

Macroeconomic Variables and Corporate Resilience: Empirical Evidence from Quoted Commercial Banks in Nigeria

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ABSTRACT

The study investigated the effects of macroeconomic variables and quoted commercial banks resilience in Nigeria. The study adopted ex-post facto research design. Stratified and random sampling methods were used to select 13 out of the 22 quoted existing commercial banks. Secondary data were obtained from the Central Bank of Nigeria publications and financial statement of the quoted commercial banks. Commercial bank resilience (variation in capital adequacy ratio) modeled as the function of interest rate, real gross domestic products, exchange rate, inflation rate and money supply. A critical analysis of the financial statements of the commercial banks over a period of 10 years (2011- 2020) was conducted. Diagnostic tests were conducted using Hausman specification test. Fixed effects estimator was employed and regression analysis to test the formulated hypotheses. The study found that 51.6 percent variations in commercial banks resilience can be attributed to the influence of economic variables while the remaining 48.9 percent variations in the dependent variable were caused by other factors not included in this model. The p-value of the F-statistic found that simultaneous combinations of the proxies of the macroeconomic indicators significantly influence commercial banks resilience since it is less than the 0.05 significant level adopted for this study. the study conclude that the variables have positive but no significant effect on commercial banks resilience within the periods covered in the study.it therefore recommend that . Government should ensure that financial market is properly managed in a manner that it will enhance commercial bank resilience. Government should direct its financial market regulators to ensure proper policies that will enhance effective transmission of macroeconomic policies that impact positive and significantly to commercial banks resilience and the need for efficient management of exchange, inflation and interest rates in such a way to stimulate the financial market that cushion the volatility of macroeconomic variables to enhance commercial banks resilience.

Keywords: *Macroeconomic Variables, Corporate Resilience, Quoted Commercial Banks, Nigeria*

INTRODUCTION

Macroeconomic variables form a huge portion of the external determinants of commercial banks soundness in most studies carried out. The most common macroeconomic factors that have been identified among others are gross domestic product growth, inflation, interest rate, exchange rate (Haron, 2004). An economic slowdown is likely to have a negative effect on bank resilience because typically low interest rates in a recession contribute to the erosion of banks' interest margins. Income from operating activities falls in the environment of macroeconomic instability (Abiad, Bluedorn, Guajardo and Topalova, 2012). In sum, it can

be expected that bank risk is correlated negatively with the business cycle, rising at times when economic activity slows. This implies that banks must be resilient to withstand macroeconomic instability. Commercial bank resilience has become a staple of financial regulation. Banking system resilience is about more than the ability of individual banks to withstand shocks. It is about the system's tendency to generate shocks in the first place, and its ability to adapt and evolve in response to them.

The term resilience has been defined in different perspectives. The socio-ecological theory considers a system to be resilient if that system can function well even after facing disturbances. Reeves and Whitaker (2020) described resilience as the adaptive power of a company to the financial stress situation and to flourish in changed circumstances. The term resilience is also prominent in the banking sector. According to Basel Committee's report, a resilient banking sector refers to its strong capacity to withstand shocks resulting from different financial and economic crises (Bank for International Settlements, 2009a). High stock of non-performing loans hinders the absorption of shocks as it limits the banking sector to provide new loans. Severe macroeconomic shock adversely affects borrowers' ability to repay their debts. In turn, this increase in non-performing loans weakens banks' lending capacity and thus also the economy's capacity to absorb shocks. Resilience is often implicitly equated with banks' capital positions measured either in terms of risk-weighted capital ratios or simple leverage ratios. Ensuring that banks hold enough high-quality capital to withstand shocks has been a major focus of post-crisis regulation, particularly via the new Basel III capital and liquidity requirements.

Every banking institution operates in two diverse environments which are the external and the internal environment. The external environment includes macroeconomic indicators such as exchange rate, gross domestic products, inflation rate, interest rate and money supply can affect operational functions of the banking institution. In economic and business cycles, banking institution experience period of expansion, contraction and recession, after the recession, the expansion starts again.

The different phases of business cycle have direct effect on the activities and business of commercial banks. It is imperative that bank managers are aware of these factors in order to reduce procyclical effect of macroeconomic variables on commercial banks resilience. Macroeconomic variables are beyond the control of an organization, therefore, the need for banking institution to predict the heterogeneous effect of these macroeconomic variables to withstand unforeseen event within the operating environment required a critical investigation. Markman and Venzin (2014) believed that the bank resilience with better effect should be composed of protective resources with high value, rare, difficult to imitate and irreplaceable, to ensure the long-term role of resilience and thus realize a virtuous cycle of bank operation.

The studies on commercial banks resilience pays more attention to overall, forward-looking and strategic management ability of the risks of the bank, as well as the long-term profitability of the bank and the balanced development process with future risks (Abobakr, 2018; Adnan and Rahat, 2020). Compared with the traditional banking theory, bank resilience has its unique focus. The above studies on the effect of macroeconomic variables on bank resilience are foreign studies. The study of Aldasoro, Fender, Hardy and Tarashev (2020) focused on the effect of Covid 19 on profitability of commercial banks. From the above, the effect of macroeconomic variables on commercial banks resilience in Nigeria is

lacking in literature, from the above knowledge gap this study examined the effect of macroeconomic variables on commercial banks resilience in Nigeria.

LITERATURE REVIEW

Macroeconomic Variables

Macroeconomics is the study of behavior of whole economy not individuals units. There are some macroeconomic variables that have impact banking activities which exist in a specific economy. Macroeconomic variables are wide economic indicators used to judge the performance of the economy at specific point of time. These are external factors that affect the operation of firms either positively or negatively. The control of macroeconomic variables is beyond the management.

Exchange Rate

Exchange rate moves are likely to have a different effect on banks with different kinds of exposure. The magnitude of exchange rate moves can be a risk source of its own. Excessive exchange rate volatility impairs economic and financial stability in a country and was found to have played a significant role in inducing banking crises in many countries (Lindgren et al. 1996). Given the fairly “crude” measure of exchange rate fluctuations used in subsequent empirical analysis (annual percentage change of the exchange rate), it is the meaning of these kinds of moves that our econometric model may help reveal. A sufficiently strong depreciation of a currency can be expected to induce disintermediation and increase bank risk as depositors withdraw their money and seek to invest it in “hard” currency assets.

