



UNIVERSITY OF GHANA

DEPARTMENT OF ECONOMICS

**THE IMPACT OF MACROECONOMIC FACTORS ON
FIRM PERFORMANCE**

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DECLARATION

This is to certify that this thesis is the result of research undertaken by Daniel Kweku Obeng-Krampah towards the award of a Master of Philosophy (MPHIL) degree in Economics in the Department of Economics, University of Ghana.

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ABSTRACT

The role of macroeconomics on firm performance has attracted attention of economists for decades due to the complexity in formulating corporate policies in achieving success among many organizations. This study aims to examine the relationship between macroeconomics and performance of firms listed on the Ghana Stock Exchange (GSE). Following literature, ROE and ROA were selected as proxy for firm performance and suggested independent variables included were growth in the sales of the firms, total assets, leverage, dividend pay-out, and key macroeconomic variables (GDP, inflation, interest, and exchange rates) using a panel data running from 2007 to 2015. The study significantly established a suitable link existing between macroeconomic variables and firm performance and further argued that macroeconomic variables alone lack enough explanatory power to explain variations within firm performance but integrating with financial indicators like firms' dividend pay-out, growth in company sales, leverage, and total assets provide a considerable explanatory power. The study further found that whilst inflation negatively affects ROA, interest rate also negatively affects ROE. The study further establish that dividend pay-out induces firm performance (both ROE and ROA). The study also finds that leverage affects firm performance (ROE) negatively whilst it affects ROA positively. Again, the study found that growth in company sales positively affects firm performance (ROE and ROA). The number of total assets (SIZE) owned by a company significantly affect its performance (ROA). The study therefore concluded that macroeconomic variables especially inflation and interest rates are significant drivers for financial performance among Ghanaian firms and thus, any variable that affects inflation and/or interest rates will also likely affect firm performance. The study finally recommends Ghanaian firms to employ relevant information from the domestic and global economy necessary for designing policies that enhance their performance.

DEDICATION

Great is thy faithfulness! This piece of research work is dedicated to God Almighty, for His unfailing love towards me. I also dedicate this work to my entire family and friends.

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I will like to show appreciation to God almighty for His great mercies in seeing me through as far as education is concerned. I am forever grateful.

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LIST OF ABBREVIATIONS

CARs	Cumulative Abnormal Returns
CCS	Cost per Client Served
COC	Cost of Capital
CPSP	Cost Per Service Provided
CROA	Critical Business Return on Asset
CTA	Cash to Assets
DY	Dividend Payment
EPS	Earnings Per Share
ETA	Expense to Assets
ETS	Expense to Sales
GRO	Growth in Sales
GSE	Ghana Stock Exchange
LP	Labour Productivity
MM	Miller and Modigliani
MTBV	Market-to-Book Value
MVA	Market Value Added
NVM	Non-Value Maximizing
OCS	Operating Cash Flow
OP	Operating Profit
OPS	Output Per Staff
PE	Price Earnings Ratio
PM	Profit Margin

PPE	Profit per Employee
ROA	Return on Assets
ROCE	Return on Capital Employed
ROE	Return on Equity
ROFA	Return on Fixed Assets
ROI	Return on investment
ROR	Return on Revenue
ROS	Return on Sales
SPE	Sales Per Employee
STS	Sales to Assets

CHAPTER ONE

INTRODUCTION

1.0 Background of the Study

In business and financial economics, instances of expansion, contraction, and recession are experienced in a continuous repeated cycle. Across the globe, financial experts and economists have created models and hypotheses to establish the effect of the cycle on firm performance and the need to reduce the cycle process. However, they have neglected to wipe out the cycle which will eventually, keep the current economies from falling into scenes of emergency.

Microeconomic and macroeconomic factors both influence the performance of an organization (Issah & Antwi, 2017). Hence, it is basic that organizations have knowledge about these factors to control their effect on future performance.

The good thing is, Microeconomic factors are controllable, and their impact can, without much of a stretch, be expected and controlled. However, macroeconomic factors such as corporate tax rate, inflation, interest rate, exchange rate, and gross domestic product on the other hand are beyond what an organization can control. Therefore, as suggested by (Broadstock et al, 2011), it is prudent for organizations to anticipate the heterogeneous impact of these factors on their future performances

According to (Brown & Ball, 1967; McNamara & Duncan, 1995; Boyd, et al., 2005; Stock & Watson, 2008; Broadstock et al., 2011; Bailey et al., 2016), Macroeconomics has a strong impact on the financial situation of firms.

That said, Macroeconomic conditions can affect future performance of firms and so should be included in predicting firm performance. But organizations should be wary of this since the importance of macroeconomic factors may vary from industry to industry and may not generally anticipate future performance for specific firms (Broadstock, et al., 2011) and we can see this in the following two paragraphs:

In recent times, the economy of Ghana has been experiencing an exponential growth with Gross Domestic Product (GDP) surging higher and expected to top the African economy in 2018 (World Bank, 2017). However, the strong GDP is influenced by many competitive and robust industries including finance and insurance.

(Ismail et al. 2018) argue that Gross Domestic Product (GDP) and Interest Rate (IR) strongly affect firm performance while Consumer Price Index (CPI) gives less impact towards firm performance.

Aside microeconomic and macroeconomic factors, the issue of dividend pay-out is one of the exceptionally fundamental components in financial economics that can hardly be ignored.

Dividend pay-out defines the directions and rules that an organization depend upon in settling on decisions concerning investors' dividend (Nissim & Ziv, 2001).

Also, Dividend pay-out can be thought of as comprising the essential components that constitute the policies firms use in disbursing investment profits.

Furthermore, dividend, which is basically the upside of investors as a by-product of the associated risk is dictated by different components. Fundamentally, these elements

assimilate: Financing constraints, Investment shots and decisions, Firm size, Weight from shareholders and Administrative regulations.

Notwithstanding, the dividend pay-out of a firm not just fills in as the fountainhead of income to shareholders but also provides data pinpointing present and future performance of the firm.

(Pandey, 2005) asserts that Improving shareholders' resources and benefits are the significant destinations firms.

According to (Azhagaiah & Priya, 2008), Shareholder's resources is principally impacted by development in deals, change in net revenue, capital investment decisions and capital structure decisions. For this situation, the potency of a firm to improve its shareholders' resources and the ability of a firm to produce dividend from the capital contributed by shareholders determines its performance level. The dividend pay-out can influence firm performance and subsequently, the abundance of shareholders (Baker, 2007).

Dividend decision is one of the four essential judgement areas that figure out how much funds flow to investors and how much is reserved for the firm (Ross, et al., 2002). In this way, they give data to partners regarding the organization's performance. The cost of capital, future incomes and key dividends are influenced by investments made firms. (Foong, et al., 2007).

Dividend pay-out is consequently, thought to be a standout amongst the most vital financial related decisions that corporate administrators experience (Baker, 2007).

As per (Omran and Pointon, 2004). It has key ramifications at share costs and thus comes back to investors, development financing and the value base via maintenances in addition to use and adaption.

There is a developing agreement that there exists not a singular clarification of dividends. (Brook et al., 1998) indicate that numerous determinants of macroeconomics exist.

(Frankfurtet and McGoun, 2000) argues that dividend pay-out highlights the issue of management as a standout amongst the most difficult themes of current financial matters.

(Mizuno, 2007) consents to the way that a firm should pay dividends to shareholders on the off chance that it fails to recognize reasonable investments which would bring higher returns to shareholders.

Dividend pay-out to shareholders fluctuates in real financial sense regardless of whether to pay financial dividend or issue additional offers depending on the terms of the investment provided by the organization. Dividend pay-out is normally met by the organization from its cash flow and income (Ahmed and Javid, 2009).

The extent of dividend paid to the aggregate income is alluded to as pay-out proportion. A high pay-out quota indicates the faith of the administration of the firm in the fortitude and growth of income in the future whereas a low pay-out quota recommends that administration is uncertain of the security governing the investment (Arnott and Asness, 2003).

The bigger the extent of dividend paid, the less finances are held for investments and the more the organization should move to alternative wellsprings of assets, for example, issue of extra offers and additional funds to feasible activities (Sindhu, 2014).

Consequently, the decision between paying dividend and holding income is considered important by the two financial specialists and administration and has been the subject of extensive research by market analysts for a few years back (John and Muthusamy, 2013).

And here's how the question concerning the relationship between dividends and firm performance was answered.

Numerous studies have demonstrated differences in perspective of whether dividend pay-out really influences firm performance and long-term share costs. (Dhanani, 2005) utilized a "survey approach" and found that dividend pay-out serves to improve performance of firms.

In any case, some contend that empirical findings that exist to establish a causal relationship between firm performance and dividends are conducted depending on brief timeframes and are along these lines deluding to key investors (Farsio, Geary and Moser, 2004). Henceforth, dividends have no informative energy to anticipate future performance.

1.1 Statement of the Problem

Firm performance as an area of study has undergone extensible study by many economists and finance scholars with attempts to establish theories and models that promise to provide an accurate estimate. However, loopholes still exist.

Considerable empirical studies have been done to find the relationship between firm performance and macroeconomic factors (Ali, Klein, and Rosenfeld, 1992; Barakat, Elgazzar and Hanafy, 2016; Broadstock et al., 2011; Caird and Emanuel, 1981; Clare and Thomas, 1994; Ibrahim and Aziz, 2003; Kandir, 2008; McNamara and Duncan, 1995; Stock and Watson, 2008).

Nevertheless, as stated by (Abor and Bokpin, 2010), discoveries of these studies have not been able to form any clear link concerning this issue. Nearly all these studies lean to developed markets with very little focus on how macroeconomic factors influence firm's performance in markets that are coming to the fore.

It was observed from these studies that firms in emerging markets exhibit different behaviour from those of developed markets (Black and Scholes, 1974; Frankfurter et al., 2002; Amidu, 2007).

This may be born out of the vast dissimilarities in efficiency level and institutional arrangements of developed and emerging markets. As a result, it is convenient to ameliorate our comprehension of the matter from the position of emerging markets (Abor & Bokpin, 2010).

(Aivazian, Booth and Clearly, 2003) postulate that firms found in emerging markets tend to have high financial constraints and therefore are highly reactive to some macroeconomic indicators that are proposed by research in developed markets. With this conception, it is critical to scrutinize the overview of firm performance in emerging markets in the macro economical context.

Despite the contradicting views on the relationship between macroeconomics and firms' performance globally, few empirical evidence exist in Ghana and even those that exist are limited to few firms such as banking and manufacturing firms (Amidu & Abor, 2006; Amidu, 2007).

Moreover, most of these studies develop their models with a focus on internal factors using ratio analysis to interpret and evaluate financial statements to make investment decisions and measure the performance of the firms (Lev, 1974; Molinero, Bishop and Turner, 2005; Altman, 1968; Altman, Haldeman and Narayanan, 1977; Beaver, 1966; Bunyaminu and Issah, 2012; Ohlson, 2012; 1980, Wang and Campbel, 2010).

These studies have therefore endeavoured to establish the relationship between the return of assets to the internal rate of return (Solomon, 1966; Vatter, 1966; Livingstone and Salamon, 1970) and try to match the rate of performance equity with conventional concepts of value (Brief and Lawson, 1992; Penman, 1991).

A recurrent feature of many past studies is that they fail to explicitly include external information such as macroeconomic indicators' influence. It is possible that the disaggregation of the results in components identifies, in a minimized form, the links with these external factors of the profitability of the companies. Nevertheless, (Li, Richardson and Tuna, 2012), are of the view that they are not explicit regarding these external factors.

Essentially, the relationship between firm performances should be based on an integrated model which include both key external factors (macroeconomic factors) and internally related factors (financial related factors) that anticipate an upward adjustment toward future performance.

By this, the study seeks to examine the relationship between macroeconomics and firms' performances by considering data from 2007 to 2015 which were gathered from important macroeconomic factors from the Ghana Stock Exchange (GSE) bearing in mind all types of firms and industries on the Ghana Stock Exchange (GSE).

It will also attempt to fill the gap that happens to be present in establishing the link between macroeconomics and performance of firms in Ghana, an emerging market as few studies have considered.

1.2 Research Objectives

The study aims at investigating the impact of macroeconomic factors and dividend pay-out on performance of firms listed on the GSE. It will also look at whether the effect can help predict future performance with a focus on absolute values.

To wholly address the overall goal of the study, the following intents will be specifically investigated:

1. Determining the relationship that exists between firm performance and key macroeconomic variables such as corporate tax rate, inflation, interest rate, exchange rate, and gross domestic product
2. Determining the effect of dividend pay-out on firm performance
3. Exploring the causality between firm performance and significant macroeconomic variables;

1.3 Research Questions

In line with the objectives of the study, the pertinent questions that will need answers are as follows:

- 1 What relationship exists between firm performance and key macroeconomic variables such as corporate tax rate, inflation, interest rate, exchange rate, and gross domestic product?
- 2 What is the effect of dividend pay-out on firm performance?
- 3 Is there a causality effect between firm performance and key significant macroeconomic variables?

1.4 Research Hypotheses

H₁: No meaningful relationship exists between key macroeconomic variables and performance of firms listed on the GSE

H₂: Dividend pay-out has no significant effect on performance of firms listed on the GSE

H₃: No significant causality effect exists between performances of firms listed on the GSE against key macroeconomic variables

1.5 Scope of the study

The purpose of the study is to examine the relationship between macroeconomic factors and performance firms listed on the GSE. Thus, macroeconomic factors and firms' performances will be the focus of this study. It will also be limited to only selected firms (from all the sectors) listed on the GSE.

1.6 Significance of the study

The outcome of this study significantly introduces a simple framework to identify and exploit relationships between key macroeconomic factors and performance of firms listed on the GSE. This will assist financial managers in developing economic policies in order to predict future performance from current performance and trend in macroeconomic conditions. It will also enable firms to be successful and retain businesses for a long term.

Additionally, this study will add up to literature in the field since it will serve as a pool of information or reference point to policy makers, researchers, and other stakeholders in attempt to study or formulate policies and regulations to improve the operations of firms and industries in Ghana.

1.7 Organization of the study

The study is made up of six chapters. The first chapter, introduction, is devoted to: Background to the study, Problem statement, Objective of the study, Research questions Significance of the study and Organization of the study.

Chapter Two deals with: Literature review on concepts, Theories and Empirical evidences relevant to the study.

The third chapter discusses an overview of firm performance in the GSE within the economy of Ghana. The chapter presents the history and performance of the GSE and adds up to the discussion, the role of the GSE in developing the economy of Ghana as well as the effect of macroeconomics on performance of the GSE and concludes with a preview of the performance of its listed firms.

Chapter Four elaborates on the methodology employed. It encompasses issues such as; research design, sampling procedure and size, instrument and data collection tools, data analysis and ethical issues.

Chapter Five presents the data, analysis and the discussions of the results.

The concluding chapter summarizes the findings of the study as well as conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter discusses previous studies conducted in line with the link between macroeconomics and firm performance. The chapter begins by defining the concepts of stock exchange and firm performance that illuminate the objectives developed for this study.

It will then discuss the conceptual framework that serves the backbone of firm performance and how vital it is to the success of a firm. The chapter further defines the determinants and measurement of firm performance. It also goes on to analyse the factors that affect firm performance.

Finally, empirical review of the subject matter is discussed upon which I have made a contribution for further analysis.

2.1 Theoretical Review

In estimating firm performance, this study adopts a mix of theories underpinning the effect of macroeconomic factors such as: Purchasing Power Parity theory, Arbitrage pricing theory, Market Segmentation theory and Monetarism theory.

The second set of theories supporting the effect of dividend pay-out which will be considered as well includes: Agency theory, Signaling theory, Bird in hand theory and Dividend Irrelevance theory on firm performance.

2.1.1 Purchasing Power Parity Theory (PPP)

The above is a model which decides the exchange rate between various currencies. It expresses that it is the adjustments in value levels in nations over a given timeframe that at last decides the exchange rate between their currencies.

The theory can be referred as the inflationary theory of exchange rate because it spikes changes in level of costs as the primary component of developments in exchange rate. The PPP is categorized absolute or relative. Whiles Absolute PPP describes the scenario where local money maintains the same purchasing power when exchanged to international money according to (Coakley et al., 2005), (Coakley et al., 2005) also further contemplated that local money ought to have the capacity to purchase same quantity of products across the globe.

