
The Impact of the Performance of Listed Banks on Their Profitability and Economic Growth of Ghana

Ernest Ankrah Kwarko^a, Fu Gang^{b*}, Linda Kissiwa Boateng^c, Bright Senyo
Dogbe^d, Gideon Ntim-Amo^e

^{a,c,d,e}Sichuan agricultural university, Chengdu, 211 Huimin Road, Wenjian District, 611130, China

^bSichuan agricultural university, Chengdu, 211 Huimin Road, Wenjian District, 611130, China and Sichuan
Vocational College of Finance and Economics, Chengdu, China

^aEmail: ernestankrah@yahoo.com, ^bEmail: fugang@sicau.edu.cn, ^cEmail: leeboat123@gmail.com, ^dEmail:
dogbebrightsenyo@yahoo.com, ^eEmail: ntimamogideon@stu.sicau.edu.cn

Abstract

This study examines the factors that influence the performance of listed banks and the impact of on Ghana's economic growth. The study used panel data from GCB Bank, HFC Bank, Ghana Economic Bank (EBG), SG-SSB Bank and CAL Bank for the period 2010 to 2019. The Hausman test for panel regression was employed to determine the best method between the fixed effect and random effect models. The results of the Hausman test show the fixed effect was the most efficient method of estimation. The findings of the fixed effect model show that liquid assets to short term liability and non-performing loan ratio have significant negative effect on return on assets. Furthermore, non-interest expense income, return on assets and return on equity have high significant impact on economic growth. Capital adequacy ratio on the other hand adversely affect economic growth. The positive result of the profitability measures explains how a good financial sector can affect the state of an economy. The study therefore suggests that stakeholders, policymakers and Governments must implement pragmatic policies and enforce existing ones to encourage financial institutions to maintain disciplined and profitable management practices.

Keywords: Economic Growth; Return on Equity; Ghana Stock Exchange; Return on Asset; Fixed Effect Regression.

* Corresponding author.

1. Introduction

The critical importance of financial system development to economic growth has aroused notable attention among many scholars as the sector continues to be transformed through globalization and changes in regulations from key policies. The economic growth of both developed and developing countries is influenced by the development of the financial sector through stimulation of financial innovation, mobilization of savings and channeling them into productive investments, and positively contributing to foreign direct investment (FDI) growth [1,2]. The effective operation of the financial market in an economy hinges significantly on banks with non-bank institutions and capital markets also playing important roles [3]. In developing countries like Ghana where the capital market is not fully developed, the banking industry is the core of the financial sector [4]. According to the world economic outlook report [5], the efficient performance of the banking industry is crucial to the growth of developing nations. Banks, therefore, have a major role to play as the main intermediary channel between investments and savings to propel economic development. The survival and consistent efficient performance of banks has hence been a noteworthy issue of discussion among scholars and inspiring this study to investigate the performance of banks listed on the Ghana stock exchange and the effects on economic growth. According to the banking sector report released in January 2020 [6], there has been a significant improvement in the financial performance of the banking industry in Ghana after completing reforms in the sector. This has made the sector very vibrant compared to other countries in the sub-region. The Bank of Ghana (BoG) is the central bank responsible for the regulation and oversight of all banks operating in Ghana. Established through the Bank of Ghana Ordinance (No. 34) of 1957, the economy sought to have an independent monetary administration after independence as the BoG assumed control over the management of the national currency [7]. The principal functions include issuing and redeeming banknotes and coins, keeping and using reserves, regulating credit situations to maintain monetary stability, and monetary policies implementation. In accordance with its mandate to improve the safety, stability, and soundness of the financial sector to promote economic growth, BoG embarked on a cleanup in the banking sector, recapitalization and other reforms in regulations from 2017 to the end of 2018. These reforms resulted in a scale-down of banks from 33 in December 2016 to 23 in December 2018 [6]. This was achieved through measures such as mergers, the takeover of two banks; UT Bank and Capital Bank by GCB limited, and the closure of five domestically owned universal banks; Royal Bank, UniBank, Sovereign Bank, Beige Bank, and Construction Bank, in August 2018, and the transfer of their assets and liabilities to the consolidated bank of Ghana (CBG). The CBG, a bridge bank, was given a capital of US\$100 million (0.15 percent of GDP) by the Government. This has drawn many attentions to the need for monitoring and assessing the performance of existing banks in country due to the inability of these affected banks to meet the requirements of the central bank. A large body of literature on the performance and efficiency of banks spanning half a century has focused mostly on the United States [8,10]. The literature on banking efficiency in Europe has also increased significantly in response to the structural changes in the European banking industry [11,13]. Despite the recent expansion of this analysis to several emerging economies [14,17], most of these studies employ cross country data for their estimation of banking efficiency [18]. Furthermore, other studies irrespective of the geographical position explore various issues of banking efficiency such as the estimates from different approaches, the impact of risk [19,20], off-balance sheet activities [20,21] and the role of environmental factors [22,25]. Despite the existence of a great dearth of literature on banking efficiency, few