Exchange rate plays an increasingly significant role on companies’ performance in Nigeria as it directly affects domestic selling price level, profitability, allocation of resources and investment decision in the companies (Kituku, 2014). These as seen in the exchange rate against one USD to get to as high as N390 making it difficult for the companies to operate at the minimum cost and price level desired. The fluctuation or volatility in the exchange rate has attracted public attention especially from importers who have argued that the strengthening naira is eroding their competitiveness.

Interest Rate

Nominal interest rate refers to the interest rate before taking inflation into account. Nominal can also refer to the advertised or stated interest rate on a loan, without taking into account any fees or compounding of interest. Finally, the monetary policy rate, the interest rate set by the Central Bank of Nigeria referred to as a nominal rate. Nominal interest rates exist in contrast to real interest rates and effective interest rates. Real interest rates tend to be important to investors and lenders, while effective rates are significant for borrowers as well as investors and lenders. To avoid purchasing power erosion through inflation, investors consider the real interest rate, rather than the nominal rate. One way to estimate the real rate of return in the Nigeria is to observe the interest rates on Treasury inflation protected securities (TIPS). The difference between the yield on a treasury bonds and the yield on TIPS of the same maturity provides an estimate of inflation expectations in the economy. For example, if the nominal interest rate offered on a three-year deposit is 4% and the inflation rate over this period is 3%, the investor’s real rate of return is 1%. On the other hand, if the nominal interest rate is 2% in an environment of 3% annual inflation, the investor’s purchasing power erodes by 1% per year.

Inflation Rate

The effects of inflation on the economy are diverse and can be both positive and negative. The negative effects are however most pronounced and comprise a decrease in the real value of money as well as other monetary variables over time. As a result, uncertainty over future inflation rates may discourage investment and savings, and if inflation levels rise quickly, there may be shortages of goods as consumers begin to hoard out of anxiety that prices may increase in the future.

Inflation is one of the most important macroeconomic indicators to analyze the economic conditions of the economy. Few studies have addressed the linkage between the stock market and inflation Fama (1990) suggests that macroeconomic variables have projecting power for the stock exchange performance, although he did not consent to the anticipating authority of stock performance for the economy. Agawam (1981) Soenen and Hennigar (1988) measured the relationship between inflation rates and stock prices. A common expectation is that the stock prices and inflation should be positively related. This is done with the mind that, common stocks should be a hedge against inflation because stocks represent the ownership of the real assets.

Gross Domestic Product

Gross domestic product is the overall measure of the performance of an economy and there is a close and meaningful relationship between GDP and stock market return. There studies that have investigated the effects of GDP on stock returns empirically include Fama (1990) and Schwert (1990). Fama (1990) argued that the standard valuation model posits three sources of variation in stock returns:

- i) Shocks to expected cash flow,
- ii) predictable return variation due to variation through time in the discount rate that price expected cash flows; and
- iii) Shocks to discount rates.

Corporate Resilience

Resilience, according to Webster's dictionary, is the ability to become stronger, healthier, and more successful after a negative event. The concept of resilience originated from physics, means that an object returns to its original state after under the press by external forces. Later, psychology adopted the meaning of resilience and extended it to include the ability of individuals to recover from setbacks and acquire new abilities to actively deal with external risks and challenges.

Based on the definition of resilience and the literature analysis of its organizational structure, combined with a series of financial reform measures made by the financial market after the financial crisis, we can get the definition of resilience of banks. Bank resilience is the positive factor utility generated by the interaction of internal and external protective characteristics of the bank, which can cope with the current risk when bank's stable operation state was been destroyed by the emergency. Through the adjustment and reconstruction of the protective factors, the bank can achieve a higher level of risk management ability and a long-term stable operation state.

Resilience has emerged as a critical characteristic of complex, dynamic systems in a range of disciplines till it recently emerged strongly into the business literatures and management studies like in Coutu (2002), Lengnick-Hall et al. (2011), Christopher et al. (2003), Hamel

and Välikangas (2003) Christopher (2004), Sheffi (2007) and many others. It has increasingly become a multi-dimensional and multi-disciplinary concept (Ponomarov and Holcomb 2009), however still inadequately theorized (Sutcliffe and Vogus 2003).

Capital Adequacy Ratio

Capital adequacy ratio (CAR) Capital Adequacy Ratio is a measure of the amount of bank's capital expressed as a percentage of its risk weighted credit exposure. Capital adequacy ratio is calculated dividing capital fund by risk weighted assets. As per the NRB guideline, commercial banks in Nepal must maintain the capital adequacy ratio above 10 percent. Capital adequacy increases the strength of the bank which improves the solvency of the bank and capacity to absorb the loan loss and protect bank from bankruptcy. Alshatti (2015) has asserted that capital adequacy ratio don't affect the profitability of Jordanian commercial Banks. However, Poudel (2012) found significant negative association between capital adequacy ratio and bank performance in Nepalese context. Likely, Djan, Stephen, Bawuah, Halidu and Kuutol (2015) also found that capital adequacy ratio have an inverse impact on banks' performance. Bhattarai (2017) has found that capital adequacy ratio was significant and negative effect on bank profitability. In this scenario, a negative relationship is expected between capital adequacy ratio and bank profitability.

Capital adequacy ratio (CAR) is the ratio that is set by the regulatory authority in the banking sector, and this ratio can used to test the health of the banking system. Hence, capital adequacy ratio for banking organizations is an important issue that has received a considerable attention in finance literature. According to Al-Sabbagh (2004), capital adequacy is defined as a measure of bank's risk exposure. Banks risk is classified into credit risk, market risk, interest rate risk and exchange rate risk that are included in the calculation of capital adequacy ratio. Therefore regulatory authorities used capital adequacy ratio as an important measure of safety and soundness for banks and depository institutions because they view capital as a buffer or cushion for absorbing losses.

Anticipated Income Theory

Under this theory, bank's management can plan its liquidity based on the expected income of the borrower and this enables the bank to grant a medium and long-term loans, in addition to short-term loans as long as the repayment of these loans are linked by the borrowers expected income to be paid in the periodic and regular premiums, and that will enable the bank to provide high liquidity, when the cash inflows are regular and can be expected. Deposit money banks can manage its liquidity through appropriate credit management that is directing of granted loans, and ensuring that these loans are collected as at when due in a timely manner and minimize the possibility of delays in repayment at the maturity date (Okoh, Nkechukwu and Ezu, 2016).

This theory holds that banks' management of liquidity can be enhanced by adequate phasing and structuring of the loan commitments to the customers. According to Nzotta (1997) the theory focuses on the earning capacity and borrowers' credit worthiness as the ultimate guarantee for liquidity adequacy. It drives banks' transactions in self-liquidating commitments (Nwankwo, 1991); and encourages the adoption of ladder effects in investment portfolio of commercial banks (Ibe, 2013).

