UNIVERSITY OF GHANA

THE IMPACT OF MONETARY AND FISCAL POLICIES ON THE LENDING RATES OF COMMERCIAL BANKS IN GHANA.

BY

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DECLARATION

I, Christabel Agyeiwaa Adu-Gyamfi, do hereby declare that this research has been done by my own efforts under the supervision of Dr. Patrick Asuming of Business School. In places where references to other people's work have been cited, full acknowledgements have been given. No part of this project work has either been presented whole or in part to any other institution for award.

……. ……..……

CHRISTABEL AGYEIWAA ADU-GYAMFI **DATE**

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CERTIFICATION

I hereby certify that this long essay was supervised in accordance with procedures laid down by the University.

…….. ……..

DR. PATRICK ASUMING **DATE**

(SUPERVISOR)

DEDICATION

These research work is dedicated to God Almighty, my sister Hon Mercy Adu-Gyamfi and my entire family for their support and love throughout my MBA program especially my mum.

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ABSTRACT

The study set out to examine the effect of monetary policy and fiscal policy on the lending rates of commercial banks in Ghana. The study used secondary data acquired from the Central Banks quarterly report spanning starting 2004 - 2018. Time series data analysis was used.

The study found that monetary policy had a significant positive effect on the lending rates of commercial banks. Government expenditure had insignificant effect on the lending rate and lastly inflation also had a positive but insignificant relationship with lending rate.

Based on the findings, the study recommends that, monetary policy should continue to be the major tool to control the cost of borrowing.

CHAPTER ONE

INTRODUCTION

1.1 Background of study

The study aims at examining how the monetary policy and fiscal policy impact the rate at which commercial banks lend in Ghana. Monetary policies are the major function of the central bank. The principal aim of the central bank is the formulation and implementation policies focused at achieving and maintaining general level price stability and keeping inflation at a lower rate. Monetary policy also achieves and maintains sufficient cash in the system to facilitate greater levels of internal savings and individual investment that boosts national development, real income and improved job opportunities.

Fiscal policy is the use of government's revenue and expenditures to influence economic growth. Tax collection is the main source of government's revenue and therefore the adoption of tax structure is effective in the economy mainly through varying interest rate. The link amid a government's fiscal policy and interest rate is of most important to strategy making in every economy. A government's budget shortage contends with individual sectors for funds, Blinder & Solow (1973) which pushes up real interest rates which causes a reduction in interest responsive aspect of individual expenses like savings.

An existing government influence both monetary policies and fiscal policies to attain financial targets. Both policies are generally believed to have weight on the borrowing cost set via the commercial banks which in turn has an influence on the general direction of every country's economy D'Adda & Scorcu (1997).

Lending as a major function of the banks has a vital impact on resource organization and distribution in the country through taking of deposits and turning them into loans and investment. Bank loans takes up a very key responsibility in the long-term financing of many private activities in many economies Freixas & Rochet, (2008).

However, the cost of these borrowed funds has become an issue for most developing countries of which Ghana is not an exception. Interest rate in Ghana is considered high among the other countries with high interest rate in Sub Saharan Africa (Mensah & Abor, 2011).

1.1.1 Monetary Policy

Monetary policy is a tool used by regulatory authorities that influences the quantity of cash which then turns to influence the interest rate in a country. One major aim of this policy is promote a nations growth. Monetary policy can either be in the form of contractionary which is targeted at decreasing the supply of money or expansionary which is aimed at increasing the stock of funds. Expansionary policy stimulates economic growth in recession via dropping cost of credit to entice businesses have access to cheaper credit to expand. Contractionary policy on the other hand is used with aim of slowing inflation to avoid asset value deterioration. The central bank can use three major tools to execute monetary policy; these are the policy rate, open market operations and the reserve requirement. The policy rate is mechanism of monetary policy used to influence the extent of borrowing within a nation. The policy rate is the rate at which the central bank lends money to the commercial banks against accepted collateral. The policy rate impacts the accessibility and the cost of borrowing. An adjustment in the policy rate causes adjustment of the cost of borrowing accessible by banks. The reserve requirement is a percentage of entire assets of commercial banks keep with bank of Ghana as cash reserve. The bank of Ghana uses this reserve requirement to affect the pumping of money into the economy. This is

kept for the tenacity of preserving easy cash and monitoring credit in the country. The Act 2016 (Act 930) which guides deposit taking institutions mandates them to keep 10% of all deposits received with the bank of Ghana as reserves. The open market operations is also about the buying and selling of short term and long term securities by the Central Bank in the open market. The open market operation can be used to either wipe out excess supply or increase the supply of funds in the economy, which impacts how rate of interest should be and stabilize the market. If the Central Bank wishes to cut the source of funds, it sells securities in the open market for banks and private individuals to purchase. In contrast, when the central bank wishes to upturn the source of funds, it purchases back the instruments from the banks via open market. Monetary policy channels through the influence of cost and accessibility of loans on actual activity, and over this on inflation and thus on the exchange rate Aziza, (2010). This is achieved through the reserve bank of every state. The Central Bank in consultation with the finance ministry set the policy rate and has the authority to regulate the quantity of funds and also cost of borrowing, which is known as the policy rate. The rate therefore increases export which fosters business growth and jobs. However, during a period of low cost of credit, increased sources of funds in the economy can lead to inflation if a country's output and employment does not rise, and more money chases less merchandises it leads to high prices. Unique purpose of monetary policy is preventing excessive inflation whiles promoting economic growth.

1.1.2 Fiscal Policy

Fiscal policy is another instrument that the government has to stabilize the economy. When there is economic recession, the government can reduce taxes and taxpayers will have extra money to spend, thereby increasing the consumption level. The relationship between the fiscal position of a government and longer period interest rate is of countless significance to policy formulators. A

budget deficit contends with the individual sectors for finance known as crowding out. This in turn increases real interest rate as demand exceeds supply. According to Sola (2011), government's debt maintains a positive relationship with cost of credit, while amid the universal factors combined monetary and fiscal position a quantitatively considerable responsibility. A fully tax revenue funded government spending and the overall budget consequence has unbiased influence on the country's activities.

Fiscal policy is used where all other mechanisms have failed including monetary. There are three stances of fiscal policy which neutral, expansionary and contractionary. A neutral stance is a well-adjusted economy which results in large tax revenue. An expansionary policy is about governments spending over tax revenue. Contractionary policy is government spending below tax revenue.

1.1.3 Interest Rate

This is the percentage of borrowed fund paid the lender by the debtor for the use of fund over a specific time period. It is a ratio of actual amount borrowed paid multiplied by a specific duration.

Monetary policy is a vital tool in handling activities like investment, inflation and unemployment is interest rate target. When the central bank of a country intends to increase investment and consumption it reduces the cost of borrowing. However, a low interest rate creates tension in the economy which is risky, that is large amount of investment going into housing facilities and stock trading. According to Mckinnon (1973), higher real interest rates of return lead to a higher level of savings, which encourages economic growth.