Relative PPP on the other hand, expresses that variety in national costs truly reflects changes between countries.

In view of this, PPP was embraced in this study since most firms listed in the GSE are affected by exchange rate changes.

2.1.2 Arbitrage Pricing Theory

Assets are normally priced with their associated risks; this theory explains how this is done. The theory recommended by (Ross, 1976) has been one of the key theories of asset pricing. As expressed by (Sharpe, 1964), APT appears as a capital asset price model (CAPM).

And so while the CAPM argues that firm performance are dictated by a single factor, APT on the other hand, says that they are really decided by multiple factors which macroeconomic factors are not exception.

The substance of this theory in straightforward terms, expresses that the performance of firms relies upon numerous elements. However, APT does not express the exact associated factors. For example, (Ross, 1976) analyzed the impact of four factors and in the end recommended that APT ought not to be limited to these four factors because along these lines, there have been a substantial group of exact investigations that have included a wide range of factors.

In this study, four macroeconomic factors were incorporated to look at their effect on the performance of GSE listed firms. Likewise, researchers address difficulties in distinguishing factors that are significant determinants in clarifying vacillations of organizations. (Chen and Scott, 2004) even back this when they say that “Indeed, even with these difficulties, researchers can pick some factors, but their choice must be founded on a tried and tested theory.”

2.1.3 Market Segmentation Theory

This is a modern theory that tries to explain interest rates phenomenon. It states that no correlation exists whatsoever amid interest rates which are short and long in nature. Markets which are short and long in time can be categorized into two diverse groups. So

in line with this, the yield curve will take its shape according to the supply and demand of securities within each group, whether long or short.

This theory is also referred to as the "Segmented Markets Theory". This school of thought presupposes that majority of investors already have an inclination with respect to length of developments that they intend to invest in. This principle asserts that the participants in each of the distinctive development lengths cannot be effortlessly substituted for each other as they have different preferences.

An offshoot emanating from this theory advocates where an investor decides to put their capital outside their preferred term, say from short to long, they must earn higher return for taking on the additional risk. This is what has been called the Preferred Habitat Theory which also throws light on the point that the worth of a security is always a function of the present value of the future cash flows related to it.

Discounting the expected future cash flows; using a discounting rate from the market gives you the present value of those cash flows expected to be generated in the future. Demand and supply of money in the economy possess a direct connection with the rate in which it discounts its securities and, with the current worth of cash flows.

According to (Sellin, 2005), demand and supply of money will ultimately influence the prices of stock if the alteration in the demand and supply of money adjusts the anticipations of investors about forthcoming policies - especially the ones relating to money. He argues further that an encouraging supply of money will prompt investors to anticipate tighter fiscal measures in the future. As a result, the interest rate goes up and so will the discount rate. Furthermore, the present value of future earnings decline bringing down the stock

prices, as often noted, the level of economic activities declines as interest rates rise, further depressing securities prices.

Another school of thought contends that a positive cash supply shock will push up the cost of stocks. They argue that adjusting cash supply gives signal on cash request, which thus is brought about by future yield anticipation, supply of money increase as a response to increased demand and signaling an increase in commercial activity. Since with commercial actions, cash flows increase and therefore pushes up the stock prices (Sellin, 2005). Therefore, the value of stock prices is affected by money supply as it has a direct impact on the interest rate.

What's more, this school of thought believes that real interest rate rises as money supply is tightened. (Bernanke and Kuttner, 2005), say that interest rate triggers a rise in the discount rate as well and in turn leads to decline the value of the stock. These experts trust that a policy fixing the demand and supply of money aims at declining the rate of commercial activity and therefore minimize the chances of firms to perform better.

2.1.4 Monetarism Theory

According to the monetarism theory, inflation defines a fiscal issue which is constantly persistent. This theory additionally says that the measure of cash that exists will decide the measure of cash that individuals spend. This is of the notion that cost of things will go up just when the supply of goods is lower than its demand. Thus, the cost of things will probably go down if the demand for goods is lower than its supply.

This theory further argues that the measure of spending is controlled by the measure of cash available for use provided the demand for goods can be dictated by ascertaining the

measure of the available cash. Because of this theory, one could accept that if the measure of available cash goes up so does the measure of spending depending on buyer demand.

Utilizing this theory, the main reason that costs would go up is when the measure of cash available goes up.

2.1.5 Agency theory

This concept proposes that dividend falls under the control of costs coming from distinctive proprietorship and control. Supervisors in general may not adopt a dividend plan that simply favors investors but would pick one that amplifies their personal advantages.

Influencing dividend pay outs which decreases the free cash that managers have access to would along these lines guarantee that investors get the most out of their investments as opposed to utilizing the assets for their private advantages (DeAngelo and DeAngelo, 2006). During the time spent drawing in new value, firms keep themselves to the observing and training of these business sectors.

The theory also expresses that administrators of firms are probably going to take part in Non-Value Maximizing (NVM) conduct. (Jensen and Meckling, 1976) assert that should a manager's wealth be linked to the firm's basic value cost, these expenses could be decreased. In this way, administrative responsibility for (insider property) could fill in as a cost decreasing instrument, expanding the estimation of the firm.

But then again, (Easterbrook, 1984) contends that dividends diminish the over venture issue claiming the installment of dividends expands the recurrence with which firms need to advertise, keeping in mind the end goal to raise extra capital. During the time spent

drawing in new value, firms bring themselves to the checking and teaching of these business sectors because this brings down cost.

2.1.6 Signaling Theory

This philosophy recommends that dividend can be utilized as a key to inform investors about a company's future performance expectations. Dividend declarations pass on important data about the appraisal of a firm's future performance indicators which investors have limited access to. Investors may accordingly price the cost of a company's offer utilizing this data.

Instinctually, this flies at the back of data inconsistency amongst directors and investors. As (Al-Kuwari, 2009) puts it, dividend under this model is applicable where supervisors have classified data about the present and future fortunes of the firm that investors have limited access to.

Also, as per the data substance of dividend, firms may consistently pay dividends so as to pull in more speculators (Amidu, 2007). In such an instance, there is a motivating force to convey this information to the market.

As argued by (John and William, 1985), and (Miller and Rock, 1985), the fact that investors may have differing data from that of firms may instigate a flagging part for dividends. They demonstrate that dividend installments convey confidential data in a completely noteworthy way. The most essential component of the theory is that organizations need to pay dividends frequently. A declaration of dividends increment is received as uplifting news and in like manner the offer cost responds positively, and as well as for the other way around.

Similarly, firms can send signs of performance to the market through dividends. In this way, a comparative thinking applies to intermittent offer purchases.

2.1.7 Bird in hand theory

With this model, experts acclaim that a relationship exists between firm performance and dividend pay-out. This model explains that dividends are safer than additions to capital, thus, investors would in this way favor dividends rather than additions to capital, (Amidu, 2007).

Additionally, the theory argues that investors favor a higher dividend strategy (Lintner, 1962; Gordon, 1963). Consequently, they will pick dividends over capital increases. Assuming this is the case, investors would place high value on firms whose dividend pay-out are high.

This theory has a fall on the basis that it is set in an entire and ideal market where investors act as indicated by thoughts of reasonable practices (Miller and Modigliani, 1961; Bhattacharya, 1979).

2.1.8 Dividend Irrelevance Theory

Investors do not really mind between dividends and maintenance-created capital increases.

Where money is needed, stocks can be offered and, in the event, that they have enough money and want to invest, they can utilize dividends to purchase stock.

However, (Miller and Modigliani, 1961) suggested that dividend is unimportant to the investor with the view that investor profit is unaltered when all parts of venture are settled and any expansion in the present pay-out is financed by reasonably estimated stock deals. This theory depends on improbable presumptions that the estimation of the firm is unaffected by its policy in a universe of impeccable economic situations (Miller and Modigliani, 1961), the authors thus concluded that the issue of dividend policy is not relevant.

2.2 Definition of Concepts

2.2.1 Stock Exchange/Market

(Lins, 2014) defines Stock Exchange/Market as a controlled market which allows trading of securities at prices aggregated by supply and demand. Fundamentally, stock exchanges fill in as:

(1) Essential markets within which enterprises, governments, regions, and other bodies can create capital by directing investors' reserve funds into profitable endeavors; and

(2) Optional markets that create avenue for investors to pitch securities among themselves for money, hence decreasing dangers of venture and keeping up liquidity within the framework. Stock exchanges force strict guidelines, posting prerequisites, and statutory necessities which are official on all parties listed.

Established exchanges are managed on the exchanging floor of the trade itself, by yelling requests and guidelines (known as open objection framework).

Nowadays, exchanges are managed over phone or on the web. All exchanges are 'closeout exchanges' where the place purchasers enter aggressive offers and dealers enter focused requests through an exchanging day. Some European exchanges, be that as it may, utilize 'occasional sale' technique in which round-robin calls are made once on exchanging day.

Even though Amsterdam Stock Exchange which was the principal stock exchange opened in 1602, the three biggest exchanges are the: New York Stock Exchange (NYSE), London Stock Exchange (LSE) and Tokyo Stock Exchange (TSE).

2.2.2 Firm Performance

In recent times, performance of organizations is the first to be assessed by investors and with the advent of globalization as one might say, trading can be done anywhere without various boundaries existing in corporate exchange and financial venture. As a result, organizations have a more extensive chance to develop.

In the same vein, with noteworthy spread of innovations in technology, people determined to accomplish their goals anywhere in the world are motivated to seek after organizations in any parts of the earth that have evidence of performing highly for investment. Hence, performance of an organization is extremely critical in attracting investors (Kaid and Hanim, 2014).

Financial performance indicates how great is the situation of a firm, and how effectively a firm is utilizing its resources to gain a bigger number of incomes than to acquire cost and grow its activities (Copisarow, 2000).

To (Rouf, 2011), what firms offer to investors is easily projected as the value of a firm and this carries with it a lot of advantages. So, this is why the performance of a firm can be identified from the organizations' detailed financial statements.

Besides, an organization characterized by high performance will strengthen administration for quality exposure as argued by (Herly and Sisnuhadi, 2011), hence diverse systems will be utilized to quantify financial performance. Moreover, income from operational exercises, add up to units sold so a piece of a firm's pie can be a marker of performance.

As indicated by (Demsetz and Lehn, 1985) financial ratios figured by utilizing financial statements are a decent method to assess financial performance consequently liquidity is the most vital ratio used to assess the capacity of a firm to encounter financial challenges.

2.3 Conceptual Framework of Firm Performance

Firm performance is the ability of a firm to support its long-term benefit. There exists, two viewpoints to such ability, general and intrinsic dimensions.

The general dimension alludes first to auxiliary components that characterize the environment in which a firm operates (i.e., national level), for instance, the administrative system of a given nation and level of global exchange.

A second segment of the general dimension is industry-related factors; for instance, the level of venture on R&D in a specific area or the level of industry focus. The influence of macroeconomic dimensions such as inflation, gross domestic product, interest rate, and exchange rate are considered the third component of the general dimension.

The intrinsic dimension on the other hand also alludes to individual firm practices which enable them to maintain their performance in the long term. These incorporate: Governance, Organizational, Functional, Sustainability, Talent development and Digital factors.

Governance here concerns every one of the practices, procedures and structures essential for the successful administering of the firm; for instance, the satisfaction of the directorate key part. The organizational factor proposes practices and procedures that take into

consideration the well-working of the administration of an organization, for instance, capacity of the administration group to adjust the company's system to advertise changes.

The functional factor is identified with the association's operational procedures; for instance, promoting techniques and advancement. The sustainability, talent advancement and digital factors concerns forms that empower firms to guarantee the viability of its governance, organizational and functional factors; for example, activities that empower firms to develop a coordinated structure to stay competitive in the global market.

Figure 2.1 illustrates the conceptual framework of firm performance. Firm performance is a result of structural, industry, macroeconomics and intrinsic factors. In other words, the intrinsic factors incorporate the abilities of a specific firm, which in turn blends with the structural, industry, and macroeconomic factors affect firms' performance.

The relationship among these factors might be strong and this suggests that organizations facing high competition must execute certain practices and build internal procedures which strongly improve their performance.

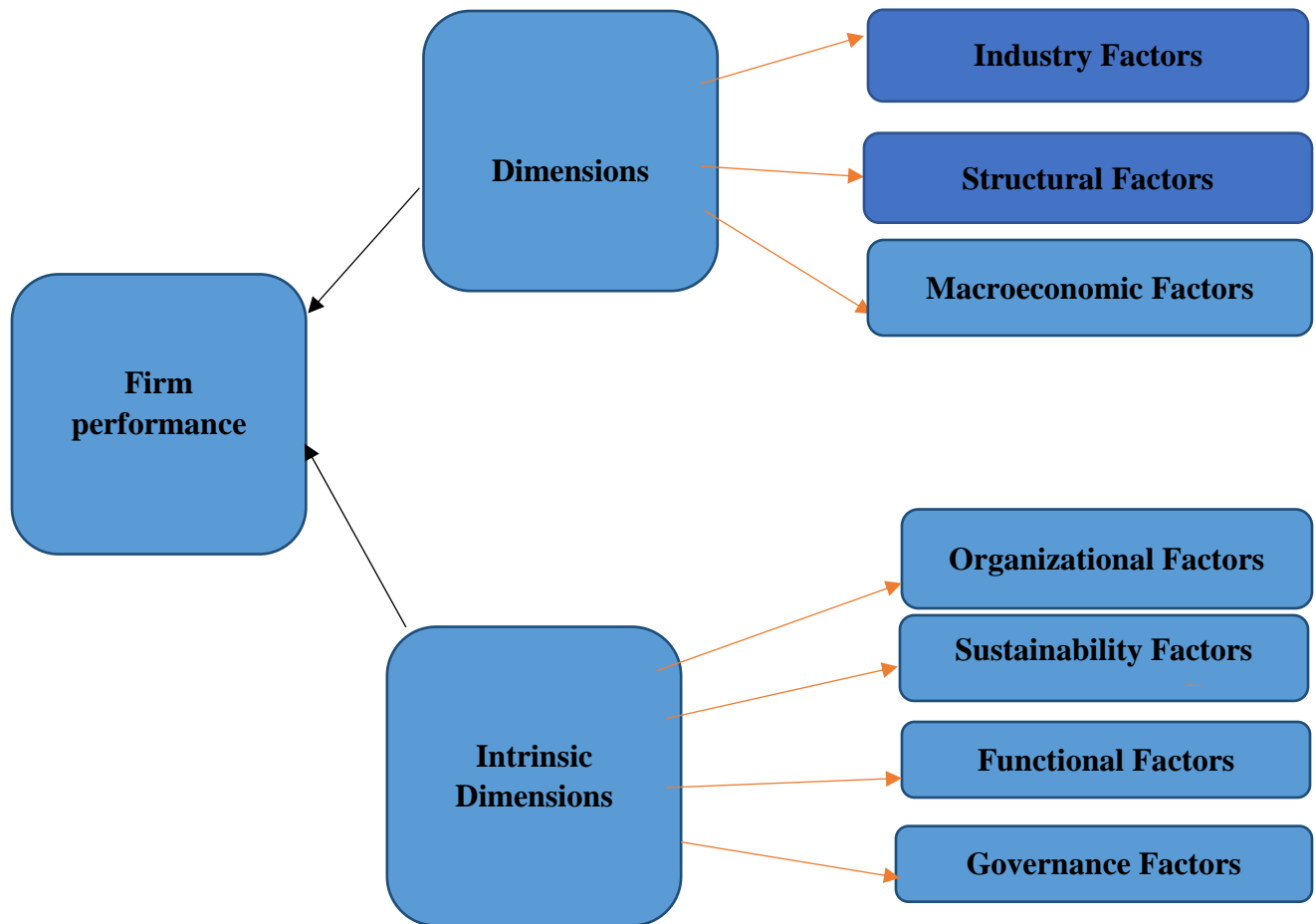


Figure 2.1: Conceptual Framework of Firm Performance

2.4 Importance of Firm Performance

According to (Demirbag, et al, 2006), Performance measurement is basic and fundamental for effective firm management. Such a procedure cannot be conceived without measuring the expected results. Thus, firms need to utilize internal resources to improve their performance (Gadenne and Sharma, 2002).