This theory was proposed by H.V. Prochanow in 1944 on the basis of the practice of extending term loans by the US commercial banks. This theory states that irrespective of the nature and feature of a borrower's business, the bank plans the liquidation of the term-loan from the expected income of the borrower. A term-loan is for a period exceeding one year and extending to a period less than five years.

Risk Management Theory

David (1997) developed this theory aiming to study why risk management was required, and outlines theoretical underpinning under contemporary bank risk management; its emphasis is on market and credit risks. The theory indicates that market and credit risks would have either direct or indirect effect on banks survival (Eichhorn, 2004). One would expect the credit risk indicators to influence banks profitability if there is no effective and efficient credit risk management (Ngugi, 2001). This theory identifies major source of value loss as Market risk being a change in net value of asset due to change in interest rate, exchange rate, equity and commodity prices (Wu & Olson, 2010). Regulators are concerned with overall risk and have minimum concern with individual risk of portfolio components as managers are capable of window dressing the bank position. The need for total risk show that measurement of risk cannot be centralized as risk of a portfolio is not just a sum of component as per Markowitz theory. This implies that portfolio risk must be driven by portfolio return which is invariant to changes in portfolio composition (Beverly, 2015). Regulatory requirements and alternative choices require managers to consider risk return trade off, Measurement of risk is costly thus bank managers compromise between precision and cost (Sovan, 2009).

Application of Theory

This study is built on bank management theories as management is the major determinants of commercial bank resilience. In time of macroeconomic instability, it is the duty of the management to formulate policies and device strategies of managing the environment by adapting to the situation, absorbing or by learning the situation.

2.3 Empirical Review

Khan, Chaudhry and Saeed (2019) examined the differences in financial resilience of Islamic and Conventional Commercial banks with respect to the short term and long-term perspectives to pliability. The selected banks are compared on their resilience quotient exhibited by Liquidity Coverage Ratio (LCR) and Z-Scores. This study evaluates cross country panel data of 157 listed and non-listed licensed Islamic banks located in 22 countries and same number of their conventional commercial counterparts, through a period of 1998 to 2018. The data were collected through database and World Bank publications. Ratio analysis and Multiple Regression analysis were applied on data to analyze the extent of resilience of both Islamic and Conventional banks. The findings suggest that there are considerable differences in short term and long term resilience quotient of Islamic and Conventional commercial banks. Where Islamic banks have relatively enervated position than Commercial banks on liquidity frontier, they hold a more resilient position with respect to z- score. ROE and Capital adequacy are two important factors that have a significant impact on bank resilience. This research is different from all past researches with respect to methodological, aeon and acclimatization perspective. Resilience is a relatively new phenomenon adopted from complex adaptive ecosystems and most studies in this area are of theoretical nature. Moreover, the fact that this

research has considered not only the long term but also short-term resilience perspective, adds to its overall value and originality.

Risqi (2017) examined the impact of bank specific determinants and macroeconomic indicators on profitability in Islamic Bank Period 2012-2015 using the multiple linear regression method. The study found that Financing Growth has a positive and significant influence on Return on Assets in Islamic Banks. The inflation rate was found to have a positive but insignificant influence on Return on Assets in Islamic Banks, while Exchange rate had a negative and significant influence on Return on Assets in Islamic banks.

Sumandi (2017) examined an early warning system for the robustness of Islamic banking in Indonesia using the non-parametric with signaling approach. The results of the study showed that Islamic banks had poor resilience during the period 2004–2005 but that they also registered a stable performance during the 2008 financial crisis. The poor resilience of Islamic banks in 2004 was due to their vulnerability. The results also indicated that 3 leading indicators out of 5 indicators could be used to measure the vulnerability of Islamic banks. These were Interest rate, Inflation and the financing to deposits ratio (FDR). The selection criteria were based on the noise to signal ratio (NSR), the proportion of crises correctly called, the proportion of false alarms to total alarms, the proportion of crises with an alarm issued and the proportion of probability of crisis given no alarm.

Lim *et al.*, (2015) researched factors affecting the performance of Islamic banks and conventional banks in Malaysia using descriptive methods with a simple regression analysis. Their results demonstrated the significant influence of capital adequacy, operational efficiency, economic growth and inflation on the profitability of conventional and Islamic banks. Assegaf, Putri, Mitra, & Syarief (2014) examined the impact of macroeconomic variables on the financial performance of Islamic banks in Indonesia. The independent variables in their research were macroeconomic variables (inflation, interest rate and money supply) and they employed multiple linear regression analysis as the research method. Their results showed, firstly, that the macroeconomic variables and ROA in the previous month simultaneously had an influence on the ROA of Islamic banks; however, partially, none of the macroeconomic variables, except for ROA in the previous month, influenced the ROA of Islamic banks.

Alpera and Anbarb (2011) examined the bank-specific and macroeconomic determinants of the banks' profitability in Turkey over the time period from 2002 to 2010. The bank profitability is measured by return on assets (ROA) and return on equity (ROE) as a function of bank-specific and macroeconomic determinants. Using a balanced panel data set, the results show that asset size and non-interest income have a positive and significant effect on bank profitability. However, size of credit portfolio and loans under follow-up have a negative and significant impact on bank profitability. With regard to macroeconomic variables, only the real interest rate affects the performance of banks positively. These results suggest that banks can improve their profitability through increasing bank size and non-interest income, decreasing credit/asset ratio. In addition, higher real interest rate can lead to higher bank profitability.

Sufian and Kamarudin (2012) have identified bank specific characteristics and macroeconomic determinants of profitability in the Bangladesh's banking sector over the years 2000 to 2010. The study uses relevant data from a sample of 31 commercial banks in Bangladesh. The determinants are identified using multiple regression analysis. The generalised least squares method has been applied consisting of fixed effect model rather than random effect model and tested by Hausman test. The results bring out five bank specific determinants that are important in influencing profitability: capitalisation, nontraditional

activities, liquidity, management quality, and size of the bank. Besides, three macroeconomic determinants significantly influence profitability including growth in GDP, inflation and concentration.