1.1.4 The Link between Monetary and Fiscal Policies

Though these policies are executed via diverse administrations, they are dependent on each other in that they all have one objective in common that aims at attaining economic growth as well as steady macro economy. When the policy management wants to expand the country, the monetary policy is expanded to accommodate and make sure cost of credit are minimal to promote smooth access to finance for the purpose of investment and consumption. However, if monetary policy remains tight which means high cost of credit, the desired advancement of the country from a fiscal policy perspective on the economy will be restrained by the high borrowing cost.

However, monetary policy will be intentionally set to back fiscal policy in as much as it does not threaten its main aim of warrant minimal inflation and maintaining sufficient external reserve. Thus should the fiscal policy expansion put force on the foreign reserve and inflation, there will be the reason to constrict the monetary policy to protect the aforementioned objective of ensuring macroeconomic stability. This imposes restriction on the government spending as cost of borrowing becomes high and thereby raise taxes to increase its revenue. There is therefore the need for harmonizing monetary and fiscal policies in other to accomplish an equal objective of protecting and supporting sustainability in economic growth.

1.1.5 How does Monetary and Fiscal Policies affect Interest Rates?

Generally, there is the assumption that monetary policy movements are conveyed over their impact on prevailing rates. Contractionary policies of bank of Ghana drives short and long period interest rate, causing lower expenditure of sectors which are interests sensitive for instance business fixed investment, houses and consumable goods. Alternatively, expansion policies of central bank lower interest and then boost economic activity. Monetary policy stance changes take effect in the market for reserves held by financial institutions. The reserved money can vary

the amount of reserve by using either open market operation or by altering the reserve borrowed through the policy rate. Less supply compared to demand by the depository institutions demand pushes interest rate up while more supply compared to demand bring interest rate downward, Rolley & Sellon (1995). Mechanism of monetary policy transmission depends on a modest form of the expectation concept of the term structure of interest rates. In the theory, long term rates average on current short term rates and projected future short term rates. Monetary policy affects long term rates to the level that it impacts current and projected short term rates.

Fiscal policy is used by government to stimulate the level of total claim in the economy, with the aim of achieving the economic goals of price stability, bursting employment and economic development, Imman& Rubinfield (1997). The Keynesian theory suggest that a government increasing its spending and reducing tax rates best promotes total claim, and decreasing expenditure and growing levies subsequent to economic flourishing. The theory argues that this method is best in period of decline or economic slowdown for building steady economic development that works towards full employment. The resulting deficit in theory will be catered for in times of an expanded economy.

Budget surplus can be used by a government to down economic development, and to soothe prices when inflation is rising. The Keynesian theory assumes that taking away expenditure from the system will cut down levels of total claim and tighten the economy, thus soothing price level. The usefulness of fiscal policy is however being debated by economist which is centered on crowding out that is how governments borrowing leads higher interest rate which may balance the stimulative impact of spending Hemming and Mahfouz (2002). When there is budget deficit by the government, funds will be sourced from the public through bond issue, borrowing overseas or through debt monetization. Deficit financing by the government through the issue of

bonds can lead to can raise credit cost across the market due to the creation of higher claim on credit in the financial system. This leads to lower total claim for goods and services, divergent to the fiscal stimulus goal. Neoclassical economists place emphasis on crowding out while the Keynesians is of the view that this policy can still be operational in liquidity trap where crowding out is argued to be minimal. In the ordinary view of monetary diffusion mechanism, monetary policy actions are expected to have a robust affirmative influence on long term rates.

1.2 Research Problem

The issue of high cost of credit has become a burden to consumers and also institutions in Ghana. Several concerns of the unwillingness of the commercial banks to reduce these lending rates have come up. They however claim some of the determinants that influence their lending rates are external; they are beyond their watch and handling as they are communicated and enforced on them by regulators for its execution in any economy such as policy rate and other macroeconomic factors such as the government's fiscal policy. The Central bank as the main supervisory authority of the system of banking and financial institutions and also the government are often called upon by investors and professionals with respects to proper policy initiatives and directions which can assist in solving the continuous rise of cost of borrowing. The bank of Ghana also seems to be adjusting their rate but the cost of credit continues to be rising. Other works tested the impact of monetary and fiscal policies separately even though they are both actions of the government (Amidu, 2006) The link between Monetary policy and banks' lending behavior. (Addo, 2013), Central bank's policy rate on the cost of credit from some selected commercial banks in Ghana.(Melina & Villa, 2012),Fiscal policy and lending Relationship.(Laubach, 2010).Fiscal policy and interest rate: The role of sovereign. A government can decide to use a monetary policy instrument through the central bank as its agent

thereby relaxing the use of fiscal policy instruments since it is expected that both will have the same effect and vice versa. Considering only one of these mechanisms available to the government can be significantly inaccurate in conclusions since the government is free to use either of the two major macro-economic policies and use the other to supplement. There is therefore a research gap in the general action of the government through uses of these two policies. The paper that addressed this issue was done in Kenya.(Runo & Ang, 2014): The effect of monetary and fiscal policy on interest rate. There is no such study addressing this issue in Ghana. This research therefore tries to address this issue through answering the question; what is the impact of Monetary and Fiscal Policies on interest rates in Ghana?

1.3 Objectives of Research

The prime goal of the study as in accordance with the problems is to examine how monetary and fiscal policies affect the cost of borrowing. For a successful outcome of information and subsequent solutions to the issues that will be found, the study will be guided by the following specific objectives.

- Examine the impact of monetary policy on lending rate.
- Examine the impact of fiscal policy on lending rate.

1.4 Questions of Research

1. What is the effect of monetary policy on lending rate?
2. What is the effect of fiscal policy on lending rate?
3. What is the relationship between monetary and fiscal policy?

1.5 Significance of the study

The relevance of this study will be its contribution to literature on impact of monetary and fiscal policies on interest rate in Ghana. However, it is crucial to study the effect of these policies to ensure a moderate interest rate. Investors will also understand how government actions influence interest rate and be able to plan their activities since they will be in a better position to predict the cost of investments and for investment decisions. The aim of this study therefore is to fill the gap by investigating the effectiveness of these policies on credit cost in developing country like Ghana. This will also assist the state to formulate policies to control interest rate.

1.6 Organization of Chapter

The study has been grouped under five headings known as; Introduction to the study, Literature reviews, study Methodology, Analysis of data and Discussions, Conclusions and Recommendations.

The chapter one introduces the problems under study, which comprises the background to the study, statement of problem, study objectives and the study's Significance.

The chapter two looks at other works relating to the study and addresses the theoretical and empirical writings of other papers relevant to this research.

Chapter three talks about the method used for the work. It similarly reviewed earlier approaches used in related works and equation model of the study as well as data was acquired, and the analysis procedures.

The fourth chapter also deals with analysis of the data was acquired, empirical demonstration and discussion of the results. This was done in connection to the study's precise goals.

Chapter five summarizes what the study found and also gives recommendation.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter has as its major aim the presentation of review of works done by authorities in the field of finance and other works of notice to give better understanding of the issues pertaining fiscal policy, monetary policy and lending rate.

Interest Rate

This is the cost of credit which is stated as a ratio of the actual amount borrowed. Again it can also be the cost of credit. Interest rate compensate for the possibility of default on the part of borrower. Interest rate promotes growth by inspiring individuals and institutions to take a loan, to lend and to spend. Interest rates however keep fluctuating, and diverse loan categories bid diverse costs. This interest is set to ensure operation cost are covered by the banks in a way and yield gained when the loan is serviced. It is also known in economics as the payment for the services rendered on a given capital, Williamson (1996).