Again, the success of a firm is fundamentally clarified by its performance over a given timeframe. Performance measurement empowers firms to compare their performance over different timeframes. Nevertheless, no peculiar accurate measurement of performance has been given till now due to the diverse dimension of firm's performance.

Studies have shown that firm performance is considerably affected by corporate governance. Thus, where capacities are properly settled for the corporate governance framework, it draws in investment and aides to improve the resources of firms, fortifying the pillars of the firm to elevate performance of the firm.

In effect, a proper corporate governance shields against plausible financial constraints and encourages striking development subsequently assuming a key role in growing firm performance prompting its review on the overall success of firms as argued by (Ehikioya, 2009).

2.5 Measurement of Firm Performance

Having a yardstick to measure or determine the performance of a firm aids in gathering firm progress reports, improving motivation and communication as well as pinpointing problems in the firm.

Principally, the idea of performance constitutes the backbone of strategic management and the utilization of business performance to review content on business management and this has been the focus of most strategy studies. Numerous research devoted to management

structures and its connection with financial performance was exceptionally subject to accounting-based indicators.

A significant number of methods have been presented to quantify financial performance and among them are: Return on Assets (ROA), Return on Equity (ROE) Tobin-Q, Profit Margin (PM), Earnings Per Share (EPS), Dividend Yield (DY), Price-Earnings Ratio (PE), Return on Sales (ROS), Expense to Assets (ETA), Cash to Assets (CTA), Sales to Assets (STS), Expenses to Sale (ETS).

Abnormal returns including: Annual Stock Return, (RET), Operating Cash Flow (OCF), Return on Capital Employed (ROCE), Labor profitability (LP), Critical business Return on Asset (CROA), Cost of Capital (COC), Market Value Added (MVA), Operation Profit (OP), Return on Investment (ROI), Market-to-book esteem (MTBV), Log of market capitalization, LOSS Growth in Sales (GRO), Stock Repurchases, Sales Per Employee (SPE), Return on income (ROR), Output per staff (OPS), Cost Per Service Provided (CPSP) and Cost per Client Served (CCS), Cumulative Abnormal Returns (CARs), Profit per Employee (PPE) and Return on Fixed Assets (ROFA) among others.

2.5.1 Accounting Based Measurement

This type measures the organization's benefits as the business of the firms is contrasted with benchmark rate of return equivalent to the risk involved.

These measurements point to the profitability of firms in the preceding years, example are: (ROA), (ROE), (ROS), (PM), (ROI), (OCF), (EPS), (OP), (GRO), (ROCE), (ETA), (CTA), (STS) and others are in this manner expounded.

When it comes to profitability, its measure is criticized for being backward looking and its incomplete measurement of future instances with regards to devaluation and amortization.

Adding to it, profitability as the accountant measures is constrained by models set up by the calling and is henceforth affected by numerous unique techniques employed in the evaluation of well-defined and elusive resources by accountants as proposed by (Kapopoulos and Lazaretou, 2007).

Likewise, Return on Assets (ROA), checks the working and financial performance of the firm according to (Klapper and Love, 2002). The measurement is with the goal that a higher ROA shows effective utilization of resources for the upside of investors in the view of (Haniffa and Huduib, 2006) as well as mirrors the organization's utilization of its advantages in serving the fiscal interests of investors according to (Ibrahim and AbdulSamad, 2011).

Accounting based performance measures is preferred over market-based measures when the connection between firm performance and corporate management is examined as the former exhibit results of management activities as per (Hutchinson and Gul, 2004) and (Mashayekhi and Bazazb, 2008).

Subsequently, a negative performance shows disappointment of the arranged elite which requires modification of plans to improve performance. The negative performance brings about investors' misfortune. The organization in this manner needs to refresh its goals to contend in the market, the opposite holds for a positive ROA as argued by (Nuryanah and Islam, 2011).

Also, Returns on Equity is another accounting-based measurement which considers the after tax profit over total equity shares issued.

Many studies including (Azam, et al, 2011; Khan, et al, 2011; Pandya, 2011; Najid and Abdul Rahman, 2011; Shahab-u-Din and Javid, 2011; Bozcuk, 2011; Lin, 2011; Chiang and Lin, 2011; Chahine and Safieddine, 2011) have employed this type of measurement.

2.5.2 Market Based Measurement

This second kind is the market-based measurement and it is classified in a long-term case like Tobin's Q, (MVA), (MTBV), (RET), (DY) to mention but few.

The market-based measurement is described by its forward-looking viewpoint and its impression of the desires for investors concerning the firm's future performance, which has its premise on past or current performance according to (Wahla, et al, 2012; Shan and McIver Ron, 2011; and Ganguli and Agrawal, 2009).

(Sánchez-Ballesta and García-Meca, 2007) propose that market-based desires for firm performance may bring about administration motivation to alter their holdings based on what they desire to achieve in the future as far as performance is concerned. Therefore, where the organization's market-based performance exceeds the aftereffects of Tobin's Q, this demonstrates that the organization is prevailing with regards to accomplishing its arranged superior (Nuryanah and Islam, 2011).

Yet, in the event that it is not as much as Tobin's Q, at that point the organization needs to amend its intends to improve its fleeting performance. The negative performance prompts financial specialist's misfortune (nearby and remote) and consequently, it is essential for

the organization to refresh its targets occasionally in the event that it is covetous of contending in the commercial center.

2.6 Factors Affecting Firm Performance

Admittedly, several factors work together to affect the performance of a firm but for this study, this section focuses on discussing the influence of macroeconomic, microeconomic, and financial factors on firm performance to investigate the key factors that affect performance of firms.

2.6.1 Macroeconomic Factors

Macroeconomic factors constitute the uncontrollable external factors that affect firm performance. Studies have shown that exchange rate, interest rate, gross domestic product, and inflation are the key macroeconomic factors that affect firm performance

Exchange Rate

Prior to 1972, many trading nations operated a fixed regime in terms of exchange rates and each country had affixed currency exchange rate to the US dollar. After 1972, the exchange rate regime was liberalized i.e. no more fixed rate relative to the US dollar. This change however, became a key sympathy toward the financial specialists, expert, supervisors and shareholders as the exchange rates became fluid. This therefore meant that the cost of monetary forms is controlled by free market activity of the cash in the open forex markets.

As the supply and demand of various currencies is a function of various outside and inward variables, this new framework is dependable for wide currency fluctuations according to

(Abor, 2005). Firms therefore face foreign exchange risk because of these fluctuations. Moreover, the world is becoming a global village and more economies are opened causing more exposure to foreign exchange rate fluctuations.

Firms face three types of risks associated with foreign exchange which include; translation exposure, transaction exposure and economic exposure (Eiteman et al., 2006).

Interest Rate

Liquidity theory takes the view that the interest rate is a coupon rewarded for the inconvenience for having to part with an asset which is very liquid in this instance cash. Since interest rate is sometimes seen as an element of pay, its essential part is to aid in mobilizing financial resources into a pool and create an environment of efficient utilization to promote economic growth and development (Ngugi, 2001).

Interest can also be the rent paid for money. It assesses the rate of return that is anticipated by the money lenders for having given out their assets. The interest rate should therefore incorporate all the data in regard to any future changes in the purchasing power and the risk component.

As per (Crowley, 2007), interest rate is the cost at which the borrower pays for the utilization of cash money borrowed from the intermediaries. In a way, it is the charge paid for the utilization of obtained resources.

Fluctuations in interest rate expose firm's financial position to this very real risk. Wild fluctuations in interest rate pose very critical dangers to an association's profit and capital base changes. It also increases by a huge percentage its functional expenses and higher interest rates may also negatively influence the basic estimation of benefits, liabilities and present estimation of future money streams that re discounted.

Inflation

Inflation refers to the change whether up or down in the overall price levels of goods and services in an economy for a given period.

The changes in prices of goods and services directly and significantly affect the purchasing power of money as well as the cost of production in the manufacture of the same goods and services. The effects of inflation can be seen from two angles; the effect on the aggregate demand and on the cost of production.

When the inflation rate is high, consumers who have fixed incomes have a lower purchasing power as the value of money is reduced. This will ultimately lead reduced demand for goods and services. On the other hand, inflation pushes up the cost of production hence affecting the bottom line of firms. The nominal interest rate is made up of real interest rate and the inflation rate and therefore change in line with changes in the inflation rate. This is referred to as the Fisher effect.

(Pandey, 2009) on the other hand suggests that if capital markets operating within countries were perfect, then even in different markets, investments with equal risk should ideally offer equal return. This is as per the arbitrage principle, proposing development of assets starting with one market then onto the next consistently until harmony is accomplished.

If the genuine return rates are the similar in two nations, then, according to the fisher impact, the ostensible rates of intrigue would alter precisely for the adjustment in the expansion rates.

(Vong and Chan, 2009) contend that exact confirmation on what lies amongst expansion and productivity is uncertain therefore there is the need investigate it.

Gross Domestic Product (GDP)

Every economy in the world today experiences some cyclic fluctuations in their performance as shown by periods of boom and recession. As per (Athanosoglou et al, 2005), in periods of booms, an economy is thriving and demand for credit is high and the opposite is true during recession.

(Ongore and Kusa, 2013) in their banking sector report, argue that when the GDP growth is declining, demand for credit falls significantly and this negatively affects the profitability of banks.

But on the other hand, when the economy is witnessing positive and increasing GDP, demand for credit increases substantially thereby leading to growth in profitability.

2.6.2 Microeconomic Factors

(Hunjra et al., 2014) utilised panel data analysis to determine the factors affecting firm performance and realized that three microeconomic variables including Size, Age, and Growth have considerable influence on how companies perform.

According to the authors, all three microeconomic factors have positive influence on firm performance.

Firm age as a decent determinant of firm performance demonstrates the experience of the firms and are able to find what they are great at and figure out how to wind up proficient with time.

Firms institutionalize and accelerate their generation procedure by getting specialization after some time (Ericson and Pakes, 1995). Hence with the progression of time, weakest firms are killed from the market because of choice impact which happens because of rivalry and other operational weight. As the quantity of firms diminish with time rest of the organizations confront high market request which brings about the expanded profitability level.

Status manage, and hierarchical memory is another idea which clarifies the connection amongst age and performance. Workers with the status of position emerge with time which crumbles the performance of the firm (Katz, 1982) and senior representatives get to take advantage over the recently coming workers adding further to the crumbling.

As indicated by (Easterbrook and Fischel, 1999) as the age of the firm expands, it comes about into high likelihood of takeover. Recently recorded firms begin small and this shields

them against showcase takeover. (Kipesha, 2013) postulates that age demonstrates experience of organizations and it positively affects manageability, income level, proficiency however negative effect on benefit.

And (Campa and Kedia, 2002), state that the connection amongst age and performance likewise gets influenced by the expansion because age is emphatically identified with broadening whereas adversely to performance.

What's more, firm size affects performance because of the points of interest and burdens which firms face at a level of development. As said by (Yang and Chen, 2009), bigger firms are effectively ready to get capital for venture because of their size of activities.

(Liargavas and Skandalis, 2008) established that size impacts the organizations performance and so bigger firms are the better entertainers.

Likewise, investigations of (Prasetyantoko and Parmono, 2008) revealed that the size of the firm is decidedly identified with gainfulness. As such, bigger firms are more productive than smaller firms (Stierwald, 2009). Conversely, more established firms are much more productive yet less gainful whereas more youthful firms are more beneficial though less profitable (Majumdar and Chhibber, 1999).

As indicated by (Asimakopoulos et al., 2009) benefit of the firm is emphatically impacted by the measure of the firm and its administrative proficiency although it is adversely influenced by use. And according to (Yang and Chen, 2009), small firms confront less organization issue and they are exemplified by more adaptable non-various leveled structures.

Regarding the above, performance has dependably been a worry for budgetary supervisors and it has been broadly contemplated. From earlier writings we see that there are several components influencing performance.

(Liargovas and Skandalis, 2008) contemplated the elements influencing company's money related performance. The outcomes demonstrated that the key determinants of money related performance are use of monetary measures, send out movement, area, size and administration fitness file.

(Asimakopoulos et al., 2009) estimated the variables which influence benefit of the firm. It was seen that gainfulness is decidedly impacted by the extent of the firm and its administrative proficiency though it is adversely influenced by use of monetary measures. While deals development actuates more benefits for small firms yet is immaterial for vast ones.

(Nagy, 2009) estimated the variables influencing association's productivity. Study presumes that there are number of elements which incorporate deals, current proportion, obligation to-value proportion, and net overall revenue.

(Almajali et al., 2012) discovered the components influencing the firm performance. They discovered that liquidity, size, use of monetary measures and administration skill significantly affects the organizations performance whereas age has no effect on the organizations performance.

(Ching et al., 2011) recognized the components that influence the performance of the firm and figured out which of the elements for the most part impact productivity. The

consequence of the investigation showed that firm size influences the most while monetary obligation has slightest effect on the performance of the firm.

For that reason, elements affecting the ROA were observed to be gross net revenue and the measure of value while use of monetary measures affected ROE. Use of monetary measures influences the estimation of the firm. Budgetary trough's real goal is to expand the estimation of the investors because of this reason it has been considered a great deal as far as capital structure is concerned.

(Myers, 2001), states that obligation offers firm a duty shield and in this way, firms endeavor to build obligation to get tax break. By so doing, duty advantage brings about enhanced gainfulness. Alongside this preferred standpoint, it additionally has weaknesses and one of the detriment is that more elevated amount of obligation expands the cost.

As indicated by (Pandey, 2008,) use brings about the changeability of the arrival offered to the investors in this way it includes chance.

(Peswani, 2011) led research and found that a high utilized firm could give better profit for value to its investors however the productivity of both the organizations was comparable.

(Akhtar et al., 2012) directed an exploration, discoveries of the investigation demonstrate that a positive connection exists between the monetary use and money related performance of the organizations. As indicated by the examination the organizations having higher productivity can enhance the performance of the firm by taking higher use. From earlier writing we see that firm development has variety.

As per (Markman and Gartner, 2002), development is utilized as a measure of firm performance.

(Sexton et al., 2000) found that the benefit of the firm is decidedly connected with the feasible development of the firm.

(Fitzsimmons et al., 2005) directed research and discovered that no relationship exists amongst development and gainfulness when longitudinal nature of development is considered.

(Vlachvei and Notta, 2008) directed an exploration and the consequences of the examination demonstrate that the connection between development, size and period of firms is extremely delicate as for the techniques for estimation and development and size definitions.

2.6.3 Financial Factors

Debt leverage, liquidity, capitalization, and investment are the major financial drivers that affect firm performance (Liargovas & Skandalis, 2010).

Debt leverage is estimated by the proportion of aggregate debt to value (debt/value proportion). It reveals how much a business is utilizing acquired cash. Organizations that over utilize this might be in danger of insolvency in cases where debt installments cannot be made; they likewise may not be able to find new loan specialists later on yet it is not generally terrible as a proper utilization of cash acquired can expand arrival on investors' venture make great utilization of the expenses favorable to circumstances related with obtaining them.

With the exchange off theory (TO), (Bradley, Jarrell and Kim, 1984; Harris and Raviv, 1991) propose that each firm has an ideal debt to-value proportion controlled by adjusting the present estimation of expected minor advantages of leverage (ex. impose reserve funds because of paid interests) against the present estimation of expected negligible expenses of leverage. As per the theory, every organization gets a bit by bit move towards its ideal debt value proportion, which thus expands its reasonable worth.

As argued by (Jensen, 1986) and (Zwiebel, 1996) expounded debt can diminish the likelihood of an association's takeover by conferring administrators to a more productive business system. Accordingly, it isn't all negative with the impact leverage brings onto a firm, there also are positives.

Liquidity alludes to how much debt commitments coming due in the following year can be paid from money or assets that will be transformed into money. It is typically estimated by the present assets for current liabilities (current proportion). It demonstrates the capacity to change over a resource for money rapidly and mirrors the capacity of the firm to oversee working capital when kept at typical levels.

In budgetary financial matters, a standard contention to legitimize the choice of a firm to keep up abundance liquidity in its advantages identifies with both theoretical and preparatory intentions. In such a situation, a firm can utilize fluid resources for funding its exercises and ventures when outer back is not accessible, or it is too exorbitant.