empirical studies have examined the performance of banks based on ratio impact analysis and the relationship between this performance and economic growth in countries especially developing economies like Ghana. Comparatively, with developed countries, the performance of commercial banks has remained poor in developing economies especially in Africa with significant gaps in the delivery of service to the private sector despite reforms in the financial sector aimed at improving productivity, efficiency, and profitability since the 1990s [26]. This doesn't mean there aren't opportunities for improvement in the industry as a recent study by [7] posited that some banks have experienced significant growth through tremendous performance yielded as a result of financial sector reforms. Economic growth in Ghana can be impeded by inefficiencies in the banking industry since banks are the main financial intermediaries between savings and investments in the economy like many other economies globally. Poor performance by banks weakens the financial sector and could significantly affect the whole economy negatively. This is explained by [27] who stated that the poor performance of banking industries in the United States (U.S) and European Union (E.U.) slowed down their respective economies and growth of the global economy for a period of time. According to the report by [28], heightened vulnerabilities in the banking sector in Ghana caused a resolution of five locally-owned banks in 2018 with valuable fiscal costs to the government of Ghana. With the relevance of the issue of efficiency of banks, it necessitates empirical research to examine the financial performance of banks to well appreciate the conditions of the banking industry and the pragmatic factors that should be considered in decision making and policy formulation to improve the industry and enhance economic growth. The banks in Ghana form a part of the larger global banking industry and must adopt strategies to improve their efficiency in operation, technical and resource allocation to increase their survival in the global competitive environment. Since the early 1980s, there have been many crises in the banking industry globally with developing countries experiencing a greater share [29]. Their study further revealed that these crises resulted through the inefficiencies in the operations of the banks in the form of excessive overhead cost, inadequate liquidity, high cost of funding due to undercapitalization, and unhealthy loan portfolios arising from increased exposure to credit risk. Empirical studies have revealed that inefficiencies exist in the banking industry in Ghana in terms of reducing credit risks, managing costs, and providing services [30,31]. In response to these inefficiencies, the BoG has taken commendable steps to address the challenges and strengthen the banking sector through policy reforms such as closing troubled banks and transferring some of the closed banks to a state-owned bridge bank (CBG), raising minimum capital requirement from minimum capital of GH¢120 to GH¢400 million at the end of 2018. Despite these efforts, there still remain areas of vulnerability in the Ghanaian banking sector [28]. This study, therefore, seeks to investigate the performance of banks listed on the Ghana stock exchange (GSE) and its impact on economic growth. Figure 1 below demonstrates the process or the route of how the research was conducted. The roadmap presents the main contents of the research, the research methodology and the relationship between them across all the stages of the research.