2.2 Theoretical Review

2.2.1 Keynesian Theory

One of the key policies that the governments revise to regulate an economy is fiscal policy. It is the mechanism through which a government alters its expenses level for regulating and impacting its economy. The fiscal policy theory builds upon the concepts of Keynes, a British economist. This theory essentially talks about the fact that, government can impact productivity levels in the macro economy through the increase or reduction tax and public spending. This

theory argues on the basis depression can be solved by inspiring the economy with the use of either a drop in borrowing rate or government spending in infrastructure. The outlay by government causes pumping of income which upshots expenses in the overall economy, at the end boosts output and investment. This is related approach to monetary policy that a central bank uses to influence a country's sources of funds. These two policies are used in several ways in an effort to guide a country's economic aspirations. This theory concludes that, in certain cases, no powerful instinctive tool moves productivity and employment to achieve peak level of employment. The Keynes concept is a broad concept in which deployment of funds could be one or the other stumpy or great. Monetary policy transmits through the interest rate centered on the traditional Keynesian version of the responsibility of money for real interest rate movement.

The classicalist opinion of monetary policy concentrates on the amount concept of money. Giving to this concept, an expansion or decline in the amount of funds causes a relative rise or decline in the level of price. The concept of amount of money is generally argued in relations to the exchange model, which is expressed as;

$$MV = PY$$

P in the expression represents the level of price, and Y denotes existing real gross domestic product. Thus, PY denotes existing nominal gross domestic product; M denotes the money supply upon which the Central bank assumes influence upon; and V represents the rate of movement, which is frequency of using the dollar on final merchandises and services over a period averagely. The equation of exchange stipulates the worth of merchandises and services on the market which is the nominal GDP should be the same as to the quantity supplied of money and the frequency of the use of the dollar for business put together for a specific time frame. The

exchange equation can be converted into money theory and monetary policy from duo sides of the quantity theory.

Classicalists are of the view that a nation constantly stands either at par or not much distant from its gross domestic product. Thus, classicalists anticipate of the exchange rate equation to have a static Y in the short term. Likewise, classicalists' debate of the frequency at which money moves which is denoted by V is also normally considered static. Supposing these variables remain static, then if the central bank has expanded or contracts its monetary policy, causing amount of money decline, its impact will simply be felt on the price level proportionately as the adjustment in the quantity of money. Not to say, tightening monetary policy causes deflation, and the expansion of monetary policy can also cause inflation of prices largely.

The straight connection amid the quantity money and the level of price which develops from the classicalist theory of quantity of money is not considered by the Keynes. Keynes discard this idea that the nation is constantly at par or almost reaching its normal gross domestic product for the actual gross domestic product (Y) in the equation of exchange can be viewed as static. Keynesians do not also accept the suggestion about the rate of movement of money being persistent quotes proof to back it. The Keynes accept the indirect connection amongst the quantity of money and actual gross domestic product. They trust monetary policy expansion to cause a growth in the availability of loan financing obtainable at the banks, which leads a fall in the cost of borrowing. With lesser cost of borrowing, total spending on asset and consumable goods which responds to cost of borrowing ordinarily rises, leading to an increase in real GDP. Therefore, monetary policy controls real GDP indirectly.

They are still unclear of how effective monetary policy is. However, Keynesians say, the expansion policy which increases the banking system reserves does not have to translate into several expansions in the quantity of funds as the banks may basically refuse giving out their surplus as loans.

A new idea of monetary policy came up in 1950 known as the monetarism to disagree with the Keynesian opinion on the ineffectiveness of the monetary policy. The monetarists who advocates for monetarism claim money is constantly demanded and not mostly subtle to adjustments in the cost of borrowing. Therefore, expansion in monetary policy simply aids the creation of excess money for individuals to spend swiftly, thus expanding total demand. On the contrary, monetarists recognize a nation not to be functioning at complete rate of employment of actual gross domestic product as seen by the classicalist. Hence, the monetarists claim monetary policy expansion in the short term can escalate the actual gross domestic product by escalating total demand. Yet when the economy is functioning during the longer term at a complete employment output, they claim that quantity theory of the classicalist becomes a good estimate for the relation amongst the supply of money, the price and then gross domestic product, which the expansion of the monetary policy finally leads to inflation and does not have an impact on real GDP level. They are mainly worried about the possible exploitation of monetary policy and the deterioration of the level of prices. Contractionary policy by the Central Bank is frequently quoted depression, as the policy for the incredible deflation of the period. They have the confidence that constant deflation or inflation are generally bought about the tenacious increase or decrease in monetary policy. As a way of fighting these periods under deflation or inflation, they claim in approval of a static rule of money supply. Monetarists trust that the Central Bank can engage in policies to maintain the rate at which money supply increases static at a same rate to the real growth in the

country within a time frame. Monetarists thus trust monetary policy be therefore able to aid in accommodating the rise in real GDP without it leading to either deflation or inflation. The quantitative instruments generally are also known as tools for monetary policy. These tools relate funds available. These credit quantity control tools are for the overall credit control. The tools are design to regulate the aggregate credit of banks in a country. They are set out to impact the availability of credit and indirect in nature.

2.2.2 The Fisher Theory

This classical concept which was proposed by Irving Fisher set out to answer the question on why the interest rate in an economy is this or that. The theory enquired about why people save and others borrow. That is the interaction between demand and supply. The supply side is as a result of people trying to postpone consumption to take care of a need tomorrow which is known as the marginal rate of time preference. If more savers are willing to save by deferring consumption, savings will be available at every level of interest which will bring about a decline in the equilibrium interest rate. All other things been the same, when one's income is high, the more the affordability to save and savers are enthusiastic to save when interest rate is high. The claim side conversely result from marginal productivity of capital which is the additional returns gained from investing in more projects. A firm takes less profitable projects if the level of investment increases and the will take on more profitable project before going to the less profitable project and as technology advances, the firm will need more loan to expand the investment but the firm would invest when additional benefit of investment outdoes the cost of the investment. Borrowers of fund will therefore borrow if interest rates fall as it is inexpensive to acquire when interest rates declines. The theory indicates that borrowers prefer to borrow at a lower interest rate while savers will want to save at a higher cost of credit and this leads to the

balance of interest rate. Fisher introduced a peculiarity amid the real and nominal rates of interest, where the nominal is how much is paid when the at the investment matures which point out how fast the investment is increasing whereas the real interest rate is the rate after adjusting for inflation since inflation reduces the purchasing power. Therefore, even though you may earn a higher nominal return, your real rate can make you worse off in terms of the purchasing power. When prices are rising, the nominal interest rate also rises but insufficient and prices are falling the nominal also falls insufficiently. With an increase in demand relative to supply, interest rate rises and falls as supply exceeds the demand. The low interest rate can bring about increase in claim that sequentially bring about depreciating the currency, for which the central bank must adjust their cost of borrowing to curb the situation.

