ASHESI UNIVERISTY COLLEGE

THE EFFECT OF INVESTOR PROFILE AND TRUST ON STOCK MARKET EFFICIENCY: EVIDENCE FROM THE GHANA STOCK EXCHANGE (GSE)

By

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Declaration

Candidates Declaration

I hereby declare that this dissertation is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

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Date: April , 2014

Supervisor’s Declaration

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by Ashesi University College.

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Date: April , 2014

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Abstract

The Ghana Stock Exchange (GSE) is described as infant and immature but has seen improvements over the last decade. Nevertheless trust remains a big challenge to the GSE. Lack of trust if not checked might affect the GSE adversely. It could lead to a reduction in the numbers of listed firms, few stock trading, and hamper effective participation of individual investors. This research therefore seeks to find out how the kind of people who invest and the level of trust they have for the GSE affects the efficiency of the stock market. Using extensive data from questionnaires distributed to individual investors on the GSE, this study analyzes and tests the sign of the relationship between investor profile and trust on stock market efficiency. The dataset includes responses from the individual investors who answered questions about themselves and the GSE. The relationship is tested using empirical methods. The study showed that the relationship between investor profile and trust is positive but it is only trust that is statistically significant, supporting the view that stock market efficiency in Ghana can be associated with trust levels of the investor. The paper ends by recommending stepping up awareness campaigns and encouraging cross border listings to help boost activities on the GSE.

Keywords: Ghana, Ghana Stock Exchange (GSE), Market Efficiency, Trust, Investor Profile, Stock Markets.

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List of Acronyms

ANOVA – Analysis of Variance

CAPM – Capital Asset Pricing Model

CFA - Certified Financial Analysts

GSE – Ghana Stock Exchange

KYC – Know Your Client

SEC – Securities and Exchange Commission

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Chapter 1: Introduction

1.1 Background to Study

The role of long term capital towards development of a nation cannot be over emphasized. A well-organized capital market is essential for mobilizing both domestic and international long-term capital. In Ghana, a well-organized market can help generate capital towards the development agenda of the country. Central to the development of the capital market is an efficient stock market. Stock markets play an essential role in the development of national economies and hence the need to conduct research to reveal issues that will be addressed towards the improvement of the market.

In Ghana the stock market, which the Ghana Stock Exchange (GSE) encompasses a major part is an infant market. The GSE has however recorded performances such as a market capitalization of 56,357.95 million Ghana Cedis and an all-share index of 2,020.07 as at October 8, 2013 (Market Highlights, 2013). However, in 2012 the number of investors on the GSE reduced. Foreign investors reduced from 818 in 2011 to 624 in 2012 and domestic investors from 33,951 in 2011 to 31,904 in 2012. The reduction in the number of investors on the GSE basically implies that market conditions (e.g. the sale of assets to meet sudden needs of cash) are not favoring some investors. They might therefore decide to withhold their capital or invest in other markets or economies. It is therefore necessary to analyze the profiles of these investors in order to devise a means of keeping them on the GSE.

The profile of investors and understanding their investment culture can also contribute to market stability in response to various signals such as price changes and correlation across assets (Guiso, Hiliassos, & Jappelli, 2008). Financial practitioners also take interest in the composition of the stockholder base for a different reason. They typically have to make choices on groups to target in marketing financial products, and knowledge of the profile of current and potential stockholders allows them to identify groups that are likely to be responsive to opportunities for stock market participation, as well as those that are currently underrepresented (Guiso, Hiliassos, & Jappelli, 2008).

Practitioners in the stock market also seek to establish a relationship with investors so that they can get these investors to allocate capital to the stock market. The decision of practitioners and institutions of the GSE seeking to develop stronger relationships with current or prospective investors will increase the wealth of the stock market which all participants benefit from.

Furthermore, over the past decade, investors have suffered a crisis of trust in the form of corrections, bear markets and recessions around the world. These crises have shaken investor confidence in capital markets. The failure of the major investment institutions worldwide to uphold investor confidence in the liquidity, stability and value of their investments, and the inability to address risk, has initiated a comprehensive review of the core assumptions that investor's hold about the validity of customary business and economic practices (Guiso, Paola, & Luigi, 2005). Previously sacred standards and widely accepted truths are openly being challenged. The inadequacy of common management practices that serve as proxy for trust can therefore pose severe problems for the GSE. Trust is more than governance, risk and compliance. Trust is the subjective probability that individuals attribute to the possibility of being cheated (Guiso, Paola & Luigi 2005). Trust is also important for economic transactions.

Aside the kind of investors and the level of trust that exist in the stock market, the efficiency of the stock market is an essential determinant of growth of the stock market. Efficiency of the market is indicated by market capitalization and market turnover (Yartey & Adjasi, 2007). Market capitalization refers to the total market value of outstanding shares and is normally expressed as a percentage of the GDP of the country. Number of listed firms per market capitalization and market turnover; which indicates the level of liquidity of the market are crucial variables that are indicators for determining the development of a stock market. However, African markets are described to also suffer the problem of low liquidity; a key determinant of efficiency (Yartey & Adjasi, 2007).

The above described measures of efficiency are influenced by some factors and that might be causing the GSE to perform in such a manner. Factors such as the kind of investors on the bourse and their level of trust for the bourse may affect these market efficiency variables. If these issues are not revealed and addressed, the GSE may face serious crisis in the future although it may be performing well as at now. The GSE being an infant bourse has not faced any severe crisis or corrections. It is therefore necessary to analyze the exchange in order to reveal certain issues that can help cushion the bourse against such crisis. Key issues pertaining current investors; their income status, risk levels and the level of trust these investors allocate to the market and how these factors affect market efficiency.

1.2 Problem Statement

Although the GSE is described as one of the best performing stock exchange in the world in 2013 (Dzawu, 2013), there are some critical issues and challenges that if not addressed, will affect its development and performance. The Ghanaian stock market cannot also be described as efficient or matured since there are issues of trading in few stocks and issues of low volume and liquidity that accounts for a considerable part of market efficiency (Osei, 1998). Moreover, Odera (2012) described the GSE to suffer from disclosure deficiencies and supervision and monitoring by regulatory authorities is also inadequate. Trust then remains a big challenge to the GSE. Lack of trust if not checked might consequently affect the GSE adversely. It could lead to a reduction in the numbers of listed firms, few stock trading, and hamper effective participation of individual investors. To that effect, this research seeks to find out the role trust plays in determining the efficiency of the GSE.

Besides trust is based on investors' perceptions. It is therefore necessary to note the kind of investors (i.e. financial status, risk tolerance and investment horizon) and the level of trust they have for the GSE. This is important because when prospective and current investors perceive the stock market to be untrustworthy they might not invest or withdraw their capital on the GSE. Since there has not been any research on this subject in Ghana, this research seeks to provide information indicating the profile of investors and the relationship that exists between their trust levels and market efficiency. It will therefore be key reference point for decision making for practitioners, institutions and investors as well.

1.3 Research objectives

This study seeks to analyze Ghana's stock exchange by describing the profile of investors and the level of trust they have for the bourse and how that affects the efficiency of the GSE. The study will focus on individual investor profiles. The study has certain objectives it seeks to achieve:

The main objective of the study is to examine the effect of an investor's profile and trust on stock market efficiency.