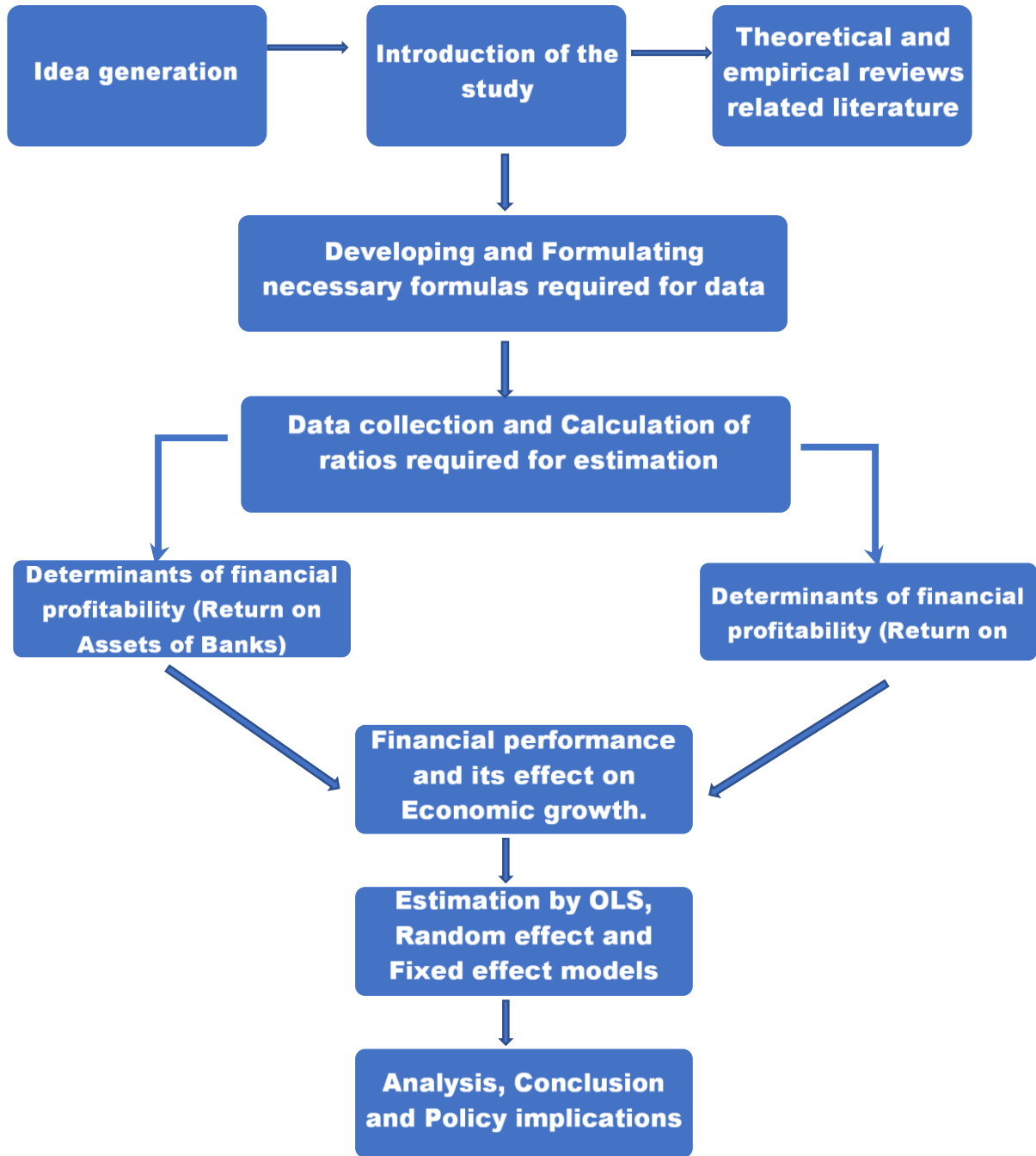


Figure 1: Technical representation of the study.

Previous studies have been done on the financial performance of banks in other countries but none on Ghana yet to the author' best knowledge. Two profitability metrics, Return on Average Assets (ROAA) and Return on Average Equity (ROAE), were employed by [27] to calculate the financial performance of banks in China and Malaysia. The ROAA represents the capacity of the administration of a bank to earn income from the assets of the bank and is measured as the ratio of net profit to average assets after tax. On the other hand, ROAE represents the return on the equity of the shareholders and is measured as the ratio between the net profit after