Then again, higher liquidity would enable a firm to manage startling possibilities and to adapt to its commitments amid times of low income as opined by (Opler et al., 1999; Myers, 1977; Kim et al., 1998). Rather than the above thinking, (Hvide and Moen, 2007),

considering a hypothetical model by (Evans and Jovanovic, 1989), propose that a direct measure of liquidity may drive entrepreneurial performance, yet that a plenitude of liquidity may accomplish more damage than great. Along these lines, the impact of liquidity on firms' money related performance is equivocal.

The capitalization rate or the proportion of settled resources for adding up to resources, measures the degree to which settled resources are financed with proprietors' value capital. A high proportion demonstrates a wasteful utilization of working capital which diminishes the association's capacity to convey records of sales and keep up stock and typically implies a low money hold. This may frequently restrain the capacity of the firm to react to expanded interest for items or administrations.

The settled advantages for adding up to resources proportion influences association's gainfulness adversely (Notta O. what's more, Vlachvei A., 2007; Agiomirgiannakis et al., 2006). This can be credited to the decreased level of current resources which could prompt a lower level of offers, since the firm will be shy of the important materials, stocks and so on with a lessened level of action.

Net venture (proportion of the net investment to the aggregate resources) alludes to a movement of spending, which builds the accessibility of settled capital merchandise or methods for creation. Net investment is the aggregate spending on new settled venture less substitution venture, which basically replaces devalued capital merchandise. This proportion gives a feeling of how much cash an organization is spending on capital things utilized for activities, (for example, property, plants and gear).

Proceeded with interest in the capital of a firm is urgent in light of the fact that the valuable existence of existing capital lessens after some time. The measure of net venture contrasted with so much things as income will vary amongst enterprises and between organizations relying upon how capital-escalated the business is. This proportion is emphatically identified with firm performance since new theories grow the creation and the income producing limit of the firm.

A key determinant of venture is profit and as firm performance can be estimated by the income created by the organization as far as productivity, there is broad writing on the connection between profit pay-out and benefit. Profits are vital to investors and key investors in demonstrating the income that an organization is creating and furthermore collecting to investors. Great or higher profits pay-outs in this manner demonstrate that organizations are producing genuine income instead of cooking books (Barron, 2002).

An examination by (Zhou and Ruland, 2006) uncovered that high profit pay-out firms tend to encounter solid future income yet moderately low past income development in spite of market spectators having a repudiating view. The discoveries of another examination done by (Arnott and Asness, 2003) likewise uncovered that future income development is related with high as opposed to low profit pay-out. They presumed that authentic confirmation emphatically recommends that normal future profit development is quickest when current pay-out proportions are high and slowest when pay-out proportions are low.

Their proof negated the view that generous reinvestment of held profit would fuel speedier future income development. Their examination was done to research whether profit pay-out of the U.S. value showcase portfolio, estimates future profit development. The

investigation involved organizations in the S&P 500 which tend to be substantial and entrenched firms in cutting edge economies (Zhou and Ruland, 2006).

Observational investigations should be done in creating capital markets or for recently recorded organizations which tend to be, not so much beneficial but rather more development situated. (Arnott and Asness, 2003) proposed that the positive connection between current profit pay-out and future income development depends on the free income theory.

Low profit bringing about low development might be because of problematic investment and not as much as perfect undertakings by managers with abundance free money streams available to them. This is unmistakable for firms with restricted development openings or a propensity towards over-venture. Paying generous profits which thus would expect administrators to raise stores from issuance of offers, may subject administration to more investigation, diminish irreconcilable circumstances and hence reduce imperfect investment (Arnott and Asness, 2003).

This depends on the presumption that problematic ventures establish the framework for poor profit development later though teach and a minimization of contentions will upgrade development of future income through painstakingly picked ventures. In this way, paying profits to diminish the free money streams upgrades the performance of an organization since supervisors will have less money streams accordingly maintaining a strategic distance from problematic theories. This is likewise in accordance with the office cost theory.

Another clarification by (Arnott and Asness, 2003) for the positive connection between profit pay-out and development in future income is that administrators are hesitant to cut

profits. A high pay-out proportion shows administration's trust in the strength and development of future income and a low pay-out proportion proposes that administration is not certain of the soundness of profit or manageability of income development (Arnott and Asness, 2003). Supervisors accordingly pay low profits to maintain a strategic distance from profit cuts when income drop.

The positive relationship is additionally determined by sticky profits joined with mean inversion in more unpredictable income (Arnott and Asness, 2003). The impermanent increments and abatements in income in this manner subjects the payout quota to be emphatically linked with future profit development. Their strength checks for the mean inversion of profit proposed that income appear to return to the mean yet may return most firmly as far as their proportion to profits.

In any case, (Farsio, Geary, and Moser, 2004) argue that there is no explicative connection amongst profits and income held over the long haul and proposed three situations that would render the long-haul relationship of profits and future income immaterial.

Initially, they call attention to fact that an expansion in profits may prompt a decrease in stocks that are to be reinvested by the firm. Firms that concentrate on high profits without considering venture needs may in this way encounter a fall in future income (Farsio et al., 2004). Along these lines, there is a negative connection between profit pay-out and future income or development.

Furthermore, an expansion in profits in a quarter might be the aftereffect of the administration's approach to keep investors fulfilled and keep them from offering the stock now and again when future income is relied upon to decay or current misfortunes are

required to proceed with (Farsio et al., 2004). This is an instance of rising profits which after is taken over by declining income.

In conclusion, an expansion in profits according to (Farsio et al., 2004) might be because of good performance in previous periods which may proceed into the future. This is in line with notion of a positive causal connection between current profits and future income which brings development and higher benefit.

From these situations, they contend that the general long-haul relationship is irrelevant since there is a positive connection amongst profits and future income in a few periods and a negative relationship in different periods.

(Nissim and Ziv, 2001), demonstrated that profit increments were straightforwardly identified with future increments in income in every one of the two years after profit change. In any case, what happens when there is an enduring increment in profits for a given number of years? (Nissim and Ziv, 2001) found that profit increments and declines are not symmetric.

Rather, profit increments are related with future benefit for no less than two years after the profit change, though profit diminishes are not identified with future productivity after controlling for present and expected gainfulness. They propose that this absence of affiliation can be clarified by bookkeeping conservatism. They in this manner infer that there is a positive connection between profit pay-out and future income, yet the relationship is more grounded for recorded organizations.

(Miller and Modigliani, 1961) proposes that under certain rearranging presumptions, the profit choice does not influence the estimation of a firm and is, subsequently, immaterial. However, conventional shrewdness with changed hypotheses advocates that an appropriately overseen profit pay-out is crucial to investors since it can influence share costs and investor's riches.

This though is dependent on two presumptions, which are; that there is no expense weakness to a financial specialist getting profits, with the other being that organizations can bring stocks up in capital markets for new ventures without bearing noteworthy issuance costs. The sympathizers of the second school of thought feel that profits are awful for the normal investor because of the assessment detriment they make, which brings about lower value. At long last, there are those in a third gathering who contended that profits are obviously great since investors like them.

In this manner, regardless of voluminous research on profits, corporate administrators and budgetary business analysts still face what (Black, 1976) once depicted as a profit puzzler with pieces that simply do not appear to fit.

2.7 Empirical Review

Considerable studies encompassing this area of concern that have been done seem to show significant relationships between the four main macro-economic variables of exchange rate, interest rate, inflation rate and GDP and the financial performance of firms in relation

to profitability and security returns. Below are conclusions drawn from some of these studies:

(Stock & Watson, 2008) for instance compiled 59 macroeconomic variables upon which (Issah & Antwi, 2017) applied the methods of Principal Component Analysis (PCA) and Multiple Regression Analysis to predict the relationship between firm performance and macroeconomic variables of UK's public listed companies.

The study confirmed Real GDP, Adjusted Unemployment Rate, and Exchange Rate (Value of Foreign Currency Relative to US Dollar) as the major macroeconomic variables that significantly have predictive ability in predicting firm performance.

(Issah & Antwi, 2017) further argue that except Real GDP, both Adjusted Unemployment Rate and Exchange Rate (Value of Foreign Currency Relative to US Dollar) predict an increase in performance for UK listed companies. The outcome for Real GDP and Adjusted Unemployment Rate is true regardless of the region where the business is operated but may not be true for Exchange Rate (Value of Foreign Currency Relative to US Dollar) for different regions since different regions have varying foreign currency exchange rates relative to US Dollar.

In Ghana for example, Exchange Rate (Value of Foreign Currency Relative to US Dollar) will more likely predict a reduction in performance because of the high Cedi to Dollar rate.

As indicated by (Zulfiqar and Din, 2015) who inspected the relationship between macroeconomic pointers and firm performance among material ventures in Pakistan, findings

recommend positive unimportant relationship between inflation rate and firm performance. The examination approach was regression analysis.

(Limpanithiwat and Rungsombudpornkul, 2010), took a gander at the relationship between expansion rate and stock return among organizations recorded in Thailand. Time arrangement information for the period 2000 to 2010 was gathered for the study. Utilizing the unit root to test for stationarity and vector auto relapse to test the relationship between factors, the yield indicated next to no relationship between inflation rate and stock returns.

A standout amongst the most suitable investigates to this study was that of (Oleka, Sabina and Ebue, 2015). They researched the relationship amongst expansion and firm performance in Nigeria. They gathered Secondary information from yearly financial related reports for the period 2000 to 2014. Playing out the conventional slightest squares relapse examination, the result achieved demonstrated a positive yet not critical relationship between both return on equity and income per share.

(Kumar, 2013), investigated the link between inflation and stock returns; an evidence from Brazil, Russia, India, China and South Africa (BRICS) market. Quarterly secondary data was collected for the period 2000 to 2013 from Brazil, India, Russia, China and South Africa for the study.

Utilizing time series to examine the information, stationarity tests demonstrated that the information was stationary in among the BRICS individuals. The confirmation likewise indicated noteworthy long-haul relationship amongst returns and inflation rate. Connection investigation attempted demonstrated that there was a positive noteworthy relationship amongst return and inflation rate.

(Kairuthi, 2014) in a local study, examined the impact of inflation and loan fees on securities exchange returns of firms listed at the NSE. The study utilized distinct time series relationship. Month to month auxiliary data was gathered on stock returns, inflation rates, trade rates and liquidity. Applying enlightening time series connection plan, the yield appeared to propose negative reverse relationship between inflation rates and stock returns. But, there was a positive noteworthy relationship between loan fee and stock returns.

In Namibia, (Eita, 2011) carried out a study on the influence of several macroeconomic variables on stock performance and between the variables themselves. The study tried to research the relationship between loan fee, inflation rate, cash supply and trade rates.

Utilizing the Vector Error Correction (VECM) model to break down the data, prove appear to point a positive critical relationship between growth in securities exchange costs and cash supply and monetary movement. Likewise noted was the converse relationship between stock prices and inflation rate while loan cost demonstrated positive huge association with stock performance.

(Barasa, 2014) similarly, examined the key financial performance pointers and stock returns among firms operating at the NSE. This study embraced the exploratory research framework, regression analysis utilized to inspect the direction of the relationship and connection examination to gauge the quality of the relationship between stock returns and key financial performance pointers. It was found that there is a positive noteworthy relationship between inflation, financial development, loan fee and stock returns. Conversely, there was a reverse relationship between swapping of currency rates and stock returns.

(Lai & Roy, 2005) studied the effects of macro-economic news declarations on large stock returns. Month to month auxiliary news was gathered on eight indicators which included; GDP, genuine movement, utilization, venture, government consumption, net foreign sales, cash supply and forward-looking pointers. The yield attained from the study demonstrated that there was a negative critical relationship between GDP news declaration and mean stock returns.

Finally, (Njoroge, 2013) examined the association between loan cost and firm performance among licensed organizations at the NSE. Utilizing judgmental sampling system to choose firms effectively exchanging somewhere around 2008 and 2013, the findings demonstrated a positive however not critical relationship between loan fee and return on equity.

The behaviour of dividend pay-out is one of the most debated issues in the corporate finance literature and keeps its prominent place both in developed and developing markets (Hafeez & Attiya, 2009).

According to (Brealey and Myers, 2000), numerous studies have been carried out to expose matters relating to the dividend dynamics and determinants of dividend pay-out, but still do not have an acceptable explanation for the observed dividend behaviour of firms.

Dividend pay-out has been dissected for a long time, yet no all-round acknowledged clarification for organizations' watched dividend conduct has been set up (Samuel and Edward, 2011). It has for quite some time been an astounding in corporate finance.

(Velnampy, 2013) considered corporate administration and firm performance in Sri Lanka. He inspected 28 producing organizations utilizing the information from 2007 – 2011 and

discovered that determinants of corporate administration were not connected to the performance measures of the association.

Also, relapse utilized demonstrated that corporate administration does not influence organizations' ROE and ROA and uncovered that corporate administration measures do not correspond with performance measures.

(Velnampy and Nimalathan, 2009) explored the relationship between authoritative development and benefit of Commercial Bank Ltd in Sri Lanka over the time of 10 years (1997 to 2006). They found that, deals were decidedly connected with benefit proportions aside from working benefit, return on value and number of contributors was adversely associated to the productivity proportions aside from working benefit and dividend for value. So again, number of advances is likewise adversely related to the arrival by and large investors' assets.

(Miller and Modigliani, 1961) contended that under certain rearranging presumptions, the dividend choice does not influence the estimation of a firm and is, thus, irrelevant. However, conventional knowledge with changed hypotheses advocates that an appropriately overseen dividend pay-out is crucial to investors since it can influence share costs and investor's riches. This contention depends on two suppositions; No duty snag to getting dividends by financial experts, and Organizations can bring reserves up in capital markets for new ventures without bearing noteworthy issuance costs.

Sympathizers of the second supposition feel that dividends are terrible for the normal investor considering the duty disservice they make, which brings about lower value.

At last, there are those in a third gathering who contended that dividends are unmistakably great since investors like them. Hence, regardless of immense study on dividends, corporate directors and money related investors continue to face what Black (1976) once portrayed as a dividend mystery with pieces that simply don't appear to fit.

(Amidu, 2007) identified that dividend pay-out influences firm performance particularly the gainfulness estimated by the arrival on resources. The outcomes demonstrated a positive and huge connection between return on resources, return on value, development in deals and dividend pay-out. This demonstrated when a firm has an approach to pay dividends, its gainfulness is affected. The outcomes additionally demonstrated a factually huge connection amongst productivity and dividend payout proportion.

An investigation by (Howatt et al., 2009) likewise reasoned that positive changes in dividends are related to positive future changes in mean genuine income per share.

(Nissim and Ziv, 2001) demonstrated that dividend increments were straightforwardly identified with future increments in income in every one of the two years after the dividend change in any case, (Zeckhauser and Pound, 1990) in a related report discovered that there is no noteworthy contrast among dividend payouts with or without huge square investors.

(Kale and Noe, 1990) propose that dividend goes about as a flag of the dependability of the company's future money streams. A study of the surviving writing uncover that the key determinants of dividend choices incorporate liquidity, after expense income of the firm, income contemplations, future dividend, past dividend hones, degrees of dividend ability, legitimate prerequisites, development prospects, expansion and interest rates.

(Brigham, 1995) present that dividends give maybe the best and most dependable flag. As per him, an expansion in dividend signals administration' certainty that future income will be sufficiently solid to help new and higher dividend and the other way around. This view is verified by (Foong, Zakaria and Tan, 2007) when they noticed that there is confirmation to aid the notion that investors react to changes in dividend.

Be as it may, (Farsio et al., 2004) argue that no noteworthy connection amongst dividends and income hold over the long haul and arguments that help this relationship depend on brief periods and subsequently are deceptive to investors. They proposed three situations that would render the long-haul relationship of dividends and future income immaterial.

To start with, they raise the fact that an expansion in dividends may prompt a decrease in reserves that are to be reinvested by the firm. Firms that compensation high dividends without considering venture needs may in this way encounter bring down future income (Farsio et al., 2004). There is along these lines a negative connection between dividend payout and future income.