Specific objectives are the following:

(a) To examine the relationship between an investor's profile and trust.

(b) To examine the effect of trust among the investing public on stock market efficiency in Ghana.

1.4 Research questions

In order to achieve all the objectives set some key questions have to be answered, serving the basis for drawing conclusions and making necessary recommendations that will improve the Ghanaian stock market. To this effect, the research questions are as follows:

(a) What is the impact of investor profile on trust?

(b) What is the effect of trust among the investing public on stock market efficiency in Ghana?

(c) What is the effect of investor profile and trust on stock market efficiency?

1.5 Scope of the Study

The study seek to investigate the effect of investor profile and trust on stock market efficiency. Market efficiency is defined in this study with three variables; market capitalization, turnover and profitability of the GSE. Capitalization being how stock prices reflecting the performance of firms. Turnover is capitalization per number of stocks which represents liquidity of the market. In other words how effective it is to sell to meet sudden needs of cash. Profitability on the other hand is the performance of the stock exchange in terms of rate of return of the entire GSE and how the bourse induces an investor to increase the percentage of his financial wealth that he or she would allocate to the stock market.

The decision to do business dwells heavily on trust (i.e. the reliance on another party or entity to act honestly). Whoever decides to allocate capital to the GSE will most likely operate via a broker, and that decision to keep money with someone (the entire bourse or broker) requires a certain level of trust and that will depend on the kind of person the investor is. The kind of people will be classified according to their risk levels, their investment objectives and their financial position. In simple terms the research seeks to find the relationship between the three variables; investor profile, trust and stock market efficiency. The study will be carried out in Accra the capital of Ghana where the GSE is located and operates. Accra is the most populous city, host most companies in Ghana and investment firms and all brokers for that matter. Investors most likely will live or operate in Accra.

1.6 Theoretical framework

This section presents some of the fundamental theories of finance as they can give some good starting insights in understanding how and why the stock markets work in one way or another in practice. This will aid in getting a clear understanding of the concepts that the paper addresses. Below is a review of the main ideas of Capital Asset Pricing Model (CAPM), Herding theory and Prospect theory.

1.6.1 Capital Asset Pricing Model

The CAPM is probably the most famous model in the discipline of finance, assuming that people are rational and that they should always stick to holding the optimal portfolio. One basic assumption of the model is that all investors are rationale and risk averse aiming to maximize economic utility. Also, the model assumes that investors can buy and sell unlimited amounts of securities at competitive market prices, in other words trade without any costs for tax or transactions. They can also lend and borrow without limits at the risk free interest rate. Finally the CAPM also assumes that all investors share homogenous expectations concerning the expected future returns, risk and correlations of the securities. It is also assumed that the new information is available to all investors at the same time (Brealey & Allen,2011).

Simply put, the optimal portfolio is the best diversified portfolio, assuming that maximizes return and minimizes risk. Every investor therefore seeks to maximze their return in any market and will have reservations about a market if they are not able maximize their return. An investor who perceives the market not maximize their economic utility may decide not to invest in the market.

1.6.2 Herding

Individual investors tend to gain interest in the same stock at the same time and tend to lose interest in the same stocks at the same time, something termed as herding behavior. According to Terrance Odean (2002) investors do not spend time to analyze stocks in the market; they tend to buy the ones that are already in the center of attraction. People wait for the stocks to draw their attention and buy it if it suits their preference. Therefore the individual investors are usually buying stocks that are circulating in the media or are traded in huge quantities. Herding behavior comes to light when investors think they do not have sufficient information and believe that the knowledge of other people can make the decision on investment easier and faster.

Insufficient information about the market poses a threat to trust and investors relying on the knowledge of others to make decisions will consequently affect the efficiency of the market. For instance if the stocks traded in huge quantities are few, investors will continue to trade in only those few stocks and that has implications for the market.

1.6.3 Prospect Theory

Prospect theory states that people value gains and losses differently and, as such, will base decisions on perceived gains rather than perceived losses. Thus, if a person were given two equal choices, one expressed in terms of possible gains and the other in possible losses, people would choose the former. It is also sometimes referred to as the loss-aversion theory, a phenomenon normalized in the prospect theory (Kahneman & Amos, 1979). According to the prospect theory, when the stakes are small relative to investor's wealth, the investors do not think in terms of wealth, they think in terms of what might be gained or lost. Moreover, people's attitudes to gains and losses are different. The prospect theory suggests how the human decisions under uncertainty are made in reality.

What the theory suggests with regards to the stock market is that, if individuals are in doubt about the market conditions or the actions of the participants but perceive gains in the form of returns or profits they will go ahead and invest in the market. What this means is that although an investor may not trust the market or have a certain profile, the investor is likely to invest because he or she perceives gains from the market.

1.7 Conceptual Framework

The conceptual framework below is developed on the ideas of theories described above and a review of existing literature.

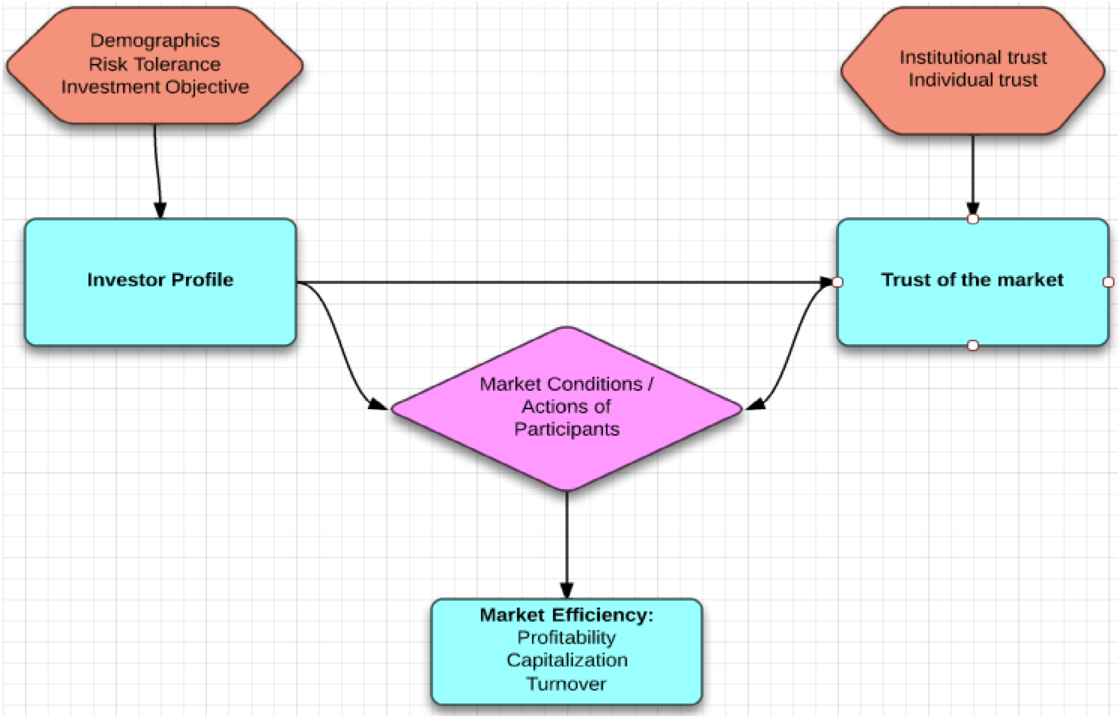

Figure 1.1: Conceptual Framework

The above model shows that Market Efficiency measured by Guiso et al (2005) as profitability, capitalization and turnover, will be enhanced given that there is general trust among the investing public. Guiso et al (2008) also analyzed the composition of European stockholders and explained that a key determinant of performance is the kind of people that exist on the stock market.