tax and the average shareholder fund. To capture any variations that exist in assets and equity over the fiscal year, mean assets and mean equity are used. As determinants of bank performance, the researchers used five variables: the ratio of net loans to deposit and short-term financing, the ratio of loan loss provisions to net interest income, the ratio of equity to capital assets, the ratio of non-interest expenditure to average assets, operating expenditure and the size determined by the natural logarithm of the accounting value of total assets of banks. Thus, these two ratios are very important in measuring profitability and this research like the many others in financial literature employs these measures to effectively analyze the performance of the listed banks. Liquidity risk is measured by the liquid assets of the bank in relation to total assets. Keeping liquid assets decreases the risk of banks not having enough cash to cover sudden withdrawals of deposits or new demand for loans, causing them to borrow at an excessive expense. Therefore, as the share of liquid assets rises, the liquidity risk of banks falls. In the Middle East and North Africa (MENA) countries, Reference [32] compared accounting-based and economic-based indicators of bank efficiency and profitability. In order to analyze the factors explaining profitability of banks in the MENA zone, the researchers used the statement of income, the statement of change in the equity of the shareholders, the balance sheet, the statement of cash flows, and the notes to financial statements from 2000 to 2008 and the external variables influencing the efficiency of the bank (inflation, concentration, GDP). Reference [33] analyzed Ghanaian banks' technological efficiency and economies of scale to get a sense of what could happen to industry efficiencies as banks grow bigger, and also to know if big banks were more effective than small banks. Using annual bank data from 2000 to 2006, The research employed data envelopment analysis and concluded that, as a group, the technological performance of large banks and small banks is comparable. From 2000 to 2006, they used data envelopment analysis on annual bank data. They concluded that, as a group, the technological performance of large banks and small banks is comparable. Small banks, however, have greater productivity on a large scale than large banks. This meant that the big banks in Ghana are on average more distant from the position of their minimum average cost than the small banks, and the central bank ought to be cautious to promote bigger banks if its goal is to demonstrate the efficiency of scale. The ability to achieve maximum profit for a given output is profit efficiency. From the perspective of the investor, a profit-efficient bank is not profit-efficient from the viewpoint of the economy and the value chain. Profit efficiency evaluates banks' ability to optimize profit on the input and output prices issued. Reference [13] analyzed the profit efficiency of savings banks in Spain between 1986 and 1991, using a thick border approach and estimating the impact of various assumptions on the competitiveness of the production market using both alternative and normal profit function specifications. Reference [34] using the stochastic border method, analyzed the technological efficiency of Malaysian commercial banks over the period from 2000 to 2006. Their findings revealed that the overall efficiency of Malaysian commercial banks was 81 percent, suggesting an input waste of 19 percent. The outcome also showed that during the duration of the analysis, the degree of productivity had improved. They also found that, compared to foreign banks, domestic banks were more effective. Using all (financial) tax rates for the investigation is impossible when businesses evaluate their performance. Only certain available financial rates are examined and selected as assessment criteria for assessing a company's financial performance [35]. Tax rates are usually provided on a sequential basis, first categorized, and then the first group of each representative is chosen as the assessment criterion to be used. A clustering approach is proposed to classify tax rates by dividing the tax rates of various firms into the same group, of the same category. In other words, in order to set up the number of categories, a fuzzy relationship is

presented. Again, rates are categorized, and a representative indicator will be defined for each cluster. According to the views from [36], the listing of stock exchanges helps to streamline the activities of listed companies, enable them to conform to certain requirements, and create corporate governance mechanisms that boost their entire performance for a long time. As such, with the implementation of good corporate governance systems that stock exchange listing offers, the problems of credit restriction and managerial incompetence in most businesses are addressed. Reference [37] asserts that to achieve sustainable growth and development, a country requires a lot of domestic and foreign investment. The stock exchange offers a means through which it is facilitated. However, in most African countries, including Ghana, the lack of long-term resources has presented the greatest plight for economic growth. Reference [25] using data envelopment analysis, also evaluated the technical efficiency of 93 European banks. The results indicated that the size of banks does not have a significant effect on technical efficiency and that co-operation and savings banks are more effective than commercial banks. Reference [38] reported that the capital market was a viable source of income for state and local government infrastructure and construction projects with less burden and resource reliance. Over the years, several countries and states have entered the stock market in order to raise funds to finance their growth projects. Reference [39] views the capital market as the engine of development and growth of every economy because it is essential for the formation of capital for long-term growth. It is important for savings to be mobilized and such savings to be channeled into efficient, self-liquidating investments. The Nigerian capital market offers the required lubricant that keeps pulling the country's economic wheel. It not only creates the requisite investment funds but also effectively distributes these financial resources to projects. Using data from 30 countries, Reference [40] showed and re-echoed the emphasis on the complementary task performed by banks and the stock market indicating the non-rivalry between the roles by the two institutions. Using the data envelopment analysis model, Reference [41] analyzed the technical efficiency of different nations. In order to know how different or close current banking performances are, the analysis expanded effective cross-country comparisons to ten European countries. The researchers made two kinds of comparisons through a data creation model named the "basic" model to measure the average technical performance with only banking variables included in the model. Using the second model, called the "total," model, environmental variables were taken into account, along with the basic model's banking variables. They were instructed by the empirical findings to substitute codified variables for the initial environmental variables. Finally, for the consideration of models based on a transformed sample, the non-homogeneity of country samples found after conducting the individual data envelopment analysis for each country was decisive. The contrast between the two models indicates that the particular environmental conditions of the world exert a significant influence on each country's average efficiency score. Finally, for the consideration of models based on a transformed sample, the non-homogeneity of country samples found after conducting the individual data envelopment analysis for each country was decisive. The contrast between the two models indicates that the particular environmental conditions of the world exert a significant influence on each country's average efficiency score.

