

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI**

**INSTITUTE OF DISTANCE LEARNING**

**THE IMPACT OF FOREIGN EXCHANGE RISK EXPOSURE ON FINANCIAL  
PERFORMANCE OF MANUFACTURING FIRMS LISTED ON THE GHANA  
STOCK EXCHANGE**

**BY**

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**A THESIS SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND FINANCE  
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OF THE REQUIREMENTS FOR THE**

**MASTER OF SCIENCE IN ACCOUNTING AND FINANCE**

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## DECLARATION

'I hereby declare that this submission is my own work towards the award of the **Master of Science in Accounting and Finance** and that, to the best of my knowledge, it contains no material previously published by another person or any material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text'.

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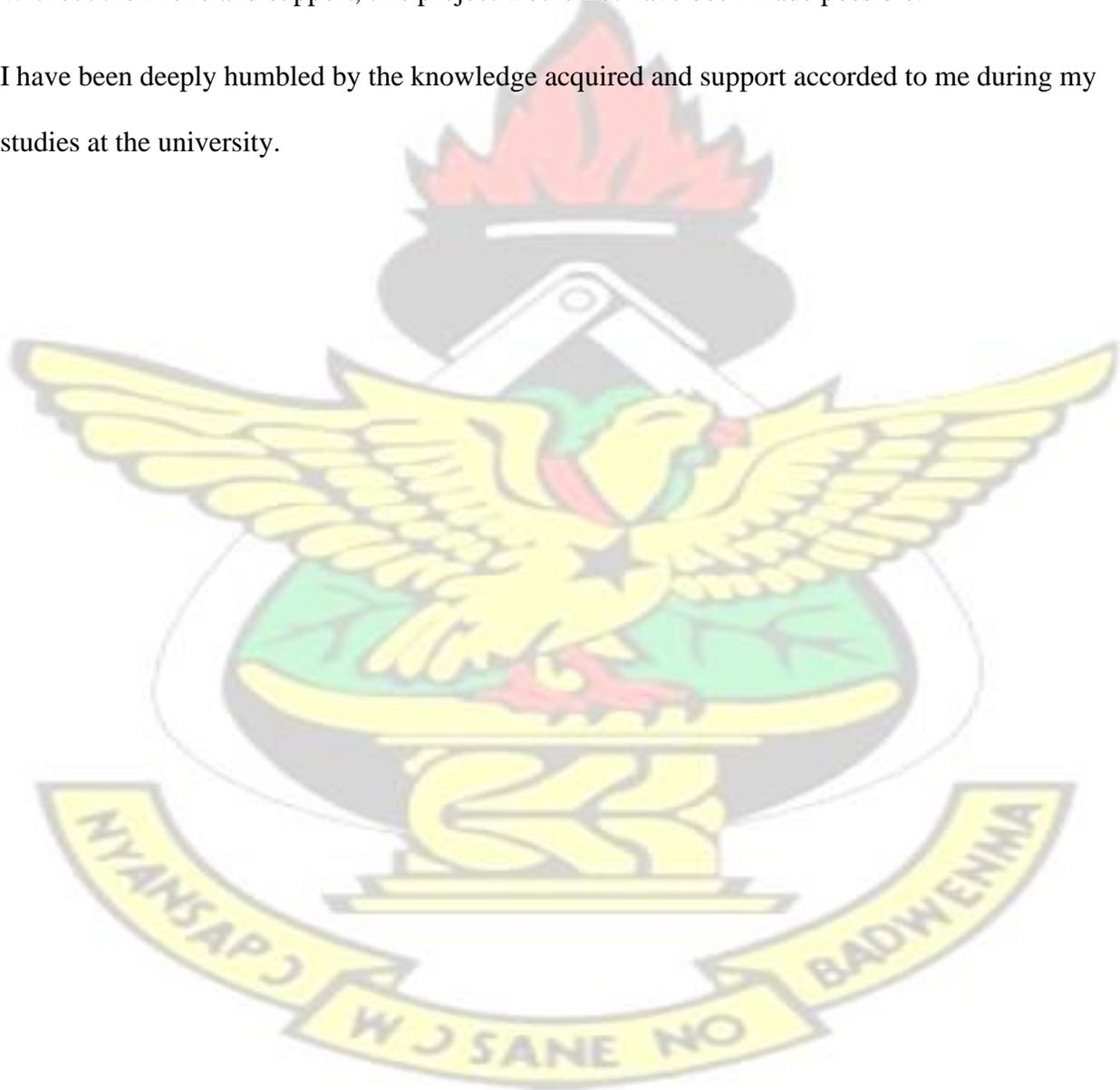
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## DEDICATION

I dedicate this project to my mother Vivian Akuamoah, all my colleagues at work (Absa Bank Ghana Limited), family and friends, the school of business and the administration at the Kwame Nkrumah University of Science and Technology for being a strong pillar throughout my MSC program.

Without their love and support, this project would not have been made possible.

I have been deeply humbled by the knowledge acquired and support accorded to me during my studies at the university.



## ACKNOWLEDGEMENT

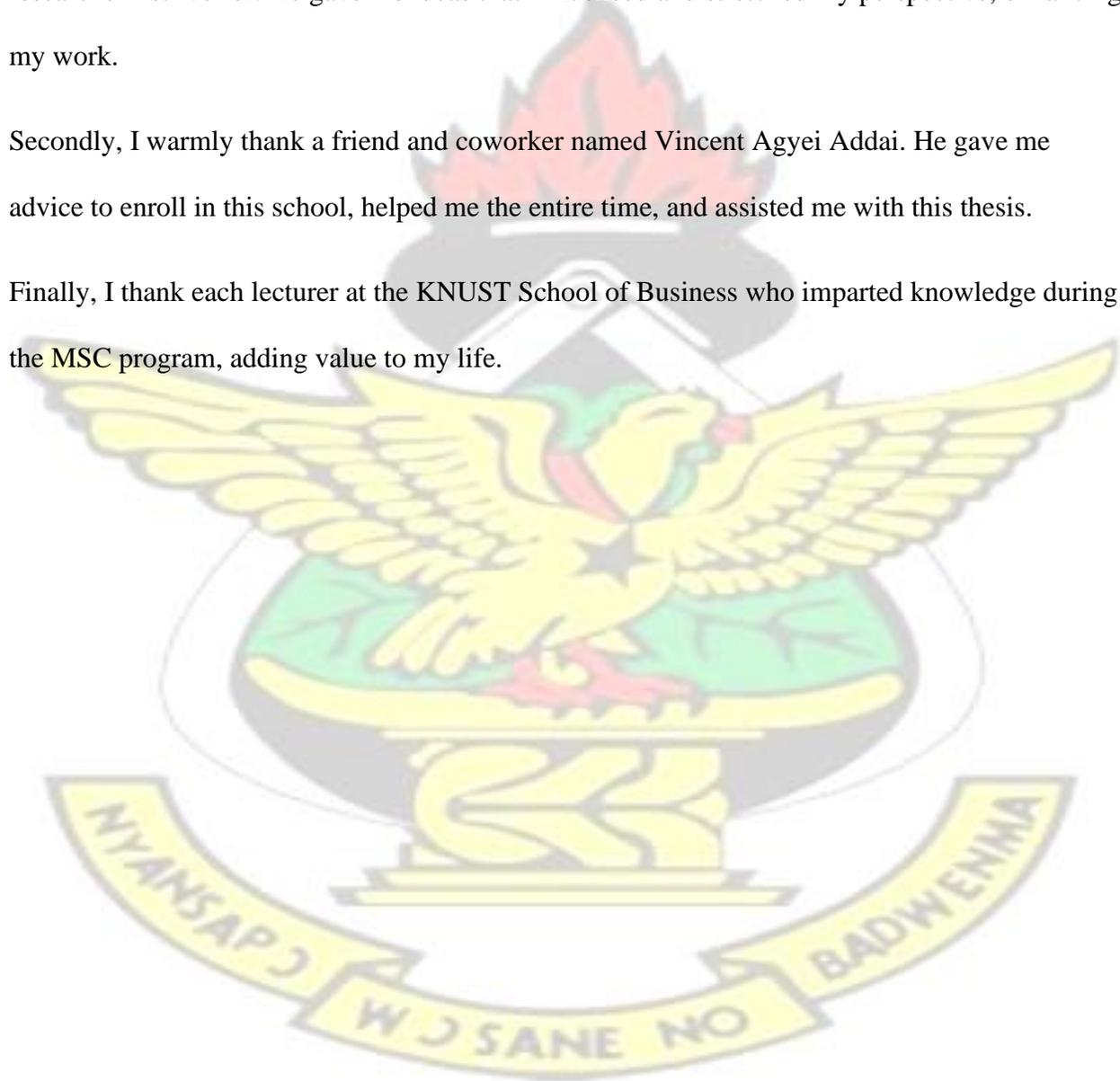
I will always be appreciative to the Almighty God to whom I owe my very life and existence.

