks tend to vary in many aspects and this may affect liquidity, debt level and profitability management responsibilities.

1.9. Structure of Research

The thesis was structured as follows: the study summary is presented in Chapter one. There is explicit review of the theoretical literature associated with the research topic in Chapter two. Empirical literature review in chapter 3.The research design and methodology for the study is discussed in Chapter 4. Chapter 5 provides detailed presentation of data used, statistical analysis, description and interpretation of results of the data. Finally, Chapter 6 provided conclusion interpretation and recommendations.

CHAPTER TWO

This literature review is intended to provide detailed information on profit including basic theories that bring about profitability of a bank, explanation of the indicators of profitability for the bank, the key external and internal factors which influence the performance of banks. Besides this chapter will demonstration what have been focused from other analysis regarding the factors influencing profitability in banks. Similarly, the study will address the intended above through a systematic analysis of scientific literature published between 1996 and 2019.

2.1. THE ROLE OF BANKS

This passage reveals the importance of commercial bank with in economy and addresses the issue behind why banks exist. To begin with, the appropriate response of why banks exist is quite simple and intuitive; the banks serve as intermediaries between those in need of funds and those in possession of excess funds. Taking a close look at this matter, a more detailed answer may be given in financial institutions are superfluous (Santos 2001), in a perfect capital market of Modigliani-Miller (1958); to be precise, through the capital market bank institutions can lend and save directly although there is no such perfect market in reality, as the management costs and transaction costs directly impact capital markets. What's more, Capital markets are strongly affected both by the Agency's problems and information asymmetry. The Agency's problem raises when there is variation of interests in creditors and savers, and in a wider sense it refers to the varying of interests between agents and principle (Jensen & Meckling 1976). In the event of financial adversity, creditors are liable to a restricted extent; meaning that they will have incentives to adjust their actions by taking more risks than savers are willing to take. Most problems are encountered when controlling the actions of borrowers as it is costly, complex and also time consuming for individuals. Therefore, financial intermediation is typically advantageous in an inefficient market as banks have lower transaction costs and monitoring than individuals as a result of their reach and economies of scale.

Again another important feature of banks is the maturity function. Banks collect short-term deposits from depositors and eventually turn those savings and investments into long-term loans to borrowers. Through maintaining some of the short-term deposits in liquid assets and cash, banks will be able to tolerate regular withdrawals from depositors.

Banks create a convenient unique services; long-term lending while maintaining the liquidity of their liabilities to depositors who would want to access their money at any time without dropping nominal value; (Schooner & Talyor 2010 cited in van Ommeren 2011). Capital markets can never accomplish the transformation of maturity with the same advantages as banks do. Individual investors may still face credit risk and liquidity cost and that cannot be diversified to the degree that banks can. Since savers do not withdraw their funds at the same time, banks keep only a small part of their savings in liquid cash. As a result, banks diversify liquidity risks over a wide pool of savers.

Banking services are much more widespread than before. Competition is increasingly and new activities frequently arise in theses modern times. The conventional form of banking, accepting deposits and extending loans is becoming less essential because the complexity of the balance sheet has enhanced, and so have the balance sheet and risk management (van Greuning & Bratanovic 2009 cited in van Ommeren 2011). In addition to integrating liquidity, cost and credit risks into banking operations, banks are progressively facing market risks (e.g. currency risk and interest rate risk). Otherwise it may be presumed that risk managers in banks carefully diversify these risks and closely track borrowers' actions in order to prevent bank failure or financial difficulties. However, the monitoring of bank conduct is important to safeguard the sustainability and soundness of the banking sector due to moral hazard issues.

2.2. PROFIT

Profit may be described as the variation over a period of time between total revenues and overall costs. Apart from this brief definition, a universal agreement exists on what profit can be defined as. It is declared that profit is a residue or price surplus over production costs and the achievement of this is by maximizing revenue and by minimizing costs.

It is believed that for several years, profitability as the highest priority in banking sector. As the shareholders of a bank are entitled to profits, it is also in their concern to significantly increase those profits. The profitability of banks is often of concern to bank management, bank supervisors' financial markets, employees and bank clients. This interest is driven by increasing associations in the banking industry, improvements in

productivity in the banking industry, regulation, technology and regional boundary breakups. (Omarini, 2016).

Profits are the very first defense mechanism against credit default losses and main source of retained earnings that are to be used as major funding source to other investments. Profits in bank act as a form of durable shields to bare further losses, those shields make sure that banks are capable and responsible to adhere financial services to households and businesses in the economy. Hence this brings about stability as financial stability matters to the competitiveness of the banks. (Doa, Ngoa, & Phung, 2020) .

2.2.1. Concepts on indicators of profitability

Profitability is an ultimate outcome of several decisions, policies and cumulative effects on asset management, debt management and liquidity. The ratios studied so far on regards to profit, provide valuable hints about the effectiveness of the activities of a firm (Ehrhardt & Brigham, 2009) . It is very essential to make profitability analysis in order to understand how a banks works and how to improve its success in the economic market. (Goddard, Molyneux, & Wilson, 2004). Among the indicators, the three best profit indicators are asset return (ROA), equity return (ROE), and net interest margin (NIM). Profitability ratio indicators for banks may be used to calculate bank profitability and strength.

ROA

According to (Doa, Ngoa, & Phung, 2020), Return on Assets (ROA) is a significant measure of an entity's profitability compared towards the total assets. The Return on assets provides investors with an understanding of how effectively management invests its capital to produce earnings. The ratio is displayed as a percentage and computed by dividing the total yearly earnings or, in other words, the total income net after interest and taxes to total assets. The Return on assets definition is as follows:

$$\text{RoA} = \frac{\text{Net Income}}{\text{Total Asset}}$$

(Kadioglu, 2017) Study observed that The Return on assets is used in the profitability studies of most banks and measures the earning per dollar of assets and depicts how

well bank management utilizes the firm's actual asset investments to create profits. The higher the return, the more efficient and productive the allocation of economic resources.

Considering the ROA ratio, therefore, investors will be aware of the idea of whether or not the company is effectively converting its assets into net income. A high Return On assets implies good performance as it indicates that the company earns more on less expenditures.

ROE

Return on Equity (ROE) is much like the Return on assets and is commonly used in several studies primarily to reflect profitability. Stockholders invest so as to earning income, and this ratio tells how well they're doing in an accounting context (Ehrhardt & Brigham, 2009).

The ROE is considered as a profitability indicator because it illustrates how much profit a company earns from the amount of funds that shareholders have invested.it is calculated and presented into percentage form by use of the following formula;

$$\text{ROE} = \frac{\textbf{net income}}{\textbf{shareholders equity}}$$

Return on Equity (ROE) also sends out a signal of business success, as it shows that the company is profiting without pouring new money into the business. The net income for the entire fiscal year is included, (before dividends were distributed to the holder of the common stock but after the holders of preferred stock) and preferred shares are not included in the equity of the shareholders.

Like Return on assets, (Kashif, 2019) Study shows the results are getting nearly similar to results from Return on Equity (ROE). Based on the study's results therefore, ROE is a good profit indicator as used in most studies such as Bojare & Romanva in 2017 ,Agu 1992 , Banks 1968 ,Goddard ,Molyneux &Wilson 2004.therefore, (ROE) findings of this study regarding the profitability determinants of banks would be useful to parties interested in findings regarding bank profitability

Net Interest Margin (NIM)

The net interest margin, (NIM), among the components that measure the bank proficiency Is a measure of the variation that exist between the interest income earned by banks or financial institutions and the amount of interest charged to their borrowers (for example, deposits) in relation to the amount of their interest-bearing assets. (Saksonova, 2014). Commercial banks in the economy deal broadly with borrowing and lending, and the net interest rate is the net gain (profit) from making loans.

The NIM is determined by the accompanying equation:

$$\text{NIM} = \frac{\textbf{Intrest revenue} - \textbf{Interest Expense}}{\textbf{Average Earning Assets}}$$

It is usually calculated as a percentage of what a financial institution gains from loans for a period of time as well as from the other assets minus interest paid on borrowed funds divided by average amount of assets from which it received profits over that period of time (the average earning assets).

Net interest margin is the difference observed between the interest income made in and the amount of interest paid to lenders. A less amount if net interest margin would therefore be viewed as a good profitability. Net interest margin (NIM) is an industry-specific ratio of profitability for banks and other financial institutions that lend interest-bearing assets. Seen to be an operative indicator for profitability in research paper.

2.3. THEORETICAL LITERATURE REVIEW

The study of commercial bank profitability causal factors has been carried out in the context of various theories. The theoretical review in this study seeks to review the market power theory (Structure-Conduct-Performance model), efficiency theory, the Portfolio theory, the signaling and bankruptcy cost hypotheses and Modigliani & Miller (1958) theory as the major theory that will be focused on in this research study. Also this part will review the most crucial micro and macro variables that influence profitability as to what other studies have suggested.

Structure-Conduct-Performance model

The very first theory that was used from past research was the Structure-Conduct-Performance model to analyze factors that affect commercial bank profitability Structure-Conduct-Performance (SCP) could well be described as the association between market structure, business conduct and business performance. It implies that the presence of obstructions to entry is a leading contributing factor for firm profitability. The higher entrance cost makes it easier for established companies to retain monopoly profits. New entrants are going to reduces the cost of collusion among firms and reduce the amount of such profits. The SCP is among the most tested hypotheses in the literature of industrial organizations nearly most of the SCP empiric studies affirmed the significance of the Structure-Conduct-Performance model.

The key idea behind this theory is that the profitability of the business is determined by the market structure that is concentration level of the industry. In other words, markets with a high level of concentration encourage companies to act collusively as a consequence, the profit of the industries will grow (Goddard, Molyneux, & Wilson, June 2004). The theory accept the fact that additional profits rises from a higher market concentration which permits the banks to intrigue cooperatively to gain huge amount of profits which emerge because of the bank's portfolio of diverse product and service that likewise builds the market share and market power and prevail to win against their immediate competitors. (Joshua, 2016)

Originally, the theory of structure-conduct-performance was commonly applied in the literature of industrial organizations to describe the profitability of a firm. (Baın, 1951) Firstly, suggested the notion that bank business profits are calculated by the level of concentration of the market. From his hypotheses 'Firms in high-seller concentration oligopolies tend to gain higher profit margins than all others. (lower concentration)' He found that the earnings of companies functioning in the industry with a greater level of concentration on average performed better than those whose companies in the industry is with a lower degree of concentration, this was supported from the period between 1936 and 1940 data from the American manufacturing industry.

(Kaufman, 1996)Conducted one of the first empirical validity checks of the Structure-Conduct - Performance model for the banking industry. The author found positive and statistical significance however not strong relationships between the output of banks operating on that market and the concentration level of the market in his research on the banking market for the period 1959-1960. On the basis of his empirical findings, he also suggested that there exists a non-linear correlation notable between market concentration and bank profitability.

A number of analytical works relating to Structure-Conduct - Performance theory research for the banking industry emerged shortly afterwards. A full survey of all these studies published before 1982 was performed by (Rhoades, 1985). In total, the presence of a positive association between market concentration and bank profitability was verified from hypotheses tested by 53 out of 65 on empirical studies. But, as in the (Kaufman, 1996) study, weak relationships were often found in most cases. Thereafter, (Demsetz, 1973) proposed a theoretical attempt to clarify this' vulnerability'. Saying banks' higher profits aren't always due to their monopolistic conduct, but also because of the high degree of efficiency, which, accordingly, leads banking institutions to holding greater market shares. In other words, the profitability of the bank is influenced by bank efficiency rather than just market concentration. This therefore led to explanation of efficiency theory.

Efficiency theory
Efficiency is a key factor for competitiveness. (Demsetz, 1973) Was the first to develop an alternate theory of the market structure-performance relationship and to propose the Efficiency hypothesis. The theory of efficiency structure made the attempts to offer an elective clarification to explain to the Structure-Conduct - Performance model. The theory contains mainly two basic approaches with it, the x-efficiency and the scale efficiency hypothesis. As applied to the banking industry, this clearly states that a commercial bank that operates more effectively compared to its rivals earns larger profits as a result of low operating costs. The Scale Efficiency concept concentrates on large scale production and neglects any dissimilarities in management and technology among the companies. Larger companies enjoy economies of scale, leading to reduce per unit cost incurred of product and hence increased profits is gained by the companies. They therefore have a high

market share leading to higher profits (Athanasoglou et al., 2006). But at the contrary, the x-efficiency explains that efficient organizations possess lower costs and are therefore quite profitable unlike the others.