Kanwal, and Nadeem (2013) have analyzed the vital contribution of the commercial banks to economic progress of Pakistan, this study investigates the impact of macroeconomic variables on profitability of public limited commercial banks in Pakistan for years 2001- 2011. Pooled Ordinary Least Square (POLS) method is used to examine the effect of 3 major external factors; inflation rate, real gross domestic product (GDP) and real interest rate on profitability indicators; return on assets (ROA), return on equity (ROE) and equity multiplier (EM) ratios in 3 separate models. The empirical findings indicate a strong positive relationship of real interest rate with ROA, ROE and EM. Secondly, real GDP is found to have an insignificant positive effect on ROA, but an insignificant negative impact on ROE and EM. Inflation rate on the other hand, has a negative link with all 3 profitability measures. Overall, the selected macroeconomic factors are found to have a negligible impact on earnings of commercial banks.

Bilal, Saeed, Gull and Akram (2013) have identified the influence of bank specific and macroeconomic factors on profitability of commercial banks in Pakistan over the period of Bhattarai 38 2007 to 2011. Return on assets and return on equity are used as dependent variable. Deposit to assets, bank size, capital ratio, net interest margin and nonperforming loans to total advances are utilized as bank specific measures. Inflation, real gross domestic product and industry production growth rate are macroeconomic factors. By employing descriptive statistics, correlation and regression analysis researcher conclude that bank size, net interest margin, and industry production growth rate has positive and significant impact on the ROA and ROE. Nonperforming loans to total advances and inflation have negative significant impact on Return on assets while real gross domestic product has positive impact on ROA. Capital ratio has positive significant impact on ROE.

Abdullah, Parvez, and Ayreen (2014) examined the bank-specific, industry-specific and macroeconomic determinants of 26 DSE listed bank's profitability in Bangladesh during 2008 to 2011. Bank profitability is calculated by return on assets (ROA) and Net interest Margin (NIM) as a function of bank-specific, industry-specific and macroeconomic determinants. The empirical results show that the profitability of the Bangladesh banking sector is determined by bank size, higher cost efficiency, capitalization and higher concentration, regardless of whether ROA or NIM is used as the dependent variable. Credit risk and ROA have a negative relation, whereas the relationship with NIM is positive. Inflation is significantly related to NIM but not with ROA, and labor productivity and nontraditional activity have a positive effect on ROA only.

Osamwonyi and Michael (2014) examined that due to the immense contribution of commercial banks to the economic development in Nigeria, this research investigate the impact of macroeconomic variables on profitability of banks in Nigeria from 1990-2013. Pooled Ordinary least method is used to determine the effect of three major factors; gross domestic product (GDP), interest rate (INTR) and inflation (INFR) on return on equity (ROE) which proxies' profitability. The findings from the empirical point of view show a positive relationship of gross domestic product (GDP) with return on equity (ROE). Interest rate and inflation rate have a negative relationship with return on equity (ROE). Gross domestic product have a significant positive effect on Return on equity(ROE) while interest rate has a

significant negative effect on return on equity(ROE) but inflation is not significant at all levels of significance.

Zhang and Daly (2014) demonstrated in the last decade the Chinese government owned banks have undergone a privatization program resulting in considerable changes in ownership of Chinese banks. The study examines the impact of bank-specific, macroeconomic, financial, and globalization variables on the performance of Chinese banking from 2004 to 2010. The results suggest that banks with lower credit risk, which are well capitalized, tend to be more profitable, while banks with higher expense preferences exert a negative impact on bank performance. The macroeconomic variables suggest that China's financial services tend to grow along with economic growth. Our results also suggest that greater economic integration through increased trade and capital flows coincides with an increase in bank profitability. Likewise, social globalization and political globalization seem to exert positive effects on the profitability of Chinese banks.

Simiyu and Ngile (2015) based on vital contribution of the commercial banks to economic progression Kenya, this study endeavors to investigate the effect of macroeconomic variables on financial profitability of listed commercial banks in the Nairobi Securities Exchange (NSE) for years 2001 to 2012. Panel data analysis using Fixed Effects model was applied on the data to examine the effects of three major macroeconomic variables which included: Gross Domestic Product (GDP), Exchange rates, and interest rates on profitability of the listed commercial banks. The study findings indicated that real GDP growth rate had positive but insignificant effect to profitability of commercial banks as measured through Return on Assets (ROA). Further, real interest rates had a significant negative influence on profitability of listed commercial banks in Kenya. While the exchange rate had a positive significant effect on the profitability of listed commercial banks on Nairobi Securities Exchange.

Noman, Chowdhury, Chowdhury, Kabir, and Pervin (2015) designed to investigate bank specific and macroeconomic determinants of profitability considering 299 observations of 35 banks in Bangladesh during 2003 to 2013. The investigation process considers all types of local Bangladeshi banks, OLS fixed effect and two step system GMM model. The results report that credit risk, cost efficiency, GDP growth and real interest rate effects profitability negatively; and capital adequacy, liquidity, size, inflation and stock market turnover effect profitability positively. The results further find that both development banks and private commercial banks are more profitable than public commercial banks in Bangladesh. Furthermore, the study finds that ROAA is most preferred measure of profitability. The study formulates some significant policy implications for improving the profitability of the banking sector of Bangladesh.

Yakubu (2016) examined the influence of bank-specific and macroeconomic factors on commercial banks profitability in Ghana. The study employed the ordinary least square regression model to analyse the data obtained from the annual financial statements of five commercial banks from 2010 to 2015. The empirical results suggest that bank size, liquidity, capital adequacy, asset management, expense management, and real interest rate are positively related to profitability. GDP growth and inflation rate on the other hand, are related negatively to profitability. However, only bank size, liquidity, and expense management have a significant effect on commercial banks profitability. It can be observed that commercial banks profitability in Ghana is largely determined by bank-specific factors, whereas macroeconomic factors have an insignificant impact on banks profitability for the period

considered. Therefore, it is crucial for management of commercial banks in Ghana to efficiently manage the factors that contribute to their profitability in order to enhance superior performance.

Pradhan and Shrestha (2016) examined the impact of bank specific variables and macroeconomic variables on the performance of commercial banks of Nepal. The dependent variable is bank performance which has been specified in terms of ROA, ROE and NIM while the independent variables are capital adequacy ratio, asset quality, management efficiency, liquidity management, employee expenses, other operating expenses, credit risk, growth of gross domestic product and inflation. To test the impact of importance of bank specific and macro-economic variables on bank performance regression models have been estimated. The study reveals that management efficiency has a very strong and positive relationship with bank performance in Nepal. The macroeconomic variables are not significant and hence there is no evidence that external forces have impact over bank performance. The study showed that all the bank specific factors are found to be significant factors affecting the bank performance.