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Firstly, my supervisor, Dr. Clement Oppong, who is a prime example of the kind of superior researcher I strive for. He gave me ideas that influenced and stretched my perspective, enhancing my work.

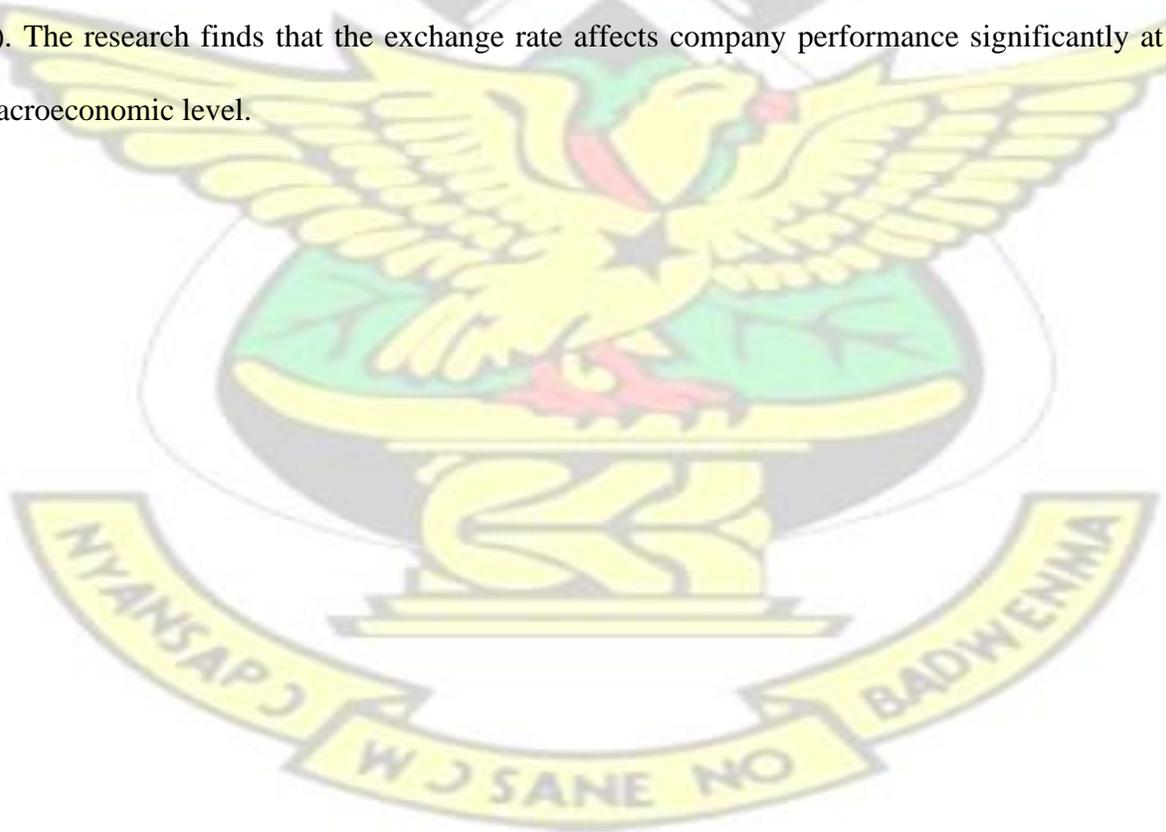
Secondly, I warmly thank a friend and coworker named Vincent Agyei Addai. He gave me advice to enroll in this school, helped me the entire time, and assisted me with this thesis.

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## ABSTRACT

The depreciation of cedis has been a long-studied subject in literature with inconsistent results and explanations. In this analysis, we compare ROA, ROE, and Tobin's Q to determine a company's success. Using data from 2005-2018, this research examined how changes in the exchange rate affected the profitability of Ghana's manufacturing sector. A combination of the panel technique and an ex-post facto research strategy allowed for the compilation of this study's findings. Likewise, the panel regression model was estimated using the GLS method, which considered both homoscedasticity and autocorrelation. The findings indicated that the exchange rate had a negative and statistically significant effect on the return on investment (ROI) of manufacturing companies. Second, expansion boosts profitability (as measured by ROA and Tobin's Q). Third, the data demonstrate that a firm's tangibility has a deleterious effect on its value (as measured by Tobin's Q). The research finds that the exchange rate affects company performance significantly at the macroeconomic level.

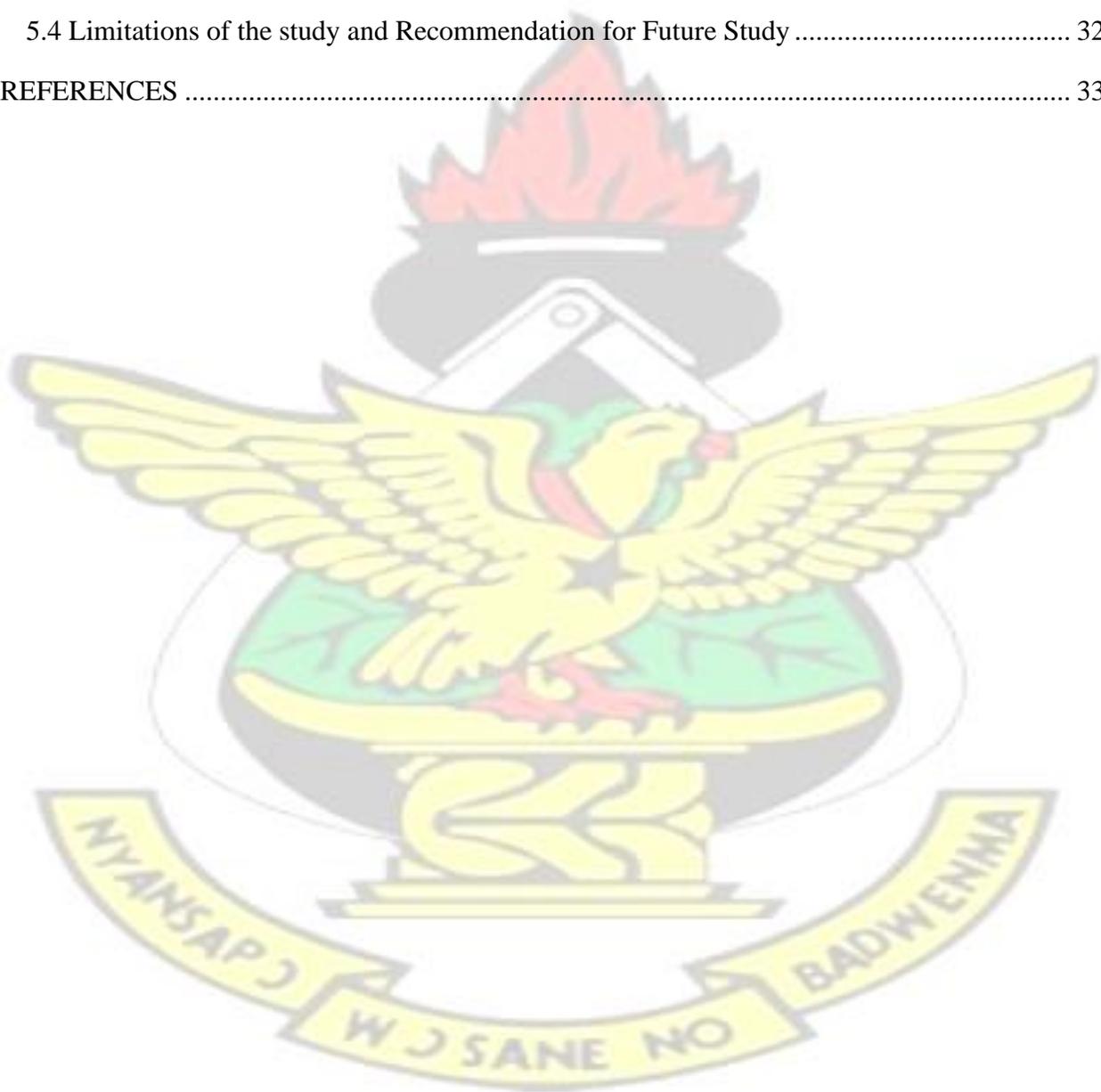


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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

Since the fall of the Bretton Woods fixed-parity framework in the early 1970s, exchange rate volatility and associated concerns have surged to the forefront of international financial management. Standard economic analysis often assumes that variations in the exchange rate will influence both the cash flow of a firm's operations and the value of the company. Since Ghana's currency has fluctuated widely over the several years, many people have been curious about how susceptible manufacturing companies could be to the risk posed by currency fluctuations. Theoretically, exchange rate changes are a significant source of macroeconomic uncertainty. Therefore, irrespective of whether the company is focused on the local or worldwide markets, it ought to have a major influence on the firm's worth (Annelies, Mark, Roel and Sigrid, 2020; He, Liu, and Zhang, 2021; Dwumfour and Addy, 2019).