2.2.3 The loanable Fund Concept

The loanable funds concept expands the Fisher concept that was criticized on the basis that the government can create funds and that its demand for loanable fund does not depend on interest rate. It also ignored the possibility that individuals and firms might hold cash balances for precautionary reasons. The loanable fund theory which was developed by Wicksell in 1968 suggests that the interaction between source and claim for loan financing fixes the market interest rate. The theory advocates that long run interest rate is set by savings and investments while financial situations dominant in the country determines its short run cost of credit.

2.2.4 Loan Pricing Concept

According to the loan pricing theory, interest rate set by banks can create the problem of information asymmetry in particular, moral hazard and adverse selection. This is as a result of the difficulty in forecasting the kind of customer at the beginning of transaction. An extraordinary cost of borrowing fixed by banks induces adverse selection due to risky borrower's

willingness in accepting the high rates, which in turn causes moral hazard since these borrowers will be forced to also enter into risky projects either than what was stated in the loan, Stiglitz and Weiss (1998).

2.3 Determining factors of Interest Rates

Studies on interest rate have been done based on diverse economic conditions in different economies. Real interest rate is obtained when inflation moves down, however the possibility of maintaining it when inflation moves up is less, Ngugi and Kabubo (1998). They further argue that liberation widens the difference amid credit and deposit rates while short term rates increases speedily as likened to long term rates in a negatively sloped yield curve. These elements that contribute to the credit rate by commercial banks in Ghana are usually attributed to the following.

2.3.1 Monetary Policy

This is defined by various authors as the flexible regulation of money supply by monetary authorities with a vision of accomplishing specified or desired economic goals. Most governments attempt to regulate the degree of expansion of sources of funds. The monetary policy as a supply aspect policy tool aids in realizing broader economy objectives. These objectives are the sustenance of economic growth, stable price, least of cost credit, steadiness in the balance of payment and sustainability in development. Monetary policy comes into actuality when there is an adjustment in the cost of credit, an adjustment in the source of funds and an adjustment in exchange rate. In anticipation of economic expansion, the government then, through the central bank, have the power to bring down the credit cost which can further cut down the rate exchange.

Bank of Ghana in consultation with the finance ministry set the monetary policy and also has the power for regulating the quantity of currency and cost of borrowing currency, known as the policy rate or reference rate at which the commercial banks also borrow from them. The banks in turn add their risks such as default risk and inflation risk and then lend to customers at that rate. When the bank of Ghana reduces the policy rate, access of money by the banks becomes cheaper which then motivate banks to give out loans at a lower rate. According to research done by the Institute of Economic Affairs, the high lending rate in Ghana can also be attributed to the policy rate. This rate is currently set at 16% and at this rate, the banks cannot advance loans to customers at a rate below this. Policy rate positively correlates with banking sector interest rate(Folawewo, 2014). This is also known as credit policy which is amount of funds that should be available in a country. What should How much should the ratio of interest rate be? According to Professor Harry Johnson 1919, the policy engages and regulates the given out of funds as a tool to attain economic policy goals generally. The monetary theory lies in the classical economics of Adam smith (1723-1790). The two foundations of the classical system are Says Law which deals with interest rates, employment and production and the quantity theory which explains the role of money. Monetary policy is a way by which monetary authorities a country regulates the money supply in the country, mostly aiming at credit cost for the cause of reassuring stable and economic growth. The aim ordinarily includes fairly steady prices and reduced credit. Monetary concept gives understanding as to how the best monetary policy can be crafted. It can also be in the form expansion or tightening, where the expansion means the total money supply is increased in the economy faster than normal, tightening policy increases the sources of funds gradually than normal or even reduces it. Expansion policy is conventionally tries to fight borrowing in times of recession by reducing interest rates with the aim of making

access to credit easy for businesses induce them to grow. Tightening policy lowers inflation in expectations of escaping the result of alterations and weakening of asset values. Monetary policy lies on the connection between the interest rate in an economy, which is the cost of borrowing, and the total money supply. There are several tools that monetary policy uses to control either tightening or expansion policies or both of them with the aim of influencing the outcomes of rate, growth rate inflation, credit and exchange rate with different currencies.

In a case where issuing money is under monopoly, or where there is a controlled system of supplying money through banks which are secured by the central bank, the monetary authority has the capacity to modify the money supply and thus impact the interest rate (to realize policy goals). Open Market Operations is also about the buying and/or selling of money and capital market instruments by the Reserve Bank in the open market. The open market operation can be used to either wipe out excess supply or increase the supply of funds in an economy, to impact the term structure of the interest rate and make the market stable. If the Reserve Bank intends dropping the stock of funds, it sells securities in the open market for banks and private individuals to purchase. In contrast, if the bank of Ghana intends increasing sources of money, it buys back the securities from the commercial banks in the open market. Policy Rate or discount rate is a tool of monetary policy used to impact the extent of borrowing of country. The policy rate is the rate at which the central bank advances funds to the commercial banks against accepted collateral. The policy rate affects the obtainability and the cost of borrowing. An adjustment of policy rate adjusts the cost of borrowing accessible to the banks. Reserve Requirement is a percentage of entire assets of the commercial banks kept at the bank of Ghana as cash reserve. The bank of Ghana uses the reserve requirement to affect sources of funds in the economy. This is kept with the aim of preserving liquidity and monitoring borrowings in the

country. The Act 2016 (Act 930) mandates banks in Ghana to keep 10% of all deposits received with the bank of Ghana as reserves. Moral Suasion is where the central bank appeals to the commercial banks to help restrain credit during periods of inflation. The central bank informs the commercial banks about their expectation by using monetary policy. The central bank under the moral suasion can give out directions, strategies and recommendations to commercial banks concerning reduction in credit supply for speculative purposes.

Importance of Monetary Policy

After the development of Keynesians in economics, the significance was accepted by many to achieve the following objectives.

Swift Economic Growth

One of the greatest essential goals of monetary policy is rapid expansion of the economy. The monetary policy affects economic growth by monitoring actual rate of interest and its ensuing influence against capital outlays. Should Bank of Ghana select low-priced or relaxed credit policy by decreasing cost of credit, the investment level in the country may boost up. This improved investment can grow the country swiftly. Rapid expansion in the economy is possible when the monetary policy accomplishes the aim of price stability and economic maintenance. Inflation and deflation is an issue in every economy. This can be called instability of price. Deflation and inflation are both risky in any economy. Hence, the monetary policy by means of soothing price always attempt to maintain worth of money. Monetary policy aids to reduce wealth and income disparity. The monetary policy ought to expand when the country is in downturn and contractionary when there is inflation.

Stable Rate of Exchange:

The amount of a local currency which is stated with respect to any international currency is known as exchange rate. When the exchange rate becomes very unstable, it generally causes exchange rate changes, assurance in the economy can be lost by internationals. The monetary policy targets at sustaining the exchange rate stability relatively. The Central Bank by varying the foreign exchange reserves attempts impacting the claim for foreign currencies and attempts to sustain the exchange rate constancy.