An investor's trust level is therefore influenced by the kind of person the investor is (i.e. risk tolerance, investment objective and demographics) and consequently how the investor reacts to market conditions influences the performance of the market (Bekaert, Harvey, & Lundbland, 2011). A trust-based explanation provides a new way to interpret the growing evidence that familiarity breeds in the stock market. Trust is however formed via both institutional (trust for the entire GSE) and individual trust (trusting the broker or another participant). The model shows that market efficiency will be enhanced if certain kinds of investors exist on the market and there is trust among the investing public.

1.8 Methodology

The purpose of this study is to measure the effect of trust and investor profile market efficiency, trust and investor profiles in Ghana. Market efficiency in this study is measured by profitability, market capitalization and turnover. The paper used mainly quantitative analysis. It adopted a cross sectional and a correlational study approach since the study seeks to describe the relationship between variables and because the research will happen at a point in time and not over a period. This design helped to establish whether a change in the independent variables (investor profile and trust) affects the dependent variable (market efficiency). The research also adopted descriptive statistics to describe the basic features of investors and the general distribution of respondents.

The study mainly used primary data by conducting a survey. Questionnaires were administered to investors, who answered questions about themselves. Indirect questions about the GSE were asked to measure their level of trust for the bourse and how the investors will react towards market conditions and that was used to indicate how market efficiency is affected by investors trust level and profile. Some personal interviews were conducted with industry professionals to gain insights on the subject matter; this formed the qualitative aspect of the research. Regression analysis was used to establish the kind of relationship that exists between the variables.

1.9 Justification of the study

Aside the usefulness of the findings of this research, there are will be serious implications for the GSE if this research is not conducted. It is necessary to conduct this research because trust forms an essential aspect of business but it is ambiguous when it comes to its impact on the efficiency of the GSE.

Furthermore the findings of the study will provide information to the investing public in order to aid them in their investment decisions. The findings will also bring out information for policy makers to take actions that will strengthen trust of the shareholders and business owners in the Ghanaian Stock Market. The study will seek to bring to light the challenges facing effective participation as a result of trust of the stock market, which once addressed will be of great importance to listed companies, financial institutions and the GSE in general. It will also help Bank of Ghana (BoG) and government in general to be able to implement efficient policies regarding redistribution and risk sharing across the different groups of investors. The study also seeks to add to literature on the Ghana Stock Exchange (GSE).

1.10 Outline of the Paper

This paper is organized in five main chapters, this chapter and four additional chapters. This chapter sets out to give a brief introduction and background to the study. Chapter 2 covers literature and these guides and shapes the paper. Chapter 3 covers the kind of study and the type of data that helps answer the research questions in chapter one. It basically consists of the methodology thus the operational definition of variables, the sampling strategy, and procedures and data collection instruments that will be used for the study.

Chapter 4 discusses the findings. The final chapter presents the conclusions and recommendations of the study that seeks to help add value to the GSE and improve market efficiency.

Chapter 2: Literature Review

2.1 Introduction

Stock market actors (households, firms and businesses, financial institutions and the state) depend on one another to conduct business in the stock market. Any of the market actors can act as a borrower and the investor, while the financial institutions play the role of the mediator in the market. The decision to keep capital in a particular stock market and not the other is an important decision that investors consider. The performance of the country where the stock market is located, the confidence the investor has for the stock market and the return the investor will make are all factors that the investor considers to make his or decisions (Bekaert, Harvey, & Lundbland, 2011). This concept is a key literature of the study since it gives a background to how stock markets operate.

Although financial practitioners tend to agree on issues such as the one described above, there are different arguments on some matters. This chapter therefore seeks to analyze and discuss the views of different practitioners pertaining the stock market, the concept of trust and factors affecting investment as a whole. It also reviews literature on investors or stockholders and their demographics.

2.2 Overview of Key Issues Affecting the Stock Market

Financial openness is often associated with higher rates of economic growth. The impact of openness on factor productivity growth however is considered more important than the effect on capital growth (Bakeart et al, 2011). This explains why the growth effects of liberalization or openness appear to be largely permanent, not temporary. Bekaert et al (2011) attribute these permanent liberalization effects to the role financial openness plays in stock market and banking sector development, and to changes in the quality of institutions. They also documented threshold effects: countries that are more financially developed or have higher quality of institutions experience larger productivity growth responses. Finally, they showed that the growth boost from openness outweighs the detrimental loss in growth from global or regional banking crises.

Lervine and Zervos (1998) also showed in their paper that stock market liquidity and banking development both positively predict growth, capital accumulation, and productivity improvements. The paper also finds that stock market size, volatility, and international integration are not robustly linked with growth, and that none of the financial indicators is closely associated with private saving rates. These show how essential the individual investor is to the development of the stock market and the economy for that matter. Lervine and Zervous findings are consistent with the view that through the provision of useful financial tools and responsible management of its own risks, the financial system can shield people from the impact of negative shocks and better position them to pursue opportunities (The World Bank, 2013).

2.2.1 Characteristics of Stock Markets in Developing Countries

Exploring what determines stock market development in developing countries has become a prominent area of research in recent years. Various factors have affected the development of the stock markets in developing countries making most of them immature markets.

In most of these markets, trading only occurs in only a few stocks which account for a considerable part of the total market capitalization. There also exist serious informational and disclosure deficiencies for other stocks (Odean, 1998). Supervision and monitoring by regulatory authorities is often far from adequate. African stock markets were established on the background of poor regulatory and legislative frameworks. This, among other things, explains why some of these markets lack the capacity to deal with capital market dynamics. Legislations to prevent insider trading are either inadequate or non-existent, and where they exist, enforcement is often poor. The inadequacy of insider trading laws on African stock markets has enhanced the perception that these markets are not efficient (Odera, 2012).

A study by Osei (1998) on the factors affecting the development of an emerging capital market, a case of the GSE, reveals that Ghanaian public lacks knowledge about the activities of the GSE and this affects investment in general. Osei also revealed that the regulatory framework is a key aspect of the development of the GSE and he proposes that a regular review of the legal and regulatory framework within which the investment laws operate is necessary to boost the confidence of investors. Issues Osei revealed were also regular with Odera’s (2012) and other literature on issues facing stock market in developing countries. Both Osei and Odera reveal very important factors that affect African stock markets including Ghana. The underlying reference was the confidence of investors for the markets, which eventually addresses the issue of trust. Trust therefore is a key determinant of the current state of the stock market.

2.2.2 Components of Stock Market Efficiency

Market capitalization is perhaps the most important criterion in assessing the size of a capital market. Market capitalization equals the value of listed shares divided by nominal GDP. The ratio has been widely adopted in the literature as a stable measure of stock market efficiency for various reasons, first; it is a proxy of the size of the stock market, which is positively correlated with the ability to mobilize capital and diversify risk. Secondly, it is presumed to include firms' past retained profits and future growth prospects so that a higher ratio to GDP signifies growth prospects and stock market development (Guiso, Paolo, & Luigi, 2005). The key weakness of this ratio is that a high ratio solely driven by appreciated value of few firms with little or no change in the amount of funds raised, and no change in the breadth of the stock market may be interpreted as stock market efficiency.