Kamandea, Zablonb and Ariembac (2016) asserted that determine the effects of bank specific factors on the financial performance of commercial banks in Kenya for a period of 5 years, starting from the year 2011 to 2015. The dependent variable under investigation was return on assets (ROA). The independent variables were capital adequacy, asset quality, management efficiency, earnings ability and liquidity. The specific objectives of this research were to determine the effects of capital adequacy on the financial performance of commercial banks in Kenya, evaluate the effects of asset quality on the financial performance of commercial banks in Kenya, determine the impact of management efficiency on the financial performance of commercial banks in Kenya, determine the impact of earnings ability on the financial performance of commercial banks in Kenya and evaluate the effects of liquidity on the financial performance of commercial banks in Kenya. The choice of this five-year period was based on the explosive growth of the banking sector in the country and the availability of complete data for that period. The study concentrated on the bank specific factors that affect the banks' financial performance. In this research, the scope was all the 11 banks listed in the Nairobi securities exchange.

Bhattarai (2017) has investigated the effect of credit risk on the profitability of commercial banks in Nepal over the period of 8 years (2009 to 2016). Panel data of six commercial banks were analyzed using pooled OLS model, fixed effects model and random effect model. The results from the estimated regression models show that default risk is significantly positively associated with banks' profitability. However, capital adequacy ratio is found significantly negatively associated to profitability. The effect of cost per loan assets seems minimal in explaining the variation of commercial banks' profitability. Thus, this study concludes that credit risk indicators like: default risk and capital adequacy ratio have significant impact on the profitability of commercial banks in Nepal.

Combey and Togbenou (2017) have investigated short-run and long-run relationship between three main macroeconomic indicators (gross domestic product growth, real effective exchange rate, and inflation) and banking sector profitability (measured by return on assets and return on equity) in Togo, from 2006 to 2015, by using Pool Mean Group estimator. Results show that, in the short-run, banks' return on assets and return on equity are not related to macroeconomic variables. But banks' return on assets is determined positively by

bank capital to assets ratio and bank size while banks' return on equity is affected negatively by bank capital to assets ratio. However, in the long-run, real gross domestic product growth and real effective exchange rate affect negatively and statistically significant banks' return on assets, while inflation rate has no effect. Concerning bank's return on equity, in the long-run, results suggest that real gross domestic product growth, real effective exchange rate, and inflation affect negatively bank's return on equity. These results imply that to stabilize bank profitability and make Togolese banking sector more resilient, policymakers and banking sector managers must, among others, try to improve real gross domestic product growth, real effective exchange rate, and inflation volatility anticipation.

Abobakr (2018) has explained the elements that affect banks' profitability in the Egyptian banking sector during the period from 2006 to 2015. The study uses unbalanced panel annual data for 26 working banks in the Egyptian market. Generalized methods of moments (GMM) estimators are applied to define the most affected factors. Return on assets (ROE) and the return on equity (ROA) have been used as measurements of bank profitability. The findings of the study reveal that high profitability are associated with large bank size, large capital ratio and large operating income, while lower profitability is associated with higher non-interest income. As macroeconomic variables do affect profitability significantly, the researcher suggests that macroeconomic strategies that encourage low inflation and sustain growth rate, enhances loans expansion, boost banks' profitability.

Aldasoro et al. (2020) concluded that banks with a good capital base and high profitability would perform relatively smoothly during the pandemic. Korzeb and Niedziółka (2020) found larger banks are more resilient to the negative impact of the pandemic while researching on the Polish banking sector. On contrary, Barua and Barua (2020) found that larger banks are more vulnerable during the pandemic in the context of Bangladesh. They conducted a study on the Bangladeshi banking sector using stress testing approach and found that all banks in Bangladesh might experience a reduction in risk-weighted asset, capital adequacy ratio and interest revenue due to different macroeconomic shocks caused by the COVID-19 pandemic. Regardless of the financial threats posed by the pandemic, some authors also drew attention to rapid digitalization of banking sector, formulating quality and dynamic market portfolio, expected loss calculation and creditor quality assessment (Bryan et al., 2020; Selvan and Vivek, 2020). Although Barua and Barua (2020) studied the adverse effect of the COVID-19 pandemic on banking sector of Bangladesh, they could not work with whole/maximum portion of credit portfolio of the banks. They just focused on two large industries RMG and SME industry. However, this pandemic has affected export-oriented industries, service industries and manufacturing industries of Bangladesh. As most of the banks' credit portfolio is diversified, so the adverse effect of the COVID-19 pandemic will ultimately hit the performing loan of banking industry. To investigate the resilience of financial sector of Bangladesh, this study will analyze the strength of banks' credit portfolio by considering banks' credit exposure to the industries, which are most likely to be impacted by these negative effects of the COVID-19 pandemic.

Literature Gap

The empirical literatures presented in this study are mainly foreign studies. Similar studies in Nigeria focused on macroeconomic variables and profitability of commercial banks. This study will focus on how macroeconomic variables affect commercial banks resilience.

METHODOLOGY

Research Design

Ex-post facto research design was employed in obtaining, analyzing and interpreting the relevant data for hypotheses testing. The rationale for the variety is that ex-facto research design allows the researcher the opportunity of observing one or more variables over a period of time (Uzoagulu, 1998). Specifically, panel data were adopted in data analysis.

Population of the Study

Nogales (2002) defined population as the total number of elements that conform to the characteristics needed for the purpose of the study. Thus, the population for this study includes the 24 licensed commercial banks that are listed on the floor of then Nigeria Stock Exchange as at December, 2019 (CBN, 2019).

Sample Size and Sampling Techniques

Given that the entirety of the population is actually used for the study, a census of 13 banks is used, thus there is no need for considering a sample. The rationale for the population/census is the relative ease in getting relevant and reliable data for the study from the annual reports submitted to the Nigeria Stock Exchange and Securities and Exchange Commission (SEC). The requirement was that the bank was in operation and has published accounts for ten-year period from 2011 to 2021.

Nature and Source of Data

The secondary data that were used in this study which were sourced from the financial statement of the quoted commercial banks, Stock Exchange Facts Book and Central Bank of Nigeria Statistical Bulletin. Firm annual statements and reports are deemed to be reliable because they are statutorily required to be audited by a recognized auditing firm before publication.