 (Smirlock, 1985,)claimed that the high profits of certain banks comparative with others isn't out of collusive conduct yet rather from efficiency in activities that lead to bigger market share and henceforth profitability (the bank's market share is considered to be an efficiency measure here) and It further connoted that higher bank profitability is not due to market concentration, but rather to operational performance, resulting in low operational costs.

The efficient structure theory in the banking industry advocates that large commercial banks with stronger and more experienced management and up-to -date manufacturing technology are able to minimize their operating costs, thereby generating higher investment returns relative to smaller banks (Saona, 2011). Basically, the hypothesis is based on the assumption that if banks operate better than their rivals, they gain income, reducing operating costs that lead to good income (Onuonga, 2014). The efficiency theory also suggests that internal efficiencies influence profitability of commercial banks (Obamuyi, 2013).

 (Smirlock, 1985) Therefore, carried out an empirical analysis on this theory (the theory of 'Efficient-Structure'). Using data collected from over 2700 banks, there was no discovered connotation between market concentration and bank profitability. While there was a substantial positive connection between bank profitability and market share. Therefore, the Structure-Conduct - Performance model was found to be incorrect according to the evidence from this empirical work. While, an empiric analysis was also carried out by (Mensi & Zouari, 2010) and found that the efficiency theory showed that there was a good, meaningful association between profitability and market share.

Further empiric studies have not explained which of the above theories is better to describe the profitability of the bank: (Yu & Neus, 2005) both and Ahmad et al.(1998) confirmed Structure-Conduct-Performance theory, but (Mamatzakis & Remoundos, 2003) and (Naceur, 2003) found revealing evidence for Efficient-Structure hypothesis. However,

(Atemnkeng & Nzongang, 2011)suggests that the portfolio theory strategy was found to be the most relevant and play a vital role in bank profitability studies.

The portfolio theory
The portfolio theory method seems to be the more valid and plays a vital role in the success of bank studies (Nzongang & Atemnkeng, 2006). As per Portfolio theory, the optimal possession of every single asset in a portfolio of wealth holders is a result of strategical decisions calculated from variety of factors, for instance the rate of return of all assets kept in the portfolio, the risk variable allied with the ownership of every single financial asset and the size of the portfolio. This implies diversification of portfolios and the optimal portfolio composition of commercial banks is the product of decisions made by management of bank. Furthermore, the ability to make full profits depends on the feasible collection of assets and liabilities calculated by the management and the unit expenses encountered by the bank for the production of each portion of the assets. (Atemnkeng & Nzongang, 2011).

Modigliani & Miller (1958) theory
This theory describes the risk return trade off theory. It states that the bank's capital structure is not influenced by the bank's market value. As per the investment theory, low equity to asset ratios and high debt levels contribute to higher risk resulting into high return rates (Van Ommeren, 2011).

The Agency Cost Theory
The Agency's cost theory is founded on valuable contributions of Jensen & Meckling (1976). Agency cost theory suggests that the firm's financing arrangement may be used as a tool or mechanism for investors and managers to resolve the problem of free cash flow. (Gedajlovic & Shapiro, 2002) Agency Theory enlightens that the corporate form of organizations is demonstrated by skilled managers who have little ownership yet run the business on behalf of the owners (shareholders) who are greatly divided, which is characteristic of a typical principal-agent problem. Agency costs are non - essential costs within an organization, since the principle does not gain full independent control, the principle will mostly use its resources to maximize the value of the firm or the shareholder's capital in a way that does not benefits the agents, the agents afterward create a work environment that benefits oneself while using the company's resources.

The Agency's costs thus arise and this surely has an impact on profitability (Sajid Nazir, Saita, Ahmad, & Musarrat Nawaz, 2012).

The signaling and bankruptcy cost hypotheses
The balance sheet structure can indeed affect the profitability of banks, therefore in this sense the equity-to-asset ratio is a significant balance sheet ratio that has earned a great extent of attention. Theoretical theories presume different signs of the relationship with profitability for this ratio.

From Arrow (1972) and Spence (1973), the signaling concept emerged. The theory of signaling suggests that the highest performing or profitable firms provide positive and valuable information to the market (Bini, Dainelli & Giunta, 2011). The theory further proposes that, by transmitting new and important knowledge to the market, most profitable companies will therefore reflect their competitive strength. Information is therefore revealed by means of particular metrics or ratios, which most often calculate specific conditions under which an agency contract may be entered into (Bini, Dainelli & Giunta, 2011).

Hence, the signaling theory confirms that when a bank has an outstanding performance, managements will notify the banks achievements of the interested parties including the market so as to attract additional investments by creating several exposures which low performing banks cannot create. By raising disclosure, the majority of managers would want to earn massive rewards and a positive image that will improve the value and profitability of banks (Muzahem, 2011).

Besides that, the signaling theory is one of the theories that clarifies the relation between capital structure and profitability (Alkhazaleh & Almsafir, 2014). The theory suggests that a stronger capital structure has a massive boost for the organization's market value. (Adeusi, Kolapo & Aluko, 2014) As per the theory of signaling, bank management triggers positive hopes for the future by growing its capital. Therefore, lower debt levels definitely imply that these banks perform better than their comparable ones. Also there are possible theoretical explanations of why a high equity-to-asset ratio has a positive profitability impact. These theories are explained based on the assumptions of signaling and bankruptcy costs. (Berger 1995b) first hypothesis states that a higher equity ratio is a

positive signal to the market of the value of a bank.Such a signal cannot be obtained by less profitable banks as this will decrease their earnings further. A lower leverage in this way means that banks earn more profits better than their rivals who are unable to increase their equity.

The listed above, Structure-Conduct-Performance model, Efficiency theory, the portfolio theory, the signaling, Risk-return trade off theory, Modigliani & Miller (1958) theory are the theories most frequently used in analytical widely used in the studies that involve investigating bank profitability. Many of the writers are not limited to using only market share and concentration ratios as the potential explanatory variables of bank success in the light of the above-mentioned theories. The most common factors used in empirical research that can explain bank profitability are the level of capital adequacy, asset quality, deposit, cost efficiency and macro variables are GDP and Inflation Rate.

2.4. Internal and External Factors Concept

Eventually, there are several studies that examine the effect of factors upon on banks' profitability. Some most essential among those findings are:

The study categorized the factors into external economic factors GDP, monetary policy, inflation and interior organizational factors such as bank size, asset-reliability management and bank growth strategy. (Al-abedallat, 2017)

Most studies acclaimed that, factors affecting the profitability of commercial banks tend to vary in their relative strengths. The most relevant factors seem to be: economic and political factors, liabilities, asset employment, regulatory measures, and supervision of banks. At the other hand, the number of workers, size of bank branches and bank age are the least important factors.

2.4.1. Review on internal and external variables and their relation to bank profit.

A bank's capital adequacy is determined by the Equity to Asset (EA) ratio Capital adequacy represents the amount of bank equity required to withstand any shocks that the bank may encounter. Equity to Asset ratio is a common measure of capital adequacy, it tends to reflect the bank's ability to resist losses as well as financial risk. A bank with a high EA has a good capacity to withstand financial risk, minimize the need for external

financing, and ultimately lead to higher profitability besides, well-capitalized banks can handle the risk flexibly, reduces the risk of being insolvent and have more potential to engage into business opportunities to gain revenue (Heng, 2013).

Several studies consider a positive connection between capital and profit, (AYAYDIN & KARAKAYA, 2014) Tells that the regulators require banks to lift their capital proportionately to the amount of risk they are taking, the author's research from the perspective of method, which are designed to test profit (or risk) consistency in the study. The findings suggest that there is a substantial negative impact of a growing bank capital for profit. While, the most detailed analysis of the relationship between bank profitability on the level of capitalization is thought to be negative,(Berger, 1995) analysis based on data from the US bank unit over the 1983-1989 period showed a strong positive correlation between bank capitalization and profitability. Also,   (Kashif, 2019) (Abbas, Iqbal, & azizi, 2019) in their study found the same evidence of positive relationship for banks in developing countries, US and Asian banks systems, respectively. The most common reason given by the authors is that by raising its capital level, the bank decreases the potential costs of bankruptcy and, as a result, increases the profitability for both large and small banks.

Asset quality refers to the quality of earning assets; it is an important aspect which entails the evaluation of a firm assets. The bank's asset structure consists mainly of loans and advances, investment in treasury bonds foreign currency reserves and other assets. (Latif, Kyereboah-Colemanb, & CharlesAndoha, 2014). The asset part of a bank balance sheet focusses more on the quality of loans which delivers higher incomes for a bank.

A study by (Gul, Irshad, & Zaman, 2011) entails Loans are bank assets that indicates banks have more chances to receive income from loans return .though, The formation of loan asset disclosures the bank to more risk of default hence deterioration in asset quality and affects it's operating and financial performance. (Dr Abata, 2014) Noted that the reduction of bank asset quality arise from the negligence of loan quality is one of the top causes of the bank loss. There seems to be a general agreement that bank profitability is strongly linked to the value of the assets on its balance sheet; that is, low credit quality has a positive impact on bank profitability and vice versa.

Consequently, the level of loan loss provision (LLP) is an indication in the doubtful assets level, doubtful debt does not contribute revenue rather requires a bank to assign a substantial portion from its gross margin to provisions to compensate the anticipated credit losses thus directly profitability will be lower. The required provision to write-offs these doubtful debts either portions or all of the loans absorb equity capital of bank, As a result, banks are reluctant to take new risks to commit new loans described as a credit crunch'. (Trujillo-Ponce) After all, if the banking sector is well remunerated – that is, if prices are set in line with the risk incurred – higher risk loans should generate higher interest income, therefore with a positive impact on profitability). Among the studies which showed a direct relationship on profitability (Sofoklis, Alexiou, & Voyazas, 2009) (Athanasoglou, Brissimis, & Delis, 2008) .

The bank size of a bank is calculated by the total assets of the bank. The relationship between the size of the bank and profitability of the bank has been tested in various countries study but the outcome is unclear.

There is a positive relationship between the size of the equity spread and profitability up to a limit of around 10%, above which the curve seems to level. For bigger banks, there is a few, albeit constrained, proof of the "Inverted U" state of the relationship between the equity ratio and the return on equity hypothesized in the presentation (Khatun & Siddiqui, 2016). In situations where the underlying degree of the equity ratio is low, an expansion in this factor will in general positively affect profitability.

While the study by (Doa, Ngoa, & Phung, 2020) convinced that the size of the bank is not statistically significant, that means it does not affect the profitability of the bank. This may be because the amount of assets needed by the banking process does not clarify the profitability of the bank. On the other hand, researches from (Aladwan, 2015) final conclusion from study of Jordan commercial bank point out that size effect exists. As the analysis shows that the profitability increases as the asset size decreases. Afterward, a simple regression was further analyzed to detect further whether it's positive or negative effect of size on profitability. Yet, similar findings were also observed, as the asset size variables coefficients were initially significant, but were increasingly negative as the asset size grew.

(Medley, 2016) Reports the study performed by Regehr and Sengupta , The research concerns the size and characteristics of the profitability of a bank, and the characteristics of the markets where it operates. The writers' research covers community and national banks with actual assets of less than $100bn between 2000 and 2014. The findings support the view that there are substantial economies of scale in the banking sector, but that as banks continue to expand, the gains in profit from that in size decrease.

Cost efficiency creates a significant and consistent potential for the growth of profitability. A variety of analyses have agreed that the primary determining factor of bank profitability is cost efficiency. Previous studies have shown that cost effectiveness has a highly important impact on profitability (Garcia-Herrero, Gavilá, & Santabárbara, 2007). Advances in information, communications and financial technology have made it possible for banks to effectively deliver many of their conventional services at lower costs. The cost-to - income ratio, therefore, is a proxy for operating efficiency. (Trujillo-Ponce, 2012).