(Zeckhauser and Pound, 1990) in a related report discovered that there is no huge distinction among dividend payouts with or without expansive square investors. Moreover, (Kouki and Guizani, 2009), and (Kumar, 2006) saw as well in their investigation that administrative possession seems to have a noticeable and noteworthy impact on dividend payout.

(Samuel Kwaku Agyei and Edward Marfo-Yiadom, 2011) analyzed the connection between dividend pay-out and performance of banks in Ghana. The investigation utilized

board information built from the monetary proclamations of 16 business banks in Ghana for a time of 5 years, from 1999-2003.

These budgetary explanations were acquired from the Banking Supervision division of Bank of Ghana. STATA was utilized for the information investigation. Findings show that banks pay dividend increase their performance. For the most part, the outcome is demonstrated that dividend pay-out affects firm value.

(Timothy Mahalang'ang'a Murekefu Ochuodho Peter Ouma, 2010) uncovered what set up the connection between dividend payout and firm performance among recorded firms in the Nairobi Stock trade. Relapse investigation was done to set up the relationship there. This investigation made utilization of both essential and optional information. Optional information was acquired from the association's yearly reports, from the year 2002 to 2010.

The populace for this examination comprised of the organizations recorded on the Nairobi Stock trade. The NSE grouped these organizations into ten parts. The discoveries showed that dividend payout was a main consideration influencing firm performance. Their relationship was additionally solid and positive.

In view of the discoveries of this exploration that dividend pay-out is important, managers are advised to give satisfactory time in outlining a dividend pay-out that will upgrade firm performance and along these lines investor value.

An examination by (Amidu, 2007) uncovered that dividend pay-out influences firm performance as estimated by its productivity. The outcomes demonstrated a positive and

noteworthy connection between return on resources, return on value, development in deals and dividend pay-out.

(Amidu, 2007), again, in an examination looking at whether dividend pay-out impacts firm performance in the Ghana Stock Exchange, found out that dividend pay-out influences firm performance particularly the gainfulness estimated by the arrival on resources. The outcomes demonstrated a positive and huge connection between return on resources, return on value, development in deals and dividend pay-out.

This demonstrated that when a firm has a strategy to pay dividends, its gainfulness is affected. The outcomes additionally demonstrated a measurably noteworthy connection amongst benefit and dividend payout proportion.

2.8 Contribution to Literature

Based on the argument of (Al-Yahyaee, Pham and Walter, 2010), it can be concluded that different tax regimes and economic characteristics influence differences in firm performance for different markets.

As a result, not only financial determinants but industry factors such as competition and macro-economic factors such as GDP, economic growth, inflation, taxes, recession, demand/supply, interest and exchange rates among others also influence firm performance which previous studies have failed to explore in their models (Amidu & Abor, 2006; Amidu, 2007; Asamoah, 2010).

(Hansen & Wernerfelt, 1989) confirms that both economic and organizational factors are significant determinants of firm performance. However, according to (Hansen &

Wernerfelt, 1989), organizational factors explain about twice as much variance in profitability as economic factors do. (Cubin & Geroski, 1987) and (Rumelt, 1991) argue that economic factors do not significantly affect performance of firms. This conception might have influenced the decision of recent studies on firm performance to consider only organizational factors and neglecting economic determinants.

This study therefore tries to explore a more elaborated econometrics model that extends the models predicted by past studies to include both important organizational and economic determinants to effectively investigate how these determinants work together to influence performance of firms.

CHAPTER THREE

OVERVIEW OF FIRM PERFORMANCE IN THE GSE AND MACROECONOMIC DEVELOPMENT IN GHANA

3.0 Introduction

Stock exchanges around the world raise the level of awareness of listed firms to the public in order to help these firms meet their financing needs.

Studies have been conducted to investigate the effects of Stock exchanges on firms' performance and have strikingly reached comparable conclusions that going publicly listed on stock exchanges has shown a significant decline in firm performance (Pagano et al., 1998; Huang & Song, 2002; Alanazi & Lui, 2013). These studies were conducted on the Italian, Chinese, and Gulf Corporation Council region markets respectively. However, the remaining portions of this chapter discusses the overview of firm performance in the Ghana Stock Exchange (GSE) within the economy of Ghana.

The chapter starts by presenting the history and performance of the Ghana Stock Exchange (GSE) and adds up to the discussion, the role of the GSE in developing the economy of Ghana as well as the effect of macroeconomics on performance of the GSE and concludes with a preview of the performance of its listed firms.

3.1 History and Performance of the GSE

The Ghana Stock Exchange(GSE) was established in July 1989 as a privately-owned firm limited by guarantee under Ghana's companies' code, 1963 and later changed to a public

firm but kept upholding its initial status as a firm limited by guaranteed in April 1994. The Exchange started its trading activities in November 1990 which allowed a wide range of securities to be listed.

The Exchange started with only three promoters but currently, can boast about its fifty-two listed members made up of eleven Licensed Dealing members (LDM) and forty-one Associate members.

Furthermore, there are presently thirty-eight (38) listed firms. The criteria for listing incorporates the following: Capital sufficiency, Benefit, spread of offers, Years of presence and Administration proficiency.

As mentioned earlier, in 1993, the GSE was the 6th best performing developing stock exchange, with a capital valuation of 116% and in 1994 made the first position as the best performing stock exchange among every developing business sector, increasing 124.3% in its valuation level. 1995's record development was a frustrating 6.3%, mostly because of increased inflation and interest rates.

Development level for 1997 was 42%, and toward the close of 1998 it was 868.35. GSE-All Share Index is a market capitalization list of all offer listed on GSE. As of December 2013, the market capitalization of the Ghana Stock Exchange was GH¢61,158.29million contrasted with the December 2012 figure of GH¢57,264.22million, recording an expansion of 6.80%. Domestic Market capitalization listed a 76.68% expansion in December 2014 with GH¢11,694.93 contrasted with GH¢6,753.14 listed for a similar period in 2012.

At present, the manufacturing and brewing firms are the most performing on the GSE. Incredibly at third position, is the banking industry while other listed firms fall into the insurance, mining and oil divisions. Many of the listed firms on the GSE are Ghanaian owned firms although there are a few from multinational holdings.

The GSE has consequently contributed significantly to the economic development of the country during recent years (Dziwornu & Awunyo-Vitor, 2013). The next section discusses the role of the GSE in developing the economy of Ghana.

3.2 The role of the GSE in developing the economy of Ghana

Although the role of stock exchanges in economic development has been very much recognized over the world as of late (Ezeoha et al., 2009), its connection with economic development has not gotten the required consideration. Additionally, different perspectives have been communicated on the nature and heading of causality between stock exchange performance and economic development (Ezeoha et al. 2009; Hondroyiannis et al., 2004).

Whiles a few examinations have discovered that financial exercises in a nation constitute the key driver of stock exchange advancement (El-Wassal, 2005; Demirguc-Kunt and Levine, 1996), others have discovered that stock exchange development rather prompts economic development (Chinwuba and Amos, 2011; Yartey, 2008). In addition, some have discovered bi-directional (input) causality between the share trading system improvement and economic development (Sudharshan and Rakesh, 2011; Soumya and Jaydeep, 2008).

In Ghana, aside from the presence of restricted investigations on the connection between stock exchange performance and economic development (Quaidoo, 2011; Osei, 2008)

aftereffects of these examinations are blended. (Quaidoo, 2011) found that economic development prompts stock exchange capitalization with no input, while (Osei, 2008) argued that stock exchange improvement promotes economic development.

(Rousseau and Wachtel, 2000) have however contended that since ostensible market capitalization is influenced by cost on the stock exchanges the utilization of ostensible stock exchange capitalization and market capitalization proportion may not be a suitable pointer since it might prompt deceptive relationship.

The Ghana Stock Exchange is imperative for comprehensive development as far as riches conveyance and making capital more secure for local investors are involved. The exchange can make more prominent financial related considerations by presenting new products and services custom fitted to stay attractive to investors. Advancement, credit advising, financial instruction and appropriate fragment distinguishing proof constitute the conceivable procedures to accomplish this.

The GSE as an all-around created stock exchange makes a feasible ease circulation system for different financial products and services the nation over confirming an earlier argument made by (Xiaonian, 1997).

Most rising economies have seen a spate of developments in the territory of financial modelling and these developments remain aftereffect of number of Government directions, assess approaches, globalization, advancement, and privatization, joining with the worldwide financial related market and expanding risk in the domestic financial market (Xiaonian, 1997). Hence, with the expanded instability in the GSE, the requirement for

new financial related advancements to fence risk and increment returns cannot be exaggerated.

Again, the GSE provides a vital wellspring of fund for long term profitable projects. In this way, it lessens the over dependence of the corporate division on financing for long term projects allowing the government to fund projects meant for giving basic comforts to financial development. (Xiaonian, 1997) argues that this aides in diffusing weights on keeping the financial framework by coordinating long term projects bearing in mind a stated capital planned to last for such long-term projects.

In addition, the GSE provides value capital and foundation advancement capital that has solid financial advantages. The exchange can help the legislature in its privatization program by offering offers in the public projects to individuals through the exchange to improve the framework improvement. Projects may include streets, water and sewer frameworks, lodging, vitality, broadcast communications, open transport.

It likewise enhances the effectiveness of capital allotment through focused evaluating instrument for better usage of rare assets for expanded financial development (Yean, 1999).

Moreover, the GSE provides roads to project openings that empower a thrift culture basic in expanding domestic funds and investment opportunities that are fundamental for quick industrialization. Likewise, it advances public-private associations to energize cooperation of private segment in useful projects for financial proficiency to improve financial profitability which has turned out to be inescapable as assets keep on diminishing.

(Yean, 1999) argues that this helps the Government to properly manage assets to supplement its exertion in financing basic socio-economic projects through raising long term project-based capital.

The GSE finally empowers the inflow of capital when firms or investors put resources into domestic securities. According to (Yean, 1999), this provides required seed capital to support innovative projects.

3.3 Effect of Macroeconomics on Performance of the GSE

Except for interest and exchange rates, stock prices in the GSE appear to lead all economic activities (Frimpong, 2009). This can be judged from the case that banks tend to charge high interest rates on loans which put burden on companies' financial performance.

Furthermore, the cedi to dollar rate has a significant impact on stock market returns. Inflation, however appear not to significantly affect stock market return in the GSE (Frimpong, 2009).

3.4 Performance of Firms Listed in the GSE

The GSE is accepted to help enhance firms' performance within the country's state of economy. With the key idea of opening responsibility for investors, the GSE has caused and keep on providing necessary financing for firms and has turned into the measure with which the overall performance of an economy is assessed.

Firms listed under the GSE have experienced improved performance as far as offer value increase throughout the years. Incredibly, in 2013 a sizeable portion of the listed firms recorded returns of 78.81% which is higher than the exchange's performance measure.

Out of 34 listed firms, ten made increases of over 100%. PZ Cussons (PZC) stood out with 338.89%.

The others were: Enterprise Group Ltd (EGL) – 291.67%, CAL Bank Ltd (CAL)– 155.26%, Mechanical Lloyd Co. Ltd (MLC) – 153.33%, Guinness Ghana Breweries Ltd (GGBL) – 136.64% GCB Ltd (GCB) – 130.95%, Benso Oil Palm Plantation (BOPP) – 129.29%, Societte General (SOGEGH) – 120.59%, Unilever Ghana Ltd (UNIL) – 114.91%, HFC Bank Ltd (HFC) – 113.33%.

Five firms also recorded additions of half or more. This classification was driven by: Ecobank Ghana Ltd (EBG) with 87%, Fan Milk Ltd (FML) – 86.48%, TOTAL Ghana Ltd (TOTAL) – 72.33%, Ecobank Transnational Inc (ETI) – 58.33% and Sam Woode Ltd (SWL) – 50%.

Five other firms recorded increases of up half. Be that as it may, there were eight firms with no adjustment in their offer costs. Then again, TRANSOL drove the washouts

available with a critical loss of 25% in its offer cost among five different firms that lost between 5%-20% in their offer costs.

3.5 Overview of Macroeconomic Development in Ghana

3.5.1 Growth Trends

One noteworthy determinant of a nation's macroeconomic performance is genuine GDP development. Ghana's development record was very sporadic before the mid-1980s when the nation set out on financial changes. From a sensibly high GDP development of 6.2% out of 1961, the economy of Ghana started to record a consistent stoppage in GDP development achieving negative 3.0 out of 1967 preceding recouping firmly to record 6.4% the next year (see Figure 3.1).

Development stayed stable for a brief timeframe and staggered again in 1972 with a development rate of negative 2.5%. Without a doubt, development was turbulent amid a significant part of the period after the mid-1960s and just started to balance out in 1984. As appeared in Figure 3.1, the negative development the nation experienced happened in 1967, 1972, 1975-1976, 1979, and 1980-1981. Educationally, the greater part of the long stretches of negative development matched with a time of extraordinary political flimsiness, and outside stuns.

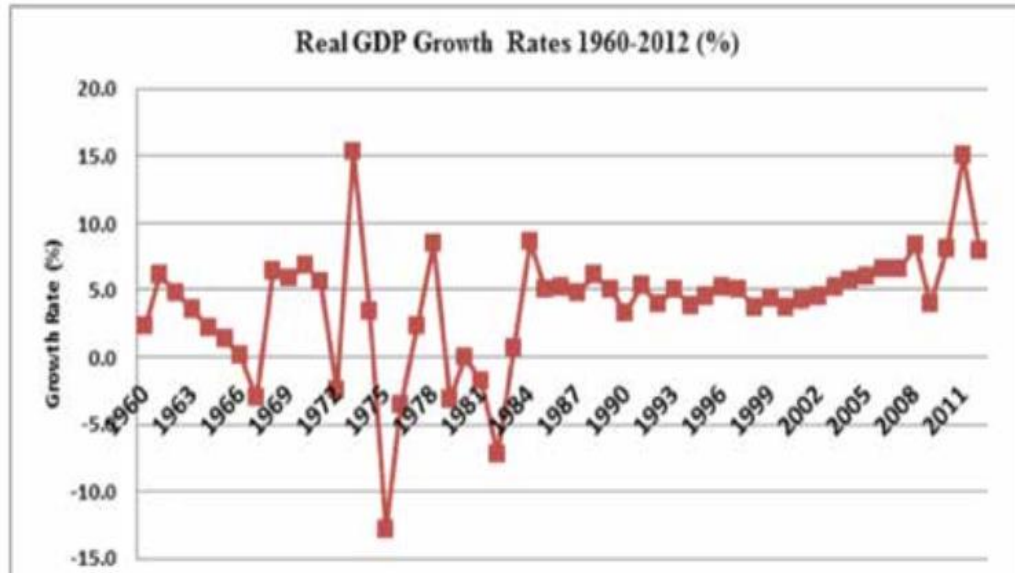


Figure 3.1: real GDP growth rates, 1960-2012 (%)

Source: Ghana Statistical Service

The main negative development happened in the year after the principal military rebellion in 1966, while the period 1972, 1979 and 1981-1982 concurred with military mediation. The least development of negative 12.9% was realised around 1975 after a poor reaction to the oil-value stun of 1973 as Ghana couldn't get to the universal capital markets to discover the connecting money for residential uses.

Misinformed monetary decisions as well as inflationary financing and household acquisitions were additionally to fault for the negative development recorded in the 1970s and mid-1980s. The genuine dry season experienced in the nation in the mid-1980s, and what monetary antiquarians point to in regard of the arrival of around one million Ghanaians from Nigeria added worry to an as of now overburdened economy.

In hunting down answers for the financial difficulties confronting the Ghanaian economy in the late 1970s and mid-1980s, the administration set up liberal monetary policies under

the sponsorship of the World Bank and the International money related Fund (IMF). In 1986, the second period of the change was supplemented with the Structural Adjustment Program (SAP) directed at redressing various basic uneven characters to guarantee a managed sound financial development.

The reaction of the economy to the change in perspective of monetary administration from state control to a changed one was firmly positive with a solid development rate of 8.6% out of 1984.

Providentially, this positive development performance has proceeded since 1984 and grabbing unequivocally since 2001.

For the most part, solid monetary development performance is an impression of liberal financial strategy joined by extensive inflows of help and outside direct investment that has activated expanded levels of venture, especially in the general population division.