The number of listed firms has been used in the literature as a measure of stock market efficiency because it is a proxy of the breadth of the stock market, which is not subject to stock market valuation (Guiso, Paolo, & Luigi, 2005). The measure is adopted in this study but it is applied to the individual investor. Also, the number of listed assets reflected the breadth of the market that is not affected by movements in stock prices.

Furthermore, turnover ratio is measured as the value of total shares traded divided by market capitalization. It has been used in the literature also to measure stock market liquidity and development (Adelegan, 2008). High turnover is expected to indicate lower transaction costs. It would also be used to indicate the ownership rates of individual investors. However this measure is adopted in this study to understand how investors perceive or feel they are able to convert their assets to cash and vice versa.

2.3 Investor Profile and the Stock Market

Guiso, Hiliassos, & Jappelli (2008) studied the portfolios of stockholders in five major European countries (France, Germany, Italy, the Netherlands, and the United Kingdom). They analysed both direct and indirect stockholders. The study revealed that although government and private investors care about the profile of the European investor, three demographic characteristics stand out as being the most relevant. These three characteristics comprises the educational background of households, the household wealth distribution and the age of the household head.

The study however expanded that the ability of European stockholders to withstand stock market pressures will be influenced by their educational background. The research concluded that the kind of stockholders on the European market influence stability of the market, and also help determine the stock ownership and help financial institutions in targeting people they market their products to.

It shows how important it is to know the demographics of those who invest in a stock market in order to ascertain how best the market reacts to certain conditions and how to address those issues if they arise. For instance, individuals located in less affluent, less educated and ethnic minority neighborhoods invest more in funds with expensive load fees (Malloy & Ning, 2004). They also tend to invest a disproportionate amount in funds with no minimum balance requirements and find fewer funds to invest in. It is also evident that investors in these areas tend to trade significantly more or more likely to redeem their fund holdings each year. This is a critical issue to the study because if investors of such attributes exist on the GSE, they are likely to withdraw their funds when there is temporary stock market crash and that will cause other investors to do it according to the herding theory and this will tend to aggravate the crises.

In an attempt to measure the profile of socially responsible investors (SRI) and how different they are from a typical investor, Junkus and Berry (2010) surveyed a large group of US-based. Respondents were well-informed, individual investors and members of the American Association of Individual Investors. The survey respondents included both those who invest according to SRI principles, and those with no interest in SRI, to determine if demographic differences exist. The paper finds that the typical SR investor is female and more likely to be single, younger, less wealthy, and better educated than their non-SR counterparts.

Furthermore the consumption of stockholders is more volatile and more highly correlated with the excess return on the stock market (Mankiw & Zeldes, 1991). However, in order to ascertain the consumption of these stockholders and ascertain their sentiments there is the need to know the kind of investors that invest in the stock market. This is because investor sentiments affect stock returns and where there are high sentiments the category of stocks show relatively low returns (Baker & Jeffery, 2006). This shows how essential individual investors on the GSE are.

Provisional advisors such as brokers also need to understand the profiles of their clients in order to make recommendations on the kind of assets they invest in. Investors perceived risk attitude and socioeconomic variables influence their investment objectives such as the investment horizon (Cavezzali & Rigoni, 2012). Professional advisors must therefore know their clientele profiles in order to make the best decisions that their clients will consider satisfactory. The findings of the above papers justify why the research objective combines investment horizon and risk tolerance to determine investor profile. In Ghana, the Know Your Client also pays attention to these two variables.

2.4 Trust and the General Investment Environment

There have been some interesting pieces of analysis, which shows the impact of trust on investment that has been upheld by many as quite considerable. For instance a study by Bottazzi, Dan Rin and Hellmann (1998) looks at the venture capital markets in which trust is particularly important. They examined the impact of generalized views on trust between nations in Europe on the amount of venture investments across borders, between countries. The Euro barometer survey showed which countries trusted each other. Europeans trusted Scandinavian and Dutch more than they trust Southern Europeans. Overall, there is a strong and positive effect of trust on investment. And it also affects the nature of contacts, with more flexible contracts, which seem to be generally beneficial, put in place when trust is highest.

A study on 'Trust in financial Markets' by Colin Meyer (2008) also notes that equity market loomed in early parts of the last century on the basis of the informal relationships of trust, rather than as statute. Meyer also noted that "it is easier to legislate for investor protection than it is to achieve effective enforcement of investor protection and still harder to promote the conditions for relations of trust".

2.4.1 Trust and the Stock Market

It is widely acknowledged that trust plays a central role in the way in which financial services organization present themselves to customers (Ennew, 2008), and this is particularly apparent in stock markets. Research by Guiso Luigi, Paola Sapienza and Luigi Zingales (2005) suggests that true insights into the root causes of a nation's financial strengths or weakness lies in trust. They noted that trust increases the probability of direct participation in the stock market. Trust captures investor optimism, in that optimistic investors may be induced to participate in the stock market by their inflated expectation of returns. Trust in essence explains why even the rich may choose to keep themselves out the stock market even if they can afford to pay the participation cost.

Trust is defined as the subjective belief about the likelihood that a potential trading partner will act honestly (Guiso et al, 2005). People distinguish between two different types of trust; the generalized and personalized trust. The former is about the preconceptions people of one group have for people from another group while the latter concerns the evolving relationship between two specific agents.

In a business sense, much of the discussions about the meaning of trust have its origins in literature relating to organizations and organizational analysis (Ennew, 2008). There are a variety of approaches to understanding the concept of trust and a variety of definitions (Sheppard & Sherman, 1998). Trust depends on the existence of risk thus if the outcomes of a particular actions are certain, then there would be no need of trust. Trust also depends on interdependence between parties. If parties or actors are not somehow dependent on each other, there is no need to trust. Trust is associated with vulnerability: risk and interdependence creates vulnerability. Trust involves confident expectations about future behaviors: a party will only accept vulnerability in the presence of strong expectations of the positive future behavior of another party (Sheppard & Sherman, 1998). Some form of trust is likely to be inherent in most relationships: few relationships are or can be characterized by complete certainty of complete contracting.

Thus, it is apparent that a common view of trust would suggest that it is concerned with an individual's willingness to accept vulnerability on the grounds of positive expectations about the intentions or behavior of another in a situation characterized by interdependence and risk. Existing perspectives of trust suggests that this willingness to be vulnerable may arise from a calculation of cost and benefits, an individual's existing predisposition to trust, a detailed knowledge and understanding of the stock exchange and faith in the related institutions in the market.

As long as there is vulnerability, risk and interdependence associated with investing in the stock market, then there will be a role for trust. From the perspective of an investor, investment in the stock market can be complicated because of the variety and complexity of the investments available and the difficulty of making comparisons. Despite the developments of the stock market in Ghana, there are, nevertheless, a considerable variety of investment products making investment in the stock market nothing less than complicated.