The effective use of labor is a major determinant of relative profitability, given the large scale and large disparities in wages and salaries. Staff costs are supposed to be inversely related to profitability, as common wisdom implies, since these costs decrease the bank's bottom line of overall operations. (Staikouras & Geoffrey E. Wood, 2004) . In Bourke's study (1989), the amount of employee expenditures tends to have a negative effect on banks' ROA. However, (Phil & Forbes) explains positive relationship between staff costs and overall income was discovered. As he suggests, that in the form of higher payroll spending, high profits received by companies in a controlled industry.

Moreover, (Bourke, 1985) note that the management capacity to control costs (the X-efficiency) is far more significant. Thus, the implications of these results therefore indicate that operating cost efficiency is a necessity for enhancing the banking system's profitability, as the most cost-efficient banks have the lowest cost-efficiency ratios.

Deposit implies growth of funds available for different uses, it is measured deposit to total assets. Major bank business relies on customer deposit as source of fund. The more the deposit the more loans and other opportunities in turn banks get more profit.

(Rose & Hudgins, 2008) Recommended from study of Jordanian banks, that banks should create favorable deposit accounts to enhance profitability since deposits are the primary source of funds for the bank. Hence, banks' earnings are realized primarily by the difference between the interests paid to deposit. Clear significance is revealed between deposits and returning on assets.(Al-abedallat, 2017) Furthermore, result is also consistent with past results from other researchers. They shows that deposits have significant positive effects on profitability, and therefore banks can achieve better return on assets based on deposited funds (Gul, Irshad, & Zaman, 2011) (Trujillo-Ponce). However, (Davydenko, 2010) discovered a negative impact of deposits on (IM) interest margin in Ukrainian banking as the growing volume of deposits does not manage to extract significant profits. Author also explained that Banks fail to obtain profits from deposits if there is insufficient demand of loans where they fail to gain income and due to the interest paid for particular deposit account reduces profit. Morley an evidence of market competition where a single bank will be unable to increase its deposit rates to generate revenue as explained by (Davydenko, 2010) the biggest banks gain substantial yields results from deposit. This signify that larger banks have far more market power and therefore can raise their deposit interest margins despite competition.

Loan ; Loans as bank assets indicates that banks have more chances to receive income from loans return, an empirical study by (Gul, Irshad, & Zaman, 2011) on the year 2005-2009 studies from Pakistan banks have shown significant positive relationship that loans have on the Return on Assets (ROA). As long as loan return is well anticipated by bank then higher chances for the bank to be profitable. This is consistent with other results from other studies (Doa, Ngoa, & Phung, 2020) (Joshua, 2016).According to the findings obtained from the review of the two-way fixed impact panel regression, profitability is influenced by loan returns (Bojāre & Romānova, 2017) thus reveals that loans with poor quality would yield less income while good quality loan with high returns will yield more income hence high profits.

Non-performing loans and profitability relationships have been at the forefront of most banking studies. Based at some previous studies that were made, it can be argued that the Non-Performing Loans may have a negative effect on profitability or, in other words, they

cause banks to be inefficient largely. A 55 operating banks study was made from Turkish banking sector on quarterly financial statements prepared in compliance with International Financial Reporting Standards, the increase in the non-performing loans in the Turkish banking sector is reported to decrease bank profitability and the decrease in the non-performing loans appears to increase bank profitability (Kadioglu, 2017). Non-Performing Loan therefore, when the get off hand it will have a negative impact on profitability of bank. The observed correlation involving non-performing loans (Asset quality) and profitability of the banks (Asset return or equity return) in the Turkish banking sector clearly shows how bank that Non-performing loans It ought to be servile be limited to boosting banks profitability

Investment is a strategic decision, which is an essential part of the company's proper approach. Investment is a way for the company to ensure medium and long term growth. Some scholars have established the concept of the investments over time. Minding that investment is considered, resources are invested expecting to gain benefits over a long period of time (Zamfir, Manea, & Ionescu, 2016). Furthermore, investors consider the active role towards investment for profit Investing is the conduct of undertaking funds to an opportunity in the intention of obtaining increased financial return. Noting the important aspect and role of profit in investment, Investment is the act of consciously and committedly investing money or capital to an attempt with the anticipation of attaining and procuring a supplementary, surplus and/or superfluous income or profit (Ayawei, 2015).

A panel analysis is carried out on twenty-four OECD countries to examine the effect of equity investments on the profitability of the banks. The findings show that investments in bank equity funds have a positive impact on net interest income and net income. Accordingly, the study indicates that a positive impact on net interest income is consistent with the idea that banks can take advantage of their shareholder position in non-financial companies by investing in them through lending and to profit from them. (González)After all, the positive effect on the interest margin of banks is the key advantage of bank equity investments, as they do not identify changes in the profitability of banks caused by capital losses or profits from equity transactions.

Gross domestic product; the most widely used macro-economic metrics are gross domestic product (GDP). It refers to the income produced over a period of time by production and investment in the economy of the country. GDP growth is used as a proxy indicator to indicate the macroeconomic situation. It reflects the state of the economic cycle.

Gross Domestic Product growth is anticipated to have impact on the supply and demand for loans and deposits. As economy booms, households and businesses' demand for credit or loans increases as well as bank asset quality increases. This period of the economy tends to improve the solvency of borrowers. Bank will therefore generate higher profit through returns, thus a positive effect on the profitability of banks. As the economy slows down, the GDP growth will likely slow down. Lending tends to diminish. Furthermore, banks will be associated with greater default risk and the cost of provisions tends to be higher, thereby reducing bank profitability. In brief, growth in GDP will serve as an indication of demand for banking services (Heng, 2013) .some researchers have explains the further that in periods when GDP is above normal, the output gap is positive, and if profitability is pro - cyclical, should be expected to grow. Likewise, whenever GDP is less than the trend, then should expect profits to fall. (Athanasoglou, Brissimis, & Delis, June 2005)

The inflation rate (INFL) is another significant macro-economic situation that have strong affect bank profitability. Inflation tends to affects both bank cost and bank revenues. Meanings it has affect in labor costs and an indirect effect in interest rates and asset prices on the profitability of banks. Perry (1992) indicates that the effect of inflation on bank depends upon how inflation is predicted or not predicted. Where in the expected situation, interest rates, prices and cost are readjusted accordingly. Thereby, the relationship between inflation and bank profitability indicates that the impact of inflation on profitability of banks relies on how inflation will impacts bank salaries and several other bank operating costs.(R, Mathew, & Shradha, 2006) From the study it can be concluded the authors noted that there is progressive correlation between inflation and banks profitability, as Inflation raises interest rates also rises, higher interest rates provide more opportunity for banks to generate profits. At the same time, their costs of funds also go up which reduces profits. Hence, it is important to study the impact of inflation on ROA, ROE.

2.5. Conclusion on theoretical review

It can be concluded, based on the above literature that a variety of studies have been carried out in this field. Several other research is being done to evaluate the external and internal factors relevant to the profitability of banks. The findings of these studies are relatively mixed and contradictory, but they provide a comprehensive theoretical understanding of these issues of bank profitability. The present analysis is focused primarily on a financial viewpoint, internal management factors and external environmental factors. The examination technique for impacting variables of bank profitability is for the most part empirical. Because of the distinctive determination of tests, which makes the consequences of empirical examination unique. In other words, it is obvious that the bank profitability studies have provided varied results tend to range from those factors with a positive effect to those with a negative impact.

2.6. THE CONCEPTUAL FRAMEWORK

The conceptual framework portrays the relationship that occurs between study variables. The study aims to identify the determinants of profitability of banks, thus independent variables include bank's investment, capital adequacy (level), loan returns, non-performing loans and liabilities, deposit, inflation and GDP. The dependent variable will be profitability (ROA and ROE).

Bank specific factors

Capital Adequacy $= \dfrac{\text{shareholders equity}}{\text{Total Asset}}$

Asset Quality $- \dfrac{\text{Total Loans}}{\text{Total Asset}}$

Deposit Ratio $- \dfrac{\text{Total deposit}}{\text{Total Asset}}$

Loan composition $- \dfrac{\text{Loan Loss Provision}}{\text{Net Loans}}$

Cost efficiency $= \dfrac{\text{Total operating cost}}{\text{Total income Generated}}$

Profitability

ROA

ROE

Macro- economic factors

Inflation rate

Growth domestic product
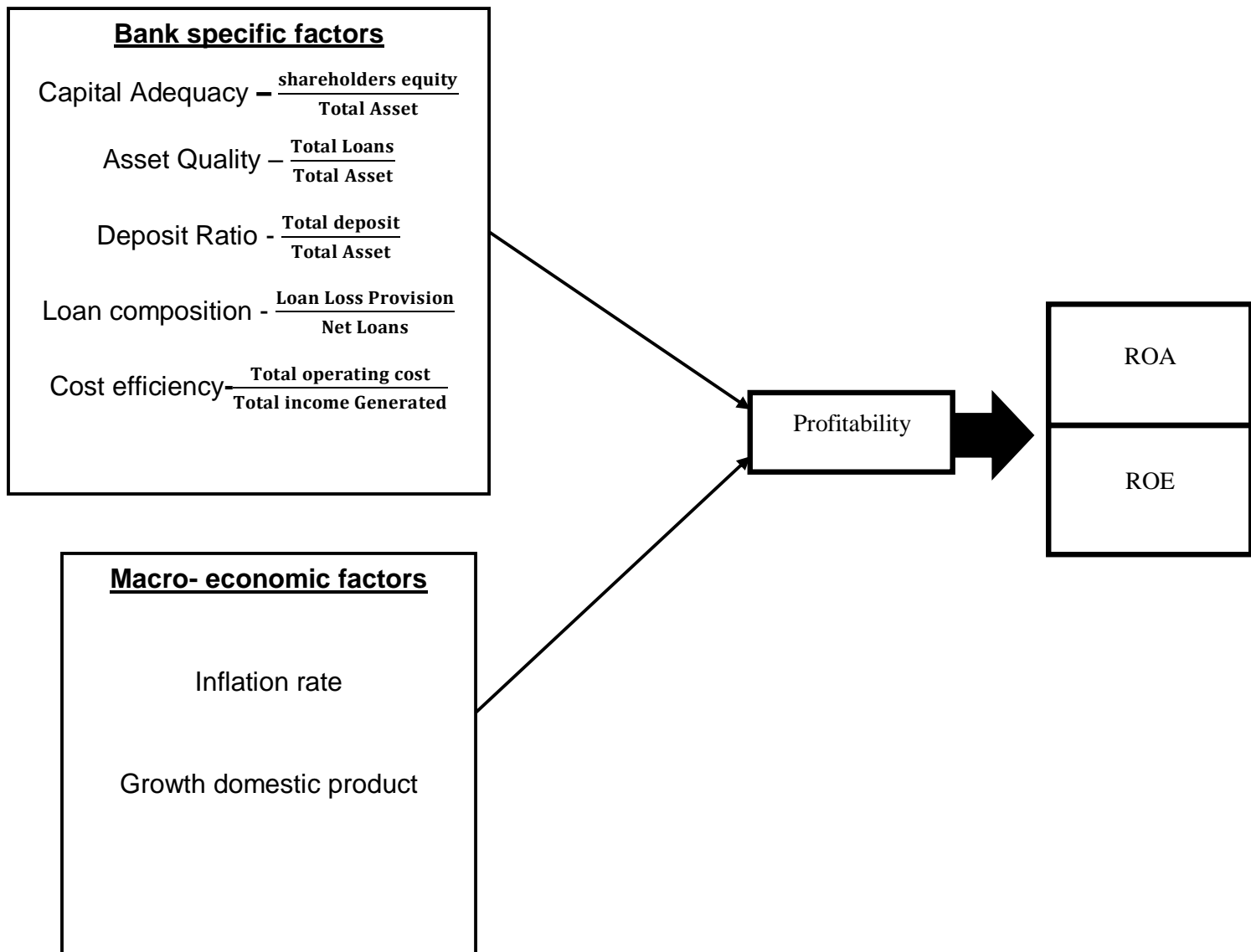
CHAPTER THREE

3.1. EMPIRICAL LITERATURE REVIEW

After reviewing the theoretical context of this research topic, it is also necessary to provide insight into the most relevant and contemporary empiric literature. The general purpose of this chapter is to review the literature chosen on a variety of aspects, such as the period and sample used, the methodology used, the conclusions drawn and their claims, which will be explained and discussed accordingly. The analysis of empiric literature, may find a reasonable gap in literature for our research to be performed. These findings from the current study can then be compared and validated by the results and views of the literature reviewed.