These enhancements combined with help inflows added to elevated amounts of open spending for the most part on framework, for example, streets, schools and doctor's facilities. (Aryeetey and Tarp, 2000) have attested that the development of the 1980s exuded from the extension of capital application, as an outcome of expanded guide inflows.

An estimation of a straightforward development bookkeeping model by (Aryeetey et al., 2001) ascribed Ghana's development example to add up to factor efficiency (TFP) which thus was helped by the liberal monetary administration. Since (Aryeetey et al., 2001), there have been few or no examinations inspecting the wellsprings of development in the Ghanaian economy.

The passage of unrefined petroleum sends out in the late 2000s, the basic changes occurring in training and wellbeing strategies, and the contracting of the offer of farming to GDP give roads to future research, especially on questions in regard to the wellsprings of development in the Ghanaian economy in the course of recent decades.

3.5.2 Sectoral Analysis of the Economy

The example of Ghana's monetary development has differed essentially by segment and this is reflected in the movements in the sectoral dissemination of national yield from horticulture for the two different divisions.

Development has been moderately more grounded in administrations and industry, and the result of this improvement is the move in sectoral strength from horticulture to administrations. Assessments from Table 3.1 demonstrates a yearly normal development rate of horticulture of around 3.3% in the vicinity of 1984 and 2012 contrasted and 7.8% for industry and 6.7% for administrations.

Therefore, the offer of administrations enhanced from a normal of 37.9% of every 1984-88 to 42.5% out of 1989-92 in light of 1975 consistent costs. After a rebase of the national records in 1993, the area's offer which dropped to 31.2% out of 1993-96 enhanced hardly to 32.9% of every 2001-05.

A rebase of the national records in 2006 further pushed the commitment of the part to GDP to a normal of half. The solid show of administrations regarding development and sectoral commitment has exuded generally from enhanced development performance of exchange, neighborliness, media transmission and money related subsectors, helped by advancement of exercises that have seen expanded private segment investment in the sub-division.

Table 3.1: Sectoral Growth Rates and Composition of GDP, 1984-2012 (%)

Sector	1984-88	1989-1992	1993-96	1997-00	2001-05	2006-10	2011	2012
Agriculture	49.0 (1.9)	43.5 (1.6)	40.9 (3.1)	40.2 (3.9)	9.7 (5.1)	28.2 (4.5)	25.3 (0.8)	22.7 (1.3)
Industry	13.0 (12.7)	14.0 (4.4)	27.9 (4.6)	27.7 (4.2)	27.4 (5.0)	21.7 (8.4)	25.6 (41.6)	27.3 (7.0)
Manufacturing	8.5 (12.7)	8.7 (2.6)	10.2 (2.1)	10.1 (4.5)	10.0 (4.5)	8.8 (2.6)	6.9 (17.0)	6.9 (5.0)
Service	37.9 (7.8)	42.5 (7.1)	31.2 (5.2)	32.1 (5.7)	32.9 (5.3)	50.1 (7.6)	49.1 (9.4)	50.0 (10.2)

Source: Ghana Statistical Service

The commitment of the mechanical segment to national yield additionally expanded emphatically from 13.0% out of 1984-1988 to 27.4% by enhanced development performance of mining and the development sub-areas.

The beginning of oil generation in business amounts in 2011, pushed mechanical development rate to a high of 41.6% and hence bringing the offer of the part from 21.7% from 2006-10 to 27.3% (Table 3.1) fabricating recorded some calculable development performance in the early time of the change in the second 50% of the 1980s which added to enhanced offer of the subsector in GDP in the late 1980s and mid-1990s.

The evacuation of outside trade limitations as a feature of the financial change added to enhanced limit of assembling firms through the accessibility of remote trade for the importation of crude materials, save parts and hardware for the activity of existing plants and apparatus. The segment has, in any case, saw feeble development which has reflected

in the declining offer of the sub-segment from 10.2% between 1993-96 to 6.9% as of 2012 (Table 3.1). During recent decades, the sub-segment has been doing combating with the issue of fast deterioration of the household money, staggering expense of credit, absence of satisfactory and solid vitality supply, shabby imports and frail infrastructural base.

These components, notwithstanding the auxiliary rigidities inside the economy have added to the not as much as tasteful intensity of local assembling ventures in the changed exchange condition.

Interestingly, farming which was viewed as the foundation of the Ghanaian economy has reliably lost its strength in the economy with a decrease in its commitment to national yield from 49.0% in the periods 1984-88 to 22.7% as of 2012. The nonattendance of sufficient help for the sustenance product, angling animals' sub-segments provoked by the expulsion of rural appropriations as a major aspect of the financial change measures, combined with promoting issues and post-collect misfortunes can't escape fault for the dreary performance of agribusiness.

The fast loss of woodland cover because of shrub flames, logging and other human exercises, restricted help from expansion administrations, and the nonappearance of sufficient water system offices which represents the substantial dependence on rain have likewise added to the contracting offer of national yield.

The performance of farming would have been more terrible had the cocoa sub-area not grabbed firmly from 2001 because of ponder approach by government to recover the nation's lost magnificence in worldwide cocoa creation. The of mass splashing and upgraded maker cost for agriculturists prompted enhanced cocoa generation from around

400,000 tons on the eve of the thousand years to 1 million tons in 2009/10, pushing the nation from third to second position behind Cote d'Ivoire on the association of world cocoa creating countries.

The move from horticultural strength to administrations in genuine GDP might be seen as basic change of the economy. Auxiliary change of financial game plan speaks to an expanding capacity of the economy and society to react productively and viably to changing and developing weights for improved welfare among individuals.

This involves a procedure by which expanding extents of business and yield of the economy are represented by areas other than horticulture. It includes a net asset exchange from horticulture to different areas of the economy over the long haul. Basic change is additionally connected with a move from casual to formal courses of action in the association of monetary action.

Nonetheless, confirmation accessible proposes that the strength of casual exercises in the administrations area and the lessening significance of assembling in financial courses of action make it troublesome for this auxiliary move to be judged as basic change of the Ghanaian economy.

3.6 Conclusion

This brings the discussion to a conclusion that stock market performance promotes economic development and economic development however does not Granger cause stock market performance. In this sense, a one-way relationship between stock market and

economic development. Economic development thus has a significant effect on financial performance for firms.

This confirms that within the stock exchange, macroeconomic indicators such as the GDP greatly influence how firms perform. Hence the need for a well-structured performance framework which not only incorporate financial principles but with an integrated economic principle to determining the performance of firms which is of much priority.

CHAPTER FOUR

DATA AND METHODOLOGY

4.0 Introduction

Chapter four will detail the data type and source as well as the methodology of the study. After a brief presentation of the data, the chapter proceeds with the description of the theoretical framework, empirical model and justification of variables, estimation procedure and the diagnostic tests required to undertake panel studies.

Specifically, multicollinearity, panel stationary, panel co-integration and panel causality tests are performed.

4.1 Data Type and Sources

This study relied on secondary data as the main source of data. This provided ample discussion for the readers to help them understand more about the issue and the different variables involved. The data was intrinsically panel, running from 2007 to 2015 for 30 firms listed on the Ghana Stock Exchange (GSE).

All data were sourced from the annual report of the GSE and the listed firms. The data were retrieved from the various annual report of the firms. The GSE groups these firms under eight (8) sectors namely; “Technology, Basic Materials, Health care, Industrials, Oil and Gas, Consumer Good, Consumer Services and Financials.”

Listed companies were preferred over non-listed firms because financial statements of these companies are readily available at Ghana Stock Exchange unlike the non-listed companies.

4.2 Theoretical Framework

Macroeconomic factors including GDP, inflation, taxes, demand/supply, interest and exchange rates influence firm performance which is made up of return of equity and return on assets in terms of profitability of the firm.

It has been hypothetically tested that a relationship exists between these macroeconomic variables and firm performance, however, empirical studies reviewed shows that there is no conclusion on the exact relationship and how significant that relationship is because different markets exhibit varying results whether it affects performance positively or negatively.

Again, firm specific factors such as the firms' age, size, and growth rate along with financial factors including debt leverage, liquidity, capitalization, and investment also affect firm performance. However, the firm specific factors were controlled in order to measure firms' performance (Amidu, 2007; Catapan, et al., 2012; Gonzalez and Stefan, 2010; Vermeulen and Smit, 2011; Zhou & Ruland, 2006; Mordedzi, 2014).

This study considered the kind of relationship that exist between the variables involved and whether this relationship is significant or not. Figure 4.1 presents a framework of a typical organizational climate in the GSE.

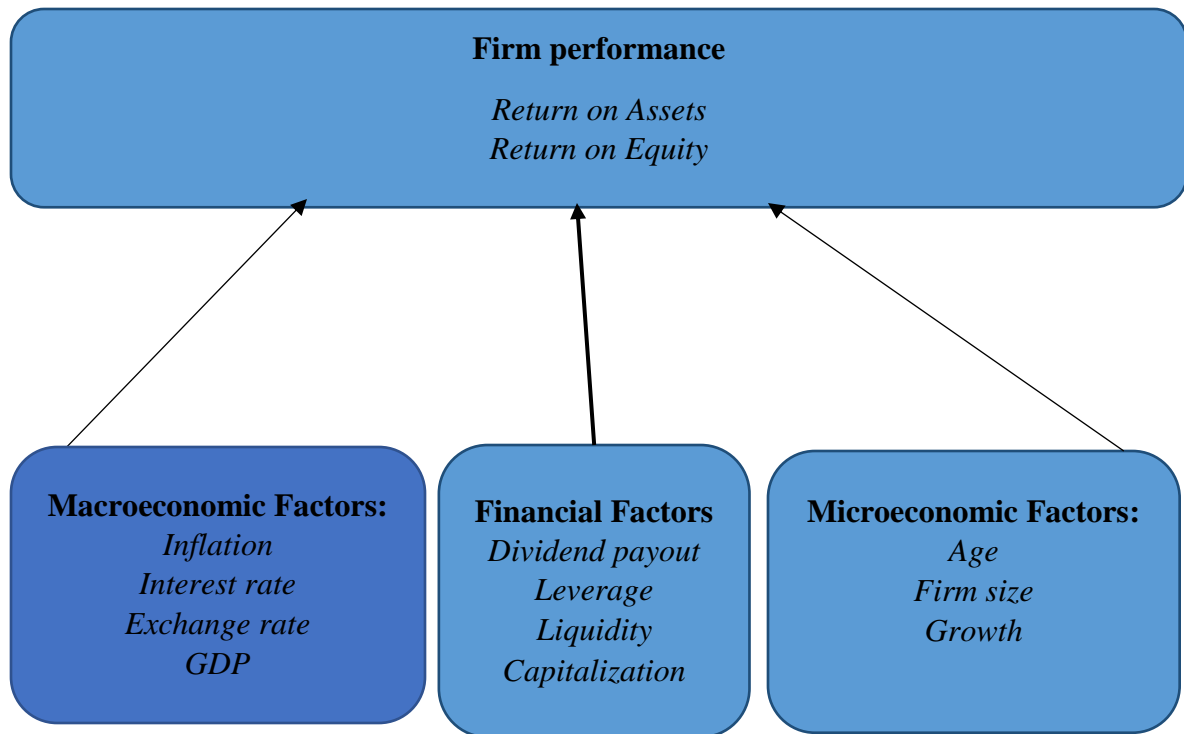


Figure 4.2: Framework of Organizational Climate in the GSE

Source: Author's construct, 2017

4.3 Empirical Model, Measurement and Description of Variables

4.3.1 Empirical Model

Since data used in this study contain observations of multiple phenomena obtained over multiple time periods for the same set of firms, panel data analysis was performed.

Panel data analysis employs two important models, namely fixed effect model (where the parameters of the model are predicted to be fixed) and dynamic effect model (where the parameters of the model have varying effects and also contains a lag of the dependent variable as a covariate).

This study investigates the efficiency of the fixed effect model in estimating firm performance because the presence of the lagged dependent variable in a dynamic effect model may encourage the presence of endogeneity which violates the assumption of strict exogeneity upon which the fixed effect estimator and the first difference estimator both rely.

However, the lagged value of firm performance could be a significant driver of its current value to exploring the effect of past firm performance on its current stands (Ekanayake & Long, 2012; Demirgüneş, 2015) but in a model such as this, the lagged value of firm performance may correlate with at least one of the covariates causing multicollinearity issue.

Hence, dynamic model will not be useful for this study unless we define and include an appropriate interaction effect between the lagged firm performance variable and the covariates in the model. (Matyjas, 2014) experimented this theoretical concept in his study and found that past firm performance values have a noteworthy influence on current firm performance.

Integrating the financial models predicted by (Amidu 2007; Catapan, et al. 2012; Gonzalez and Stefan 2010; Vermeulen and Smit 2011; Zhou & Ruland 2006; and Mordedzi, 2014) with the economic model suggested by (Hansen & Wernerfelt, 1989), the fixed effect model underpinning firm performance follows a similar model suggested by (Chandrapala & Knápková, 2013).

$$PF = F(INF, IR, GDP, EXR, PAY, SIZE, LEV, GROWTH) \quad (1)$$

Where PF = Firm performance in the areas of ROA and ROE. Hence, the fixed effect models of firms' performance with regards to the panel nature of the data are:

$$ROA_{it} = \beta_0 + \beta_1 INF_t + \beta_2 IR_t + \beta_3 GDP_t + \beta_4 EXR_t + \beta_5 PAY_{it} + \beta_6 SIZE_{it} + \beta_7 LEV_{it} + \beta_8 GROWTH_{it} + \varepsilon_{it} \quad (2)$$

$$ROE_{it} = \beta_0 + \beta_1 INF_t + \beta_2 IR_t + \beta_3 GDP_t + \beta_4 EXR_t + \beta_5 PAY_{it} + \beta_6 SIZE_{it} + \beta_7 LEV_{it} + \beta_8 GROWTH_{it} + \varepsilon_{it} \quad (3)$$

Table 4.1 describes the dependent and independent variables for models (2) and (3).

Table 4.1: Variables of the Models		
Variable	Explanation	Expected Sign
Response Variable		
ROA_{it}	Return on Assets; ratio of earnings before interest and taxes on total assets for firm i in period t . GHS (Million)	+
ROE_{it}	Return on Equity; ratio of earnings after interest and taxes on total equity for firm i in period t .	+

GHS (Million)

Covariates		
PAY_{it}	Dividend Pay-out; dividend per share earnings per share for firm i in period t	+
INF_t	Inflation; (Ratio)	-
IR_t	Interest rate; (Ratio)	-
EXR_t	Exchange rate; (Ratio)	+ \ -
GDP_t	Gross Domestic Product; (Ratio)	+

Control Variables		
$SIZE_{it}$	Firm Size; natural logarithm of total assets for firm i in period t	+
LEV_{it}	Leverage; Capital structure; ratio of total debt to book value of total assets for firm i in period t (Ratio)	-
$GROWTH_{it}$	Growth; in sales for firm i in period t (Ratio)	+

ε_{it} represents error term for firm i in period t

4.3.2 Diagnostic tests

Multicollinearity

The existence of multicollinearity in the model estimates leads to higher standard errors which makes inferences problematic (Green, 2008). Consequently, it is typical to test for multicollinearity before subjecting the model estimates to critical analysis. This study thus adopts the Variance Inflation Factor (VIF) to test for the magnitude of multicollinearity in the data.

4.3.3 Panel Unit Root Test

Most time series or cross-sectional data over a period (panel data) are generally non-stationary. This implies that the variables often do not revolve around a constant average. The usage of these variables at their levels generates spurious results which would have no meaning in informing policy (Gujarati, 2003).

To avoid this problem, all the variables employed in the study were critically subjected to unit root test. Among the available unit root tests (Dickey & Fuller, 1979; Levin & Lin, 1993; Levin, Lin & Chu, 2002), the framework of (Im, Pesaran, & Shin, 2003) is adopted for the study. Unlike the tests of the former, the latter controls for heterogeneity in autoregressive coefficients and solves issues of serial correlation (Ekanayake & Long, 2012).