Since the Bretton Woods fixed exchange rate system ended in 1971, investors, analysts, managers, and shareholders have been particularly worried about exchange rate movements. Market forces now determine the value of currencies, and this system was abandoned. The new system may be responsible for currency fluctuations due to the volatile nature of supply and demand, which is influenced by several external factors (Susan, Winarto and Gunawan, 2022). Because of these fluctuations, businesses face the risk of exposure to foreign exchange markets. In addition, as globalization progresses and international commerce expands, firms will become more vulnerable to fluctuations in foreign exchange markets.

A company's exchange rate exposure is the degree to which its stock price or economic value is sensitive to changes in the currency rate (Mukherjee, Mukherjee, Mishra, Broll, & Parhi, 202; Mohapatra and Rath, 2017). Businesses, analysts, and economists pay close attention to changes in the value of currencies because of the effects on costs and profits. A company's cash flow may be at risk if the value of its foreign currency assets and liabilities (as exporters or importers) or its operations overseas fluctuated significantly.

The modern economy relies on the manufacturing sector because it provides vital benefits that are essential for economic growth and because it plays a catalytic function in the economy. According to Nel, Rogerson and Marais (2006) as well as Mbam (2018), the manufacturing industry has traditionally been the main driver of the economy in most nations. DTI (2017) and Borat (2017) both state that there are very few, if any, examples in the economic history of a country experiencing continuous and sustainable economic development that was not driven by manufacturing. Exports and productivity growth are aided by the manufacturing sector, and the industry is also a vital source of innovation and competitiveness (2018). Although the manufacturing industry is now setting the pace in most countries in terms of gross domestic product and job creation, most of these countries' economies were first built on a strong manufacturing base (SEDA, 2012). As a result, the manufacturing sector acts as a conduit for stimulating the growth of other activities, such as the services industry and accomplishing certain goals, such as the creation of jobs and the empowerment of poor individuals.

The contributions of the manufacturing sector (or company) to national development and the betterment of citizens' economic and social conditions cannot be overstated. Since manufactured products depend so largely on imported capital goods and raw materials, the manufacturing sector is especially sensitive to fluctuations in the exchange rate. However, in a country where the

manufacturing sector relies heavily on imported capital goods and raw materials, the industry has suffered due to fluctuations in the currency rate, which have lowered the country's competitiveness both at home and abroad. Thus, exchange rate swings have caused the collapse of many industrial companies and have also produced a climate of macroeconomic uncertainty, which lowers the value of enterprises, lowers employment and investment levels, and lowers the financial performance of organizations.

## **1.2 Statement of the Problem**

The effect of currency fluctuations on the financial success of factories in both developed and underdeveloped countries has been the subject of a considerable number of empirical studies. From 1981 to 2016, Ayobami (2019) analyzed the effects of the naira's fluctuation on the profits of Nigerian factories. The analysis shows that Nigerian manufacturing enterprises' development is positively connected to exchange rate changes but is insignificant. Buabeng, Ayesu, and Adabor, (2019) examine the impact of foreign assistance and the real exchange rate on economic development for developed and developing nations between 1970 and 2014, focusing on the period from 1970 to 2014. The study's findings indicate that foreign assistance has a significantly positive impact on economic development. Using data from 1986 to 1997, Emre and Derekoy, (2020) analyse how the Canadian exchange rate affected the success of local businesses. The outcomes of their study indicate that the exchange rate has a negative and substantial effect on the functioning of businesses. Therefore, the findings are inconclusive and additional investigation is warranted.

The impact of exchange rate variations on Ghana's manufacturing firms' financial performance is poorly understood, despite empirical research (see, for example, Ofori, Obeng, and Armah, 2018;

Alagidede and Ibrahim, 2017; Salifu, Osei and Adjasi, 2007; Nyarko, Nketiah-Amponsah and Barnor, 2011; Okyere, Mensah, Antwi and Kumi, 2013; Baba and Anthony, 2013). Empirical research shows exchange rate variations affect economic growth, capital inflows, trade balance, employment, and growth (see for instance Elbadawi and Soto, 2008; Umaru Aguda and Davies, 2018; Alagidede and Ibrahim, 2017). Three empirical studies (Buabeng, Ayesu, and Adabor, 2019; Abdul-Mumuni, 2016) have examined the effect of currency rate exposure on Ghanaian manufacturing firms.

While Boateng (2019) looked at the manufacturing sector's financial performance, Abdul-Mumuni (2016) analyzed the manufacturing sector's percentage of GDP. The present study distinguishes out from others (Buabeng et al., 2019, and Boateng, 2019) for two primary reasons. First, we add to the little research on exchange rate variations and Ghana's industrial sector. Second, the current research uses a more recent and bigger sample period than Boateng's (2019) 2009 to 2017 sample span. Thirdly, the study employs micro-economic parameters such as firm size, growth, and tangibility as controls, unlike Buabeng et al. (2019), and Boateng (2019), which used macro-economic variables.

### **1.3 Objectives of the Study**

The main objective is to determine the impact of the exposures to foreign exchange risk on the performance of manufacturing firms in Ghana. Specific objectives will therefore include:

1. To examine the impact of foreign exchange risk exposure on the return on asset of manufacturing firms listed on the Ghana Stock Exchange.
2. To determine the impact of foreign exchange risk exposure on the return on equity of manufacturing firms listed on the Ghana Stock Exchange.

3. To assess the impact of foreign exchange risk exposure on the Q ratio (Tobin's Q) manufacturing firms listed on the Ghana Stock Exchange.

#### **1.4 Research Questions**

The study seeks to address the following research questions:

1. What is the impact of foreign exchange risk exposure on the return on asset of manufacturing firms listed on the Ghana Stock Exchange?
2. What is the impact of foreign exchange risk exposure on the return on equity of manufacturing firms listed on the Ghana Stock Exchange?
3. What is the impact of foreign exchange risk exposure on the Q ratio (Tobin's Q) manufacturing firms listed on the Ghana Stock Exchange?

#### **1.5 Significance of the Study**

Financial investors need to understand how foreign exchange rates affect manufacturing companies' financial performance to calculate the risk involved in their investment choices and the degree of risk connected with such fluctuation. Therefore, the study's findings will provide investors with a basis for making strategic choices and selecting investment strategies while taking the impact of currency rates into account. The research will also inform investors about how currency fluctuations impact on a company's bottom line. This research adds to the body of knowledge in the field of foreign currency risk management by providing an evaluation of the country's current capability in this regard. This research adds to the empirical literature on the influence of exchange rates on corporate financial performance, and its results are important in the

following areas: This study will help us comprehend the relationship between exchange rates and financial performance by including firm-specific micro-level factors.

### **1.6 Scope of the Study**

The study covers the manufacturing sector in Ghana, to determine how exchange rate fluctuations have influenced their financial performance from 2005 to 2018. The choice of period is based on data availability. Moreover, as the study includes fifteen listed manufacturing companies the data point of 210 is sufficient for an inferential analysis to be performed on the data. The research adds micro-level control variables in Ghana's manufacturing sector to explore how they affect business profitability in the context of exchange rate volatility.

### **1.7 Summary of Methodology**

This quantitative study evaluates the impact of foreign exchange rate risk on manufacturing enterprises' financial performance. The data came from Ghanaian industrial enterprises' financial accounts. The data was collected from the website of the Ghana Stock Exchange and lasted 14 years; from 2005 to 2018. The empirical model for the inferential analysis is the panel regression model since the data for the study is longitudinal.

### **1.8 Organisation of the Study**

This thesis has five chapters. First is the research subject introduction. This part includes the study's history, issue description, research aims and questions, importance, scope, and methodology. Chapter 2 reviews research-relevant literature. This part includes a conceptual overview, theoretical framework, empirical research, and hypothesis testing. The third chapter discusses

research methods used to attain goals. These comprise study design, data, methodologies, model formulation, diagnostic testing, and robustness check. The fourth chapter discusses research results. The fifth and concluding chapter summarizes conclusions and gives recommendations based on research findings.

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## CHAPTER TWO

### LITERATURE REVIEW

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#### 2.0 Introduction

Literature reviewed to provide context for the investigation and ideas is included in this section.

The chapter also includes a rationale, a synopsis, a discussion of the study's findings, and a breakdown of the study's conceptual framework and the empirical research that informed it.

#### 2.1 Conceptual Review

##### 2.1.1 Foreign Exchange risk

Foreign exchange exposure is the vulnerability to fluctuations in the value of assets, liabilities, and operational income denominated in one currency due to fluctuations in another currency (Adler and Dumas, 1984). Since the beginning of the floating exchange rate system, companies throughout the world have worried about the effects of changes in foreign currency (forex) values on their bottom lines. Companies that deal in exports and imports, loans, and borrowings, or even portfolio and direct foreign investments are all vulnerable to swings in the value of the currency they use. Additionally, the company's cash flows, and value might be impacted by fluctuations in foreign currency rates.