In addition, the term "trust" and "confidence" are often used as synonyms though there are distinct differences. Confidence is the overriding objective for investors, and investors can attain sufficient level of confidence in an investment by either trusting the issuer's management to optimize performance or by controlling management actions (Todd, 2007). Contrary to this view Odean (1998) states that overconfidence however increases expected trading volume, increase market depth and decreases the expected utility of over-confident traders. This affects volatility and price quality depending on who is overconfident. Overconfident traders can therefore cause markets to underreact to the information of rational traders.

Stock market in Ghana is generally considered unappealing to some companies and accordingly are unwilling to invest in stock markets (participate in IPO's). The difficulty associated with investing in the stock market are compounded by the inability to judge how well the investment will perform in the future, investors can only assess the outcome once.

2.4.2 Trust and Stock Market Efficiency

Guiso, Sapienza and Zingales (2008) conducted a study that examined Dutch and Italian micro data to establish that countries with high prevailing trust exhibit on average high stock ownership rates, consistently with the fact that prospective investors in low-trust countries perceive a higher probability of being cheated. Guiso, Sapienza and Zingales also showed that less trusting persons are less likely to buy stock and conditional on buying stock they will buy less. This shows how if measures are not taking to improve trust for the Ghanaian stock market, participation will reduce overtime.

When the average level of trust is low, for any given level of return, investors are more reluctant to invest and to attract them; price-earnings ratios should fall and if they do, entrepreneurs are less interested in floating their companies or even in selling pieces of them to private investors (Giannetti & Koskinen, 2010). In places where trust is scarce, corporations are reluctant to broaden their shareholder base. An investor needs some trust even when he buys a stock indirectly, through a mutual fund, a broker, or a bank. While the presence of an intermediary reduces the need for information; synonymous to trust, it also increases exposure to cunning conduct of the intermediary.

2.5 Conclusion

From opinions of the various scholars' it is evident that investor profile and trust must be taken into consideration while looking at development of the stock market in Ghana given that the markets are information markets. Information about investors risk levels and investment objective are essential determinants of the level trust for the market and this will influence their behavior in terms of whether to continue investing or not.

Chapter Three: Methodology

3.1 Introduction

The purpose of this paper is to study the effect of investor profile and trust on stock market efficiency. This section of the paper is the methodological section, which covers research design, data source, and methods of data collection, data analysis and tools and limitations of the study.

3.2 Research Design

The study used a cross-sectional study because the study happened at a point in time, not over a period; and correlational study since the emphasis is on showing the relationship between variables (Trochim, 2005). The research sought to show whether indeed market efficiency on the GSE (measured by profitability, capitalization and turnover) is influenced by investor profile and trust. This design will therefore help to establish whether a change in the independent variables (investor profile and trust) affects the dependent variable (market efficiency).

The research also adopted descriptive and analytical statistics to establish the relationship and define the basic features of investors such as their income levels, accommodation status and level of education. The research adopted a mixed method in collecting data by combining unstructured interviews with an experimental design using questionnaires. The questionnaire asked a series of questions to determine trust levels and the components of investor profiles; investment objective and risk level. This also helps reduce the noise in the data.

3.3 Hypothesis

The conceptual model described in the Introduction chapter expects that there investor profile and trust has an effect on market efficiency. This is backed by the literature as discussed earlier. A quick review is the herding theory, which explains that when investors think they do not have sufficient information and believe that the knowledge of other actors, they will buy stocks already in the center of attraction (Odean, 1998). This implies that investors will trust actors such as brokers and will buy stocks they are already buying. A high trust for market actors and conditions means buying more stocks and this consequently affect efficiency. Based on the description giving to the conceptual framework (refer to Figure 1.1) the alternative hypothesis for the study is:

H_A: Investor profile and trust has an effect on market efficiency in Ghana.

However, it must be noted that trust is the main variable the study seeks to find its impact on market efficiency. Investor profile is also a key variables since it is a key determinant of performance and investors' trust levels may be influenced by it (Guiso et al, 2001).

3.4 Study Area and Data Source

The study area is mainly individual investors of the GSE. Institutional investors were left out on the basis of the preferential treatment they get from brokers and GSE because of the worth of their investments. The study mainly used primary data from questionnaires administered to 68 sampled investors in Accra. A household drop-off and a dual media (i.e. respondents printing and filling out questionnaires) method of survey were used in administering the questionnaires. Interviews were also conducted with three industry professionals: a financial advisor at a brokerage firm, a finance lecturer and the head of broker-dealers and advisors at SEC. They were interviewed on their thoughts and comments on market efficiency, investor trust for the market and ways to improve efficiency on the stock market.

3.5 Sampling Method

Purposive sampling was used to single out the industry professionals on the GSE on the basis of their field, availability and willingness to provide necessary information. However in selecting individual participant, snowballing was adopted where participating investors referred other investors. The initial investors who participated were selected randomly from top brokerage firms such as Databank, HFC, IC securities and Gold Coast Securities. As indicated earlier a total sample of 68 individual investors responded to the questionnaire.

3.6 Research Instruments and Data Collection Tools

Primary data formed the core of the study. However, as indicated in literature some research was conducted as a means of gathering data on investors and trust and primary data and surveys were mainly used.

The primary research tool that was mainly used is questionnaires. Questionnaires were administered to investors, who answered questions about themselves and indirect questions about the GSE to measure their level of trust for the bourse. Interviews were also conducted for some industry powers in Ghana to probe their thought on the subject matter.

Questionnaires collected and extracted information on investor profile and opinions about the GSE. Although the research does not provide the opportunity to motivate respondents to participate or to answer a question, no pressure was exempted on respondents since it can be completed at their convenience. The questions being asked in these questionnaires are not direct questions that participants will answer. The questions seek to probe participants' reactions to certain market situations and their perceptions about their brokers and the market.

For instance with the aim ensuring that investors gave their true opinions on how they trust the market statements such as "The transactions on the stock exchange are transparent" are made. Investors will therefore answer using the five point Likert scale, where 5 means strongly agree; 4 means agree; 3 means neither agree nor disagree; 2 means disagree;1 strongly disagree. Their responses were used to determine their trust levels and how they perceive market efficiency on the GSE. For market efficiency, liquidity for example, statements such as "I am able to sell my assets to meet sudden needs for cash" were made and the investors weighed it based on the Likert scale. Weights concerned with particular questions were summed up and averaged to arrive at the specific value for a particular respondent.

3.7 Data Analysis Tools

The data analysis tool, SPSS was used in analyzing the data. The data obtained from the responses of the investors was used to run a regression to establish whether investor profile and trust (independent variables) actually has an effect on market efficiency (dependent variable). The weights assigned to the responses to every individual investor set the basis for running the regression. Below is the regression Model

$$Yi = ui + a\ INVPROi + \beta\ TRUCAPi + \varepsilon i$$

Where *i* represent each investor, *ui* the fixed effect of each investor and *εi* being error. Level of trust, *TRUCAP (T3)* is scalar from a series of questions. Trust was measured in two levels, interpersonal trust and institutional trust.

INVPRO is the investor profile, which is a vector of the following variables

Z1 = investment horizon

Z2 = risk level

Investor profile also considers some other factors such as the financial wealth, employment status and further factors that will affect the other classifications. Respondents however do not know the weights allocated to their responses since this may influence their choices.