2. Materials and methods

To examine the determinants of the profitability of banks and the effect on economic growth, the study developed a standard model with a general equation as follows;

$$Y_{it} = \sum_{j=1}^S \sigma_j y_{ij} + X_{it} \delta + \varepsilon_{it} \dots \dots \dots \quad \text{Eqn (8)}$$

where $y_{ij} = 1$ if $i = j$ and 0 elsewhere. We, therefore, have a set of S dummy variables in the model. The parameters $\sigma_1 \dots \sigma_S$ and δ can be estimated by the use of ordinary least squares in equation 3. The implied estimator for δ is referred to as the Least Square Dummy Variable (LSDV) estimator [42].

2.3 The Random Effect Model

According to [42], It is assumed in regression analysis that all factors that disturb the dependent variable, but which have not been included as regressors can be aptly concise by a random error term. With respect to this literature, the study assumes that σ_j are random factors, autonomously and identically dispersed over others. The random effect model translates into the form;

$$Y_{it} = \omega + X_{it} \delta + \sigma_1 + \varepsilon_{it}, \varepsilon_{it} \sim \text{PIR}(0, \partial_\varepsilon^2); \sigma_1 \sim \text{PIR}(0, \partial_\alpha^2) \dots \dots \dots \quad \text{Eqn (9)}$$

where $\sigma_1 + \varepsilon_{it}$ is treated as an error term serene of two components. Thus, one individual component will not vary over time and the other is assumed to be uncorrected over time.

2.4 The Hausman test

In performing fixed effect and random effect regression, the researcher is found to be indecisive about which result to use for the study in question. The Hausman test was introduced to correct such a situation by [43]. The test allows researchers to select between the fixed effect model and the random effect model. Hence, the study considered the Hausman test to deduce how big a difference is too big to be compatible with the null hypothesis of the correct specification. It essentially tests whether the unique errors (ω) are correlated with the regressions; the null hypothesis is that they are not.

2.5 Data Source

The type of data adopted for this study is secondary data. The data is made of 10 years from 2010 to 2019 due to the availability of data for all variables employed in the study. The data was deducted from the financial statements, income statements, cash flow statements, and notes to the various banks incorporated in the study. the banks in question for this study include GCB bank, HFC Bank, Ecobank Ghana (EBG), SG-SSB Bank, and CAL Bank. The total number of banks to be used is 5. This study w calculated ratios for each individual bank to assess its relative performance. This will be done for each of the years and also for the entire period. The study will also consider the averages of the total ratios that will be useful for calculating the ratios to show the efficiency of banking institutions listed on the Ghana Stock Exchange. The main financial ratios to be considered in this study are categorized with regards to the Bank of Ghana’s Financial Soundness Indicators for banks. They include Cost Efficiency Ratios, Profit Efficiency Ratios, Financial Leverage (Capital Adequacy) Ratio, Liquidity Ratios, Asset Quality Ratios, and Exposure to Foreign Exchange Risk Ratios. The profit

efficiency ratios include Return on Assets (ROA) and Return on Shareholders' Equity (ROE). ROA is calculated as net profit before tax divided by total assets. It shows the capability of the banks' management to generate returns from the assets of the banks. ROE is also calculated as net profit after tax divided by shareholders' equity. This also shows the return to shareholders on their equity. The cost-efficiency ratio measures the ability of the banks' management to control cost. It can be looked at from two dimensions. Ratio of net interest income to gross income and ratio of non-interest expense to gross income.