There is always a chance that changes in exchange rates will have a negative impact on a company's cash flow or operational performance. A company's assets, resources, income, expenses, cash flows, and future value are all susceptible to swings in the exchange rate because of their monetary nature. Variations in the economies of the countries using those currencies, the

development of financial markets, the political stability of a country, the expectations of those who trade on financial markets, and random events all contribute to the rise and fall of the value of one currency in relation to another. Njaaga (2014) Translation risk, transaction risk, and economic risk are the three types of foreign currency risk that companies with a worldwide presence face, according to Parlak and Ihan (2016). The risk involved in converting between various foreign currencies is referred to as "translation risk" or "accounting risk." The potential adverse effect of changes in currency rates on a company's bottom line is quantified by its exposure to foreign exchange risk. Alternately, "the likelihood of loss and gain owing to exchange rate movements' effect on expected cash flows" is a fair working definition of transactional risk. "Transaction risk" refers to the potential loss that might occur due to fluctuations in the value of a foreign currency between the date of a transaction and the date on which a futures contract is formed (Christensen, 2012). Profits and losses, as well as the value of shareholders' equity and total assets, are all impacted by fluctuations in currency values because of the impact of foreign exchange gains and losses on the revaluation of assets, liabilities, revenues, expenses, gains, and losses into the reporting currency. The term "economic risk" refers to the potential negative effect of fluctuations in exchange rates on the reporting currency value of a company's future operational performance and cash flows.

### **2.1.2 Foreign Exchange Risk management**

Foreign currency exchange risk refers to a company's cash flows being more volatile or risky because of fluctuations in foreign currencies (Assad, 2016). There are three categories of foreign currency risk: translation risk, transaction risk, and economic risk. To manage a company's exposure to foreign exchange risk, decision-making is made to mitigate or eliminate the effect of currency changes on the company's income statement, balance sheet, and cash flows. Financial

solutions are now available to businesses that may help them cope with the consequences of fluctuating currency rates. Hedging strategies are what most people think of when they hear this term. To protect yourself from a loss that is more likely than not to occur, you can use a tool called a hedge. Hedging is a risk management strategy used to lessen the impact of potential losses from the value of assets and liabilities translated into another currency. Some hedging strategies can be performed within the company without using financial instruments traded on international markets known as internal hedging techniques.

### **2.1.3 Relationship between foreign exchange risk and financial performance**

Boermans (2011) says excellent financial success must result from financial risk. This is true regardless of danger. Balance sheet, real interest rate, inflation, capitalization, and GDP growth impact financial performance and risk, therefore they must be studied together to determine whether a corporation will succeed or fail. This is because financial performance and financial risk are mutually beneficial that facilitate company sustainability or closure. Each company is eager to expand and improve its performance while also borrowing money and maximizing its financial advantage (Kiptisya, 2017). The company may default on its loan payments if it takes on additional debt to improve its performance.

### **2.1.4 Measures of financial performance**

There are several indicators of financial performance. For instance, the ratio of a company's profits to its sales may be calculated using the return on sales metric, the efficiency with which assets are utilized can be gauged using the return on assets, and the return on equity can be calculated using the return on shareholders' capital. One of the main benefits of using financial measures is that their definitions are standardized and accepted over the world. Historically, financial measures

have been used to gauge the effectiveness of a manufacturing system or a business (Mohamed, Faiz, Ishak and Ahlam, 2020).

#### **2.1.4.1 Firm size**

Firm-specific variables, such as size, value, growth opportunities available in the market, and predicted financial difficulties, were originally highlighted by Aggarwal and Harper (2010) as the primary drivers of enterprises' susceptibility to foreign exchange fluctuations. However, large enterprises receive the benefits of economies of scale and thrive as they reduce their unit costs while increasing their output. Due to their large output, established businesses may take advantage of economies of scale and scope, lowering their unit costs as a result. When compared to companies of a comparable size and industry, their operational leverage is exceptionally high. These businesses are more profitable when demand is high, prices are increasing, and production is at full capacity because of their cheap production cost per unit. For Kenyan manufacturers, the foreign exchange risk hedging that Kiilu (2018) outlines have trivial effect. Krüger (2018) found that large organizations are less vulnerable to information asymmetry because of their size and the economies of scale that result. This study's findings provide credence to the idea that companies with a global footprint have access to data that is unavailable to locally focused competitors. A manufacturer that also engages in international commerce and has both forward and backward market integration is a prime example of this type of business. The company can acquire accurate forecasts of monetary and fiscal policy changes in the countries in which it operates.

#### **2.1.4.2 Growth**

Growth is a key factor that will determine the firm's financial results in the future (Javed and Akhtar, 2012). Investment prospects improve as growth accelerates. The expansion of the economy gives businesses a leg up in the marketplace. The potential for future expansion is an asset that might boost a company's worth, but it cannot be used as collateral and generates no taxable gain. According to the pecking order idea, businesses may get started without taking out loans from outside sources by using money from within the company (Watson and Head, 2010). This finding shows that companies with promising development prospects will favor raising capital through means other than debt and equity. The rising cost of external financing owing to knowledge asymmetrical threatens to dampen growth prospects and overall profitability.

### **2.2 Theoretical Review**

#### **2.2.1 Purchasing power parity.**

Gustav Cassel created purchasing power parity (PPP) in 1920 to compare worldwide business rates. The PPP theorem links product prices with exchange rates. The PPP theorem asserts that, in a floating exchange system, a change in the equilibrium exchange rate between any pair of currencies would tend to be approximated by a change in the purchasing power parity for that pair of currencies. According to the PPP, the relative cost of goods and services stays constant even when living costs grow. This is because a country's exchange rate will fall in proportion to its rising internal cost of living. This concept demonstrates that the legislation of one charge should be maintained, as price changes were neutralized by comparable fee indices or inflation. The law of one rate, which holds that in competitive marketplaces, related products would sell for the same prices when valued inside the same currency, provides the theoretical basis for purchasing power

parity (PPP). Generalizing from the specific case of one product to the broader category of PPP is an ideal situation. Relative PPP focuses less on absolute rate stages and more on changes in prices and trade quotations. For every given pair of countries, the ratio of their respective exchange rates will determine the amount of money that may be exchanged for one another, while the underlying structural links between the countries will remain unaffected. For PPP to hold, it is assumed that everything is the same, everything is freely marketable, there are no barriers to trade such as transportation costs or information gaps, taxes, tariffs, or exchange rate laws, and that the only factor affecting the relative cost of alternatives is inflation. Economic trends of exchange price determination were adopted even though the law of one charge, the foundation of PPP, has been empirically broken. Critics of foreign exchange risk management contend that this is because there is no meaningful exchange risk. Critics commonly experience the Capital Asset Pricing Model (CAPM) to buttress their claim that foreign exchange risk management is irrelevant.

### **2.2.2 Stock–Oriented Model**

Branson and Frankel (1983) created the stock-oriented model. These models describe exchange rate dynamics based on supply and demand for financial assets. Rising stock prices spurred investors to seek safe-haven assets, which boosted the local currency. The native currency's growth increases foreign capital and investment in the local market. Agubata and Odubuasi (2018) argued that an increase in the stock price would lead to a big inflow of money, which would raise the local currency's value. Demand and supply for financial assets affect the exchange rate. Richards, Simpson, and Evans (2009) criticized the stock-oriented method for disregarding cross-border capital flows. The writers rejected the stock-oriented approach. The author contends that the flow-oriented model is better suited for studying exchange rate volatility on a company's early financial performance than the stock-oriented approach (Cerra and Saxena, 2010). This theory is significant

because it gives another explanation for the association between stock prices and currency exchange rates at a particular moment.

### **2.2.3 International Monetary model**

The monetary model places a strong focus on the role that shifting asset prices play in the determination of the exchange rate rather than focusing simply on short- and long-term current account flows, as previous systems did. Changes in exchange rates are impacted by asset holders' money appetite. Capital transactions affect the exchange rate. This explains why stock disequilibrium, or people's inclination to hold onto money, causes exchange rate volatility. A currency exchange rate is the foreign currency's price in the local currency. As a relative price of two assets (money), the equilibrium exchange rate is attained when both currencies' current inventories are gladly kept. The monetary model assumes (i) prices are set by the global price level and the exchange rate using purchasing power parity (PPP), (ii) the domestic economy is at full employment with flexible wages, and (iii) prices are set by the global price level and the exchange rate using PPP.

## **2.3 Empirical Review**

### **2.3.1 Foreign exchange risk exposure to financial performance**

Caglayan and Muñoz Torres (2011) evaluated the peso's exchange rate on fixed investment from 1994 to 2002. The research employed 2-SLS regression to estimate. Exports and imports mediate a negative connection between currency depreciation and fixed investment. Thus, the exchange rate is more favourable for the low markup ratio businesses and the sectors dealing in non-durable commodities.