3.1.1. Empirical literature review from Tanzania studies

A limited number of research have been successfully executed in Tanzania on the elements of bank profitability. (Pastory & Marobhe, 2015) Conducted a study employing a set of panel secondary data from respective 18 commercial banks as sample, over the period of 2000-2011 .the study applies the CAMEL model which mean. Capital adequacy, asset quality, management capacity, earnings, liquidity and sensitivity and Sensitivity to investigate the financial performance of banks in Tanzania. Focusing on the internal and external factors, this study's outcome confirmed that capital adequacy, liquidity, asset quality and macro-economic factors (inflation and Interest rate) are critical components which reveled to have a statistical significance in influencing results on Return on Asset (ROA).

Besides that, it is shown that asset quality capital adequacy and liquidity seem to be more relevant for the profitability of the commercial banks, since the inadequacy of them will certainly result into losses. (Qin & Pastory, 2012) The research examines the profitability of local Tanzanian commercial banks in over a time frame of 10 years (2000-2009), using CRDB Bank plc, National Microfinance Bank (NMB) and National Bank of Commerce (NBC) as a case study. The aim of the paper was objectively aimed to analyze the earning position of commercial banks in the country, therefore study employed the profitability measures of commercial banks, and the evidence of performance in terms of profitability was established based on return on average asset, net interest income to average bearing assets and non-interest expenses to average assets. The utilized panel

secondary data from respective banks for the period of ten years, by using ANOVA test. the result then showed effects of capital adequacy, liquidity and asset quality on the profitability of commercial banks as the adjusted R square was 73.5 percent, which means that the level of profitability as measured by liquidity, capital adequacy and asset quality is explained in that percentage, but the R square was 81.8 percent, which means that the dependent variable, which is asset return, is well explained by the independent variables. The study noted that, with the exception of the level of nonperforming loans that have a negative impact on profitability, liquidity and asset quality have a positive effect on profitability. The adequacy of capital has also had a negative impact on profitability.

Panel data for Four Tanzanian Commercial Banks as set out in the DSE, while ROA and ROE were taken into account as two main profitability measurements (dependent variables). Results for the Return on Asset (ROA) model show that shareholders' equity in total assets have a negative impact on bank profitability while consumer deposits to total assets have a positive impact on the profitability of bank. In comparison, inflation and GDP were favorable for the profitability of the bank (Issaya, 2013) also the study concludes that equally bank internal variables and macro-economic variables are important.

3.1.2. Empirical literature review from other countries.
The study analysis undertaken by (Mwangi, Muturi, & Ombuki, 2015), adopting the panel data regression estimation, generalized methods moments (GMM estimation technique), with the secondary data with a data collection acquired from the Kenya Central Bank Supervision department reports for 2012 and 2013. The explanatory research design It was speculated that the deposits to asset ratio had no influence on microfinance institutions taking deposits. The findings of the analysis dismissed this null hypothesis at a confidence level of 95 percent. The deposit-to-asset ratio has a favorable and substantial effect on the MFIs' return on investment, with a coefficient of 0.362.

Research of the Tunisia banks by Naceur and Goaied (2008) explored the determining factor affecting performance of banks as at period 1980-2000 by adopting balanced panel data. The net interest margin and return on assets was utilized as dependent variable.

Final results indicate banks that hold large amount capital positive correlation with banks positive correlation between banks meaning Well-capitalized banking institutions minimize their capital costs by lower bankruptcy costs their customers and for themselves. In addition, they found that the size ratio is relevant but has a negative effect on net interest margins, while bank loans have a favorable and substantial impact, as the growth of the stock market has a positive impact on bank profitability. The author's finely reports that a complementary relation between bank and stock market and concentration ratio affects negatively and significantly.

Alemu (2015) looked at the predictors of profitability of eight banks in Ethiopia during 2002 and 2013. The research employed a fixed-effect regression and multiple linear regressions model to evaluate data. The study established that the relationship between efficiency of employees, efficiency of management, inflation and foreign exchange rate were statistically irrelevant. The outcomes of the research also showed that operational efficiency, liquidity risk, funding cost and banking sector development have a negative and statistically significant relation with profitability. Lastly, the scale of the capital adequacy of banks and the gross domestic product have a strong and statistically relevant correlation with bank profitability.

Birhanu (2012) study's main aim was to investigate the probable effect of bank specific factors and macroeconomic factors on Ethiopian financial bank profitability. In the study the researchers used OLS estimation method to measure the effects of both internal and external factors on average return on asset and net interest margin profitability proxy from the period 2000 – 2011. Result reveals as anticipated all bank factors affect bank profit significantly and positively with the exception of bank size, expense management and credit risk which affect the bank negatively. However, from macroeconomic determinants GDP had significant positive effect on both assets return and interest margin of the bank while interest rate policy had positive effect on interest margin only.

Athanasoglou et al. (2006) It was established that the South Eastern European Region's bank profitability determinants, which the credit institutions considered for the yeas between 1998 to 2002, indicated any application of the results. They find that all bank-specific determinants have an important influence on the profitability of banks.

The outcome of a market capitalization analysis of the performance of the top sixteen global banks shows that the bank's managers rely more on regulating internal factors when responding to external factors. The findings suggest that the performance of global banks is affected more by bank-specific influences than by macroeconomic variables as a whole. (Iacobelli, 2017) An obtained panel of data covering the period between the years 1980 to 2015 estimates multiple specifications to analyze the effect on profitability of bank-level and country-level variables. With the Fixed effects and GMM outcomes also indicate the macroeconomic metrics noted that higher economic growth and inflation spur banks' profitability The findings for the inflation expectation coefficient were mixed, however, as they revealed an encouraging but statistically important effect on the profitability of global banks from 1980 to 2007 and an adverse impact from 2008 to 2015. Inflation forecasts had an adverse effect on ROA for both years, at the 10 percent mark.

Mamatzakis and Remoundos (2003) examine the deciding factor for the viability of the commercial banks of Greece during the period from 1989 to 2000. They found that the proportion of operating productivity has an important and negative effect on Greek commercial banks through a technique focused on the Structure-Contact-Performance paradigm. However, the opposite holds for the internal factor of equity to assets ratio as it is discovered to be to be statistically significant and positive and same applies to loans to assets ratio. Furthermore, the independent variables of the status of ownership, loan loss reserves, and the inflation did not have statistical significance impact on profitability. The results also suggest that economies of scale are due to the size of the bank, while the size of the sector described by the capital supply has a substantial effect on profitability.

A sample of 32 foreign and of 26 domestic in UK banks, study is conducted by Kosmidou et al. (2004). A multivariate analysis is employed to observe to what extent the performance of foreign banks differs from local banks. From the view of the fact that domestic banks have higher stock returns, consumer & short-term lending deposits, net and interest income on overall earning assets suggests that domestic banks do better in the UK than international banks. Further studies by Kosmidou et al. (2005) form unbalanced panel data set of 224 making the total observation of 224 from the period

years from 1995 to 2002. Finding reveal most important determinant of UK banks profitability, equity to total assets which represents power strength while the bank size the cost-to-income ratio are negatively related to banks" profitability. Meanwhile results for loan loss reserves on net interest margins income ratio and liquidity ratio and on ROA results are mixed. Finally, the use of externals factors increases its explanatory power only in the case they are used individually.

Contribution by Staikouras and Wood (2004) from the study of internal and external determinants, performance of the EU banking sector that included thirteen banking markets and for the period 1994-1998.as the internal bank factors are involved the study findings reveal that higher equity to assets ratio the more the bank will gain more profit for both developed and developing countries Besides, this study used some new determinants which are legal indicators and tax variables, that have not been included in many earlier studies for examining bank profit. Moreover, findings confirm revers association between proportion of loan loss provisions, loan to assets ratio and return on asset. Thirdly, this research did not support either the efficient hypothesis or the structure-conduct performance while the external factors from the results a positive impact of the level of interest rates

Athanasoglous et al. (2008) Using unbalanced panel results, they examined the profitability of Greek commercial banks over the period 1985-2001. The capital variable, credit risk, productivity rise, operating expenses and size are the bank-specific variables they use. The empirical findings point out that, with the exception of duration, all bank-internal determinants have a major and anticipated effect on bank earnings. In comparison, persistence in earnings is found to suggest no perfectly open market structure. The findings were also unable to validate the hypothesis of structure-conduct-performance, because the emphasis on bank profitability was found to be negligible. With respect to the market variables of ownership and concentration, profitability for banks does not seem to be significant. To end with Profitability in Greece and the Balkans before and after the Financial Crisis 16 Cyclical output, macroeconomic regulation factors such as inflation and bank determinants, obviously influence the efficiency of the banking sector, although the market cycle is significant only at the upper stage of the cycle.

55 Banks in Turkey by (Eyup, Telceken, & Ocal, 2017), using quarterly data set including 1809 observation. The period from 1 st quarter of 2005 to 3 rd quarter of 2016. It is found that there is a significant, the unfavorable relationship between the performance of banks and non-performing loans, as calculated by asset return and equity return. The higher non-performing debt, the poorer quality of assets, contributes to the lower return on equity and asset return, and the lower non-performing loans, the higher quality of assets, leads to the higher return on equity and return on asset. Whereas the rise in provisions for non-performing (past due) loans to total loans negatively impacts profitability. The decrease in provisions for non-performing (past due) loans to total loans improves profitability of banks. These findings, regarding the relationship between non-performing loans and non-performing (past due) loans provision and profitability are compatible with the conclusions of the research studies by Pasiouras,Kosmidou (2007),and Abata (2014).

Moreover After reviewing the key determinants of the viability of banks in EU277, (Petriaa, Caprarub, & Ihnatovc, 2015) found The optimistic effect of an interesting and useful outcome of concentration on bank profitability in EU27. The conclusion of their empirical findings were consistent with the expected results that, Credit and liquidity risk, management effectiveness, industry diversification, market competition and economic growth all have a bearing on bank profitability, both on average asset return (ROAA) and on average equity return (ROAE).The study assessed the main determinants of banks' profitability in EU27 over the period 2004-2011.Both major groups regarded bank-specific (internal) factors and industry-specific and macroeconomic (external) factors as proxies for the profitability of banks.

Study that is carried out in China as one of the major research studies in emerging markets by Herrero"s et al. (2009). Using annual panel data over the period 1997-2004 from 87 banks, this study in particular examined why Chinese banks have low profits. The study successfully measured bank profitability by pre provision profit and ROA which are identical measures. Final findings reveal that are well capitalized, with more deposit and are more efficient become more profitable.

The performance of the Malaysians local banks and foreign banks by Lamarana (2012) were compared by their profitability. The comparative study main objective was to

examine the factors that influence profit of the 16 major selected commercial banks in Malaysia from the period of 2005-2011.the author used ROA and ROE as a dependent variable, while asset quality, capital adequacy, liquidity, bank size and management efficiency were used as independent variables. By the use of regression analysis of the panel data, the study concluded that foreign banks made more profit compared to the domestic bank.

By the use of unbalanced panel of SSA commercial banks, sample of 389 banks from 41 SSA countries and a period of 1998 to 2006, Sufian et al. (2009) study the determinants of bank profitability. From this study the return on assets (ROA) was used as a measure of bank profitability. Whereas independent variables were capital, credit risk, mixed activities, market power, bank size, inflation rate and GDP growth. The study result showed that higher returns on assets are associated with diversification of activities and large bank size while the macroeconomic variables also are found to affect bank returns. The study also suggests that macro-economic policies that encourage stable output growth and low inflation can boost credit expansion. The paper also supports a policy of imposing higher capital requirements in the region in order to make a stronger financial stability.