Table 1: Variable description and sources

Variables	Code	Formula	Source
Return on Asset	ROA	$\frac{Net\ Income}{Total\ Asset} \times 100\%$	Financial Statements of selected banks
Return on Equity	ROE	$\frac{Net\ Income}{Shareholders\ equity} \times 100\%$	Financial Statements of selected banks
Non-Interest Expense Income	NIE	$\frac{Total\ non - interest\ expense}{Average\ Assets}$	Financial Statements of selected banks
Capital Adequacy Ratio	CAR	$\frac{Tier\ 1 + Tier\ 2\ Capital}{Risk\ Weighted\ Asset} \times 100\%$	Financial Statements of selected banks
Liquid Asset to Total Asset	LATA	$\frac{Liquid\ Asset}{Total\ Asset} \times 100\%$	Financial Statements of selected banks
Liquid asset to short term liability	LAST	$\frac{Liquid\ Asset}{Short - term\ Liability} \times 100\%$	Financial Statements of selected banks
Non-performing Loan Ratio	NPLR	$\frac{Non - performing\ loan}{Total\ Loans} \times 100\%$	Financial Statements of selected banks
Loan Loss Provision ratio	LLPR	$\frac{Loan\ loss\ Provision}{Gross\ loan} \times 100\%$	Financial Statements of selected banks
Gross Domestic Product	GDP	$\frac{Nominal\ GDP}{Deflator}$	World Bank Database

3. Results

To begin the empirical analyses, Table 2 below presents the summary statistics of the variables included in the model for regression analyses. The summary statistic was done using the raw data before the transformation of the data. From the Table 5.1 above, the standard deviation of the variables represents variation or deviation of the series from their mean values. All the variables portrayed a high variation from their respective mean values. This is because the extent of variation from the mean values are significant for ROA, ROE, GDP, INCOME, NIE, CAR, LATA, LAST, NPLR and LLPR. INCOME of the banks listed on the Ghana Stock Exchange had an average of 50.5% over the period of study which was keenly followed by NIE with 48.05% with standard deviations of 8.825 and 11.463 respectively. Again, the study recorded that ROA, ROE, GDP, CAR, LATA, LAST, NPLR and LLPR averaged around 6.80%, 21.03%, 3.07%, 16.05%, 24.9%, 32.8%, 8.08% and 5.7%

respectively. This is a good sign as most of the banks surpassed the bank of Ghana’s minimum condition of 10% which serves as the standard. The liquid assets to total assets ratio offer an indication of the liquidity accessible to the banks to convene predictable and unanticipated demands for cash. As measured, the higher the value of the liquid asset ratio, the larger the margin of safety that the banks possess to cover short-term debts or meet loan requests. On average the banks recorded 24.87% with a standard deviation of 4.215515. The average value of 32.82% of the liquidity assets to short term liability ratio indicates that the banks listed on the GSE have low liquidity risk. Thus, the banks listed are viable in terms of meeting credit payments. This will lead to relatively lower interest cost because deposit withdrawals or new loan demand, may not need to borrow at excessive costs. The banks are capable of meeting short term withdrawal of funds and other liability without liquidity problems. The mean NPLR over the period studied was 8.08% with a standard deviation of 6.04572. This means that the portfolio of loans and advances have better credit quality. This implies that only a smaller proportion of their loan portfolio does not earn income or is lost in the course of operations. The low non-performing loans will enhance the profitability, capital preservation and more importantly the solvency of the listed banks. With regards to the loan loss provision ratios of the listed banks recorded a mean of 5.72 over the period studied with a standard deviation of 3.72. This implies that these banks have been assessing their credit risk accurately, which enabled them to make necessary provisions against them. They have the capability to measure credit quality of their loans portfolio in order to provide buffer for losses on loan defaults.

Table 2: Variable description and sources

VarName	Obs	Mean	Std. Dev	Variance	Skewness
ROA	50	3.074	1.002	1.00482	-.1609887
ROE	50	21.029	10.239	104.8382	1.564362
GDP	50	6.796	3.354	11.24807	.5608999
INCOME	50	50.469	8.825	77.8822	-.5719166
NIE	50	48.049	11.463	131.4058	.1038563
CAR	50	16.049	6.312	39.84398	.7161356
LATA	50	24.874	4.216	17.77057	.3756802
LAST	50	32.825	3.080	9.48587	-.3108875
NPLR	50	8.078	6.046	36.55073	1.298819
LLPR	50	5.723	3.715	13.80215	1.979877

Source: Authors’ computation, 2021, Note: all ratios are expressed in percentages.