The basic equation underpinning the (Im, Pesaran, & Shin, 2003) panel unit root tests is specified as follows:

$$\Delta y_{it} = \varphi_i + \theta_i y_{it-1} + \sum_{j=1}^g \varrho_{ij} \Delta_{it-j} + \zeta_{it} \quad (4)$$

Where y_{it} represents each variable under consideration in the study. φ_i stands for the fixed effect and ϱ is used to make the residuals uncorrelated over time. The null hypothesis is that θ_i is zero versus the alternative hypothesis which maintains that θ_i is less than zero. (see Gujarati, 2003; Green, 2008). The (Im, Pesaran, and Shin, 2003) model is computed by averaging the individual Dickey-Fuller statistic as follows:

$$\bar{t} = \frac{1}{N} \sum_{i=1}^N t_{iT} \quad (5)$$

Where t_{iT} is the Dickey-Fuller t-statistic for firm i based on the company specific Dickey-Fuller regression which follows the standard normal distribution asymptotically (Ekanayake & Long, 2012).

4.3.4 Panel Cointegration Tests

Although variables may be found to be non-stationary, there may be a long run relationship among them in the regression model. This phenomenon is referred to as Cointegration (Gujarati, 2003).

In order to examine the long run effect of the predictors on firms' performance or the cointegrating relationship between the variable, the study employs the standard panel tests for cointegration proposed by (Pedroni, 1999, 2004). The Pedroni test allows for heterogeneity in the intercept and slopes of the cointegrating equation. The tests provide seven (7) test statistics: Within dimension (panel tests) and between dimension group tests.

These include: Panel v-statistic, Panel Philips-Perron type ρ - statistic, Panel Philips-Perron type t-statistics, Panel Augmented Dickey-Fuller type t-statistics, Group Philips-Perron type ρ - statistic, Group Philips-Perron type t-statistic and Group Dickey-Fuller type t-statistic.

In the spirit of the Pedroni test, these statistics are based on the averages of the individual autoregressive coefficients connected with the unit root tests of the residuals for each company in the panel. All the seven test statistics are distributed asymptotically as standard normal.

Panel Causality Test

The Pedroni panel co-integration method tests only the existence of long run relationship among the variables. As a result, the test does not reveal the direction of causality when the variables are co-integrated (Ekanayake & Long, 2012).

Traditionally, Causality of the long run relationship of variables is tested with the benchmark framework of the Engel and Granger causality procedure (Green, 2008).

(Holtz-Eakin et.al, 1988, 1989) provide a framework for detecting the causality in panel studies. For a two-variable model, being co-integrated, the causality equation is modelled as lags of the dependent and explained variables as follows:

$$Y_{it} = \sum_{j=1}^J \varphi_j Y_{it-k} + \sum_k \Phi_k X_{it=k} + f_{yi} + \omega_{it} \quad (13)$$

$$X_{it} = \sum_{l=1}^L \theta_l X_{it-l} + \sum_{m=1}^M \Phi_m Y_{it=m} + f_{xi} + \psi_{it} \quad (14)$$

Where Y_{it} and X_{it} are the two cointegrated variables. The (Holtz-Eakin et.al., 1988; 1989) model extends the standard Engel and Granger test by adding the terms f_{xi} and f_{yi} to capture the individual fixed effects for the panel member i.

Following (Holtz-Eakin et.al.,1988; 1989), study specifies the granger causality model for firm performance and pay-out ratio, due to their peculiar interest in the study. The models are as follows:

$$ROA_{it} = \sum_r^R \gamma_r ROA_{it-r} + \sum_s^S \delta_s X_{2it-1} + \pi_i + \xi_{it} \quad (15)$$

$$X_{2it} = \sum_u^U \varrho_u X_{2it-u} + \sum_v^V \tau_v ROA_{it-1} + \omega_i + \varepsilon_{it} \quad (16)$$

$$ROE_{it} = \sum_w^W \alpha_w ROE_{it-w} + \sum_x^X \beta_x X_{2it-1} + \sigma_i + \mu_{it} \quad (17)$$

$$X_{2it} = \sum_z^Z \chi_z X_{2it-z} + \sum_d^D \eta_d ROE_{it-1} + \nu_i + \psi_{it} \quad (18)$$

4.4 Measurement and Description of Variables

In measuring the performance of firms, researchers such as (Baptista et al., 2011) and (Lam and Lee, 2008) used accounting-based criteria as financial performance indicators (Return on Assets-ROA and Return on Equity- ROE).

In Ghana, (Amidu, 2007) employed both accounting and marketing-based criteria, thus, return on Equity and Tobin's q in measuring the performance of firms from 1997 to 2004. This study used two accounting based (ROE and ROA) financial performance indicator as dependent variable.

Dependent Variable

Following (Amidu, 2007), this study uses two accounting measures of performance, Return on Equity (ROE) and Return on Assets, as the dependent variable serving as proxy for performance of firms listed on the GSE.

ROE defines the earnings a firm makes after interest and taxes on total equity whilst ROA defines the earnings a firm makes before interest and taxes on total assets.

Independent Variables

The importance of monetary policy effect cannot be underestimated as it affects all sectors of the economy. Through the cost of debt and the availability of money and credit, monetary policy could affect a firm's ability to access external sources of fund. Fiscal policies affect a firm's after tax net cash flow, its cost of capital, and keenly the demand for its products, and survival.

Studies like (Wadhvani, 1986; Davis, 1995; and Robson, 1996) argue that increases in interest and inflation rates influence firms' survival and performance. The four macroeconomic variables inflation, interest rate, exchange rate, and gross domestic product defined in Table 4.1 are the first set of independent variables considered for this study. These macroeconomic variables are the main predictors of the outcome of this study.

The second set of predictors considered for this study is dividend pay-out. Dividend pay-out is measured as dividend per share in line with (Hashim et al., 2013). This points at a firm's capacity to pay dividends over the years under study.

Normally, as dividends are regularly paid to stockholders by firms, the actions of management to perform creditably are regulated to continue the policy. Therefore, whether to increase the dividend payment policy, maintain previous payments or not to pay at all may be decided through policy.

Subsequently, as firms employ regular dividend pay-out, performance is more likely to increase in the short term whilst firms that adopt irregular dividend pay-out may increase performance but normally in the long run because of the investments such firms may retain funds to undertake such worthy projects (Oppong, 2015).

On this premise, dividend pay-out may be deemed to either positively or negatively affect firms' performance depending on the time horizon. In this study, dummy variables were used to represent the presence or absence of dividend pay-out (1= Dividend payment policy 0= No dividend payment policy) and if the firms have such policy in place, dividends given to shareholders was captured as pay-out.

In order to avoid misspecification errors (Green, 2008; Gujarati, 2003), some control variables are included in the models. These control variables included firm's age, size, leverage, growth, liquidity, capitalization, industry effect, and period (year).

Size

Firms generally have relatively easy access to the financial market as they grow and mature and therefore become less and less dependent on funds generated internally for any form of investment. This allows them to pay higher dividends to investors which is an indication of high performance.

Also, larger firms enjoy economies of scale and therefore pay lower transaction cost as compared to smaller ones.

It is therefore expected that size of a firm has positive impact on its performance. A proxy for firm size is the logarithm of total assets to control for size differences across the sample firms.

Growth

Firms that find themselves in growth phase have the potential to gain more as they are exposed to investment opportunities. Due to the lack in strength at this point to overly depend on the financial market, firms in the growth phase tend to finance these

opportunities from internally generated funds, thus, such firms have to retain more in order to enhance performance.

According to (Oppong, 2015), mature companies are likely to be in low growth phase and less attractive investment opportunities, these firms do not have any incentive to retain more as a result of less capital expenditure firms, growth in income have been set as a control variable which is expected to have a positive impact on firms' ROE and ROA.

Leverage

This is also known as capital structure.

For a firm to have high debt ration means that that firm will inadvertently have high interest expense. This will push the firm to experience low net income and thus less and less earnings will be available for shareholders.

Performance may thus be affected by the financing and investment plans particularly where firms are highly leveraged. Earnings of firms that are highly leveraged are riskier and volatile. Highly leveraged firms appear to underperform (Oppong, 2015). It is therefore expected that an inverse association be seen in leverage and firms' ROE and ROA.

CHAPTER FIVE

PRESENTATION AND DISCUSSIONS OF RESULTS

5.0 Introduction

This chapter presents the study results and discussions. The chapter begins with the descriptive statistics and correlation matrix. It subsequently presents the diagnostic tests frameworks.

Specifically, the multicollinearity test, panel unit root test, panel co-integration test, and panel causality test. It finally delves into the estimation, presentation and discussion of the results emanating from the fixed effect models.

5.1 Descriptive Statistics

Here, we present the descriptive statistics of the variables used in the study. These statistics are estimated to enable the researcher to identify and correct the issues of extreme values in the data.

The primary descriptive measures used are the mean (average), standard deviation, and the range (minimum and maximum value of the variables) for the period under consideration. Given the nature of the data (i.e. panel data), other statistics estimated are the overall statistics, variations in the means of the explained and explanatory variables with regards to between companies and within companies. Table 5.1 presents the descriptive statistics of the study.

The panel data is unbalanced with 30 companies, spanning 2007 to 2015. Apart from company size, Table 5.1 shows that the variations in mean within companies from ROA, ROE, Growth, pay-out and leverage exceed the between variations.

This indicates that with time the variables tend to be different within a particular company than it does across companies used in this study. The significant variations imply that the data contains panel effect (Gujarati, 2003; Green, 2008) which makes panel modelling suitable for the study.

Table 5.1: Descriptive Statistics

Variable		Mean	Std. Dev.	Min	Max	Observations
ROE	Overall	10.08	233.79	-2766.61	371.28	N = 270
	Between		91.08	-377.11	37.57	n = 30
	Within		215.89	-2499.42	370.57	T = 9
ROA	Overall	3.40	55.09	-4.33	905.21	N = 270
	Between		18.35	-0.30	100.58	n = 30
	Within		52.04	-97.43	808.03	T = 9
SIZE	Overall	6.24	1.65	0.00	9.32	N = 270
	Between		1.28	3.98	8.94	n = 30
	Within		1.06	-1.02	7.83	T = 9
LEV	Overall	4.87	17.89	-13.78	267.55	N = 270
	Between		8.34	-2.09	46.07	n = 30
	Within		15.89	-41.20	226.35	T = 9

	Overall	0.41	1.51	-1.00	13.01	N = 270
GROWTH	Between		0.48	-0.26	1.63	n = 30
	Within		1.43	-2.23	11.78	T = 9
	Overall	1.10	13.52	-49.63	185.66	N = 270
PAY	Between		0.80	-0.96	1.39	n = 8
	Within		13.50	-49.92	185.37	T = 9
	Overall	8.04	15.36	-19.22	23.85	T = 9
GDP	Between					
	Within					
	Overall	13.26	3.87	8.70	19.30	T = 9
INF	Between					
	Within					
	Overall	11.96	2.56	8.90	17.06	T = 9
IR	Between					
	Within					
	Overall	1.86	0.90	0.90	3.70	T = 9
EXR	Between					
	Within					

Source: Author's Computations

5.2 Correlation Matrix

Table 5.2 presents the correlation matrix for the variables used in the model. The Kar Pearson correlation provides an index of the direction and magnitude of the relationship between two sets of scores without causality (Gujarati, 2003). The sign of the correlation

coefficient gives the direction of the relationship. According to Gujarati (2003) the correlation matrix is useful to the extent that it shows whether there are elements of multicollinearity present in the data.

Apart from the correlation between Leverage and ROE which stands at -0.69, results from Table 5.2 show that there exists low correlation between the firm performance indicator, ROE and the independent variables since all the correlation coefficients are less than 0.5 (Gujarati, 2003).

With reference to ROA, low correlation is recorded for all including Leverage since the highest correlation of -0.448 recorded for its correlation with Inflation is still less than 0.5.

Except growth in sales which show a high correlation of about -0.679 with interest rate, all the firm-specific (controlled) indicators recorded low correlations among other independent variables. Moreover, most of the macroeconomic indicators show high correlation among themselves and thus the issue of multicollinearity is likely to be present in the data (Gujarati, 2003).

Table 5.2: Correlation Matrix of Variables

	ROE	ROA	SIZE	LEV	GROWTH	PAY	GDP	INF	IR	EXR
ROE	1	-.003	-.050	-.691	.047	.022	-.069	-.366	-.259	.212
		.958	.415	.000	.443	.720	.861	.333	.502	.584
	270	270	270	270	270	270	9	9	9	9
ROA	-.003	1	-.084	-.007	.020	-.005	-.027	-.448	-.427	-.146
			.171	.913	.742	.929	.945	.226	.252	.709
	270	270	270	270	270	270	9	9	9	9
SIZE	-.050	-.084	1	.154	.110	-.036	-.088	-.307	-.123	-.324
				.011	.072	.552	.821	.422	.752	.394
	270	270	270	270	270	270	9	9	9	9
LEV	-.691	-.007	.154	1	-.010	.000	.086	.170	-.126	-.283
					.871	.998	.826	.661	.748	.461
	270	270	270	270	270	270	9	9	9	9
GROWTH	.047	.020	.110	-.010	1	-.011	.411	-.489	-.679	-.341
						.858	.272	.182	.044	.369
	270	270	270	270	270	270	9	9	9	9
PAY	.022	-.005	-.036	.000	-.011	1	-.010	-.251	-.451	-.200
							.979	.515	.224	.605
	270	270	270	270	270	270	9	9	9	9
GDP	-.069	-.027	-.088	.086	.411	-.010	1	-.685	-.626	-.633
								.042	.071	.067

	9	9	9	9	9	9	9	9	9	9
INF	-.366	-.448	-.307	.170	-.489	-.251	-.685	1	.788	.337
	.333	.226	.422	.661	.182	.515	.042		.012	.375
	9	9	9	9	9	9	9	9	9	9
IR	-.259	-.427	-.123	-.126	-.679	-.451	-.626	.788	1	.295
	.502	.252	.752	.748	.044	.224	.071	.012		.442
	9	9	9	9	9	9	9	9	9	9
EXR	.212	-.146	-.324	-.283	-.341	-.200	-.633	.337	.295	1
	.584	.709	.394	.461	.369	.605	.067	.375	.442	
	9	9	9	9	9	9	9	9	9	9

Source: Author's Estimates

5.3 Hausman test

Before the estimation of a panel regression, the Hausman test is used to make a choice between the fixed effect model and the random effect model of panel data analysis.

The Hausman test can detect which of these two models is superior to the other. The null hypothesis of the Hausman test is that random effect is the preferred model and the alternative hypothesis is that the fixed effect model is preferred. When the null hypothesis is rejected, it indicates that cross sectional unit random effects are correlated with the regressors; therefore, the fixed effect model is superior to the random effect model.

Nonetheless, if we fail to reject the null hypothesis then the random effect is preferable implying there is no correlation between the unique errors and the explanatory variables.

The results of the Hausman’s test for the two models are presented in Table 5.3 and 5.4

Table 5.3: Hausman test for the ROE model

	Coefficients			
	(b)	(B)	(b-B)	Sqrt (diag(v_b-V_B))
	fe	re	Difference	S.E.
SIZE	-1.962	-0.166	-1.796	2.925
LEV	-8.836	-0.984	-7.852	3.630
GROW	-58.051	-0.794	-57.257	12.226
PAY	21.072	1.655	19.417	3.503
GDP	-1.557	-0.386	-1.171	1.212
INF	-4.715	-0.576	-4.139	1.872
IR	-3.208	-0.259	-2.949	2.068
EXR	11.438	0.326	11.112	7.273

b = consistent under Ho and Ha; obtained from xreg

B = inconsistent under Ha, efficient under Ho; obtained from xreg

Test: Ho: difference in coefficients not systematic

$$\text{Chi2}(5) = (b - B)' [V_b - V_B]^{-1} (b - B)$$

$$= 600.21$$

Prob > Chi2 = 0.0000

Source: Author’s Estimations

Table 5.4: Hausman test for the ROA model

	Coefficients			
	(b) fe	(B) re	(b-B) Difference	Sqrt (diag(v_b-V_B)) S.E.
SIZE	0.101	0.074	0.027	0.123
LEV	0.148	0.144	0.004	0.145
GROW	-1.017	-0.121	-0.896	-0.296
PAY	1.280	0.878	0.402	1.299
GDP	-0.151	-0.328	0.177	-0.444
INF	-0.386	-0.412	0.026	-0.733
IR	0.368	0.260	0.108	0.632
EXR	1.196	0.298	0.898	0.585

b = consistent under Ho and Ha; obtained from xreg

B = inconsistent under Ha, efficient under Ho; obtained from xreg

Test: Ho: difference in coefficients not systematic

$$\text{Chi2}(5) = (b - B)' [V_b - V_B]^{-1} (b - B)$$

$$= 256.58$$

Prob > Chi2 = 0.0000

Source: Author's Estimations

Results from both Tables 5.3 and 5.4 leads the Hausman test to reject the null hypothesis since both P-Value are less than the significance values of 1, 5 and 10 percent respectively.