A case of Islamic bank profitability study involving 25 banks from 12 countries, from the period of 2005- 2010. Masood and Ashraf (2012) carried out the study on the determinants affecting Islamic banks profitability. Their main aim was to check if bank-specific and macro-economic determinants influence Islamic banks' profitability. by using the balanced panel data regression model of the selected countries of different regions, ROE and ROA were used as profitability measure while considering both micro and macro variables as determinants of profitability. The micro determinants include capital adequacy, asset quality, asset size, deposit, liquidity, operating efficiency, asset management, financial risk and gearing ratio while the macro factors being GDP growth and inflation rate. Results from the study tells that, management efficiency precisely about operating expenses management, it has a positive and meaningful impact on bank earnings. Not only has that but also, banked with greater assets size together with efficient management attain higher returns on asset (ROA).

3.2. Table 1; Summary of literature review

	SAMPLE	DURATION	METHODS	KEY FINDINGS
Eyup, K., Telceken, N., & Ocal, N. (2017)	A sample of 1809 out of 55 Turkish banks	1 st quarter of 2005 to 3 rd quarter of 2016	Panel regression analysis	It has been found that non-performing (overdue) loans on total loans have a substantial negative impact on profitability, as a result it affects bank profit by increasing amount to cover these non-performing (overdue loans) .
Iacobelli, A. (2017)	16 global banks spanning 8 countries	1980 to 2015	Fixed effects and Generalised Moment Method (GMM)	Overall, the findings provide proof that the profitability of global banks is affected more by bank specific (internal) factors more than macro-economic factors.
Mwangi, M., Muturi, W., & Ombuki, C. (2015, August).	9 microfinances	2012 and 2013	regression estimation, generalized method moment technique (GMM)	The end finding explained that higher deposit to asset ratio has a significant influence to Micro Finance Institutions
Pastory, D., & Marobhe, M. (2015).	18 commercial banks making	(2000-2011	Adopts Panel Least Squares (PLS), Fixed effect (FE),	The empirical findings of this paper indicate that The commercial banks with a

	304 total observation		Panel EGLS (Cross-section random effects)	higher level of liquidity have shown greater profitability potential. While overheads expenses and Asset quality in terms of Non-performing loans and tend to decrease the profitability, also added that Capital adequacy has mixed results
Petriaa, N., Caprarub, B., & Ihnatovc, I. (2015).	Data from 230 banks from 31 countries	2011-2016	Estimate multiple linear regression model by least squires fixed effect estimator	Found a quadratic relationship between profitability and capital ratio and that there is an optimum level of capital ratio that maximizes profitability. Similarly, a quadratic relationship between profitability and bank size. A lower level of cost to income ratio indicates a high level of management efficiency that had a statistically significant effect on profitability.
Qin, X., & Pastory, D. (2012).	3 leading commercial banks	the period of 2000-2009	Descriptive analysis	Final results in this study portrays that there is special positive influence of capital adequacy, liquidity and asset quality on profitability level as they were all significant.

Athanasoglou et al. (2006)	1098 banks from EU27 countries	2004-2011	Estimate the model with fixed effects. Simultaneously with the panel level fixed effects,	Found that bank specific determinants have significant effect on banks' profitability as expected. Cost to income, credit risk had negative impact while capital had positive but not significant on ROA.
(Erdoğan & Adalessossi, 2019)	sample consists of 86 active banks in the WAEMU'zone	2006-2014	Dynamic Panel Data Techniques, GMM technique	In regards to Cost/ Income Ratio considered as a key of efficiency ratio, the study found this coefficient is highly negative and significant to profits of the western commercial banks
(Tan & Floros, 2014)	banking data is composed of annual figures from 101 Chinese banks	2003-2009	using Seemingly Unrelated Regression (SUR)	The author presented that LLP/TL has a negative influence on ROA in Chinese banking industry Implying that banks with a higher degree of loan loss provision typically have lower profitability levels. In addition, GDP growth has been shown to be negatively and significantly related to bank profitability in China.
(Liua & Wilson, 2011)	732 observation,	2000–2009	Dynamic Panel Estimation	Final conclusion in this study noted, Inflation has a negative

	from banks operating in Japan The sample is an unbalanced panel with 4806 bank-year			effect on bank earnings, suggesting that ineffective macroeconomic management will adversely affect the soundness of the financial system. Bank profits have been shown to be positively associated with real GDP growth. As economic conditions improve investment prospects increase and banks have incentives to finance riskier investment projects.
SAMUEL ALEMU (2015)	eight banks in Ethiopia making 96 observation	2002 to 2013.	multiple linear regressions and the fixed effect regression model to analyze data	Findings of the study indicated that operational efficiency, liquidity risk, funding cost and banking sector development have a negative and statistically significant relation with profitability of bank. Also the relationship between efficiency of employees, efficiency of management, inflation and foreign exchange rate were statistically insignificant

Amdemikael Birhanu (2012)	96 observation from study of 8 commercial banks	period 2000 – 2011	used OLS estimation method	Result reveals as anticipated all bank factors affect bank profit significantly and positively with the exception of bank size, expense management and credit risk which affect the bank negatively. However macroeconomic determinants GDP had significant positive effect on both asset return and interest margin of the bank while interest rate policy had positive effect on interest margin.
(Iacobelli, 2017)	of the top sixteen global banks according to market capitalization	spanning the period 1980 to 2015,	the Fixed effects and GMM	Results show the macroeconomic indicators noted that higher economic growth and inflation spur banks' profitability. Inflation showed a positive but statistically significant impact on global banks' profitability over the period from 1980 to 2007 and a negative impact from 2008 to 2015 on ROA for both periods.
Kosmidou et al. (2005)	total observation of 224 from	period years from	A multivariate analysis	Finding reveal most important determinant of UK banks profitability, equity to total

	sample of 32 foreign and of 26 domestic in UK banks	1995 to 2002		assets which represents power strength while the bank size the cost-to-income ratio are negatively related to banks" profitability.
(Eyup, Telceken, & Ocal, 2017)	55 Banks in Turkey using quarterly data set making 1809 observation.	The period from 1 st quarter of 2005 to 3 rd quarter of 2016		found that there is a significant, negative relationship between non-performing loans and bank profitability which is measured by return on equity and return on asset.
Herrero"s et al. (2009)	from 87 banks, in Chinese banks	the period 1997-2004	Using annual panel data	Final findings reveal that are well capitalized, with more deposit and are more efficient become more profitable.
, (Petriaa, Caprarub, & Ihnatovc, 2015)	Banks from EU27	period 2004-2011		Found an interesting and valuable result of the positive influence of concentration on bank profitability in EU27, credit and liquidity risk, management efficiency, the diversification of business, the market concentration and the economic growth have influence on bank profitability both return on average assets (ROAA) and the return on average equity (ROAE).

Lamarana (2012)	16 major selected commercial banks in Malaysia	from the period of 2005-2011	use of regression analysis	author used ROA and ROE as a dependent variable, while asset quality, capital adequacy, liquidity, bank size and management efficiency were used as independent variables.the study concluded that foreign banks made more profit compared to the domestic bank.
Sufian et al. (2009)	sample of 389 banks from 41 SSA countries	period of 1998 to 2006,		The study result showed that higher returns on assets are associated with diversification of activities and large bank size while the macroeconomic variables also are found to affect bank returns. The study also suggest that macro-economic policies that encourage stable output growth and low inflation can boost credit expansion.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction

This chapter focuses mostly on approaches that have been implemented in the analysis to achieve the research objectives. It comprises of the research design implemented to evaluate the financial performance determinants, the type of data being used and the sampling design used to capture the data, the data collection techniques used, and the parameters of the model.

4.2. Research Design

The study sought to examine determinants of banks' profitability, the descriptive research design is employed. A descriptive design because, It is a theoretical approach to design that is created by the compilation, assessment and display of collected data. It therefore enabled this research to provide information into how and why the research was performed. Descriptive design often guarantees an absolute clarification of the situation and ensures that there can be no prejudice in the collection of data and ensures that the collection of data from a significant target population is cost-effective (Tefera, 2014 January). A descriptive model was thus able to determine the factors affecting the profitability of commercial banks in Tanzania.

4.3. Population of the Study

Here the population is the entire group of people or subjects with identical characteristics that the researcher seeks to understand and generate statistical inferences or conclusions. Population of this study comprised of all the 53 Tanzania As of 31/12/2019, the commercial banks. This demographic has the capacity to provide appropriate knowledge on the determinants of the viability of banks.

4.4. Data source and Collection method

Secondary data has its own advantages, according to Stewart and Kamins (1993), quoted in Li Yuqi (2007). Compared to primary data, secondary data contains higher quality data, the feasibility of clinical study output and data protection. This means that secondary data usually provides a source of data that is both permanent and accessible in a form that can be verified reasonably easily by others. Furthermore, the reliability of the data improves. Secondary data were used to analyze the determinants of bank profitability in

this analysis. Data for bank relevant factors is derived from audited financial statements, in other words from the income statement and balance sheet of the respective banks. Thus, the external factors, the data was gathered from the Ministry of Finance and Planning of Tanzania and the World Bank, but the Bank of Tanzania (BOT) and the respective commercial banks collected data on bank-specific causes.

4.5. Sampling Design

This study comprises all banks operating in Tanzania as a population of the study. On the contrary, only banks that display their audited financial report for the public were taken since those banks provided the information needed for the research and those that did not display their audited reports where not taken. Because of this form 53 banks operating in Tanzania, using an objective sampling method, this analysis involved only eleven commercial banks, two of which are state owned and the rest are private commercial banks. So, this research study made used of panel data of eleven commercial banks for seven years making 77observations.chosen banks listed below

Tab2; LIST OF COMMERCIAL BANKS

	BANK NAME
1	CRDB BANK PLC
2	NMB BANK PLC
3	AMANA BANK
4	EXIM BANK
5	NATIONAL BANK OF COMMERCE
6	DIAMOND TRUST BANK
7	AZANIA COMMERCIAL BANK
8	MKOMBOZI COMMERCIAL BANK
9	INTERNATIONAL COMMERCIAL BANK
10	AKIBA COMMERCIAL BANK
11	I & M BANK

4.6. Data Analysis

The objective of this study is to analyse the determinants of commercial banks in Tanzania. The report uses panel data from eleven banks to accomplish this aim. For seven years, making N (number of groups > T (time span). By using EVIEWS version10 software, the data obtained from the panel was analyzed using descriptive statistics, correlation matrix and Difference GMM.

Panel Data Analysis is a method of estimating relationships through cross-section time series. ((H.Greene, 2003) There are many benefits of employing panel data analysis as stated by (Hsiao, 2007), but mostly because we can obtain more accurate inference as Panel data usually includes more degrees of freedom as well as more sample variability, Which can be interpreted as a T = 1 column, or time series data that is a N = 1 panel, henceforth improving the quality of econometric estimates. The general model of balanced panel estimation is written as follows

$$Y_{it} = \beta o + \beta 1 \, xit, 1 + \beta xit, 2 + \cdots \beta k xit, k + Vit \qquad \text{..... (I)}$$

Where

i is the unit of observation x_{it} (explanatory variables)

k signifies the kth explanatory variable

t signifies the period of time

β_k signifies the coefficient of each explanatory variable

β_o signifies the intercept

V_{it} signifies the error term

$$\mathbf{V_i = a_i + u_{it}}$$

V_i is the disturbance with U_{it} the idiosyncratic error and a_i the unobserved bank-specific factor effect.

$$\mathbf{Y_{it} = \beta_o + \beta_1 \, x_{it} + \beta_2 \, x_{it} + a_i + u_{it}} \qquad \text{.... (ii)}$$

The explanatory variables *Xit* above are grouped into two, *Xit*k with superscripts β_1 and β_2 denote internal bank- specific factors and macroeconomic factors respectively.

In addition, bank profits display a tendency to linger over time, indicating informational opacity or vulnerability to macro-economic shocks, hindering market competitiveness to the point that they are strongly correlated with the explanatory variables but orthogonal to U_{it} (Berger *et al.*, 2000). Therefore, different GMM panel method is adopted.

Different GMM Panel Method

Generalized Methods of Moments (GMM) is a panel data estimate used most for controlling endogenity. The development and implementation of the (GMM) Generalized Methods of Moments estimation for panel data has been highly popular in recent years. As stated in empirical growth literature GMM estimates have become especially common, The Arellano and Bond model, is the initial estimator and also referred to difference GMM. The (Arellano & Bond, 1991) estimator in particular originally benefited from widespread use in numerous topics.