3.1 Fixed Panel Regression

Table 3 shows the fixed effect estimates of all the variables on ROA, ROE, and GDP in the column 1,2 and 3 respectively. In the case of ROA in the first column, LAST and NPLR have negative coefficients and are significant at 1% and 10% respectively. A 1% increase in LAST and NPLR reduces ROA by 16.2% and 5% respectively. The fixed effects of the regressors on ROE are insignificant whereas CAR has a negative fixed effect on GDP at 1% significance level. A 1% increase in CAR reduces GDP by 30.4%. The other significant

variables include NIE, ROE and ROA who have positive effects on GDP at 5% and 1% significance levels. A 1% increase in ROA and ROE increases GDP by 129.5% and 17% respectively. This is an indication of the impact banks performance have on the growth of the economy of Ghana.

Table 3: Fixed effects estimation results

Variables	fixed_ROA	fixed_ROE	fixed_GDP
INCOME	0.031 (1.566)	0.151 (0.491)	0.058 (0.766)
NIE	0.012 (0.969)	-0.159 (-0.805)	0.107** (2.224)
CAR	-0.009 (-0.386)	0.278 (0.786)	-0.304*** (-3.585)
LATA	-0.024 (-0.582)	-0.310 (-0.479)	-0.196 (-1.268)
LAST	-0.162*** (-3.845)	0.641 (0.988)	0.068 (0.374)
NPLR	-0.050* (-1.958)	-0.200 (-0.509)	-0.034 (-0.348)
LLPR	-0.018 (-0.420)	-0.213 (-0.328)	-0.137 (-0.882)
ROA			1.295** (2.183)
ROE			0.170*** (4.400)
_cons	7.483*** (3.505)	5.975 (0.182)	-0.109 (-0.012)
N	50	50	50
r2_a	0.368	-0.172	0.477

t statistics in parentheses: * p < 0.1, ** p < 0.05, *** p < 0.01

3.2 Determinants of profitability of banks listed on Ghana stock Exchange

Based on the choice of the most efficient model that best fits this data, the Hausman test depicts the fixed effect model and hence the coefficients from this model are best fit for the regression analysis and results. From the fixed estimation results, NPLR regression coefficient of - 0.050 states that each increase in NPLR by 1% will have 5.0% decrease in ROA assuming the other independent variables are constant. The negative and significant effect shows the higher the level of the NPL ratio indicates the amount of bad credit experienced by the bank and results in losses. According to Basel II theory, credit risk is a risk of loss associated with the possibility of a party to the transaction will fail to fulfill its obligations when due. This will affect the profitability of the bank because the supposedly received income has failed to be received due to bad credit. In addition to the bank not

receiving income, the bank also should keep paying for the operational costs it carries. The negative relationship between NPLR and profitability measured by ROA is consistent with previous studies who found NPLR to affect ROA negatively [44,49]. The results of the fixed regression also show a 1% increase in LAST will reduce ROA by 16.2% assuming the other independent variables are constant. The loan to deposit ratio measured by LAST states the ability of a bank to fulfill the depositors' withdrawal of funds that have been used by banks to provide credit to other parties. LAST is a ratio of credit given by the bank and funds collected by the bank. The higher percentage of LAST results in lower profits (ROA) as depicted by the coefficient -0.162. This result is opposite to the results of the studies conducted by [49, 50] and [51]. The estimates in the second column of table 3 shows the fixed effects on ROE. All the variables have no significant effect on ROE as shown by the p-values which are all greater than the critical levels of 10%, 5% and 1%.

3.3 Impact of the Performance of listed banks on Economic growth

The last column in Table 3 presents the estimates of fixed effects of the independent variables on GDP. The fixed estimates indicate NIE, CAR, ROE and ROA all have significant relationships with economic growth. This reflects the vital role banks performance can play in achieving economic growth. The coefficient of CAR is -0.304 and significant at 1% indicating a 30.4% reduction in GDP when CAR increases by 1%. On the other hand, NIE, ROE and ROA have positive significant effects on GDP at 5% and 1% significance levels with coefficients of 0.107, 1.295 and 0.170. A 1% increase in ROA and ROE increases GDP by 129.5% and 17% respectively. This is an indication of the impact banks performance have on the growth of the economy of Ghana. The positive impact of the profitability measures of banks on GDP is consistent with the findings of [52,53] whose studies revealed that increase in the profitability levels of banks (ROE, ROA) impacts economic growth positively. Hence, Ghana can hugely profit from a well-structured and best performance of banks as the economic growth is influenced positively.