Equilibrium Balance of Payment:

Most emerging countries like Ghana undergo balance of payment disequilibrium. The central Bank of Ghana from the side of its monetary policy attempts sustaining a balance in the Balance of Payments (BOP). Balance of payment comprises of duo parts which are the Surplus balance of payment' and the Deficit balance of payment'. The surplus reveals an extra source of funds in the local economy, whiles deficit reveals inflexibility of funds. If the monetary policy does well in achieving monetary balance, then the balance of payment balance is possibly attainable.

Complete Employment:

The concept of complete engagement was greatly argued after Keynes's publication of the "General Theory" in 1936. It signifies lack of unintentional credit. Simply put, 'Full Employment' is the state where those desiring for employment are employed. This does not take out the fact unemployment does not exist. This means that employment can certainly not be complete. Monetary policy can be used for accomplishing this. As monetary policy is expanding the quantity of financing can be stimulated.

Money Neutral:

Most economists like Wicksted, Robertson constantly deliberates money as an inactive feature. They are of the assumption that money has to take the responsibility of intermediation and nothing else. Therefore, monetary policy has regulated the issue of money. The adjustment in the quantity of money produces monetary instability. Hence the policy needs to control money quantity and offset the influence of expansion of it. Nonetheless this aim of a monetary policy is continuously disapproved based on the fact that if the amount of funds remains endless price instability could result.

Equal Distribution of Income:

Most economists used to defend the responsibility of the fiscal policy as sustaining financial parity. Yet recently economists are of view that the monetary policy can aid and act an additional responsibility of attaining parity in the economy. Monetary policy can create distinct requirements for the abandoned sectors like agriculture, small-scale industries, etc. to offer inexpensive facility for a longer period. Which might be useful for them to grow. Accordingly, in recent times, monetary policy can aid in dropping disparities in the economy amid diverse segments of humanity.

Monetary Policy Limitation

Although the monetary is beneficial in accomplishing many objectives of economic policy, it has some shortfalls. The shortfalls can be atypical to emerging countries like Ghana. Some of the shortfalls of the monetary policy are given below.

Presence of Unorganized Financial Market:

The financial markets aid in executing the monetary policy. In many emerging nations the financial markets particularly the money markets are disorganized under regressive situations. In several jurisdictions individuals such as creditors, dealers, and businessmen aggressively partake in advancing funds. On the other hand, awkwardly they do not fall under the control of a monetary policy and therefore causes barrier for attaining monetary policy.

Unconventional Funds

Huge proportions of funds under no circumstances come in the conventional system. The rich, dealers, entrepreneurs and others choose to expend somewhat compared to saving funds in the bank. These funds are used in engaging the purchasing of assets such as gold, silver, ornaments, and land and speculative purposes. These expenditures cause inflation movement in typical economy and the monetary policy cannot regulate.

2.3.2 Fiscal Policy

This is the claim aspect strategy is pursued by the government to accomplish macroeconomic goals. These include economic growth, stable price, and a decrease in credit and equilibrium in the balance of payments (Kibiwot et al., 2012). Fiscal policy comprises two things; either increasing or reducing taxation or either increasing or reducing government spending. All these are done to impact total demand (Kibiwot et al., 2012).

Expansionary Fiscal Policy: increasing governmental expenses relative to its taxation.

When governmental expenses rise as compared to revenue, the only way to get the money is through borrowing.

As governmental borrowing appetite rises, the pressure on loans also rises. When pressure on loans exceeds the availability of funds, its price rises. The rate of interest is therefore denoting cost of the funds within a time frame.

If government requires more credit, which means there's more claim in the system for funds. This pushes the interest rate up to persuade a lot of individuals to save to balance the claims.

Credit is also bound by the supply and demand dynamics so when there is a spike in demand for credit, interest rates rise (the Central Bank would increase their target rate to control a potential uncontrolled increase in inflation above expected levels).

An expansionary fiscal policy is basically when spending exceeds taxes. In addition to the positive aspects of expansion, this also does 2 negative things: increases claim for goods and services which fuels inflation; and increases claim for savings. Since investors seek an interest rate for their funds in excess of inflation, failure to reach that discourages savings and tends to push rates. Also, in the alternative, a budget surplus would make the government a supplier of savings and push rates lower. But in the end, it all comes down to market forces; supply and demand and a rise in demand should increase the rate of interest.

Balancing Act:

The idea however, is to find an equilibrium in using these influences. For example, motivating a stationary economy battles with the risk of escalating inflation. This happens as a result of growth in the stock of funds followed by a growth in individual claim thereby decreasing the worth of funds. For instance, if an economy in is recession, credit levels rise, buyer's expenditure reduces and companies don't gain. Governmental interventions come in to boost the economy through the reduction in taxes to give individuals more ability to spend and again raising

expenditure in the form of paying for services in the market such the roads construction. Through this, the government generates jobs and the wages bring back money into the system. The act of bringing back money into the system is called "pump priming". In the interim, general credit declines. Evidence displays that there is a substantial affirmative response by the credit rate due to increases in government expenditure.

Types of Fiscal Policy Tools

Tax or Revenue

The primary instrument is taxes or revenue, whether of profits, gains from property, trades or just about anything else. Levies offer the major income source that finances government. The miserable aspect of taxes is that whatever or whoever is levied has fewer income to use themselves.

Expenditure:

The government offers subsidies, transfer payments, contract to execute various types of public works and certainly salaries to its workforces to mention a few. The purpose for this expenditure is to ensure that whatever or whoever obtains the funds has more income to expend, hence motivating claim and economic development.

Importance of Fiscal Policy

Fiscal policy is useful in manipulating the direction of the economy. Thus talking of fiscal policy, the Central government usually is denoting the key economic actions of government, taxes and expenditure. The country's budget serves as key fiscal tool through which the central government regulates the amount of the funds to allocate to its key actions. The improvement of a fiscal policy usually made up of four crucial functions.

Allocation:

The key role of fiscal policy is the decision of precisely how much resources will be distributed. This is carefully connected to the matters of taxation and spending, the reason being that the distribution of resources rest on the pool of revenue and how to use these revenues for exact reasons. Budget regulates in what way resources are distributed. Meaning the definite amount of resources fixed for purposes precisely put out by the government. This influences the economy directly.

Distribution:

Whiles allocation defines the amount that will be put aside and for what use, the distribution is about exactly the means by which these resources must be shared to each section of the country. For example, should $3milion be allocated for special initiative agendas, yet $100 thousand might be assigned for school projects, whereas the remaining are assigned to other important programs. Distribution gives the exact explanation of what allocation was planned for.

Stabilization:

Stabilization is also a key function of fiscal policy in that, budgeting aims at promoting economic growth stability. Lack of control on spending can cause the economic growth of the country to become unbalanced, leading time of uncontrolled growth and tightening. Though countless people might glare upon governmental control of growth, the crash of the stock market which happened in 1929 emphasized that unregulated growth could have severe impact. The recurrent manner of the market means that uncontrolled development cannot endure forever. If there is no growth, there is tightening in the way of downturns or extended downturns known as depressions. Fiscal policy is aimed at forestalling and alleviating the impact of the breaks in the economy.