Using Return on asset and equity as a dependent variable, Boateng (2019) looked at how the exchange rate affects the financial performance of manufacturing enterprises in Ghana from 2009 to 2017, with an emphasis on the years 2015 and 2017. The estimate is made using panel regression using imports, FDI, and the nominal interest rate as control variables. Financial growth was shown to be negatively correlated with a manufacturer's vulnerability to fluctuations in currency markets.

Williams (2018) conducted an analogous study, this time examining how fluctuations in the value of the exchange rate impacted the financial performance of various publicly listed Nigerian firms between 2012 and 2016. The ordinary least squares approach was employed as the estimation technique for this study. The research indicated that the exchange rate has positive and statistically significant influence on the performance of companies. Business performance was found to be positive and statistically significantly correlated with inflation.

Researchers Lotfalipour et al. (2013) looked at how the value of the rial affected industrial investment in Iran from 1995 to 2009. The study uses the Generalized Method of Moments to estimate based on the yearly data received from the sector (GMM). One finds a significant and negative correlation between industrial investment and the currency exchange rate.

Umaru et al. (2018) analyzed the impact of changing exchange rates on economic growth in a sample of English nations in ECOWAS from 1980 to 2017 using fixed and random factors and pooled OLS. This analysis found a statistically significant negative link between exchange rate volatility and economic development in Ghana and Nigeria, but not in The Gambia and Sierra Leone. Ishimwen and Ngalawa (2015) studied how exchange rate volatility affected South African exports and American manufacturers from 1990Q1 to 2014Q4. Pesaran, Shin, and Smith's ARDL bounds tests were utilized to examine the long-term and short-term consequences of exchange rate fluctuation on industrial exports. This research uses a Granger causality test to assess whether

exchange rates affect manufacturing exports. Long-term industrial exports benefit from increased exchange rate volatility. Short-term effects are minimal. Exports of manufactured products are Granger caused by currency rates. Manufactured exports do not Granger-cause the actual exchange rate.

### **2.3.2 Impact of foreign exchange risk exposure on the return on asset**

Kiptisya (2017) determined how effectively commercial banks in Kenya deal with foreign exchange risk. One hundred people working in Stanbic Bank Kenya's Treasury and Finance departments were the focus of the study. The results showed that most respondents believed that liquidity risk affects ROA and ROE, that good financial risk management methods have translated into a competitive advantage, and that respondents give greater weight to assessing risk exposure when making decisions. Most respondents agreed that the bank had sufficient Capital to withstand risks, effective cost, and profit determination by management and that the bank had seen increasing ROE and ROA over the years, all of which reflect positively on the bank's performance. While foreign exchange risk is a concern in the banking sector, it was also determined that liquidity risk has an impact on ROA and ROE. The research found that the bank's performance has improved, maybe because it has more resources to use in risk mitigation and because its management is better able to forecast and control expenses and profits.

Kelilume (2016) analyzed currency rate volatility clustering in Nigeria. This research provides a framework for international investors and enterprises to make investment choices based on variations in the Nigerian Naira compared to their home currencies. Using cross-sectional data on Nigeria's 20 most active companies. According to the study, exchange rate fluctuations lower ROI (ROA). The research indicated that the more uncertain a currency's value compared to another, the worse the businesses' productivity and profitability.

Parlak and Ihan (2016) researched the foreign exchange open positions maintained by manufacturing and service sector businesses, how these positions impact company financial performance, and the underlying factors of firms' inclination to keep a net short position in foreign currency. Profitability was assessed by the company's return on assets (ROA). A survey of thirty companies found that those with a short foreign currency position had worse operational profitability from the third quarter of 2012 to the second quarter of 2015. In times of local currency overvaluation, enterprises with short foreign exchange positions improved their overall profitability to the same level as companies with long foreign exchange positions but suffered considerable losses in times of local currency devaluation. Companies that are now net sellers of foreign currency have outperformed those that are net buyers in terms of liquidity and asset efficiency but underperformed on the bottom line when using applied regression analysis.

Limo (2014) analyzed how changes in exchange rates affected Kenyan automakers. The Company's Financial Report was used to compile secondary data. Regression analysis was used to determine how variations in the exchange rate have affected Kenyan automakers. Foreign exchange rate fluctuations had a negative correlation with the research and several measures of financial exposure, including sales to raw material prices, accounts receivable to payable, total machinery and equipment to economic exposure, and economic exposure to firm financial performance. The firm's financial success was measured by return on assets (ROA).

Financial overall manufacturing sector performance and the performance of a few representative enterprises were analyzed by Boateng (2019) to determine the impact of exchange rate fluctuations. According to the study, GDP, and Interest Rate, in addition to respect to the variable of interest in our analysis, both ROA and ROE show a considerable impact of the manufacturing firm. Panel data analysis was judged acceptable for this study.

Abdul-Mumuni (2019) analyzed how the Ghanaian manufacturing sector performed because of the exchange rate from 1986 to 2013. The autoregressive distributed lag (ARDL) approach was used to estimate time-series data on industrial production as a percentage of GDP, imports, exchange rates, FDI, and interest rates. All the studies use World Bank data. According to the research, manufacturing business performance is associated with the exchange rate.

Majok (2015) examined the impact of exchange rate fluctuations on forty-three commercial banks' return on assets (ROA). Central Bank of Kenya and bank consolidated accounts provided secondary data. The findings indicated a modest negative correlation between changes in the value of financial performance and Kenya's commercial banks.

Mugi (2015) studied the influence of foreign currency risk management on Kenyan commercial banks. The research used secondary data from annual reports provided to the CBK on Kenya's commercial banks. Forwarding Contracts have a high mean, whereas Cross-Currency Swaps have the largest standard deviation. Return on assets assessed financial performance (ROA). A one-unit rise in forwarding contracts, cross-currency swaps, and options increased ROA.

### **2.3.3 Impact of foreign exchange risk exposure on the return on equity**

Nzioka and Maseki (2017) studied how hedging foreign currency risk affected Nairobi-listed NBECs. Multiple regression analysis was performed to determine how hedging affected corporate performance. Nonfinancial businesses outperformed financial organizations when all variables (internal and external hedging, inflation, and interest rates) were included. The proposed research analyzes how alternative exchange rate exposure strategies impact a company's financial performance using return on equity (ROE) as the dependent variable. According to the research, internal hedging had the greatest influence on company performance, whereas external hedging

had the least impact on firm performance. Hedging strategies influenced company performance, such as profitability, sales revenue, cash flow, and liquidity.

Hussain, Hassan, Rafiq, and Quddus (2019) investigated the working capital of few representative Pakistani manufacturers. Their research uses static panel analysis to examine how exchange rate variations affect working capital. Hausman test results are trustworthy when choosing an analytical method. Exchange rates hurt ROE. The exchange rate positively correlates with day receivables, inventory turns, payments, and cash converts. Companies' working capital policies might range from aggressive to conservative depending on the level of exchange rate volatility.

Moyo and Tursoy (2020) studied how inflation and currency rates influence South African banks' profits. This study compares Standard Bank, Nedbank, Capitec Bank, and FirstRand Bank from 2003 to 2019. They used ROE as a proxy for financial success, with inflation and currency rate as independent factors. The research uses the ARDL, FMOLS, and DOLS models to accomplish its goals. The results showed that inflation has a strong negative association with ROE, whereas the exchange rate has a limited link with ROE.

Salifu, Osei, and Adjasi (2007) investigated Ghana Stock Exchange-listed companies from 1999 to 2004. Several exchange rate measures are used to quantify exposure, including cedi to US dollar, cedi to British pound sterling, cedi to euro, and a trade-weighted exchange rate index. Jorion (1990) created a two-factor model that incorporates exchange rate and return on equity (ROE) changes to forecast future stock price swings. Industrial and retail sectors are highly exposed to the US dollar's exchange rate risk, according to sector-specific exposure analyses. The financial industry has no foreign currency risk.

Ezenwa, Ogbebor and Alalade (2021) analyzed the impact of currency fluctuations on ROA for Nigerian consumer goods producers listed on the stock market between 2010 and 2019. The study used retrospective methodology. Fourteen (14) of the mentioned consumer products companies were randomly selected for this study using a purposive selection approach. The investigation employed panel data using fixed-effect and random-effect panel regression models (with the Hausman test showing the proper model) and the GARCH approach to quantify exchange rate volatility (ERV). The research demonstrated a negative correlation between currency exchange rate volatility and asset return. The research revealed currency exchange impacted ROE.

Lagat and Nyandema (2016) examined how liberalizing foreign exchange rates affects Kenya's Nairobi Securities Exchange. This study uses time series correlation to investigate Nairobi Securities Exchange commercial banks from 2006 to 2013. Primary data source was the Central Bank of Kenya's annual reports of listed banks. This research used multivariate Linear Regression to assess currency rates, interest rates, inflation rates, and bank performance indicators. Pearson product-moment correlation ( $r$ ) was used to determine the variables' correlation. As financial performance indicators, return on equity and return on capital equity showed a favorable association with exchange rates. The unpredictable exchange rate may have boosted banks' profits, as seen by the positive correlation between the two factors.