4. Conclusion

This study sought to examine the performance of banks listed on the Ghana stock exchange. The study used panel data on banks listed on the Ghana Stock Exchange. The study employed a panel data approach for GCB Bank, HFC Bank, Ecobank Ghana (EBG), SG-SSB Bank, and CAL Bank. The study used Return on Asset, Return on Equity and Gross domestic Product as dependent variables. ROA and ROA are to measure the performance of the listed banks on Ghana Stock Exchange and their effect of the economic growth which is measured using GDP. The study performed OLS, fixed and random effect models to analyze the results. As required to determine the exact model that is appropriate for the study, the Hausman test was utilized, and it was found that the fixed effect model best explains the performance of banks listed on the Ghana stock exchange and their impact on economic growth. The study found that in using the OLS regression, none of the independent variables were statistically significant when return on equity is used as the dependent variable similar can be said of the random and fixed effect estimations. Again, the study recorded a positive significant impact of income on return on asset for both OLS and random effect estimation but statistically insignificant for the fixed effect estimation. automated teller machine to be significant with a higher impact on depositors. With respect to liquid asset to total asset (LATA) variable, the study revealed a negative and significant impact on return on

asset for all estimations (OLS, Random and Fixed effect). Non-interest expenses had a positive significant effect on economic growth of Ghana through the three estimations. The OLS result indicated a positive effect of 11.7% with a statistical significance level of 10% while random and fixed effect had a positive effect of 11.7% and 10.7% with a statistical significance level of 5% respectively. Similar outcome but with a negative effect can be said of capital adequacy ratio impact on economic growth of the banks listed on the Ghana Stock Exchange. The main interest of the introduction of the economic growth variable in the study to examine the total effect of return on asset and return on equity of the banks listed on Ghana Stock Exchange. Return on Asset and return on equity are key variables in the measurement of performance for the banking sector in most economy. In this current study, return on asset and equity revealed a positive significant impact on economic growth of Ghana. However, return on equity has a statistical significance in all the estimations as compared to return on asset.

5. Policy Recommendations and limitations of the study

Premised on the findings of the study, the following recommendations are made: The study revealed that return on asset and return on equity had a positive significant impact on economic growth. Profitability is essential to the survival of every business. The key bank profitability ratios include return on assets and return equity. This implies that with positive implementations of policies for banks listed on the Ghana Stock Exchange the aftermath effect will reflect on the economic growth of the country. Positive sign of the return on equity implies that shareholders returns and potential growth on their investments had a positive growth. Again, banks with high return on equity are more likely to generate cash internally, hence promoting economic growth. Return on Assets shows what earnings were generated from the banks' assets. It measures the banks' efficiency in the utilization of their assets to earn profits. The assets of the banks are comprised of both debt and equity. Both of these types of financing are used to fund the operations of the bank. The positive impact of Return on Assets explains how effectively the banks are converting money into net income which then promote the financial sector of the economy. A good financial sector indicates a strong economy. In this regard, the study suggests that stakeholder, policy makers and the government must continue to implement pragmatic policies that encourage financial institutions to maintain a discipline accounting records because the higher the percentage of return on assets, the better. Such pragmatic policies include the following: Maximum utilization of information technology such as electronic banking system. Effective participation in the capital market. In order to raise capital to grow its business, banks can issue capital stock. These shares can be bought by investors who seek price appreciation and dividends or exchanged for assets, such as equipment needed for operations. This will go in the long run to increase the profitability of these banks. Also, in order to gain competitive advantage over other players in the market, credit policies can be developed by these banks. The banks should clearly lay out its philosophy on extending terms to customers and collecting on overdue accounts, because if there's no plan, there's no hope for survival. The banks should review their credit terms and conditions regularly in order for them to remain competitive against the changing lending environments. Finally, there can be the introduction of credit appraisal, this will place these banks in a pole position to assess credit worth client. This will improve the performance of these banks by reducing the number of non-performing loans. Banks' lending rate can be fortified through these proficient regulations and a good administrative structure. Government should also come up with monetary policies which will increase the profitability of banks. The study faced data constraint with

only five major banks selected out of the sampled banks. This is a limitation to the study as a regular series of data for each of the sampled banks was difficult because some of the banks had had insufficient data for the period under study. Hence after careful and rigorous collection of data for more than ten banks, there were so many gaps caused by missing values and even no data for some key variables among the banks that were dropped from the study. Hence, consistency in data and availability of data resulted in settling for the five sampled major banks. Future studies in this direction can expand the example size to include more banks.

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