Development:

Another key role of fiscal policy developmental purposes. Development appears to portray growth in the economy, thus actually, the general aim. Nonetheless, financial policy is more complex as compared to deciding the amount the government should levy its nationals in a particular period and then deciding the amount of money to be expended. Real growth in the economy happens when several developments are funded and embarked on with the use credit facilities. This is due to the reason of individual businesses not being able to grow on its own in the country. And therefore, governmental involvement and impact are desirable. Using credit facility for expanding the economy is a means through which the governmental activities are undertaken. The economic model which was established by John Maynard Keynes has been embraced through several ways ever since the World War II era.

2.3.3 Inflation

This is the insistent rise in the general goods prices in an economy. This is one of the variables in the macro economy related with interest rate. According theories and empirical studies, inflation seems to have two directional relationships with interest rate. The advocate of bi-directional link amid credit cost and inflation argue about how high interest rates affect inflation by raising the price of production, thereby causing high inflation rates, Branson (1979). According to the Fisher equation, the variance amid the nominal interest rate and inflation is the real interest rate: Real interest rate = Nominal interest rate – inflation rate.

Commercial banks would therefore want to factor in inflation while determining the interest rate to charge customers to shield against loss of purchasing power of principal and interest amount in the future. A rising inflation induces the central bank to raise credit cost, which means

borrowing cost also rises, leading to a drop in the amount of funds borrowed by individuals and companies. This in turn curb inflation since less money will be in the economy.

2.3.4 Exchange Rate

A higher interest gap entices funds inflow which leads to exchange rate increase Mundell-Fleming model. Monetarists in contrast consider that higher interest rate cuts down money request and therefore causes decline in the value of currency attributable to rising inflation. The link between interest rate and exchange rate can be clarified from the side of anticipated adjustment in exchange rate. Supposing the world interest rate is to be externally set, the link between domestic interest rate and exchange rate rest upon the anticipated exchange rates response to fluctuations in interest rate.

Sargent & Wallace (1981) suggest that high interest rate policy can translate into a reduction in the claim for funds and increase level of price because increase in interest rate means an increase in government debt, which can cause exchange rate devaluation. In contrast, a rise in credit cost can unfavorably disturb the future performance of export that would lead to reduction in the future cashflow of foreign exchange reserves and in so doing leads to currency devaluation Furman & Stigliz (1998).

2.4 Empirical Review

Studies by most researchers have found that monetary policy by the central banks and government deficit affect interest rate in most economies and some too otherwise. Study by Peter Claey S, Rosina Koreno & Jordi Surinach (2008) fiscal policy and interest rates: The role of financial and economic integration, found that fiscal policy affects interest rate. Kristian Totteman (2017) set out to study the effect of fiscal policy on long-term interest rates, Evidence

from 29 OECD Countries and found out that public debt to GDP influences interest rate through the default premium. Ardagna,S., Caselli, F.,& Lane,T.(2007) examined the effect of government debts and deficits on long –term interest rates using a panel data of 16 OECD countries over several decades. Cross-country analysis was used to establish that fiscal deficits and accumulated public debt affect interest rates. The effect was both statistically and economically significant.

A Nigerian study by Kelilume (2014) analyzed the influence of monetary policy rate on interest rate over the periods of 2007-2012 using monthly time series data. The findings revealed that proof that effective monetary policy can be envisaged through the link amid monetary policy rate and interbank rate. Study by Mohammed Aminu (2006) examined the Link between Monetary Policy and Banks' Lending Behavior in Ghana. The study found that the Central banks' prime rate negatively affects lending behavior. Aziakpono, M.J., & Wilson, M.K., (2010) in their study to examine the interest rate pass-through and monetary policy regimes in South Africa, found that commercial banks respond to positive shocks in monetary policy rate.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter's aim is to give insight into how the research was done. This section talk of how the research was designed, the source of information, research instrument and method for gathering the information and lastly how the information gathered was analyzed.

3.2 Study Design

This study is quantitative in nature which comprises the gathering of arithmetic data for analysis. Quantitative approach is made up of collection and analyzing arithmetic information. The study requires time series analysis for obtaining the correlation that exists among the variables under study. The time series is a sequential data values, calculated over a sequential period, spaced at an equal time interval. The analysis of a time series comprises of the method for analyzing the series that helps to obtain an understanding statistics and other features of the data points. The work is best described as time series because it is a gathering of interpretations of distinct data points acquired from repeated measurements overtime i.e. yearly, quarterly etc.

The research relied on the use of secondary data published in Bank of Ghana statistical bulletin and quarterly reports. These data collected were the policy rate, lending rate (the base rate) for the average banking industry, tax and expenditure of the government as a percentage of the gross domestic product, inflation rates then exchange rate. The data span is from 2004 – 2018. There is no single source of information that can give a broad and complete view of the study (Merriam,

1998). It is therefore necessary for this study to explore multiple sources of data to get a broader view as possible.

3.3 Data Analysis Procedure

In the current study, the researcher used correlation; multiple regressions and descriptive statistics in the data analysis. For this study, the researcher performed the by using statistical package known as Stata software. Software which researchers have widely adopted for use as a data analysis tool (Zikmund, 2003).

Descriptive Statistics

The mathematical average of a set of values, or distribution is known as the mean. For skewed distribution however, that is the lopsidedness of dispersal, the mean is not necessarily related to the median or mode.

Standard deviation measures the spread of a data from the average. The further the dispersion of the data, the greater the standard deviation. This is computed as the square root of the variance. Analysis of Regression permits a researcher to formulate, observe and discover interactions, and aid to describe the factors that brings about detected outlines. It is meant for predicting and also understanding why something happens and can also be used to test hypothesis.

R-Squared is the ratio of discrepancies in the dependent variable that can be described by the independent variables. It is also the general measurement of how strong the association is and does not reveal the degree to which a specific independent variable is related to the dependent variable. In statistics, coefficient of determination is the percentage of inconsistency among a set of data which a statistical model accounts for. In term of inconsistency is defined by the sum of squares.

Adjusted r-squared is the adjustment of the Rsquared which punishes the addition of unimportant forecasters of the model. The adjusted Rsquared compensates for variables added to the model. As more independent variables are added to the regression, the unadjusted r-squared will continue to decrease. The unadjusted Rsquared reduces contentiously as more independent variables are added to the regression model. This occurs in a situation where the additional variables do not help much in explaining the dependent variable. The Rsquared amended for the number of independent variables in the model as compensation. Rsquared adjusted is always lower as compared to unadjusted. Is it therefore always necessary to present the adjusted r-squared, particularly in the case where multiple models are presented with varying number of independent variables.

The t-test is a proportion whose upper part signifies the change between the two means and averages and the lowest part measures the inconsistency or spread of the marks. The F-statistics is a figure which results from a statistical test which is standardized and being used in anova and analysis of regression value resulting from a standard statistical test used in anova and regression analysis to decide if the differences among the means of the population are different statistically. For examining the worth of fits acquired with diverse constraint values, the difference of the fit (chi-squared) is an appropriate statistical measure. The proportion of the chi-square of two fits is spread like a fisher scattering. It therefore can be used to critic whether a certain difference rise has greatness in a series that occurred as a result of error in the data given statistically or if it is a significant rise.