#### **2.3.4 Impact of foreign exchange risk exposure on the Q ratio (Tobin's Q)**

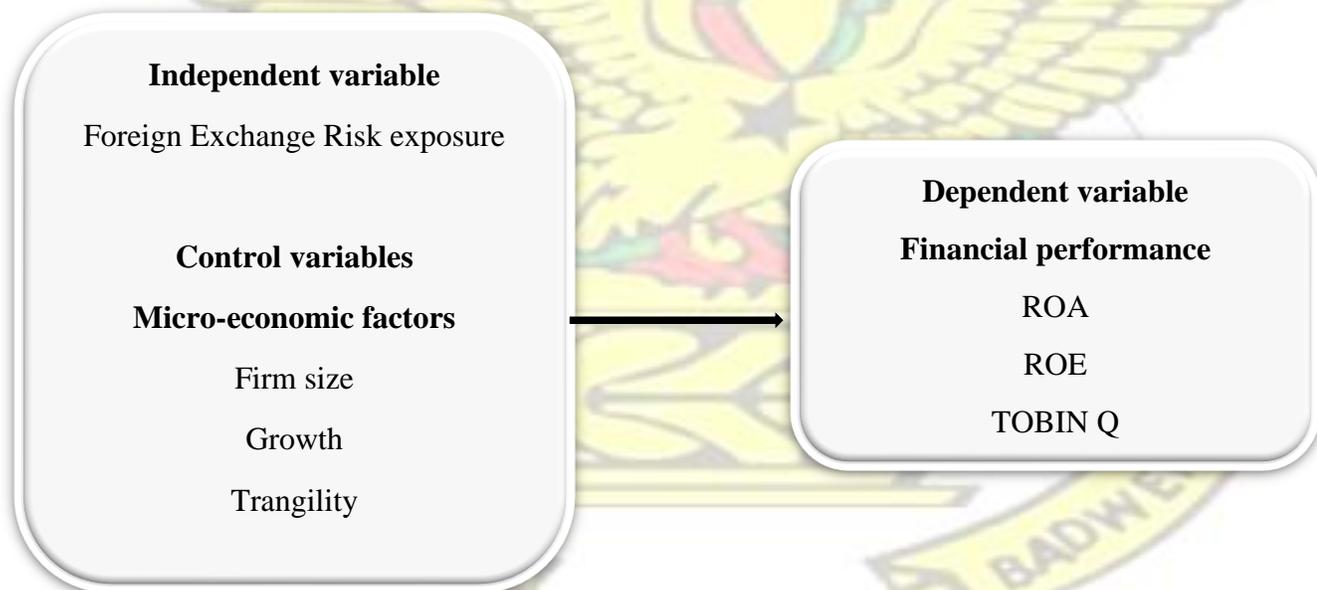
Vietnamese commercial banks' performance determinants from 2009 to 2020 are analyzed by Quoc Trung (2021). Recent economic developments have shifted the focus of the public and the banking industry's stakeholders squarely onto the performance and procedures of the banking sector. The CAMELS model is discussed in this article as a tool for evaluating financial institutions using the Q ratio. The author further analyzed eleven statistically relevant components,

encompassing all the CAMELS model pro-rata, using quantitative regression, the System Generalized Method of Moments (SGMM), and integrating past findings. The previous probes' results were combined. Data show a link between bank ownership and performance, underscoring the need for state-owned banks to enhance their financial soundness.

## 2.4 Conceptual Framework

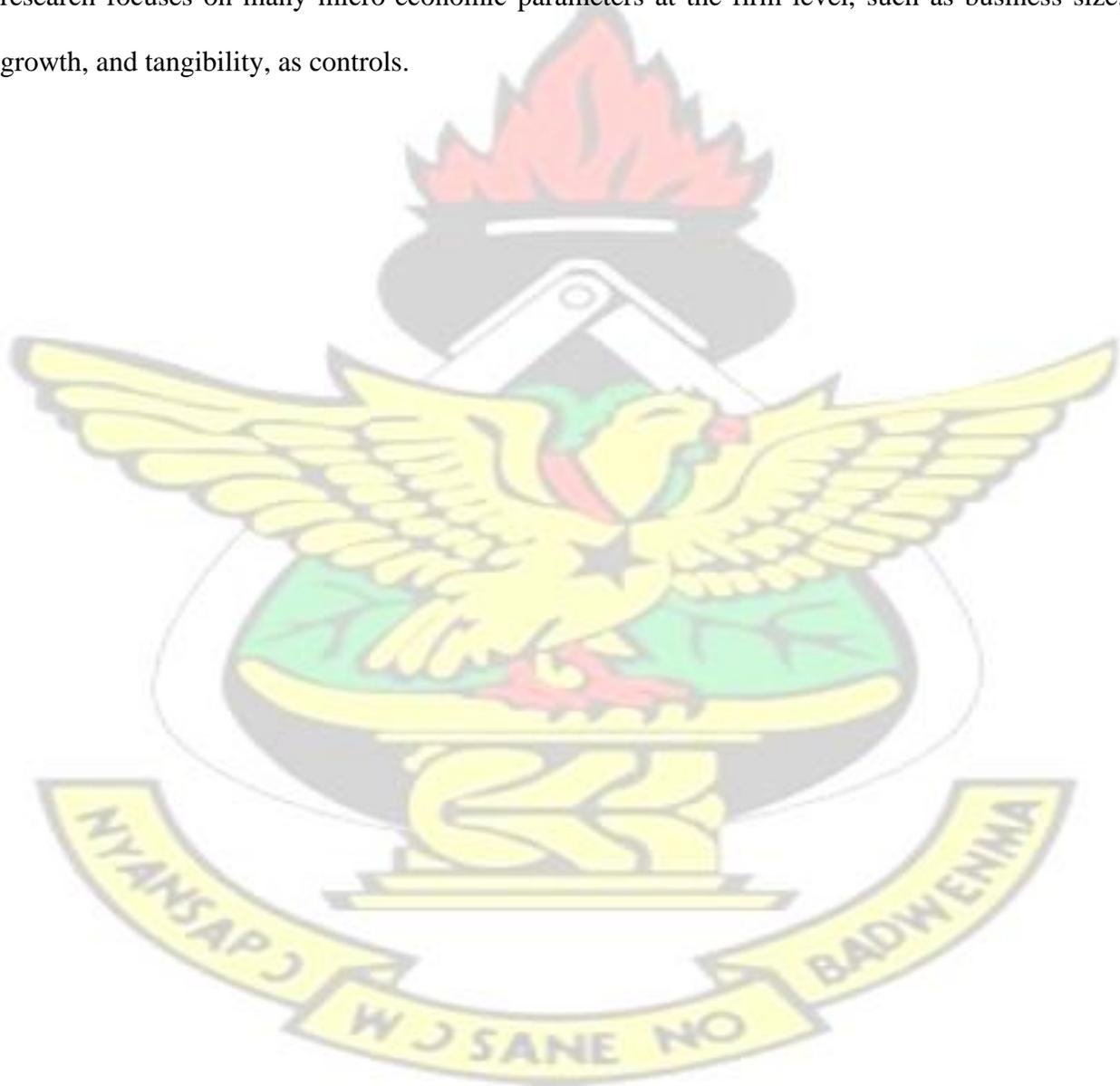
This initiative aims to investigate how foreign currency risk affects Ghanaian manufacturers. This research will use foreign currency risk exposure as an independent variable, firm financial performance as a dependent variable, and business size, growth, and tangibility as controls.

### Conceptual Framework



While Boateng (2019) examined the financial performance of the manufacturing sector using return on assets and equity, Abdul-Mumuni (2016) looked at the manufacturing sector's percentage of GDP. The present research distinguishes out from previous ones on the effect of currency

fluctuations on Ghana's industrial sector (Boateng, 2019 and Abdul- Mumuni, 2016) for two reasons. First, we contribute to the study on exchange rate volatility and Ghana's manufacturing sector's financial performance. Second, in comparison to Boateng's (2019) sample period of 2009 to 2017, the current research uses a more recent and bigger sample period, 2005 to 2018. Third, in contrast to the studies by Buabeng et al. (2019), Abdul-Mumuni (2016), and Boateng (2019), the research focuses on many micro-economic parameters at the firm level, such as business size, growth, and tangibility, as controls.



## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.0 Introduction

This chapter outlines the researcher's procedures and tactics for collecting, cleaning, and analyzing data. It looks at the research design, data, method, model specification, diagnostics, and chapter summary.

#### 3.1 Research Design

Ex-post facto research was utilized. In ex-post facto research, the researcher anticipates the cause based on the effect (Simon & Goes, 2013). Ex-post facto study cannot modify variables. Considering the nature of the variables which are based on data from financial reports of banks, this research design is most appropriate in determining the cause and effect of exchange rate and other firm-specific characteristics on the performance of manufacturing firms.