3.8 Operational Definition of Variables

Stock Market Efficiency: This was measured mainly on the grounds of profitability, capitalization and turnover and also indicating liquidity according to Guiso et al (2005).

Profitability is the performance of the stock exchange in terms of rate of return of the entire GSE and how the bourse induces an investor to increase the percentage of his financial wealth that he or she would allocate to the stock market

Capitalization is how investors perceive prices reflect performance of the GSE.

Turnover is how well an investor is using its total stock to produce gains. In other words how frequent assets are sold to meet sudden needs of cash and vice versa.

These variables are measured from the investors' perspective. Questions were indirect and probed the investors to answer them using the Likert Scale. For instance, they rated the GSE with a statement like "I am able to sell my assets to meet sudden needs for cash" to determine how liquid they perceive the market.

Investor profile: The demographics and preferences (i.e. risk tolerance and investment objective) of any person who commits capital to the stock market.

Demographics is indicated by financial standings and other basic information about the investor.

Risk tolerance is the level of variability in returns of an investment that the investor can withstand.

Investment horizon is investor's goal and how long he or she decides to allocate capital to the stock market.

Investor profile is the characteristic of an investor, so they responded to questions that those responses were and averaged to form a scale equivalent to the Likert scale. For instance to determine investors' risk levels scenarios such as this was provided: Imagine that in the past three months, the overall stock market lost 25% of its value. An individual stock investment you own also lost 25% of its value. What would you do?

Trust is the perception of the investor about the possibility of actors (brokers and participating institutions) in the stock market acting honestly, and taking decisions that are mutually beneficial to all parties.

Interpersonal trust is the confidence in a broker to act honestly and take mutual advantages that is beneficial to the investor.

Institutional trust is the reliance on institutions such as Securities and Exchange Commissions (SEC), investment banks and the GSE to have the structures that will regulate operations to prevent dubious activities such as insider trading and punishing wrong doers.

Still using the Likert scale, indirect questions were asked to probe investors' responses to determine their trust levels. As discussed in the Research Instruments and Data Collection section, statements such this were made: "The legal framework in place is conducive for the proper operation of the exchange". Investors rated what they thought of the GSE using the Likert scale (see Appendix II for full questionnaire).

3.9 Limitations of Study and Ethical Considerations

The research posed some limitations during its implementation. The scope of the study is a limiting factor since market efficiency can be influenced by some other factors aside trust and investor profile and there was no control group. However, as discussed earlier, the design was done in such a way that internal validity was not flawed.

Another limiting factor is the unwillingness of some investors to answer questions which they deemed personal and interfering with their privacy. Some investors also just answered some questions and left the rest unanswered. However most people answered the questionnaire understood that their confidentiality is assured after reading the consent form (see Appendix I). There were also those who started answering the questions but stopped in the process because they felt the questionnaire was bulky and time consuming.

Some respondents also delayed in answering the questionnaire. This limitation posed a threat because the data gathering took longer than expected resulting in cutting down the number of respondents. The initial plan was to sample 90 individual investors but after a very exhaustive data collection process and considering the time constraint, the number was reduced to 68. The time and budget for the research were also constraining factors for not sampling institutional investors.

Although there were limitations, it did not disrupt the core framework of the research. The strong measures taken helped in eliminating the hindrances to ensure a successful research.

Respondents participated voluntarily in the research without any form of cohesion whatsoever. Participants were made to read to the consent before responding to the questions. The consent form clearly outlined the procedures, benefits, risks, confidentiality issues and the rights of the participant.

Chapter Four: Data Presentation and Analysis

4.1 Introduction

This chapter deals with the findings of the study. A discussion of descriptive and inferential statistics was done. The data was collected from selected individuals involved in the stock market, using both questionnaire and interview methods. Questionnaires were distributed to 68 respondents. The findings are summarized from primary and secondary sources, presented in tables, frequencies, mode, mean, correlation and percentage contributions. This chapter has two sections, where the first section presents the demographic features of the sample used in the study whereas the second section presents the findings and examination of the study variables.

4.2 Descriptive Statistics

The demographic features are represented using simple frequencies, showing respondents' monthly income, sex, age, marital status etc. Cross tabulations were used in on the demographics such as sex and monthly income. They give an insight into the nature of the sample and can be used to as a way representing how individual investors on the GSE look like. They however do not answer the research questions but gives a basis for answering them.

4.2.1 Gender of Respondents

Gender of Respondents	Frequency	Valid Percent
Male	48	71%
Female	20	29%
	68	100%

Table 4.1: Gender of Respondents

Majority of the respondents were male (71%), possibly indicating the need to bring more women on board to participate in the growing financial sector in Ghana especially the Stock Exchange. Sex of respondents was considered as an important factor since gender balance is up-to-date. Encouraging the participation of both sexes will help optimally utilize the available capacity from both sexes that will be beneficial to the efficiency of the GSE.

4.2.2 Age of Respondents

Most respondents where in the 18-29 year old (61%) group. The youth will therefore play a very essential towards the development of the Ghanaian financial sector and the stock market for that matter. Interestingly, none of the sampled investors ages above 60. This was expected due to the risky nature of the stock market, and pensioners' therefore would not like to allocate their money to the market. Although other stock markets may have investors older than 60, according to the sample, the Ghanaian stock market may not have much of such investors.

Age	Frequency	Valid Percent
45-59	4	7%
30-44	22	32%
18-29	42	61%
	68	**100%**

Table 4.2: Age of Respondents

4.2.3 Monthly Income and Investments of Respondents on the GSE

The tables below show a summary of the monthly incomes of respondents and how much they choose to invest on the GSE.

Monthly Income	Frequency	Valid Percent
Below GHS2000	50	74%
At least GHS 2000 but less than GHS3500	12	18%
At least GHS3500 but less than GHS6000	6	9%
	68	**100%**

Table 4.3: Monthly Income of Respondents

Investment on GSE	Frequency	Valid Percent
Below GHS1000	54	79%
At least GHS1000 but less than GHS2500	4	6%
At least GHS2500 but less than GHS5000	4	6%
GHS 5000 above	6	9%
	68	**100%**

Table 4.4: Amount Invested on the GSE by Respondents

A majority of the respondents (74%) have indicated that they earn a monthly income below GHS2000 and a majority (79%) has investments worth less than GHS1000 on the GSE. Income levels and amount invested according to Guiso, Hiliassos, & Jappelli (2008) is one relevant demographic characteristic that government and private investors care about. Revealing such characteristics will therefore aid institutions in their decision-making processes.

4.2.4 Other Descriptive Statistics

The study also revealed certain demographic characteristics such as educational background, employment status and marital status. It is interesting to note that 100% of sampled investors have either gone through undergraduate or post-graduate studies. Guiso, Hiliassos, & Jappelli (2008) in their paper, *The Profile of European Investors* indicated that the ability of investors to withstand stock market pressures will be influenced by their educational background. Having such an indicator showing that individual investors have at least a college education is good but whether or not they are aware of investments and financial practices is another issue. This also indicates that individuals who are uneducated or have no formal education but the capital to invest on the GSE are not participating or do not have the incentives to participate.

Furthermore, 91% of the sampled investors were employees, 6% unemployed and 3% were self-employed. It is fascinating to note that some unemployed individuals would like to still commit their capital to the stock market regardless of the risky nature of market. It is very important to note that the number of self-employed individuals compared to employees is very low. There is the need for institutions on the GSE to pay attention to this and encourage self-employed individuals to participate on the GSE. Also 74% of investors were single and 26% were married.