Model Specification

These analytical techniques enabled the researcher attain justifiable and robust results.

$$Y = \beta_0 + \beta_{1Xit} + \mu \quad (3.1)$$

Where Y = Dependent Variable

β_{1Xit} = Independent variable

β_0 = Regression Intercept

μ = Error Term

Disaggregating Equation 3.1 to form the multiple regression models, we have, the model specified in this study was adopted from Babalola (2012).

$$CAR = F(EXR, INTR, IFR, GDP, M2) \quad (1)$$

Transforming equation 3.2 to econometrics form, we have

$$CAR = \alpha_0 + \alpha_1 EXR + \alpha_2 INTR + \alpha_3 IFR + \alpha_4 GDP + \alpha_5 M2 + \mu \quad (2)$$

Formulating model for hypotheses testing

Where:

CAR = Capital Adequacy Ratio

EXR = Exchange Rate proxied by naira exchange rate per US dollar

INTR	=	Real Interest rate proxied by interest rate after inflation
INFR	=	Inflation Rate proxied by consumer price index
M2	=	Broad money supply proxy by growth of M2
RGDP	=	Real Gross Domestic Product proxied by percentage increase or decrease
α_0	=	Intercept
$\alpha_1 - \alpha_7$	=	coefficient of independent variables to the dependent variable.
et	=	error term

A-priori Expectation = $\beta_1, \beta_2, \beta_3, \beta_4$ and $\beta_5 > 0$

Technique for Analysis

To obtain the observed values on the expectation of the impact of financial information on market value, panel data survey over a ten year period will be employed. Panel data structure allows us to take into account the unobservable and constant heterogeneity, that is, the specific features of each quoted firm. The researcher will employ pooled Ordinary Least Square (OLS), Fixed Effects and Random Effects regression models to test the various hypotheses. Pooled OLS regression technique is popular in financial studies owing to its ease of application and precision in prediction (Alma, 2011).

Pooled Regression (OLS) Model (PRM): is equally known as the constant coefficient model (CCM). It is the simplest among the three models in panel data analysis. However, it disregards the space and the time dimensions of the pooled data. In a situation where there is neither significant cross-section unit nor significant temporal effects, one could pool all of the data and run an ordinary least squares (OLS) regression model.

Fixed Effects (FE) Model: in the FE technique, the slope coefficients, are constant but the intercept, varies across space i.e. the intercept in the regression model is allowed to vary across space (individuals). This is as a result of the fact that each cross-sectional unit may have some special characteristics.

Random Effect (RE) Model: the RE technique which is equally known as the Error Components Model (ECM) is an alternative to FE technique. Basically, the RE estimator assumes that the intercept of an individual unit is a random component that is drawn from a larger population with a constant mean value. The individual intercept is then expressed as a deviation from this constant mean value.

ANALYSIS AND DISCUSSION OF FINDINGS

Presentation of Results

Table 1: Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	17.28505	5	0.0000

Source: Extract from E-view 9.0 (2022)

The result of the Cross-section test variance carried out on this was invalid. The Hausman statistic set to zero. Also there is no difference between fixed and random effect for all the independent variables as tested on each of the models. The likely reason for this is the nature of the data used for the study, the independent variables data (economic characteristic variables) does not change across section therefore there is no effect as to measuring the impact of the movement within the cross-section. Therefore there would be no difference if research adopts a fixed effect or a random effect. All observation share same independent data across section. Therefore for the purpose of consistence the study adopt a fixed effect for its analysis.

Table 2: Pooled Effect Regression Results on Macroeconomic Variables and Commercial Banks Resilience

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXR	0.007437	0.010862	0.684690	0.4948
GDP	0.123148	0.322285	0.382110	0.7030
INFR	0.190477	0.313607	0.607374	0.5447
INTR	0.164493	0.227410	0.723335	0.4708
M2	0.012044	0.079725	0.151066	0.8802
C	13.17469	7.217914	1.825277	0.0704
R-squared	0.311060	Mean dependent var		18.77631
Adjusted R-squared	0.228816	S.D. dependent var		4.439765
S.E. of regression	4.503279	Akaike info criterion		5.892543
Sum squared resid	2514.661	Schwarz criterion		6.024891
Log likelihood	-377.0153	Hannan-Quinn criter.		5.946321
F-statistic	0.277366	Durbin-Watson stat		0.612756
Prob(F-statistic)	0.924781			

Source: Extract from E-view 9.0 (2022)

From the multiple regression estimates in Table 2 the Adjusted R-squared showed that about 22.8 percent variations in commercial banks resilience can be attributed to the influence of economic variables while the remaining 77.2 percent variations in the dependent variable were caused by other factors not included in this model. The p-value of the independent variables shows that the variables are statistically not significant.

The p-value of the F-statistic shows that simultaneous combinations of the proxies of the macroeconomic indicators does not significantly influence commercial banks resilience since it is greater than the 0.05 significant level adopted for this study. Therefore, from the above regression estimates, macroeconomic variables have no significant impact on the resilience of commercial banks. The model does not show any evidence of first order autocorrelation since the observed Durbin-Watson of 0.612756 less than the tabulated lower Durbin-Watson (dL) value of 2.00 at 5% level of significance. This means that the error term is independent of the independent variables.

Table 3: Fixed effect Regression Results on Macroeconomic Variables and Commercial Banks Resilience

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXR	0.007437	0.007447	0.998686	0.3201
GDP	0.123148	0.220955	0.557345	0.5784

INFR	0.190477	0.215006	0.885914	0.3776
INTR	0.164493	0.155910	1.055054	0.2937
M2	0.012044	0.054658	0.220345	0.8260
C	13.17469	4.948532	2.662344	0.0089

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.580149	Mean dependent var	18.77631
Adjusted R-squared	0.516421	S.D. dependent var	4.439765
S.E. of regression	3.087405	Akaike info criterion	5.220426
Sum squared resid	1067.592	Schwarz criterion	5.617469
Log likelihood	-321.3277	Hannan-Quinn criter.	5.381758
F-statistic	9.103594	Durbin-Watson stat	1.468350
Prob(F-statistic)	0.000000		

Source: Extract from E-view 9.0 (2022)

From the multiple regression estimates in Table 3 the Adjusted R-squared showed that about 51.6 percent variations in commercial banks resilience can be attributed to the influence of economic variables while the remaining 48.9 percent variations in the dependent variable were caused by other factors not included in this model. The p-value of the independent variables shows that the variables are statistically not significant.

The p-value of the F-statistic shows that simultaneous combinations of the proxies of the macroeconomic indicators significantly influence commercial banks resilience since it is less than the 0.05 significant level adopted for this study. Therefore, from the above regression estimates, macroeconomic variables have no significant impact on the resilience of commercial banks. The model does not show any evidence of first order autocorrelation since the observed Durbin-Watson of 1.468350 less than the tabulated lower Durbin-Watson (dL) value of 2.00 at 5% level of significance. This means that the error term is independent of the independent variables.