Our general estimated equation (i) is estimated by fixed effect in which it carries two assumptions with it. Firstly a_i is the observed heterogeneity and it is correlated with the explanatory variables $X_{it,k}$, also idiosyncratic error U_{it} is independent of explanatory variables. Therefore, unobserved heterogeneity a_i is eliminated or corrected by using first difference GMM. The first difference is the difference between one period to the next, that is if y_t denotes value of y at time t, then first difference will equal to $y_t - y_{t-1}$. Y_{t-1} is one period lagged. Therefore, our equation (ii) will be lagged by one period as follows

$(y_{i2} - y_{i1}) = \beta_1 (x_{i2,1} - x_{i1,1}) + \ldots \beta_k (x_{i2,k} - x_{i1,k}) + (u_{i2} - u_{i1})$

The first difference transformation has eliminated both individual effect and the constant term making.

$\Delta y_{it} = \beta_k \Delta x_{i,k} + \Delta u_i$ …… equation (ii)

Generalized Method of Moments (GMM) is seen to be more efficient estimates of the panel data model. As the DPD (Dynamic Panel Data) approach is generally considered by the work of Arellano and Bond, Who popularized the work of (Holtz-Eakin, Newey, & Rosen, 1988).

Test for Serial Correlation

Ignoring serial correlation in the error structure may lead to biased estimates outcomes that can initiate inaccurate interpretations. The Arellano and Bond (1991) test, precisely the AR (2) test has been commonly used in empirical applications to check for serial

correlation in idiosyncratic errors that is the validity of the model specification. The AR (2) test examines for the second-order serial correlation in the error structure differences. The hypotheses for Arellano-Bond test are as follow:

H_o - The Arellano-Bond autocorrelation test has a null hypothesis of no autocorrelation and is applied to separated residuals.

- The AR (1) system test typically denies the null hypothesis in the first variations.
- The AR (2) test for first variations is more relevant because it can detect degrees of autocorrelation. Studies have introduced the use of conventional moment conditions if the AR(2) test is not rejected (the error structure is presumably serially uncorrelated).

Model Specification

This study used explanatory variable which are capital adequacy, cost efficiency, asset quality, deposit ratio, loan composition, inflation rate and GDP while the dependent variables are ROA and ROE. As stated in Brooks (2008), the panel keeps the same individuals or items and checks each of them overtime. The model for panel data is described in this study as adopted in the following equation.

$Y= KY_{it-1}$ ln (CA)+β_2 ln(AQ)+β_3 ln(LCO)+β_4 ln(CE)+β_5 ln(DER)+β_6 ln(INF)+β_7 ln(GDP)+μ_{it}

Where:

EQUATION

Y= provides the indicator of profitability, i.e. the return on assets (ROA) or the return on equity (ROE), Y_{it-1} denotes one period lagged profitability measure (ROA_{it-1} or ROE_{it-1}).

K=speed of adjustment to equilibrium

CA– natural logarithm of Capital Adequacy

AQ– natural logarithm of Asset quality

LCO– natural logarithm of Loan Composition

CE– natural logarithm of Cost Efficiency

DEP– natural logarithm of Deposit ratio

INF– natural logarithm of Inflation rate

GDP – natural logarithm of Growth Domestic Product

μ_{it} =error term

VARIABLES DEFINITIONS AND THEIR EXPECTED SIGHNS AND HYPOTHESES

Capitalization Adequacy: This is a useful indicator used to explain the profitability of banking institutions. This variable is calculated as the proportion of

$$= \frac{share\ holdres\ equity}{total\ Assets}$$

Capital adequacy explains the adequacy of the amount of equity that can withstand shocks which firm may encounter in the immediate future. Therefore, expected effect of the capital adequacy on bank profitability is positive. First, (Berger, 1995) notes from the assumption of the expected costs of bankruptcy, For a financial institutions with capital below its equilibrium ratio, the expected costs of bankruptcy are relatively high and the increase in capital ratios increases the intended profits by lowering interest costs on uninsured debt. From this context, (Athanasoglou, Brissimis, & Delis, 2008) argues that a positive impact can result from capital serving as a safety net in the event of adverse outcomes. There are other more theories that have been supported to explain this direct relationship between capital and profitability Therefore, a direct positive association we expect between capital adequacy and profitability giving us this hypothesis.

Hypothesis1: There is a positive relationship between the capital adequacy of a bank and the bank's profitability.

Asset Quality: This is a variable that can be used to display the percentage of bank assets to total debt in a year and still a liquidity indicator. This ratio shall be determined as

$$\frac{Total\ Loan}{Total\ Asset}$$

Given that interest income encompasses a substantial portion of bank revenue, it is expected that a higher ratio of (TL/TA) loans to assets, banks will be expecting to get profits and from loan interest income, thus the ratio will have a positive effect on bank

profits. However (Dr Abata, 2014) noted that loans to assets demonstrates the ability of the bank to meet the demand for loans by using the total asset kept by the bank, which means (indicates what percentage of the bank's assets are tied up in the bank's loans) and that there is more risk of default which may deteriorates the quality of the asset and affects its operational and financial performance. (Dr Abata, 2014) Mentioned that a decrease in the quality of bank assets due to negligence in the quality of loans which is one of the key causes of bank losses. There seems to be a general consensus that bank profitability is closely related to the value of the assets on its balance sheet and that the following hypothesis have to be checked.

Hypothesis2 (o): There is a positive association between asset quality and bank profitability.

Hypothesis2 (1): There is a negative association between asset quality and bank profitability.

Deposit Ratio; the more the deposit the more loans and other opportunities in turn banks get more profit. Banks create favorable deposit accounts to enhance profitability since deposits are the primary source of funds for the bank.it is measured by the following ratio

$$\frac{Total\ Deposit}{Total\ Asset}$$

Although most reviewed literature does not pay attention to the role of deposit, deposits could be a significantly influential factor to determine the profitability.

Hypothesis 3: There is a positive association between the deposit ratio of a bank and the bank's profitability

Loan Composition; this indicator is among the most relevant metrics that has been used in research to demonstrate the risk and quality of the loan and how it affects the bank. This measure represents wellness of the bank loan portfolio, i.e. credit quality. The variable of loan composition will be defined as the ratio of

$$\frac{Loan\ Loss\ Provision}{Net\ Loans}$$

As expected more loans could lead to more interest being paid, which would improve profitability. However, these additional loans generated on the other hand have an influence on lending banks as they expose the bank to credit risk, which is the risk that a loan or an asset will become irrecoverable in the event of non - payment. Due to the high probability of default that could lead to higher loan loss provisions set aside this then reduce amount or profit earned. Credit risk have rippling impact that leads to insolvency. Therefore, for this ratio LLP/NL we expect an inverse relationship with Profit because the more LLP means more amount set aside by the bank to cover bad loans and lowers profit of bank and vice versa. The results supported by (Trujillo-Ponce) (MBEKOMIZE & MAPHARING, 2017)the hypotheses formulated is

Hypothesis 3: There is a negative association between the loan composition of a bank and the bank's profitability

Cost efficiency; previous studies have shown that cost effectiveness has a highly important impact on profitability. Over the past decade, from a variety of analyses have agreed that cost to income ratio as a proxy of bank operational efficiency profitability.to this end, Cost efficiency of a bank is then measured as

$$\frac{total\ operating\ cost}{total\ income\ generated}$$

The expense to Income ratio can be defined as the operating costs divided by the total revenues obtained. Employee wages and administrative expenses are the core components of operational costs. It is used to quantify the effect of cost effectiveness on bank profitability, numerous studies have confirmed a highly important negative effect of cost efficiency on profitability e.g. Garcı´a-Herrero et al., 2009. This would mean that the cost-efficiency ratio of banking should be the lowest to improve profitability. As a result, the negative correlation between operating costs and profitability is expected to imply that higher operating costs mean lower profits and vice versa. However, this probably not be the situation as increased operating costs may as well represent greater volumes of banking operations, giving the following assumptions to be checked.

Hypothesis5 (o): There is a negative association between the cost efficiency of a bank and the bank's profitability

Hypothesis5 ($_1$): There is a positive association between the cost efficiency of a bank and the bank's profitability

Inflation rate; Revell (1979) Introduces the relationship between inflation and bank profitability, claiming that the effect of inflation on profitability of banks varies depending on how inflation affects the bank's stuff wages and other operating costs. The findings on the effect of inflation on bank profitability are however mixed. This variable is determined by the actual change of year that is Inflation is measured by consumer price index (CPI) and has a positive significant impact on return on equity for domestic commercial banks (Frederick, 2015) therefore expect a direct relationship amongst the variables. The outcomes are consistent with the findings of (Athanasoglou, Brissimis, & Delis, 2008) *et al* (Trujillo-Ponce). Inflation, however, continues to be serious and adversely correlated with bank profitability. (R, Mathew, & Shradha, 2006) Tariq *et al.*, 2014). Therefore our hypotheses will be

Hypothesis6 (o): There is a positive association between inflation and bank profitability.

Hypothesis6 ($_1$): There is a negative association between inflation and bank profitability.

GDP growth. It depicts the actual state of the economic cycle. It is used as a proxy indicator to indicate the macroeconomic situation. This is determined by the average real change in gross domestic product (GDP per capita for the nation for which the bank is based on a per capita basis. Economic growth (wealth) is thought to have a favorable positive effect on bank profitability, by growing demand for loans, lowering default rates, and allowing banks to demand extra for services. Gross domestic product growth is expected to accelerate demand for banking services (Liua & Wilson, Competition and Risk in Japanese Banking, 2010). Therefore, we expect positive association this correspond with results from (Zampara, Giannopoulos, & Koufopoulos, 2017), (Francis, 2013)

Hypothesis 7: There is a positive association between gross domestic product growth and bank profitability.

TABLE 3: EXPECTED SIGNS

Type of Variables	variables	measure	Expected impact
Dependent variable	Return On Asset Return On Equity	Net profit/ Total assets Net profit/Total equity	
Independent variable (internal)	Capital adequacy Asset quality Loan composition Cost efficiency Deposit	Equity to Total assets Total loans to Total Assets Loan Loss Provision to Total gross loans Total operating cost to total revenue generated Deposits to Total assets	+ (+)(-) - - + +
Independent variables (external)	Inflation rate GDP growth	Consumer Price Index Real Gross Domestic Product Growth per capital	+/- +

CHAPTER FIVE

ANALYSIS

The research methodology adopted with in this research has been obtainable in the previous chapter. Therefore, the objective of this chapter is the study and interpretation of the results of the data generated from the method used in this report. Consequently, this chapter is structured into three segments. The first section 5.1 will present the output of the research study from descriptive statistical findings as well as the correlation matrix between variables. Thereafter will be accompanied by section 5.2 which will present research hypotheses as presented in the previous chapter. Finally, Section 5.3 will address the findings of the analysis based on a difference GMM (dynamic panel model).

5.1 Descriptive Statistical Results Analysis and Correlation Matrix

5.1.1. Descriptive statistic

The descriptive statistics of the variables used dependent and independent in the analysis of sample banks are described in this part. ROA and ROE were the dependents, variables in the analysis, while capital adequacy, asset quality, loan composition, cost efficiency, deposit ratio, inflation rate and real GDP growth were the independent variables. Thus, for each contingent and explanatory variables, the overall observation was 966 (panel data of 11 commercial banks for 7years). Table 4 displays the mean, standard deviation, minimum and maximum values for survey banks for dependent and independent variables over the period between 2013 and 2019.