4.3 Main Findings Relating to Objective of Study

The section presents the main findings of the research that relates to the research objective. The components of the objectives of the study were described separately before finally presenting and analyzing the main objective.

4.3.1 Correlation Coefficients between Investor Profile, Trust and Stock Market Efficiency

Correlation analysis is used to establish the strength of the linear relationship between the two random variables. Correlation ranges between -1 and +1, and is a measure of co-movements (linear association) between two random variables. Two random variables are positively correlated if high values of one are likely to be associated with high values of the other. They are negatively correlated if high values of one are likely to be associated with low values of the other. Table 4.5 below shows the correlation coefficients of the research variables.

	Investment Horizon	*Risk Tolerance*	*Trust*	*Market Efficiency*
Investment Horizon	1			
Risk Tolerance	0.12	1		
Trust	0.21	0.26	1	
Market Efficiency	0.14	0.21	0.54	1

Table 4.5: Correlation between Research Variables

4.3.2 The Relationship between Investor Profile and Trust

One of the specific questions this research seek to uncover is the relationship between investor profile and trust in the stock market. From Table 4.5 above the relationship between investor profiles and trust cannot be described as a strong relationship looking at the correlation coefficient, r of both investment horizon (r= 0.21) and risk tolerance (r=0.26). Although a combination of both will give a rise to a strong r, that conclusion will not be made since they are both independent of each other. The relationship between the two variables however is a positive one. Figure 4.1 and 4.2 below describes the scatter of investors' investment horizon and risk tolerance respectively to their trust levels.

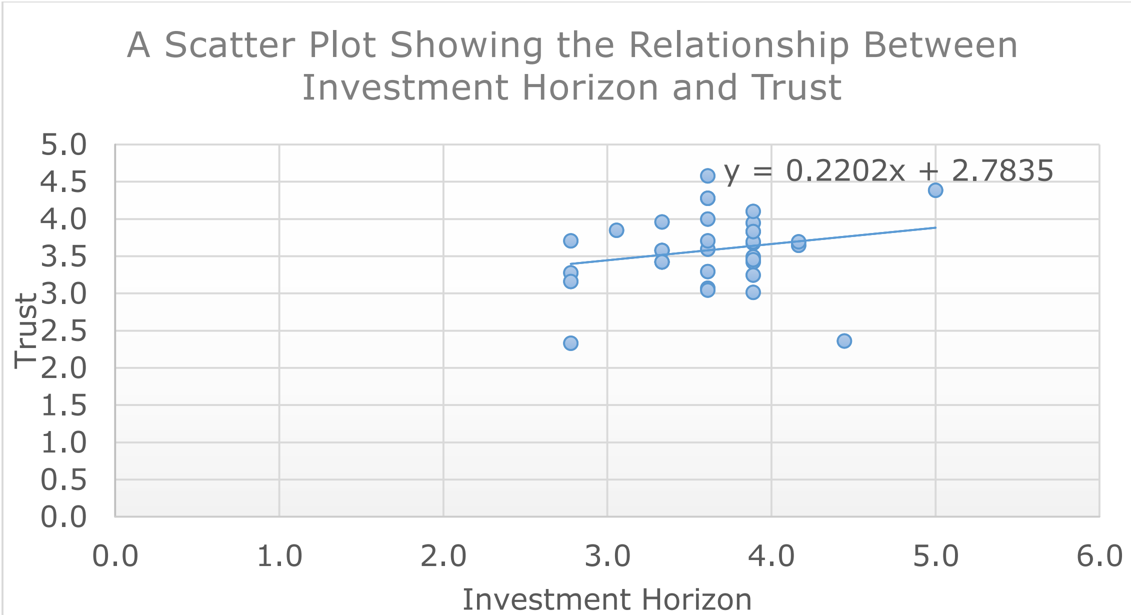

Figure 4.1: A Scatter Plot Showing the Relationship between Investment Horizon and Trust

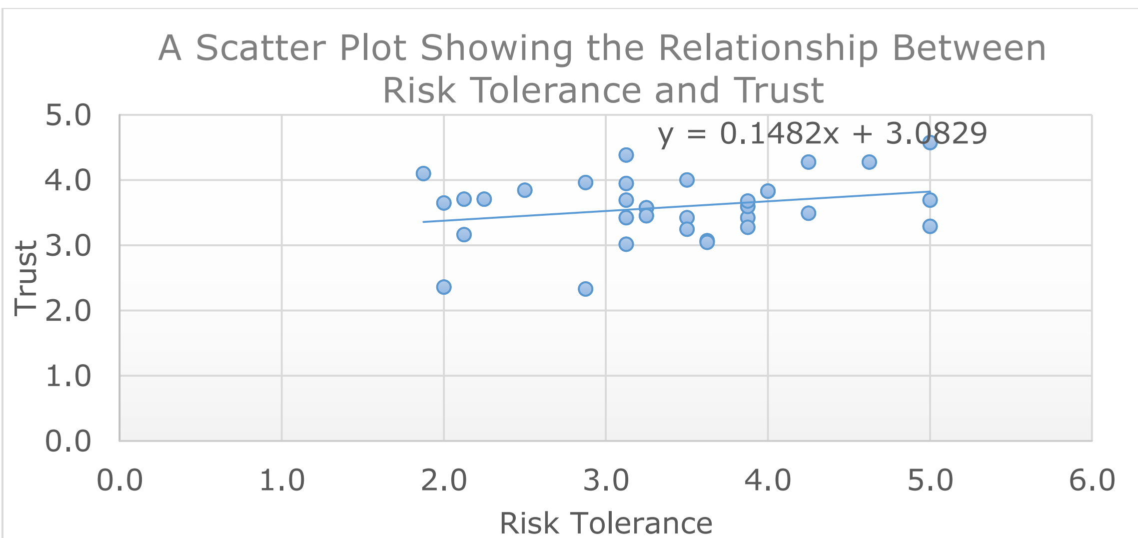

Figure 4.2: A Scatter Plot Showing the Relationship between Risk Tolerance and Trust

It is interesting to note that although risk tolerance has a stronger correlation than investment horizon, investment horizon has a greater slope. In conclusion there seems to be a little relationship between investor profiles and their level of trust. In other words, if an investor's investment horizon or risk tolerance changes there will be a very low impact on trust levels of that investor.

4.3.3 The Effect of Trust among Investors on Stock Market Efficiency

A significant aspect of this research as illustrated by the conceptual model is to understand the effect of trust on stock market efficiency. Referring to table 1.4 above, we can conclude that there is a strong and significant effect of trust on stock market efficiency. The correlation coefficient of 0.54 ($p\text{-value} < 0.01$) between trust and market efficiency indicates a strong relationship between these two variables. This basically means that if trust is improved, stock market efficiency in Ghana is likely to improve as well. In Figure 4.3 below, the slope ($b=0.74$) indicates by how much market efficiency will improve if there is a unit change in the trust level of an investor. Maintaining trust therefore, can be considered important towards improving stock market efficiency.

This finding is consistent with Guiso et al (2005) research that suggests the financial strength of a nation relies on trust for the nation. This implies that market efficiency relies heavily on trust and serious attention should be paid to it.