Table 4: Random Effect Regression Results on Macroeconomic Variables and Commercial Banks Resilience

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXR	0.007437	0.007447	0.998686	0.3199
GDP	0.123148	0.220955	0.557345	0.5783
INFR	0.190477	0.215006	0.885914	0.3774
INTR	0.164493	0.155910	1.055054	0.2935
M2	0.012044	0.054658	0.220345	0.8260
C	13.17469	5.034109	2.617085	0.0100
Effects Specification				
Cross-section random			S.D.	Rho
Idiosyncratic random			3.332522	0.5381
			3.087405	0.4619
Weighted Statistics				
R-squared	0.323241	Mean dependent var		5.278977
Adjusted R-squared	0.216144	S.D. dependent var		3.062781
S.E. of regression	3.087405	Sum squared resid		1181.976
F-statistic	0.590097	Durbin-Watson stat		1.290806
Prob(F-statistic)	0.707544			

Unweighted Statistics			
R-squared	0.211060	Mean dependent var	18.77631
Sum squared resid	2514.661	Durbin-Watson stat	0.612756

Source: Extract from E-view 9.0 (2022)

From the multiple regression estimates in Table 4 the Adjusted R-squared showed that about 21.6 percent variations in commercial banks resilience can be attributed to the influence of economic variables while the remaining 78.4 percent variations in the dependent variable were caused by other factors not included in this model. The p-value of the independent variables shows that the variables are statistically not significant.

The p-value of the F-statistic shows that simultaneous combinations of the proxies of the macroeconomic indicators not significantly influence commercial banks resilience since it is less than the 0.05 significant level adopted for this study. Therefore, from the above regression estimates, macroeconomic variables have no significant impact on the resilience of commercial banks. The model does not show any evidence of first order autocorrelation since the observed Durbin-Watson of 1.290806 less than the tabulated lower Durbin-Watson (dL) value of 2.00 at 5% level of significance. This means that the error term is independent of the independent variables.

Table 5: Descriptive Statistics

	CAR	EXR	GDP	INFR	INTR	M2
Mean	18.77631	214.2253	3.698000	11.76600	7.220000	10.31600
Median	18.88000	175.4965	3.500000	11.56500	6.145000	9.750000
Maximum	27.14000	306.9210	9.540000	16.52000	13.59000	17.78000
Minimum	1.400000	150.2980	-1.580000	8.060000	1.070000	1.320000
Std. Dev.	4.439765	67.12997	2.990823	2.759478	3.558594	6.033794
Skewness	-0.730991	0.457765	0.171128	0.320162	0.294081	-0.103752
Kurtosis	4.522089	1.392009	2.642647	1.968692	2.335123	1.471517
Jarque-Bera	24.12663	18.54575	1.326217	7.982057	4.268319	12.88798
Probability	0.000006	0.000094	0.515247	0.018481	0.118344	0.001590
Sum	2440.920	27849.29	480.7400	1529.580	938.6000	1341.080
Sum Sq. Dev.	2542.785	581329.8	1153.908	982.2987	1633.603	4696.461
Observations	130	130	130	130	130	130

Source: Extract from E-view 9.0 (2022)

The descriptive statistics on the above shows that commercial banks resilience (CAR) has a mean value of 18.77631 while the maximum and minimum values are 27.14000 and 1.400000 respectively. Exchange rate has a mean value of 214.2253, while the maximum and minimum values are 306.9210 and 150.2980 respectively. Gross domestic products have a mean value of 3.698000, while the maximum and minimum values are 9.540000 and -1.580000 respectively. Inflation rate has a mean value of 11.76600, while the maximum and minimum values are 16.52000 and 8.060000 respectively. Interest rate has a mean value of 7.220000, while the maximum and minimum values are 13.59000 and 1.070000 respectively while money supply has a mean value of 10.31600, while the maximum and minimum values are 17.78000 and 1.320000 respectively.

Table 6: Covariance Analysis:

	CAR	EXR	GDP	INFR	INTR	M2
CAR	19.55988					
	1.000000					

EXR	22.54641	4471.768				
	0.076235	1.000000				
	0.865018	-----				
	0.3886	-----				
GDP	-0.891113	-148.9809	8.876216			
	-0.067629	-0.747786	1.000000			
	-0.766895	-12.74246	-----			
	0.4446	0.0000	-----			
INFR	0.676396	91.00608	-3.646028	7.556144		
	0.055638	0.495086	-0.445201	1.000000		
	0.630443	6.446795	-5.625083	-----		
	0.5295	0.0000	0.0000	-----		
INTR	0.149061	-56.26887	-1.426970	-6.431490	12.56618	
	0.009508	-0.237371	-0.135114	-0.660024	1.000000	
	0.107573	-2.764555	-1.542784	-9.939937	-----	
	0.9145	0.0065	0.1254	0.0000	-----	
M2	0.418992	-36.67642	4.397912	5.584814	-8.199220	36.12662
	0.015762	-0.091250	0.245595	0.338022	-0.384820	1.000000
	0.178348	-1.036703	2.866376	4.063465	-4.716983	-----
	0.8587	0.3018	0.0049	0.0001	0.0000	-----

Source: Extract from E-view 9.0 (2021)

From the table, the correlation matrix indicate that exchange rate have positive correlation with capital adequacy ratio, gross domestic product have negative correlation with capital adequacy ratio, inflation rate have positive correlation with capital adequacy ratio, interest rate have positive correlation with capital adequacy ratio and broad money supply have positive correlation with capital adequacy ratio.

Discussions of Findings

The study found that exchange rate has positive but no significant effect on commercial banks resilience over the periods covered in this study. The estimated model indicates that exchange rate could add 0.007 percent increase in commercial banks resilience. This finding confirms our a-priori expectations and objectives of bank management. The finding is in line with macroeconomic policy reforms and foreign exchange management policies such as the Dutch auction exchange rate system and flexible exchange rate policies. the finding confirm the findings of Akani & Lucky (2014), Khan, Chaudhry and Saeed (2019) that there are considerable differences in short term and long term resilience quotient of Islamic and Conventional commercial banks, The findings of Bologna (2010) that made the resilience of Australian banking system obvious from an international perspective and Risqi (2017) that Financing Growth has a positive and significant influence on Return on Assets in Islamic Banks.