Table 4; DESCRIPTIVE STATISTIC FOR VARIABLES

	DEPENDENT VARIABLES		INDEPENDENT VARIABLES						
			Bank specific variables					Macro variables	
	ROA	ROE	CA	AQ	LCO	DEP	CE	INF	GDP
Mean	0.01465	0.13829	0.16735	0.61652	0.06616	0.94622	0.76811	5.29181	52,500
Median	0.01216	0.14038	0.14038	0.557302	0.05478	0.79749	0.75119	5.31871	50,000
Maximum	0.06034	0.26079	1.41003	5.343132	0.22496	7.50654	2.60494	7.87072	63,200

Minimum	-0.01635	0.00970	0.01437	0.059511	0.00358	0.10551	0.30526	3.46428	45,700
Std. Dev.	0.01362	0.03755	0.17740	0.555378	0.05109	1.02444	0.33222	1.42494	5,790
Skewness	0.97009	-0.35538	5.90022	8.141900	0.87654	5.90245	2.20792	0.29497	0.6882
Probability	0.00000	0.00000	0.00000	0.000000	0.00662	0.00000	0.00000	0.29611	0.0178

Source: research data

The ROE which is measured by the net income divided by the total equity has a mean value of 13.8 percent. This ensures that, on average, the sample banks gained 13.8 percent of the overall net income. Since ROE reflects the income generated from equity investment of bank the higher the ROE the higher the bank's earning and more and more stable the bank becomes. The sample commercial banks in Tanzania therefore had relatively good performance during the study period when they are measured by ROE. ROA is ultimately determined by Net Income divided by Total Asset, which portrays an average value of 1.46 percent. This reveals that the sample banks on average earned a Net Income of 1.46 percent of the total asset. Since ROA stipulates the company management competence in generating Net Income from all the resources of the institutions, the higher ROA demonstrates that the company is more effective in utilizing its assets.

ROE maximum value was 0.26 and the minimum value was 0.009. Implying that the most profitable bank among the sampled banks gained 0.26 cents of net income for a single investment made in 1 TSH from the bank shareholders' equity. From the other hand, the least profitable bank of the sampled banks made a loss of 0.009 cents for each 1TSH invested from the company's shareholder equity. The maximum value of ROA was 0.06 while minimum value is -0.01. That means, among the sampled banks the most profitable bank earned 0.26 cents of net income for every single TSH invested in from firm total asset. On the contrary, the least profitable bank of the sampled banks incurred – 0.01

cents of loss for each TSH invested from the firm total assets and this loss this loss could be attributed by low control of expense or high operating costs. This then triggers poor performance. This means that, the higher costs of operation adversely impact bank profits. These results show profitability index for Tanzania commercial banks but little profit where made. Moreover, ROA has positive skewedness of 0.97 which is moderately skewed while ROE -0.35 skewedness, ranging from -0.5 and 0.5 ROE distribution is approximately symmetric

The cost efficiency ratio indicates to have mean of 76.8% with maximum value range from 2.60 and minimum value of 0.30. This clearly explains the banks in Tanzania have poor cost management and a large part of the bank profit is being swallowed by operating expenses. The profits could also be affected by interest paid on customer's deposit as the deposit ratio shows a mean value is 94.6% meaning banks receive a large number of deposits. Deposit ratio has a maximum value of 7.50 and 10.5 minimum value.

Loans to the total asset ratio have an average value of 61.6 percent in terms of asset quality factors, which appears to be high. This ratio, with a maximum value of 5.34 and a minimum value of 0.05, indicates that the ability of most banks to make loans from their assets is greater.

The capital adequacy ratio displayed a positive skewness and a mean value 16.7% with a maximum value of 1.41 and minimum value of 0.014 this result may imply bank do not follow minimum capital requirement during the time of the study as the values are relatively low. Also, the mean value of this result imply bank used most of their finances from equity rather than debt funding which lowers bankruptcy potential but rather exposes the banks to better performance during the time of the study. The real GDP growth and inflation rate have a mean value of 52,500 and 5.29 percent, respectively, with regard to external variables. In addition, inflation has a higher standard deviation of 1.42 for all external variables. This points out that inflation in Tanzania was not stable during the period of the study.

5.1.2 Correlation Analysis

Table 5 Contains information about the level of the correlation between (dependent and independent) variables used within the correlation test. The matrix reveals that generally,

the correlation obtained between bank-internal variables is really not strong, thus indicating that the problems of multicollinearity are not extreme just few variables are highly correlated. Kennedy (2008) states that when correlation is above 0.70, then Multicollinearity will be a problem which is not that much of a problem here.

Table 5; CORRELATION BETWEEN DEPENDENT AND INDEPENDENT VARIABLES

Source: research data

Correlation significant at 0.01 level (2 tailed); Correlation significant at 0.05level (2 tailed)

Probability	ROA	ROE	AQ	LCO	DEP	CE	INF	GDP	CA
ROA	1.000000								
ROE	0.149197	1.000000							
Sig. 2 tailed	0.1953	-----							
AQ	-0.248541	0.014403	1.000000						
Sig. 2 tailed	0.0293	0.9011	-----						
LCO	-0.161041	0.343805	-0.125700	1.000000					
Sig. 2 tailed	0.1618	0.0022	0.2760	-----					
DEP	-0.132234	-0.004620	0.645620	-0.090630	1.000000				
Sig. 2 tailed	0.2516	0.9682	0.0000	0.4331	-----				
CE	-0.026082	0.044817	-0.085181	0.264057	-0.072425	1.000000			
Sig. 2 tailed	0.8219	0.6987	0.4614	0.0203	0.5313	-----			
INF	0.132609	-0.202131	-0.191060	-0.126068	-0.205604	-0.030281	1.000000		
Sig. 2 tailed	0.2503	0.0779	0.0960	0.2746	0.0728	0.7938	-----		
GDP	-0.085625	0.189058	0.142699	0.144232	0.226761	0.076908	-0.882472	1.000000	
Sig. 2 tailed	0.4590	0.0996	0.2157	0.2108	0.0473	0.5062	0.0000	-----	
CA	-0.214457	0.238847	0.788788	0.045116	0.523137	-0.039430	-0.159697	0.091727	1
Sig. 2 tailed	0.0611	0.0364	0.0000	0.6968	0.0000	0.7335	0.1653	0.4275	---- -

This tables show correlations among variables, where variables show positive and some show negative and significant correlation. GDP coefficient show a high negative and significance at 1% level relationship with Inflation ($r = 0.88$, $p = 0.000$). However, GDP and deposit ratio are found to have a positive correlation and significant at 5% level. ($r =$

0.226, p= 0.04) this positive correlation could be a result of economy growth boosting financial services. Cost efficiency (total cost/total generated revenue) also had a positive correlation at 5% level with loan composition (loan loss provision/total loan) with (r= o.2645, p = 0.02).

A positive correlation between capital adequacy (shareholder's equity to total asset) and ROE is found. The correlation is significant at 5% level (r=0.238, p=0.03), from this the result shows that for each equity invested there is an increase in asset. Moreover, capital adequacy and asset quality (total loan to total asset) are also are highly positively correlated as highly significant at 1% level. (r= 0.78, p=0.00) this shows that large amount total asset is financed by shareholder's fund while the other large portion of the asset is financed from customer deposit as the results show a medium positive correlation which is highly significant at1% level (r=0.523, p=0.00).

Asset quality (total loan to total asset) has shown to have negative correlation with ROA which is significant at 5% level (r = -0.248, p = 0.02). This indicate that banks listed have poor loans which may affect the returns on asset ROA. Also a very high and positive correlation is observed between deposit ratio and asset quality which is significant at 1% level, (r=0.645, p= 0.00) which could mean that bank make more loans as a result of increase in customer deposit.

Furthermore, the loan composition ratio (loan loss provision to total loan) and ROE have a positive correlation which is highly significant at 1% level, (r= 0.34, p= 0.002). this could indicate that the banks are capable to set write-offs of the anticipated bad loans without affecting the bank profit.

5.2 Research hypotheses

The broad aim of this analysis was to analyze factors influencing the profitability of private commercial banks in Tanzania, as described in chapter one. In addition, as stated in the previous chapters (chapters one and four), in order to accomplish the broad goal, the following theories were established in the analysis in which they were evaluated and the findings will be addressed.

Hypothesis1: There is a positive relationship between the capital adequacy of a bank and the bank's profitability.

Hypothesis2 (a): There is a positive association between asset quality and bank profitability.

Hypothesis2 (b): There is a negative association between asset quality and bank profitability

Hypothesis 3: There is a positive association between the deposit ratio of a bank and the bank's profitability

Hypothesis 4: There is a negative association between the loan composition of a bank and the bank's profitability

Hypothesis5 (a): There is a negative association between the cost efficiency of a bank and the bank's profitability

Hypothesis5 (b): There is a positive association between the cost efficiency of a bank and the bank's profitability

Hypothesis6 (a): There is a positive association between inflation and bank profitability.

Hypothesis (b): There is a negative association between inflation and bank profitability
Hypothesis7: There is a positive association between gross domestic product growth and bank profitability

5.3 Analysis of results based on panel dynamic model
The essence of this section is to discuss the outcome obtained from data sources. The analysis is based on the results acquired from the regression analysis between the dependent variable and the independent variables as presented in table 6.

In order to assess whether profits are recurrent or not in Tanzania banking sector by following Athanasoglou, et al. (2006b), (Erdoğan & Adalessossi, 2019) and others), the generalized method of moments (GMM) technique has been implemented. In this study the dependent variables ROE and ROA were lagged one period and, the endogenous (instrument) variables are lagged 2 through 2 to resolve the issue of endogeneity.

When related to the literature and following Growe et al. (2014), Roodman (2009), Of the explanatory variables that are first differentiated, all bank-specific variables are used as endogenous variables, while bank internal variables and macroeconomic variables are

used as exogenous variables but are not first differentiated and regarded. as control variables. The preceding sections presented the result of the documentary analysis.

According to Table 6 shows the results of regressions that use ROA and ROE as a dependent variable for private commercial banks'. Accordingly, the lagged variable has positive and statistically insignificant impact on profitability. It can be explained as during the study period private commercial banks earn a positive income flows unrelated to the balance sheet items. Also if the lagged values of the explanatory variables are valid instruments then the GMM estimator is considered reliable, the tested Arellano-Bond test displays no rejection of the null of zero (AR (1) <0.05. The occurrence of correlation of first order in the differentiated residual does not signify that the estimates are inconsistent. The first order serial correlation is anticipated due to the lagged dependent term and does not imply invalidity of the model. Yet, the second-order autocorrelation value test (AR (2) >0.05) suggests that the current conditions in the model are correct.

TABLE6.   GMM ESTIMATION RESULTS FOR ROA AND ROE

	ROA		ROE	
	COEFICIENT	T-STATISTIC	COEFICIENT	T-STATISTIC
LAGGED VARRIABLE	0.10861	0.3857	0.13290	0.7292
LCAPITAL ADEQUACY	-0.002820	-1.356854	0.097943	1.917276
	(0.1813)		(0.0613)	*
LASSET QUALITY	-0.024542	-4.740477	-0.117126	-2.037706
	(0.0000)	***	(0.0472)	**
LLOAN COMPOSITION	-0.006734	-2.096152	-0.008769	-0.653591
	(0.0415)	**	(0.5166)	
LDEPOSIT RATIO	7.45361	0.019651	0.011356	0.417817
	(0.9844)		(0.6780)	
LCOST EFFICIENCY	-0.009860	-1.441351`	-0.005955	-0.197206
	(0.1061)	*	(0.8445)	
LINFLATION RATE	-0.000334	-0.046276	0.001180	0.068772
	(0.9633)		(0.9455)	
LGDP	0.012996	0.475368	0.092318	1.244530

	(0.6367)		(0.2195)	
AR (1)	0.0574		0.1918	
AR (2)	0.4521		0.4978	

Source; research data.