The significant level is the likelihood of declining a valueless proposition that is in fact true. This ranges from zero to one and typically denoted by the by alpha which is a Greek word. In literature the values normally range from 0.05 to 0.10. It is also referred to as the size of test, in

that its magnitude determines the end point of the critical or rejection region for hypothesis tests. The significance level is used in hypothesis testing.

The level of confidence is the value of possibility related with a confidence interval. This is the proportion of all likely samples expected to be included in the true population parameter. Confidence level in risk analysis is the degree of assurance that a specified model is not exceeded. In polling and statistics is the degree of confidence interval. Thus the probability of pollster or a statistician believing the result of a poll is repeatable and non-random.

3.4 Analytical Model

To achieve the objectives associated to the impact of the variables on the lending rates of commercial banks, we use time series data equation model as;

$$y=\alpha+\beta_1 X_{1t}+\beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \beta_5 X_{5t} + \mu_t$$

Where

Y = Interest rate as measured by the average rates of the commercial banks

X_1 = Monetary Policy Rate

X_2 = Government expenditure

X_3 = Government Revenue

X_4 = Inflation rates

X_5 = Exchange rates

α = the intercept or constant

$\beta_1 \ldots\ldots \beta_5$ = the coefficients regression

μ is the error term

3.5 Conclusion

The chapter three provides an insight into the method used in the study. The study was a quantitative research. Data used for the study was secondary in nature which was acquired in the published quarterly reports and statistical bulletin of the Central bank.

CHAPTER FOUR

ANALYSIS AND DISCUSSION OF RESULTS

4.1 Introduction

This section reports results of the analysis of data found on the effect of monetary and fiscal policy on the commercial banks' lending rates in Ghana. The study used secondary quarterly data on monetary policy, fiscal policy and rates for lending from the Bank of Ghana for a 14year period spanning from 2004- 2018.

The analysis began by running descriptive statistics on the variables, then and the impact of monetary policy and fiscal policy on lending rate was determined by the use of multiple analysis of regression.

4.2 Descriptive Analysis

The variables on monetary policy, fiscal policy and lending rate were first evaluated. The results for the average, deviation, lower and upper figures of the various variables are presented in Table 4.1 below.

Table 4.1: Descriptive Statistics of Variables

Variable	Obs	Mean	Std.Dev.	Min	Max
BASE RATE	60	24.682	3.185	18.77	31.4
MONETARY RATE	60	17.447	3.884	12.5	26
REVENUE	60	6.206	1.596	3.12	10.26
EXPENDITURE	60	7.642	2.185	4.14	14.52
INFLATION	60	13.545	3.658	8.4	20.7
EXCHANGE RATE	60	2.204	1.375	.896	4.944

From Table 4.1 the base rate which is the lending rate of the banks has an average of 24.682 and a deviation of 3.185 which indicates how the variation in the values affected the ensuing year's figure significantly, a minimum figure of 18.77 and a maximum figure of 31.4 out of the 60 observations considered.

For the period under consideration, the monetary policy on the average had 17.447, the measure of dispersion or standard deviation of 3.884, showing how the data is scattered around the mean, a minimum figure of 12.5 and a maximum figure of 26.

The inflation rate recorded a mean of 13.545, measure of dispersion of 3.658, a minimum figure of 8.4 and a maximum figure of 20.7 under the period of consideration.

Out of the 60 observations under the period of consideration, the revenue recorded an average figure of 6.206, standard deviation of 1.596, maximum figure of 10.26 and a minimum figure of 3.12.

The rate under the period of consideration expenditure recorded an average figure of 7.642 out of the 60 observations, standard deviation of 2.185, maximum figure of 14.52 and a minimum figure of 14.52.

The exchange rate of the cedi per dollar recorded an average figure of 2.204, measure of dispersion of 1.375, maximum figure of 0.896 and a minimum figure of 4.944.

4.3 Unit Roots Test

In order not to have a spurious or biased result, the test for unit root was run to ensure all the data set were not random either at level or first difference. From the table 4.2, all the data set were stationary at level with the exception of exchange rate and revenue which were neither stationary

at level nor first difference. For this reason, exchange rate and revenue were taken out of the regression model.

Table 4.2: Unit Root Test

Augmented Dickey-Fuller(ADF)						
	Level			First Difference		
Variables	z(t)	P-value	order of Integration	z(t)	P-value	Order of Integration
MONETARY POLICY	-3.914*	0.0116	I(0)	-2.602	0.2789	I(2)
BASE RATE	-3.729**	0.0205	I(0)	-3.190*	0.0864	I(0)
INFLTIONRATE	-4.032**	0.0288	I(0)	-2.187	0.497	I(2)
REVENUE	-2.690	0.2403	I(1)	-2.745	0.2179	I(2)
EXPENDITURE	-3.612**	0.0288	I(0)	-2.439	0.3592	I(2)
EXCHANGE RATE	-1.705	0.7485	I(1)	-1.920	0.6443	I(2)

Note: *, **, *** indicate significance at 10%,5% and 1% levels respectively

4.4 Normality Test

Table 4.3: Normality Test

Variables	Obs	Pr(skewness)	Pr (kurtosis)	Adj_chi2(2)	Prob>chi2
BASE RATE	60	0.959	0.105	2.750	0.253
MONETARY RATE	60	0.011	0.913	6.050	0.049
REVENUE	60	0.060	0.603	3.990	0.031
EXPENDITURE	60	0.012	0.234	6.960	0.031
INFLATION	60	0.401	0.000	15.760	0.000

From table 4.3, inflation was not normally distributed. For this reason, inflation was transformed into log in the regression model.

4.5 Regression Results

Table 4.6 displays the outcomes of the regression. The table showed the effect of monetary and fiscal policy on cost of credit of commercial banks in Ghana.

Table 4.4: Regression Result

BASE RATE	Coef	St.Err	t-value	p-value
MONETARY RATE	0.287***	0.104	2.77	0.008
EXPENDITURE	-0.309	0.197	-1.57	0.122
LnINFLATION	3.221	1.920	1.68	0.099
Constant	13.757	3.401	4.04	0.000
R-squared	0.345			
F-test	18.064			
Number of obs	60			
Prob > F	0.000			

Lending rate = 13.757 + 0.287Monetary Policy -0309Expenditure + 3.221Inflation

From the above equation, the intercept was 13.757. This was the average cost of credit of commercial banks if all the autonomous variables were assumed to be zero.

The result explains a positive (0.287) and statistically significant (0.008) relationship between the rate for lending and the policy rate. Meaning that, as the central bank raises the monetary policy rate, it causes the banks to also increase their lending rate all things been equal. This confirms the study by (Awuah et al, 2016), (Akosah, 2015) and (Gambocorta 2015) which revealed that monetary policy rate has a positive relationship with lending rate.

The result shows a negative (-0.309) but statistically insignificant (0.122) relationship between government's expenditure and the lending rate of commercial banks. This means that the lending

rate of commercial banks decreases with government expenditure. This shows that as the government spends more, lending rate reduces.

The finding reveals a positive (3.221) but insignificant (0.099) relationship between inflation and the lending rate of commercial banks. This contradicts the study by(Mensah & Abor, 2012), (Nana, 2015) which discovered that relationship between lending rate and inflation is negative. Meaning as inflation rate increases the banks must also cater for the purchasing power of money and thereby increasing the cost of borrowing.