#### 3.2 Data

For this study, considering the research objectives, secondary data were employed for all analyses and estimations. Secondary data refers to already collected and compiled data. Secondary data are based on already published data or compiled data in its original form (Church, 2002). The study collected most of the data from companies' annual reports into a panel while the exchange rate was obtained from the Bank of Ghana website. The analysis included manufacturing businesses registered on the Ghana stock market from 2005 to 2018. The stipulated time for the data was deemed appropriate as the time frame offered the researcher enough data for the analysis. In

addition, the panel regression requires a minimum sample size of 30 to test and analyse the hypothesis (Taherdoost, 2017). The selection period is based on data for all chosen manufacturing enterprises. GSE collected data from fifteen manufacturing businesses. Excel sheet data was obtained.

### 3.3 Methods

The panel method which utilizes a time-based longitudinal approach was employed as the design for this study. The panel method is an effective method of longitudinal research in which the same people, groups, or organizations are studied throughout several periods (Neuman, 2007). So, the panel research design is useful for tracking changes in the features of certain businesses over time. Furthermore, this type of research is useful for recording real-time alterations. The analysis will use data from the 14-year annual reports of 15 Ghana Stock Exchange banks. The study covers (2005-2018). The study measures ROA, ROE, and Tobin's Q ratio. The exchange rate was the independent variable, with firm-specific characteristics as controls.

### 3.4 Model Specification

The research used a panel regression model to examine exchange rate exposure and manufacturing business performance. Estimating model parameters using R. Panel data requires a panel regression model for inferential analysis. The empirical model that was employed in the study is:

$$FP_{it} = \beta_0 + \beta_1 ER_{it} + \beta_2 FS_{it} + \beta_3 GR_{it} + TANG_{it} + \mu_{it} \quad (1)$$

Where:  $FP_{it}$  is the financial performance for the  $i$ th firm at year  $t$ . The financial performance comprises the return on asset, return on equity and Tobin's Q ratio as a result, three-panel

regression models are formed. In addition,  $ER_{it}$  represents the exchange rate,  $FS_{it}$  is the firm size, and  $TANG_{it}$  is the tangibility of the firm, and  $GR_{it}$  is the growth of the firm. The error of the panel regression is denoted by  $\mu_{it}$ .

### **3.4.1 Diagnostic Testing**

#### *Hausman Test Hausman*

Random and fixed-effect models were tested for suitability. The Durbin-Wu-Hausman test analyzes the consistency of two estimators (Sheytanova, 2015). The test compares empirical and research data. This strategy was used to explain the link between the dependent and autonomous variables in panel regression (s). The random effects model is chosen under the null hypothesis while the fixed effects model is chosen under the alternative.

### **3.4.2 Robustness Check**

#### *Multicollinearity Test*

Multicollinearity comes from autocorrelation. VIF was utilized to investigate. Variance Inflation Factor estimates how much the variance is inflated in multicollinearity tests (Perez-Melo and Kibria, 2020).

#### *Heteroscedasticity Test*

It is important to evaluate the regression model's standard errors. The research tested heteroscedasticity and homoscedasticity. If the sample is homoscedastic, meaning the error term variance is constant, robust standard errors are unnecessary. A skewed regression will result. If our data is heteroscedastic, we must use robust standard errors to avoid bias. The Breusch-Pagan/Cook Weisberg heteroscedasticity test was used (Khaled, Lin, Han, Zhao, and Hao., 2019).

### 3.5 Variable Description

Variable	Description/Measurement	Expected Result	Source
<b>Independent variable</b>			
Foreign exchange	Cedis/dollar ratio	Negative	Buabeng et al. (2019)
Firm Size	Natural log of sales	Positive	Gatsi et al. (2013), Amponsah-Kwatiah and Asiamah (2020)
Tangibility	Fixed asset/ Total asset	Positive/negative	Musah et al. (2019)
Growth	Capital expenditure/ Total asset	Negative	Prempeh and Nsiah Asare (2016)
<b>Dependent Variable</b>			
ROA	Profit before interest tax/Total asset		
ROE	Profit before interest tax/Total equity		
Tobin's Q	Market value of equity Book value of debt/Book value of assets		

### 3.6 Chapter Summary

This chapter demonstrates why ex-post factor research is the best way to analyze the influence of foreign currency rate exposure on Ghanaian manufacturing enterprises. It employed quantitative techniques and panel research to collect data from fifteen manufacturing organizations over 14 years. Based on the Hausman test, the panel data model was estimated using fixed or random effects. Post-estimation Heteroscedasticity and multicollinearity tests ensured model estimates' robustness.



## CHAPTER FOUR

### DATA ANALYSIS AND DISCUSSION

#### 4.0 Introduction

This chapter analyzes the effect of foreign currency risk on Ghanaian manufacturing enterprises. The chapter provides a descriptive analysis of the research variables, a preliminary analysis to assess stationarity, and the Hausman test findings to identify fixed or random effect. Then, the model is estimated using Hausman's results. The chapter closes with outcomes discussion.

#### 4.1 Descriptive Analysis

The study's dependent variables are return on asset (ROA), return on equity (ROE), and natural logarithm of Tobin's Q (ln Tobin's Q). Tangibility, the natural logarithm of firm size (ln size), and the natural logarithm of firm growth (ln Growth) are firm-level variables, whereas ln EXR is the independent variable. Fifteen manufacturing enterprises registered on the GSE within 14 years provide 210 data points. As certain businesses' data on specific variables were lacking, the observation of data points differed across variables (Table 4.1).

From the descriptive statistics table, the average performance of all fifteen firms was negative. The ROA and ROE of the firms were -0.45, and -.31 respectively between 2005 and 2018 for fifteen manufacturing firms listed on the exchange. This translated to an average growth of 0.054 (5.4% after taking the exponent of -2.91) and an average tangibility score of 0.4 over the 14 years. This implies that although the industrial average made some losses on average over the period, there was some growth made which may be attributed to asset increment. The culminating effect of the performance of the manufacturing industry is witnessed in the positive Tobin's Q value of 0.85

(calculated by taking the exponent of -0.16). Since the Tobin's Q value represents the market value, it can be implied that the market value of the manufacturing industry was around 0.85 on average within 14 years.

Despite the loss in profitability, some firms gain as much as 12.9 % ROE and 1.1% in ROA, which signifies some level of appreciation in equity and assets. However, some firms saw high losses as low as 80% and 61% for ROE and ROA respectively resulting in negative profit on average.

**Table 4. 1: Descriptive Statistics of the variables.**

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	210	-0.4514234	5.712659	-61.7946	1.088768
ROE	210	-0.3079351	5.861365	-80.6924	12.89505
Tangibility	210	0.3983927	0.222864	0.015811	0.9846
In size	150	2.863459	0.167478	2.416107	3.339559
In Tobin's Q	209	-0.1597116	1.746767	-8.11173	5.477729
In EXR	210	0.6145629	0.573937	-0.09431	1.52388
In Growth	152	-2.910679	1.396494	-10.5088	-0.18547

## 4.2 Diagnostic Analysis

### 4.2.1 Stationarity Tests

Before the data was used for the analysis, they were examined for stationarity. This is important because subsequent analysis and estimation require this assumption to be met. Thus, the data were

tested to ensure stationarity and, in the case, where the stationarity condition is violated, the data were transformed using the natural logarithm. This ensured that all the data variables were stationary before they were used for the analysis.

**Table 4. 2: Stationarity Test Results**

	Fisher-type unit-root test	m-Pesaran-Shin unit-root test
ROA	77.1425***	-2.0158**
ROE	80.6484***	-3.6691***
In Tobin's Q	86.9944***	-3.5189***
ln-EXR	47.9764**	-4.7366***
In Growth	146.6958***	NA
In Size	295.9003 ***	-3.6808***
Tangibility	144.9803 ***	-4.1386***

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

The stationarity analysis used the Fisher-type unit-root test on panel data. The null hypothesis says unit root or stationarity is violated, while the alternative says data points are stationary. The test result was significant at a 5% significance level, rejecting the null hypothesis. The m- Pesaran-Shin unit-root test was also performed to corroborate stationarity findings for all variables except In Growth, which did not exhibit significant variance in the data and so the results were not accessible. From the stationarity test results, after some of the data were transformed, they were all tested to be stationary at a 5% significance level.

#### 4.2.2 Hausman Tests

The Hausman test compared fixed and random effect models for model selection. One of the studied models delivers consistent and efficient outcomes, whereas the other does not. In panel data estimation, the null hypothesis is that the random effect is suitable, which indicates no association between the error term and the independent variables. The alternative defines the fixed effect model as appropriate for the panel estimate.