The study found that gross domestic product has positive but no significant effect on commercial banks resilience over the periods covered in this study. The estimated model indicates that gross domestic product could add 0.12 percent increase in commercial banks resilience. This finding confirms our a-priori expectations and objectives of bank management. The finding is in line with macroeconomic policy reforms such as the deregulation of the economy and investment in infrastructural development. the finding confirm the findings of Febrina and Naomi (2009) BI rate and bank profitability due to a

negative relationship between the exchange rate, inflation and bank profitability, Briguglio (2009) that GDP per capita has a positive correlation with the resilience of the economy and is negatively correlated with vulnerability, Lim *et al.*, (2015) demonstrated that the significant influence of capital adequacy, operational efficiency, economic growth and inflation on the profitability of conventional and Islamic banks, the findings of Assegaf, Putri, Akani (2009), Mitra, & Syarief (2014) that the macroeconomic variables and ROA in the previous month simultaneously had an influence on the ROA of Islamic banks; however, partially, none of the macroeconomic variables, except for ROA in the previous month, influenced the ROA of Islamic banks and the findings of Bennaceur and Goaid (2008) that private banks performed better as compared to state owned banks. There was a negative impact of partial interest rate liberalization on interest margin and positive impact of complete interest rate liberalization of banks in Tunisia.

The study found that inflation rate has positive but no significant effect on commercial banks resilience over the periods covered in this study. The estimated model indicates that inflation rate could add 0.19 percent increase in commercial banks resilience. This finding confirms our a-priori expectations and objectives of bank management. The finding is also in line with macroeconomic policy reforms such as the deregulation of the economy and investment in infrastructural development. The finding confirms the findings of Alpera and Anbarb (2011) that banks can improve their profitability through increasing bank size and non-interest income, decreasing credit/asset ratio. In addition, higher real interest rate can lead to higher bank profitability, Agwor & Akani (2020), Sufian and Kamarudin (2012) that are important in influencing profitability: capitalization, nontraditional activities, liquidity, management quality, and size of the bank. Besides, three macroeconomic determinants significantly influence profitability including growth in GDP, inflation and concentration, contradict the findings of Kanwal, and Nadeem (2013) that Inflation rate on the other hand, has a negative link with all 3 profitability measures. Overall, the selected macroeconomic factors are found to have a negligible impact on earnings of commercial banks and the findings of Bilal, Saeed, Gull and Akram (2013) that bank size, net interest margin, and industry production growth rate has positive and significant impact on the ROA and ROE.

The study found that interest rate has positive but no significant effect on commercial banks resilience over the periods covered in this study. The estimated model indicates that interest rate could add 0.16 percent increase in commercial banks resilience. This finding confirms our a-priori expectations and objectives of bank management. The finding is also in line with macroeconomic policy reforms such as the deregulation of the economy and investment in infrastructural development. The finding confirms the findings of Alpera and Anbarb (2011) that banks can improve their profitability through increasing bank size and non-interest income, decreasing credit/asset ratio. In addition, higher real interest rate can lead to higher bank profitability, Sufian and Kamarudin (2012) that are important in influencing profitability: capitalization, nontraditional activities, liquidity, management quality, and size of the bank. Besides, three macroeconomic determinants significantly influence profitability including growth in GDP, inflation and concentration, contradict the findings of Kanwal, and Nadeem (2013) that Inflation rate on the other hand, has a negative link with all 3 profitability measures. Overall, the selected macroeconomic factors are found to have a negligible impact on earnings of commercial banks and the findings of Bilal, Saeed, Gull and Akram (2013) and Akani & Lucky (2020), that bank size, net interest margin, and industry production growth rate has positive and significant impact on the ROA and ROE.

The study found that money supply has positive but no significant effect on commercial banks resilience over the periods covered in this study. The estimated model indicates that money supply could add 0.01 percent increase in commercial banks resilience. This finding confirms our a-priori expectations and objectives of bank management. The finding is also in line with macroeconomic policy reforms such as the deregulation of the economy and investment in infrastructural development. The finding confirms the findings of Alpera and Anbarb (2011) that banks can improve their profitability through increasing bank size and non-interest income, decreasing credit/asset ratio. In addition, higher real interest rate can lead to higher bank profitability, Sufian and Kamarudin (2012) that are important in influencing profitability: capitalization, nontraditional activities, liquidity, management quality, and size of the bank. Besides, three macroeconomic determinants significantly influence profitability including growth in GDP, inflation and concentration, contradict the findings of Akani & Akani (2019) Kanwal, and Nadeem (2013) that Inflation rate on the other hand, has a negative link with all 3 profitability measures. Overall, the selected macroeconomic factors are found to have a negligible impact on earnings of commercial banks and the findings of Bilal, Saeed, Gull and Akram (2013) that bank size, net interest margin, and industry production growth rate has positive and significant impact on the ROA and ROE.

Conclusion

This study examined the effect of macroeconomic variables on commercial banks resilience. Five hypotheses were formulated to study the effect of the independent variables on the dependent variables. The study found that 51.6 percent variations in commercial banks resilience can be attributed to the influence of economic variables while the remaining 48.9 percent variations in the dependent variable were caused by other factors not included in this model. The p-value of the F-statistic found that simultaneous combinations of the proxies of the macroeconomic indicators significantly influence commercial banks resilience since it is less than the 0.05 significant level adopted for this study.

From the findings, the study conclude that exchange rate have positive but not significant effect on commercial banks resilience, that interest rate have positive but not significant effect on commercial banks resilience, that gross domestic products have positive but not significant effect on commercial banks resilience, that inflation rate have positive but not significant effect on commercial banks resilience and that money supply have positive but not significant effect on commercial banks resilience.

Recommendations

In the light of the researcher's findings, the following recommendations are presented:

1. Government should ensure that financial market is properly managed in a manner that it will enhance commercial bank resilience. Government should direct its financial market regulators to ensure proper policies that will enhance effective transmission of macroeconomic policies that impact positive and significantly to commercial banks resilience.
2. There is need for efficient management of exchange, inflation and interest rates in such a way to stimulate the financial market that cushion the volatility of macroeconomic variables to enhance commercial banks resilience.
3. That foreign exchange rate could be maintained at a low rate if there is a consistent growth in commercial bank resilience.

4. Domestic monetary and macroeconomic policies should be formulated to control hyperinflation in the economy to encourage savings, investment as this can enhance commercial banks policies and increase commercial banks resilience.
5. The macroeconomic environment and policies should be revisited, existing policies that threaten investment and the financial market should be abolished and new policies that will enhance economy growth should be formulated for effective management of commercial banks for increase resilience.
6. Macroeconomic policies should be directed towards increasing the operational efficiency of Nigeria banking industry for increase in commercial resilience against monetary and macroeconomic shocks

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