The R squared statistic is a degree of the degree to which the total disparity of the dependent variable is described by the regression. The R-squared is 0.345 which is approximately 35% of the variation means that a change in the commercial banks' lending rate is described from the side of the independent variables and the 65% is described by other factors which are not considered under this research.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5. 1 Introduction

This research aimed to examine the impact of monetary policy rate and fiscal policy on the lending rate of commercial banks in Ghana. This section is grouped into three subdivisions. The first subdivision is about summary, the next is conclusions and finally the recommendation.

5.2 Summary

This research reveals that bank of Ghana monetary policy rate has the highest effect on the cost of borrowing of commercial banks in Ghana due to the significant positive relationship between the two variables under the period of study. The variable that represents the fiscal policy which is the government expenditure showed negative but insignificant association with lending rate of commercial banks. Inflation which was a control variable also had a positive but insignificant association with the lending rate of commercial banks.

5.3 Conclusion

According to the results, the research concluded that the bank of Ghana's monetary policy rate has a positive significant influence on the lending rate of commercial banks followed by inflation. The fiscal policy variable had a negative association with the rate of lending over the periods under study. Overall, policy rate showed a significant impact on cost of credit of commercial banks in Ghana under the period of the research than the fiscal policy.

5.4 Recommendations

The monetary authorities should consider reducing the monetary policy further as it influences the cost of credit of the commercial banks in Ghana. Fiscal policy has little effect on lending rate and therefore should be used as second resort.

5.5 Study Limitations

The researcher encountered a problem with access to information from the bank of Ghana for a longer period and therefore had to rely on the data available. Since the data was obtained from a secondary source, the findings also rely upon how accurate the data is.

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APPENDIX

Skewness/Kurtosis tests for Normality
------ joint ------

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj_chi2(2)	Prob>chi2
BASERATE	60	0.959	0.105	2.750	0.253
MONETARY RATE	60	0.011	0.913	6.050	0.049
REVENUE	60	0.060	0.603	3.990	0.136
EXPENDITURE	60	0.012	0.234	6.960	0.031
INFLATION	60	0.401	0.000	15.760	0.000
EXCHANGE RATE	60	0.020	0.003	11.680	0.003

Descriptive Statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
BASERATE	60	24.682	3.185	18.77	31.4
MONETARY RATE	60	17.447	3.884	12.5	26
REVENUE	60	6.206	1.596	3.12	10.26
EXPENDITURE	60	7.642	2.185	4.14	14.52
INFLATION	60	13.545	3.658	8.4	20.7
EXCHANGE RATE	60	2.204	1.375	.896	4.944

regression

BASE RATE	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
MONETARY RATE	0.287	0.104	2.77	0.008	0.079	0.495	***

EXPENDITURE	-0.309	0.197	-1.57	0.122	-0.703	0.085	
lnINFLATION	3.221	1.920	1.68	0.099	-0.626	7.068	*
Constant	13.757	3.401	4.04	0.000	6.945	20.570	***

Mean dependent var	24.682	SD dependent var	3.185
R-squared	0.345	Number of obs	60.000
F-test	18.064	Prob > F	0.000
Akaike crit. (AIC)	290.942	Bayesian crit. (BIC)	299.320

*** *p<0.01*, ** *p<0.05*, * *p<0.1*

SECONDARY DATA

QUARTERS	BASE RATE	MONETARY RATE	REVENUE	EXPENDITURE	INFLATION	EXCHANGE RATE
2004	28.13	20	6.69	7.49	15.6	0.896
	26.88	18.5	8.1	8.7	18	0.8999
	25	18.5	8.39	9.22	19.6	0.9013
	25	18.5	10.26	11.05	16.4	0.903
2005	25	18.5	5.54	5.92	17.8	0.9052
	24	16.5	7.1	8.08	14	0.9055
	22	15.5	7.5	8.75	14.3	0.9055
	21.45	15.5	9.2	8.08	13.9	0.9088
2006	21.25	14.5	5.06	6.49	11.3	0.9106
	21.25	14.5	7.81	7.49	11.4	0.9162
	21	14.5	6.48	8.63	11.7	0.9204
	21.25	12.5	8.43	11.1	10.9	0.921
2007	19.44	12.5	8.24	8.59	10.2	0.9255
	19.36	12.5	7.56	9.77	10.7	0.9265
	19.36	12.5	7.43	8.94	10.2	0.9384
	18.77	13.5	8.86	12.75	12.7	0.9599
2008	18.81	14.3	7.57	9.87	13.8	0.9747
	22.25	16	7.25	9.82	18.4	1.0212
	26.57	17	8.4	14.52	17.9	1.119
	27.22	17	9.42	12.33	18.1	1.2134
2009	28.92	18.5	7.14	7.64	20.5	1.3699
	30.52	18.5	6.79	9.15	20.7	1.4549
	30.87	18.5	6.52	9.51	18.4	1.4543
	31.4	18	9.48	10.87	16	1.434
2010	29.9	16	4.39	6.28	13.3	1.4222

	28.63	15	4.57	6.43	9.5	1.4254
	26.46	13.5	4.81	7.21	9.4	1.4326
	25.79	13.5	6.09	6.08	8.6	1.4532
2011	24.54	13.5	4.72	4.51	9.1	1.519
	23.95	13	4.93	5.42	8.6	1.5075
	23.26	12.5	6.23	6.05	8.4	1.5338
	22.47	12.5	6.57	7.46	8.6	1.5841
2012	22.07	13.5	4.83	4.54	8.8	1.7307
	20.39	15	5.38	6.12	9.4	1.8989
	22.82	15	4.91	7.02	9.4	1.9012
	21.52	15	6.78	9.81	8.8	1.8846
2013	21.48	15	5.09	5.5	10.8	1.9385
	22.8	16	5.16	6.03	11.6	1.9883
	21.6	16	4.49	8.51	11.9	1.9988
	21.51	16	5.77	8.08	13.5	2.1616
2014	23.12	18	5.06	5.36	14.5	2.68
	24.89	18	4.95	6.82	15	3.0016
	25.06	19	5.73	7.31	16.5	3.1973
	25.68	21	6.24	8.9	17	3.2001
2015	26.24	21	5.57	6.35	16.6	3.7472
	26.25	22	5.66	6.81	17.1	4.3274
	26.82	25	5.5	7.13	17.4	3.7545
	26.94	26	6	7.41	17.7	3.7944
2016	27.86	26	4.31	5.12	19.2	3.8304
	26.39	26	5.1	6.85	18.4	3.923
	26.46	26	4.76	7.59	17.2	3.9709
	26.66	25.5	5.46	10.06	15.4	4.2002

2017	27.08	23.5	4.41	5.08	12.8	4.3173
	25.79	22.5	6.85	4.63	12.1	4.3629
	25.22	21	5.03	6.3	12.2	4.944
	24.95	20	5.75	7.25	11.8	4.4157
2018	28.75	18	3.12	4.14	10.4	4.4044
	27.53	17	4	5.05	10	4.523
	27.49	17	4.09	5.23	9.8	4.7776
	26.86	17	4.83	5.34	9.41	4.82