**Table 4. 3: Hausman Test For Fixed Effect and Random Effect Results**

	Hausman Test			
	Chi-Sq.-Statistics	DF	Prob	Decision
Model 1(ROA)	1.28	12	0.999	Random Effect
Model 2 (ROE)	4.24	12	0.979	Random Effect
Model 3 (ln Tobin's Q)	82.12	12	0.000	Fixed Effect

Table 4.3 shows Hausman test findings. Results illustrate the Hausman test for three models with ROA, ROE, and Tobin's Q dependent variables.

The first model using ROA as the dependent variable uses the random effect estimate. The null hypothesis was not rejected since the test statistic was negligible at 5%. This means model one was randomly picked.

Model 2's p-value of 0.979 shows the null hypothesis is not rejected and the random effect is efficient and adequate for model estimation. Model two employed random effect model.

The third model uses Tobin's Q as the dependent variable and has a p-value of 0.000, which is significant at 1%. The fixed effect model was found efficient for model estimation.

Random effects models yield consistent findings if bias, homoscedasticity, autocorrelation, and exogeneity are violated. Exogeneity must be examined to verify that individual-specific components are not connected with independent variables. If the error term correlates with model components, use a pooled or fixed effects model. OLS estimators may be unreliable since serial independence and homoscedasticity are not guaranteed for fixed or random effect models. The GLS estimation method reduced inefficiencies. Thus, the panel model used GLS estimation rather than OLS estimation for fixed and random effect models.

Table 4.4 shows the model's GLS estimation results. For model one, firm growth and exchange rate affected ROA of GSE manufacturing enterprises. The exchange rate reduces enterprises' ROA. A higher exchange rate reduces ROA by 8.32%, everything else being equal. Depreciation of the Ghana cedi affects manufacturing enterprises' return on assets, everything else being equal. Second, company expansion favorably increases ROA by 10%. Holding other parameters unchanged, a rise in firm growth (natural log) increases ROA by 0.024.

**Table 4. 4: GLS Estimation of the Panel Regression Model**

VARIABLES	Model One	Model Two	Model Three
	ROA	ROE	Ln Tobin's Q
In Growth	0.0245* (0.0125)	0.488 (0.399)	0.290*** (0.0862)
Tangibility	-0.0415 (0.0831)	-7.381*** (2.647)	-0.240 (0.511)
EXR	-0.0832**	-0.610	0.189

	(0.0406)	(1.294)	(0.251)
In size	0.172	-0.382	-0.887
	(0.106)	(3.384)	(0.665)
Constant	-0.153	5.808	3.307*
	(0.312)	(9.942)	(1.965)
Observations	149	149	148

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

In model two, the exchange rate's influence on ROE is negative but minor at 5%. Firm tangibility negatively affected ROE. Increasing firm tangibility was predicted to reduce ROE by 7.4%. When corporations convert more physical assets into non-tangible assets, ROE increases.

Model three using Tobin's Q as the financial performance metric shows that company expansion positively affects manufacturing businesses' financial performance. An increase in the natural log of growth increases Tobin's Q by 0.29. A percentage rise in firm growth increases firm value by 1.34 percent (calculated by taking an exponent of 0.29).

#### 4.3 Discussions of Results

The research examined how foreign currency risk affected Ghanaian manufacturers. The research attempted to investigate how foreign exchange rates impact manufacturing organizations' financial performance and to evaluate investment risk and currency fluctuation risk in manufacturing.

Exchange rate swings harm financial performance, the studies suggest. The exchange rate negatively affects manufacturing enterprises' ROA. Depreciation of the Ghanaian cedi affects

industrial enterprises' financial performance (especially return on assets). Second, growth influences financial performance (ROA and Tobin's Q). The rise in the business's capital expenditure leads to profitability and firm value. Third, tangibility hurts firm value (Tobin's Q). Intangible assets boost a company's worth.

Exchange rate volatility hurts not just industrial enterprises, but also banks. Kelilume (2016) found similar findings on the influence of currency rate volatility clustering on Nigerian corporate performance. Other research with both sectors found comparable findings. Parlak and Ihan (2016) studied manufacturing and service sector FX open jobs. The exchange rate hurts a company's success, they determined. Much research shows a negative association between exchange rate and corporate performance (Limo, 2014; Boateng; 2019; Abdul-Mumuni, 2019; Majok, 2015; Mugi, 2015). Few studies found a positive relationship (Elbadawi et al., 2008), which may be due to economic situation.

Currency depreciation relates to inflation, which devalues company assets, hence exchange rate fluctuation has a negative effect. Inflation devalues companies' bank and investment company holdings. Depreciating cedis compels the central bank to raise the monetary rate, which impacts company lending. Firms pay high interest to banks for borrowing, while products and materials costs grow. Also, enterprises will need to exchange a lot of cedis for dollars before buying industrial supplies. This is particularly true for import-dependent manufacturers.

The research found no substantial influence of exchange rate on ROE and Tobin's Q, although the findings represent the Ghanaian setting. When the cedi depreciates and performs poorly versus the dollar, equity investment is low and the value stakeholders and investors put on equity diminishes, therefore investors are hesitant to participate in company stock. The inflation-related risk of cedi depreciation hinders consumers from saving and investing, while monetary rate adjustments

discourage enterprises from taking out loans. This equivocal response by companies and investors to the cedi may explain the exchange rate's modest influence on corporate value.

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## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.0 Introduction

The chapter summarizes the study's results and provides conclusions. It also suggests how stakeholders should react to exchange rate variations in their financial performance.

#### 5.1 Summary

Inconsistent findings on the exchange rate-firm-performance nexus prompted the investigation. The research used data from 2005 to 2018 before the covid-19 outbreak to examine the association between exchange rate volatility and Ghana's industrial sector. This was to account for the covid-19 pandemic's anomalous impact. As controls, the research considered firm size, growth, and tangibility. The study employed ex-post facto research and panel data collecting. Study employed GLS model to estimate panel regression model while accounting for homoscedasticity and autocorrelation. Financial success was measured by ROA, ROE, and Tobin's Q.

The first model shows that exchange rates lower businesses' ROA. A higher exchange rate reduces ROA by 8.32%, everything else being equal. Depreciation of the Ghana cedi affects manufacturing enterprises' return on assets, everything else being equal. Secondly, the results found that firm growth positively affects the ROA of firms, which is significant at 10%. This means that an increase in growth (in the natural log) of firms is translated to an increase in ROA by 0.024, holding other factors constant.

In model two, the exchange rate's influence on ROE is negative but minor at 5%. Firm tangibility negatively affected ROE. Increasing firm tangibility was predicted to reduce ROE by 7.4%. When businesses convert more physical assets into non-tangible assets, their ROE tends to rise.

Model three using Tobin's Q as the financial performance measure shows that company expansion positively affects manufacturing firms' financial performance. An increase in the natural log of growth increases Tobin's Q by 0.29. A percentage rise in firm growth increases firm value by 1.34 percent (calculated by taking an exponent of 0.29).

## **5.2 Conclusion**

The study concludes that the exchange rate is an important macroeconomic factor in firms' performance. The negative impact of exchange rate volatility or currency depreciation can discourage the growth of the economy and the value of manufacturing firms. The study has seen how the depreciation of the currency may affect firm performance due to inflation, the prohibitive cost of purchasing materials, and an increase in the cost of capital. Manufacturing firms must take into consideration the effect of the depreciation of the currency as it can have a long-term effect on their performance. Taking steps to counteract the currency rate's negative effect may protect Ghanaian enterprises' profitability.

## **5.3 Recommendations**

Based on the study findings, the following recommendations are suggested for manufacturing firms, investors, and the government.

- The study found a negative impact of exchange rate on firm performance; therefore, the study suggests firms hedge exchange rate risk by adopting exchange rates risk mitigation strategies like purchasing options, futures, and swaps. These risk mitigation tools can be used to hedge exchange rates that do not fluctuate beyond an acceptable rate.
- For investors, the study suggests diversification of investment into fixed asset and fixed income markets where the exchange rate does not affect the assets. Investment into real estate and physical assets can be daring from the beginning but such an investment other than equity investment during times of depreciation of the currency safeguards investments capital from the associated impact of inflation.
- The study found a negative effect of firm tangibility on financial performance. Thus, investment in an intangible asset by manufacturing firms rather than tangible assets may be associated with high financial performance. Thus, manufacturing firms' investment in physical assets like real estate and bonds rather than a physical asset in times of depreciation could raise financial performance.
- Government has a role to play in improving firm performance by stabilizing the exchange rate as the study has shown its negative impact on firm performance. Thus, the government must walk the talk and close on the importation spree and encourage manufacturing firms through tax incentives to improve exportation. In this way, cedis appreciate and the financial performance of the firms in Ghana is improved.

#### 5.4 Limitations of the study and Recommendation for Future Study

Inflation was one factor for the exchange rate's negative influence on company performance. The research found that exchange rates impact company performance directly and indirectly via inflation and monetary rate (interest rate). Future research should examine how these two factors mediate the link between the exchange rate and manufacturing business financial performance.



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