This implies that the fixed effect model is superior to the random effects model, for explaining either ROA or ROE.

5.4 Results of the Diagnostic Tests

5.4.1 Multicollinearity tests

As already indicated, the presence of multicollinearity inflates the standard errors of the parameter estimates leading to inferential problems. In accordance with (Gujarati, 2003; Green, 2008), the VIF was employed in estimating the extent of multicollinearity in the data. Table 5.5 presents these results. Some VIFs are greater than 5, indicating that there exists multicollinearity in the variables under study for both models.

This implies that at least one or more of the independent variables are linearly correlated. Hence, estimates and interpretations resulting from such data may be weak (Ekanayake & Long, 2012).

We observe from the correlation matrix in Table 5.2 that inflation, gross domestic product, interest rate, and exchange rate show high correlation with each other and are therefore suspected to be the culprit for multicollinearity.

Table 5.5: Results of Multicollinearity tests

Variable	ROA		ROE	
	VIF	1/VIF	VIF	1/VIF
SIZE	14.15	0.070671	2.232	0.448
GROWTH	7.69	0.130039	3.689	0.271
LEVERAGE	6.18	0.161812	2.986	0.335
PAY	7.61	0.131406	1.604	0.623
INF	5.63	0.17762	4.977	0.201
IR	12.32	0.081169	4.481	0.223
GDP	24.31	0.041135	5.203	0.192
EXR	3.30	0.30303	6.402	0.156

Source: Author's Estimations

It becomes very necessary to remove some of these variables causing the problem of multicollinearity from the model. In addressing this problem, (Frost, 2017) suggests three methods including principal component analysis (PCA), variable removal, and centring the various independent variables on their respective means.

This study used the backward approach of the variable removal method and by doing so, exchange rate, gross domestic product, and interest rate were found to be the lead variables causing the problem of multicollinearity for the ROA model (i.e. model 2). Whilst exchange rate, gross domestic product, and inflation were found to be the lead variables causing the problem of multicollinearity for the ROE model (i.e. model 3).

These variables were then removed from their respective models. VIFs for both models after applying the variable removal method are all less than 5 as shown in Table 5.6. Hence, we conclude that there may still exist some form of multicollinearity within the remaining variables explaining variations within firm performance, but they are not severe to cause further problems in interpretations of results for our regression (Frost, 2017).

Table 5.6: Results of Multicollinearity Tests after Removing Variables

Variable	ROA		ROE	
	VIF	1/VIF	VIF	1/VIF
SIZE	2.155	0.464	1.464	0.683
LEVERAGE	2.781	0.360	1.772	0.564
GROWTH	3.601	0.278	3.034	0.330
PAY	1.369	0.730	1.348	0.742
INF	2.638	0.379	N/A	N/A
IR	N/A	N/A	2.376	0.421

Source: Author’s Estimations

5.4.2 Panel Unit root test

The results of the panel unit root tests are shown in Table 5.7 below. The test held that all companies have unit roots with regards to their variables against the alternative hypothesis that at least some panel members are without unit root.

The test reveals that all the variables are stationary even at 1 percent significance level for the “individual effect and individual effect with trend” tests since they all produced

significant probability values smaller than 1%. Hence, employing our variables in a “level estimation” would yield the most authentic results (Green, 2008).

Table 5.7: Results of Panel Unit Root tests for Variables

Variable	With only individual effect	With individual effect and trend
ROA	0.0001	0.0003
ROE	0.0001	0.0006
SIZE	0.0001	0.0002
GROWTH	0.0009	0.0008
LEV	0.0005	0.0004
PAY	0.0008	0.0000
GDP	0.0003	0.0001
INF	0.0007	0.0009
IR	0.0001	0.0001
EXR	0.0004	0.0004

Source: Author’s Estimations

5.4.3 Results of Panel Cointegration test

Having established with the panel unit root test that the variables are integrated, it has become essential to perform a co-integration test. Table 5.8 presents the Padroni panel co-integration test results.

Out of the eleven Pedroni's statistics, seven rejects the null hypothesis that there is no cointegration between the variables. This implies that there is long run relationship between firms' performance and pay-out ratio, size, leverage, growth of sales, and the suggested macroeconomic variables.

Table 5.8: Results of Pedroni Co-integration tests

	Prob
Panel v-Statistic	0.0007
Panel rho-Statistic	0.0002
Panel PP-Statistic	0.0000
Panel ADF-Statistic	0.0004
Group rho-Statistic	0.0003
Group PP-Statistic	0.0001
Group ADF-Statistic	0.0012

Source: Author's Estimation

5.5 Econometric Results and Discussions

The regression results are shown in table 5.9 below. As already indicated, the ROA and ROE are estimated using the fixed effect technique. All the models are estimated to produce robust standard errors. The inclusion of robust standard errors helps in containing the econometric problems of heteroscedasticity (Green, 2008).

Results from Table 5.9 show that individual effects of the predictor variables join forces to form significant models to explain variations in ROE and ROA by 96% and 98% respectively since the models recorded R^2 values of 0.963 and 0.980. Indeed, these values

indicate considerable aggregate explanatory power for the estimated models. Nevertheless, both models are judged to be significant at the 5% significance level since they recorded considerable high F-values with associated significant probabilities less than 5%.

Table 5.9: Model Summary and ANOVA F-test

		Sum of	Mean		R ²	Adj. R ²	
Model		Squares	df	Square	F		Sig.
ROA	Regression	0.048	5	0.010	15.806	0.963	0.023
	Residual	0.002	3	0.001			
	Total	0.049	8				
ROE	Regression	7096.935	5	1419.387	29.840	0.980	0.009
	Residual	142.700	3	47.567			
	Total	7239.635	8				

Source: Author's Estimation

At the 10% significance level, results of the regression shown in Table 5.10 depict that five out of the eight variables including LEV, PAY, GROWTH, SIZE and INF significantly influence ROA since they recorded probability significant values which are less than 10%.

At the 5% significance level on the other hand, results confirm that four out of the eight variables including LEV, PAY, GROWTH, and IR influence ROE. Thus, these variables significantly contribute to the models in predicting the relationship between firm performance (ROA and ROE) and macroeconomic variables.

Table 5.10: Coefficient Estimates

Model		Unstandardized		Standardized		
		Coefficients		Coefficients		
		B	Std. Error	Beta	t	Sig.
ROA	(Constant)	0.430	0.076		5.667	0.011
	SIZE	-0.024	0.008	-0.493	-3.040	0.056
	LEV	0.022	0.008	0.484	2.629	0.078
	GROWTH	0.203	0.040	1.070	5.106	0.015
	PAY	0.078	0.010	0.972	7.525	0.005
	INF	-0.019	0.004	-0.911	-5.078	0.015
ROE	(Constant)	123.190	22.357		5.510	0.012
	SIZE	-1.901	1.821	-0.102	-1.044	0.373
	LEV	-9.654	1.867	-0.558	-5.171	0.014
	GROWTH	49.193	10.271	0.676	4.789	0.017
	PAY	11.551	2.890	0.376	3.997	0.028
	IR	-7.457	1.466	-0.635	-5.086	0.015

Source: Author's Estimation

5.5.1 Effect of Macroeconomic Variables on Firm Performance

To investigate the effect of macroeconomics on firm performance, we perform a partial regression to determine the contribution of the significant macroeconomic variables given that SIZE, LEV, GROWTH, and PAY are already contributing to the firm performance effect.

Table 5.11 present the results for the model summary and ANOVA F-test for the partial regression. According to results of Table 5.11, we observe that macroeconomic determinants including IR and INF significantly influence firm performance indicators (ROE and ROA) since they recorded significant values less than 5% for their respective models.

However, these macroeconomic determinants alone do not have enough explanatory power to explain variations in both ROE and ROA since the partial regression performed for these variables recorded low R^2 values.

Table 5.11: Model Summary for the Partial Regression

	R²	Adj. R²	Sig.
ROA	0.405	0.271	0.043
ROE	0.467	0.387	0.018

Source: Author's Estimation

Results from Table 5.10 show that INF and IR are the two macroeconomic variables that significantly affect firm performance. The results further establish that INF affect ROA whilst IR on the other hand affect ROE. A negative coefficient value of -0.019 recorded for INF in the ROA model explains that a percentage increase in INF reduces firm performance (ROA) by 0.02%.

Similarly, a negative coefficient value of -7.457 recorded for IR in the ROE model explains that a percentage increase in IR also reduces firm performance (ROE) by 7.46%.

5.5.2 Effect of Dividend Pay-Out ratio on Firm Performance

The results further reveal that dividend pay-out ratio increases firm performance in Ghana.

The result is statistically significant at the 5 percent significance level in both the ROE and ROA models.

For a percentage increase in dividend pay-out, ROE and ROA increases by 11.55 and 0.08 percent respectively. This implies that a corporate policy that focuses on high dividend pay-out would attract higher performance.

The results are consistent with (Arnott & Asness, 2003) and (Zhou & Ruland, 2006). (Arnott & Asness, 2003) explain that the positive relationship is driven by sticky dividends combined with mean reversion in more volatile earnings.

5.5.3 Effects of Leverage, Size and Growth on Firm Performance

The study finds that leverage affects firm performance (ROE) negatively. In terms of magnitude, the results indicate that a percentage increase in leverage reduces firm performance (ROE) by 9.65 percent whilst it appears to increase firm performance (ROA) by 0.02 percent. Statistically this is significant at 5 percent.

Additionally, growth in company sales affects both ROE and ROA positively, a finding that is statistically significant at 5 percent. This finding confirms the views of (Velnampy & Nimalathan, 2009) and (Velnampy, 2013).

A percentage increase in GROWTH increases firm performance (ROE and ROA) by 49.19 and 0.20 percent respectively. This is probably because, growth in sales encourages

companies to expand which impacts their financial performance positively. The results therefore suggest that corporate policies that lead to sales growth must be strengthened to ensure sustainable firm growth.

Again, a percentage increase in SIZE significantly reduces firm performance (ROE) by 0.02 percent. This result is statistically significant at the 5% significance level.

5.6 Panel Causality test results

The panel causality test results are shown in Table 5.12 below. The test was undertaken with the Wald Causality results.

This tests the null hypothesis that macroeconomic variables (inflation and interest rates) do not cause firm performance against the alternative that macroeconomic variables (inflation and interest rates) cause firm performance.

The test rejects the null hypothesis at 5 percent significance for ROE and ROA respectively against the associated macroeconomic variables. The results imply that inflation causes ROA whilst interest rate causes ROE.

Table 5.12: Wald Causality Results

Null hypothesis	Inflation does not cause ROA	ROA does not cause Inflation	Interest rate does not cause ROE	ROE does not cause Interest rate
χ^2	5.078	0.887	4.070	1.987
P-value	0.015	0.401	0.045	0.302

CHAPTER SIX

SUMMARY, CONCLUSIONS AND POLICY RECOMMENATION

6.0 Introduction

This chapter presents a brief overview of the preceding chapters in this study. It also covers the summary of findings, conclusions, policy recommendations and limitations of the study.

6.1 Summary of Findings

The role of macroeconomics on firm performance has attracted attention of economists for decades due to the complexity in formulating corporate policies in achieving success among many organizations.

Whiles some scholars have found positive evidence of macroeconomics on firm performance, others maintain that macroeconomics has no significant impact on performance.

Despite the contradicting views on the relationship between macroeconomics and firms' performance globally, few empirical evidence exist in Ghana and even those that exist are limited to few firms, such as banking and manufacturing firms (Amidu & Abor, 2006; Amidu, 2007).

This study generally sought to examine the relationship between macroeconomics and firm's performance. Additional objectives were to evaluate the significant effects of key macroeconomic variables on firm performance. The study also sought to ascertain the

direction of causality between firm performance and keenly significant macroeconomic variables.

Following literature, ROE and ROA were selected as proxy for firm performance and suggested independent variables included were growth in the sales of the firms, total assets, leverage, dividend pay-out, and key macroeconomic variables (GDP, inflation, interest, and exchange rates).

To address the above objectives, the study made use of panel data of the firms listed on the Ghana Stock Exchange running from 2007 to 2015. Two panel econometric models were estimated using a fixed model technique for both ROE and ROA.

In addition to these models, a panel causality model was espoused to effectively address the direction of causality between firm performance and the significant macroeconomic variables.

In accordance with literature, the necessary diagnostic tests were performed to ensure that the parameter estimates are efficient and consistent for inferential purposes. Particularly, multicollinearity, panel unit roots, Hausman, and panel cointegration tests were performed. The multicollinearity tests showed that the degree of collinearity was higher than the threshold of ten provided by the Variance Inflation Factor for some of the variables, indicating that multicollinearity is a likely problem within the variables.

However, the backward approach of the variable removal method was used to address the problem of multicollinearity. The panel unit roots test indicated that all the variables were integrated. Following the panel unit root test, the panel cointegration tests revealed that

long run relationship exists between the variables. The Hausman test showed that fixed effects models are suitable for modelling firm performance (both ROE and ROA).

With regards to the first objective, the results showed that there exists a meaningful relationship between some macroeconomic variables and firm performance. But further analysis suggests that only macroeconomic variables lack enough explanatory power to explain variations within firm performance.

To increase the explanatory power for analysis, variables such as dividend pay-out, growth in company sales, leverage, and size were added to the model which increased the explanatory power to over 96%, a very considerable value. A percentage increase in dividend pay-out also increases ROE and ROA respectively by 11.55 and 0.08 percent.

The study finds that leverage affects firm performance (ROE) negatively. Again, a percentage increase in leverage reduces firm performance (ROE) by 9.65 percent whilst it increases firm performance (ROA) by 0.02 percent. A percentage increase in GROWTH increases firm performance (ROE and ROA) by 49.19 and 0.20 percent respectively. A percentage increase in SIZE significantly reduces firm performance (ROA) by 0.02 percent.

The study also revealed that inflation and interest rates significantly affect ROA and ROE respectively. We found that at the 5% significance level, a percentage increase in inflation reduces firm performance (ROA) by 0.02% and similarly, a percentage increase in interest rate also reduces firm performance (ROE) by 7.46%.

Considering the second objective, the study revealed that at the 5% significance level, a percentage increase in dividend pay-out increases ROE and ROA by 11.55 and 0.08 percent respectively.

Addressing the third objective saw the estimation of the Wald causality framework. The test found that inflation and interest rates respectively drive ROA and ROE for Ghanaian firms.

6.2 Conclusion

Macroeconomics has stimulated academic and management discussions for decades, with varying findings. Though results of such a key area is necessary in guiding corporate policy, it has been lacking in the Ghanaian financial and economic literature.

The study therefore sought to fill this gap. It can be concluded that macroeconomics especially inflation and interest rates significantly impact firm performance in Ghana, specifically, ROE and ROA.

Also, inflation and interest rates significantly drive the performance of firms listed on the GSE. Hence, any variable that affects inflation and/or interest rates will also likely affect firm performance.

6.3 Policy Recommendations

Based on the findings of the study, firms are recommended to raise their current performance for a better performance in the future. This can be achieved by making effective use of all relevant information from the domestic and global economy in their decision making.

Such practice would cushion them from incurring debts and liabilities which may accrue higher interest rates to distort their equity returns.

Also, since inflation and interest rates drive firm performance, monetary policies must be geared towards stabilizing these variables where the economy seeks to see firms operating in it do well to grow the economy.

6.4 Limitations of the Study

The study was limited in one main area – Time.

Due to the limited time, the study could not make use of many observations to further enrich the findings. Future studies will and must endeavour to employ several data points for all companies listed on the GSE. This would provide a comprehensive view of the role of macroeconomics on performance of firms listed on the GSE.

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