Significance level *** at 1%; Significance level** at 5%; Significance level* at 10%

The estimated regression on ROE is

(ROE)=0.13290(ROE(-1))+0.09794(LCAPITAL_ADEQUACY)-0.11712(LASSET_QUALITY)-0.00876(LLOAN_COMPOSITION)+0.011355(LDEPOSIT_RATIO)-0.005955(LCOST_EFFICIENCY)   + 0.001180(LINFLATION) + 0.092318(LGDP)

The estimated regression on ROA is

(ROA)=0.10861(ROA(-1))-0.00282(LCAPITAL_ADEQUACY)-0.02454(LASSET_QUALITY)-0.00673(LLOAN_COMPOSITION)+7.45361(LDEPOSIT_RATIO)-0.00985(LCOST_EFFICIENCY)-0.00033(LINFLATION) + 0.01299(LGDP)

Capital Adequacy, as capital represents the amount of internal own finances available to finance a bank's business, bank capital frequently serves as a safety net throughout the event of contrary developments. Considering that the shareholder's equity ratio is perceived to be the primary proxy for capital, the outcomes reveal that the ratio had a positive effect on the return on equity at a level of 10% significance with coefficient 0.097. Firstly, this anticipated positive relationship between capital and profitability is followed by the relaxation of the perfect capital market assumption that enables increase of capital to significantly boost the expected earnings. The positive relationship between ROE and Capital Adequacy is aligned with (Athanasoglou, Brissimis, & Delis, June 2005), Bourke (1989) Macit (2012) and Mudaet. al. (2013). However, Tanzania's financial system is indeed further away from being described as a perfect capital market with perfect market information that could positively influence profitability from increased capital. (Berger, 1995) (Athanasoglou, Brissimis, & Delis, 2008). Otherwise from these result therefore, if capital adequacy ratio increases by 1%, then there will be an increase of 9.79 units in ROE.

Yet, a completely contradictory outcome is provided for ROA as the negative relationship is revealed which is a source of rejecting the hypothesis. However, interestingly, the direction of this negative effect of is not as expected and insignificant. These mixed outcomes can be easily viewed due to the fact that the ROA is described to be the measure of net income above the total amount of all the asset. As a result, less returns on asset as more equity invested. More importantly, the variation in outcomes between Return on Asset (roa) and Return on Equity (roe) can still indicate the possible side effects of raising higher capital in banks that can hold back profitability. This mixed results of capital on ROE and ROA are in agreement with the research of (Sharma & Gounder, 2012)Guru et al. (2002) (Offion & I., 2015).

Asset Quality, the good quality of earning assets is the one consists mainly of loans and advances. Focusing on the coefficient of Loans to total asset ratio (widely used to measure asset quality), the result of asset quality has shown negative relationship on both ROE with coefficient -0.117 with P-value 0.047 and ROA coefficient -0.0245 with P-value 0.000 which is high significance at 5% level and 1% level respectively. These results are therefore accept alternative hypothesis 2 on asset quality and reject the hypothesis 1 that there is positive relationship between them. Considering the results showing inverse relationship between loan to asset ratio on both ROA and ROE, means that the higher the ratio the more the loans bring variation in returns, that is risk return (default). These results are supported by Liu and Wilson (Liua & Wilson, Competition and Risk in Japanese Banking, 2010), Alper and Anbar (2011), Ana et al. (2011) and Growe et al. 2014. Means Tanzania banks face challenges on loan returns hence the bank is more exposed to risk of loan returns which leads to increase cost of write-off of failed loans which then lowers the profit for banks. Therefore, a banks need to pay more attention on the quality of loans.

Loan composition as a measure of credit risk, the loan composition variable (Loan Loss Provision to gross Loan) result reveal a negatively and highly significantly relation to bank profitability at 5% level, showing that the Commercial banks in Tanzania have had significant banking difficulties in receiving returns from loans arising from the inability of banks to perceive impaired loans and to establishment of large write-off reserves for these loans during the study period, which in result lowers the bank profit. Banks should

correspondingly rely more on credit risk management, which has been shown to be challenging in the recent past. The negative significant coefficient led us to accept the hypothesis that negative significant relationship exists between loan composition and bank profitability. These results are in consistent with other results showing that Loan Loss Provision to gross Loan has a negative impact on profit of banks and that banks with greater level of loan loss provision usually record lower profitability ratios include Fadzlan and Royfaized (2008) (Tan & Floros, 2014) .

Cost Efficiency, (Bourke, 1985) Note that the management of costs is far more significant for enhancing the banking system's profitability .The variable of cost efficiency from the results presents a negative effect on both ROA and ROE. Although the negative effect on ROE is shown to be insignificant, it is significant at 10% level on ROA. This resulted to the acceptance of the hypothesis that there is a major negative significant relationship existent between cost efficiency and bank profitability. This result suggests that there is lack of competence in cost management. These results are same as (MBEKOMIZE & MAPHARING, 2017) Frederick, 2015, Dawood, 2014 (Trujillo-Ponce) who found highly significant effect of cost efficiency on profits. Specifically, if cost efficiency ratio increases by 1%, then there will be a decrease of 0.986 units in ROA. The negative coefficient of cost efficiency reminds the importance of keeping the operating expenses under control in order to boost profits.

CHAPTER SIX

INTRODUCTION

This chapter draws attention to the general conclusion founded from the previous chapters of the study, which describe key factors that are associated to bank profit and how they affect bank profitability. The main research aim and hypothesis, the theoretical frame work discussed and the empirical literature review presented, explained the research methodology and at the same time follows the analysis to explain the final findings. Throughout to the end, this chapter deals with the overview conclusion and suggestion and that further study opportunities will also be identified.

6.2 OVERVIEW AND SUMMARY OF THE RESEARCH
6.2.1 Research Overview
Chapter 1

The introduction and background of the study together with the Tanzania banking sector evolution the problem statement, the main objective of the study, hypotheses that gave motive of the study, significance, scope and the limitation of the study.

Chapter 2

The bank role in the economy was presented in this chapter, the bank concept on profit plus bank profit indicators. Similarly, this chapter presented the theoretical literature review which theories and crucial variables regarding bank profit were discussed. The chapter discussed profit theories for financial institutions together with various factors that affect bank profit. The conceptual frame work is also presented in this chapter.

Chapter 3

This chapter discussed the empirical literature review. Which involved reviewing the existing literature by numerous scholars in the field of bank profitability determinants specific on their empirical findings and their final conclusions, which covered bank-specific variables and macro-economic determinants on bank profitability. Including the approaches used to explain how this relationship among bank-internal variables and macro-economic variables affects the profitability of commercial banks in Tanzania.

 In Chapter 4

 This chapter provides adequately. The research sampling design, population and the applied data source in the study. The quantitative approach was maximized and

generalized moment method for analysis of panel-data. Also the chosen variables for the study were explained including their hypotheses that were tested.

In chapter 5

The study results were presented and discussed.

6.2.2 The Research Summary

The major objective of this research study focused on the analyzing the elements that influences the profitability of private and public commercial banks in Tanzania, Secondary goals was to analyze the impact of the internal banking variables which are (capital adequacy, asset quality, loan composition, deposit ratio and cost efficiency)on profitability for commercial banks as well analyzing the influence of inflation and GDP growth in the banking sector on profitability of commercial banks and to contribute to the limited literature on the impact that the internal and external factors have on banks profit.

The study main problem statement was what affect the profitability of Tanzania banks? And the study results showed that internal variables are the variables that strongly and significant affect the bank profit in Tanzania banks. Though, macro-economic variables were found insignificant. Therefore, Tanzania banks are more affected by bank internal variables more than the macroeconomic variable and so both the primary and secondary objectives in this study had been met.

6.2.3 Conclusion of the Study

The determining factor of bank profitability addressed in this analysis are that commonly adopted in commercial banking and literature studies.

This empirical study was performed by collecting samples from commercial banks in Tanzania. The chosen sample consists of eleven banks. Data were gotten from the financial statements of the sample units on each of the listed dependent and independent variables. The analysis included the yearly time-series from the balance sheets and also the income and loss statements of the specified commercial banks over the time frame of 2013-2019.

In regards to factors that decide bank profitability in commercial banks in Tanzania, research findings showed few aspects that are more relevant than others in relation to analyzing profitability of commercial banks with return on equity (ROE) and return on asset (ROA). The presented results in table 6, this research conclude that the profitability

of Tanzania commercial banks has also been addressed by both internal and external variables. The empirical findings, conversely, demonstrated that profitability is more decided by internal bank-specific variables. Which are capital adequacy, asset quality, loan composition and cost efficiency as the variables that strongly and significant affect bank profit than the macroeconomic factors which are inflation rate and GDP growth.

Capital adequacy had mixed results, the mixed findings of this variable on ROA and ROE are in correspondence with the research of Guru et al. (2002) Malaysia. Capital adequacy had negative but insignificant effect to ROA while having a positive significant relation with ROE. Therefore, the more equity is invested, the more income from equity is raised. Perhaps importantly, the disparity in findings between ROA and ROE can also mean that during the study time Tanzania banks had more potential of creating profits from equity investments which raised their profitability.

Asset quality has clear and significant negative impact from both ROA and ROE, study reveal that quality of the assets turns out to be a factor which would cause a deterioration in bank profitability. The most valuable assets of commercial banks are loans to customers and they clearly reflect the quality of bank's assets. Yet the study is showing negative impact existing that means there is a high proportion of non-performing loans expected, this raises the probability of credit risk impacting bank earnings.

For cost efficiency, the final results highlight the importance of cost efficiency or the bank's ability to control administration cost for profit growth. Since during the time of study average value for cost efficiency was 78.6 percent while regression model result show a negative impact on both ROA and ROE being significant and insignificant respectively. The final results demonstrate the benefit of cost efficiency or the ability of the bank to monitor management costs for profit growth. As high cost to income ratio will highly likely to erode the return of banks.

This research's result on loan composition had negative relation on both ROA and ROE while being significant and insignificant respectively, therefore given the fact the higher loan loss provision to the total asset ratio, the higher rate of bad lenders will undermine the bank's interest income. In this situation, banks must start writing-off default loans, which means that the bank must report the loan to be non-collectible and declare it as a loss in the income statement, thereby impacting the profit.

Results shows deposits could be an influential factor to determine the profitability as the mean value from descriptive statistic 94.6% showing banks gain the cheapest source of income to make more loans. The final results though show a positive return to both ROA and ROE even though they are both insignificant

GDP growth rate shows positive effects on profitability in both ROA and ROE model. With a positive effect as expected the result though not statistically significant. In comparison to the GDP growth rate, the inflation variable tends to be negative but not significant in both model of ROA and ROE with a negative effect on interest rates as a result of unforeseen inflation rate change.

6.3 RECOMMENDATIONS FOR POLICY MAKERS

Basing on the results of this research, the recommendations made to policy makers, banks, shareholders, directors and managers and executives.

- As the macroeconomic factors are not the direct outcome of the management decision of the bank and do not tend to have a substantial effect on the profitability of the commercial bank. For this reason, the bank policy makers, bank managers, shareholders, and Directors ought to be very cautious about the maintenance and management of bank-specific that are substantially make a substantial influence on the profitability of the bank. Regarding the factors that are not significant, interested parties should make some effort to address these factors, improve them for profit making.

- Tanzania commercial banks can improve profit by maintaining capital requirement. Bank managers should raise equity capital value to encounter capital requirement for the Basel Committee Regulations as given by the bank of Tanzania who are the regulators so as to minimize expenditure and other raising capital costs

- The bank managers should effectively manage loans granting procedures to not only secure but achieve huge interest spreads by improving inspection techniques in order to create good quality loans to borrowers. Also by improving the audit system for the lending activities in banks by monitoring and reviewing whole loan process before and after the loan has been issued. This is so as decide whether the lender complies with the loan terms agreements but also to strengthen the credit environment and protect bank business from bankruptcy.

- Deposits, are seen to be the primary sources of bank financing and the cheapest cost. Commercial bank managers in Tanzania should pay more attention to growing deposits, so that the more the amount of deposits, the more the impact is on bank profitability. Also bank managers can opt to increase the number of branches for growth and acquiring new deposit.

- The Central Bank of Tanzania should continuously monitor the capital adequacy ratio and set a limits on borrowing and liquidity ratios that will allow the achievement of profit maximization by management. The central bank should as well regularly check and monitor the portfolio of assets and encourage banks to implement the regulatory structure.

6.4. OPPORTUNITY FOR FURTHER RESEARCH

Future studies should be performed on topics such as degree to which supervisory authorities have the power to take specific action against bank management, interested parties like shareholders, directors, and auditors of the bank and their influence on the profitability of commercial banks in Tanzania.

The present research did not take into account NIM to be dependent variables; nevertheless, future studies also included NIM as the dependent variable. About the independent variables, others that may be taken into consideration shall include bank interest rate, size, bank regulation and supervision variables which are capital requirement (CAPRQ); restrictions on bank activities (RESTR), official disciplinary power (SPOWER) and private monitoring (PRMON) together with liquidity measures and bank asset structure.

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