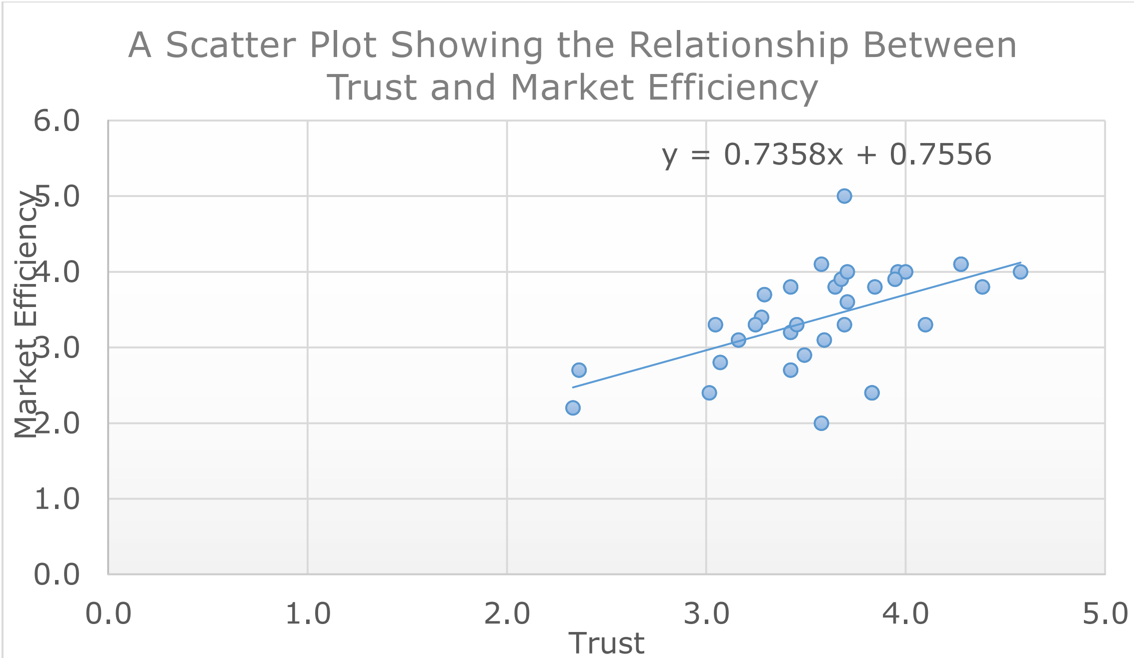

Figure 2.3: A Scatter Plot Showing the Relationship between Trust and Market Efficiency

4.3.4 The Effect of Investor Profile and Trust on Stock Market Efficiency

This part of the study seeks to examine the main objective thus the effect of investor profile and trust on stock market efficiency. The analysis was done from the perspective of the investor using the regression model and an analysis of the variance (ANOVA) table.

The regression model made simple:

$Y = u + a_1Z_1 + a_2Z_2 + \beta_3T_3 + \epsilon$

Y= market efficiency as perceived or described by investors

u =the constant

$Z1$= Investment Horizon

$Z2$= Risk Level

$T3$ = Trust level

ϵ = error term

The study seeks to evaluate this model i.e. to find Z1, the effect on market efficiency for every one-unit increase in an investor's investment horizon, to find Z2, the effect on market efficiency for every one-unit increase risk level of an investor and also T3, the effect on market efficiency for every one-unit increase in trust levels. The regression was used to establish the strength of independent variables and the dependent variable, which is Market efficiency. It is specifically used to establish combined effect of the independent variables on the dependent variable.

After running the regression model, the conclusion is that there was no strong relationship between investor profiles and market efficiency but a very strong relationship between trust and stock market efficiency. Below is what the regression model presented;

$$Y = 0.55 + 0.06Z_1 + 0.04Z_2 + 0.70T_3$$

The intercept of .55 suggests that in the absence of Z_1, Z_2, and T_3 investors normally perceive the market to be efficient 0.55. According to the herding theory, all other investors and prospective investors will also rate the market to be efficient at this level and may decide to buy stocks or not. Adding on, for every one-unit increase in an investor's horizon, market efficiency will increase by 0.06 units. For risk tolerance, a unit change in it causes a 0.04 change in market efficiency.

Trust on other hand had a very strong effect on stock market efficiency. From the equation it depicts that a unit change in an investors trust level will bring about a 0.70 change in market efficiency. Table 6 below is the regression summary output table, which presents more evidence of the existing effect of the investor profile and trust and stock market efficiency.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.5457
R Square	0.2978
Adjusted R Square	0.2648
Standard Error	0.5737
Observations	68

ANOVA

	Df	*SS*	*MS*	*F*	*Significance F*
Regression	3	8.9319	2.9773	9.0454	0.0000
Residual	64	21.0657	0.3292		
Total	67	29.9976			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.5473	0.6885	0.7949	0.4296	-0.8281	1.9227
Investment Horizon	0.0606	0.2529	0.2395	0.8115	-0.4446	0.5657
Risk Level	0.0367	0.0527	0.6972	0.4882	-0.0685	0.1419
Trust	0.7014	0.1506	4.6582	0.0000	0.4006	1.0022

Table 4.6: Regression Summary Output

Looking at the key aspects of Table 6, more goes to indicate the strong relationship between trust and stock market efficiency while at the same time affirming the little relationship between stock market efficiency and investor profile. For instance, the p-value of Trust is less than 0.01, which indicates how significant trust can be used to explain stock market efficiency. The multiple regression equation was significant; however not all the variables had a significant impact on the result.

In other words when the independent variables (investor profiles and trust levels) are jointly regressed against the dependent variable (market efficiency) an adjusted R^2 is generated which indicates combined predictive strength by the independent variables. In our case it is 26.48 %, (F-value 9.05, Sig. 0.00); we can conclude that 26% of the variance in the dependent variable has been significantly explained by the independent variables. There is a less than 0.00 percent chance of this not holding true. The beta coefficient indicates individual predictive strength. A higher the beta coefficient indicates a bigger causal effect. The greatest predictor of the variation in relation to the magnitude of the beta coefficient is Trust (Beta =0.70, t=4.66).

Overall the analysis suggests that low levels of trust will negatively affect the efficiency of the stock market measured by profitability, capitalization and liquidity. This was consistent with what was expectations of the conceptual model and ideas of Guiso et al (2005) and Bekaert et al (2011). Although according to Guiso et al (2001) investor demographics is key determinant of performance of the stock, investor profile in this study is not significant to market efficiency and trust but it has a positive relationship with them.

4.4 Other Findings

The data from respondents showed that total trust stood at 244 out of a possible of 340. This worked out to be 72% of the overall trust rate as per the opinions of the investors. Total trust is the average of the combination of interpersonal trust and institutional trust. Interpersonal trust defined as the confidence in a broker to act honestly and take mutual advantages that is beneficial to the investor. Institutional trust on the other hand is the reliance on institutions such as Securities and Exchange Commissions (SEC), investment banks and the GSE to have the structures that will regulate operations to prevent dubious activities such as insider trading and punishing wrong doers.

Below is the chart showing the percentage distributions of each group of trust. A further breakdown of the different groups is also discussed below.

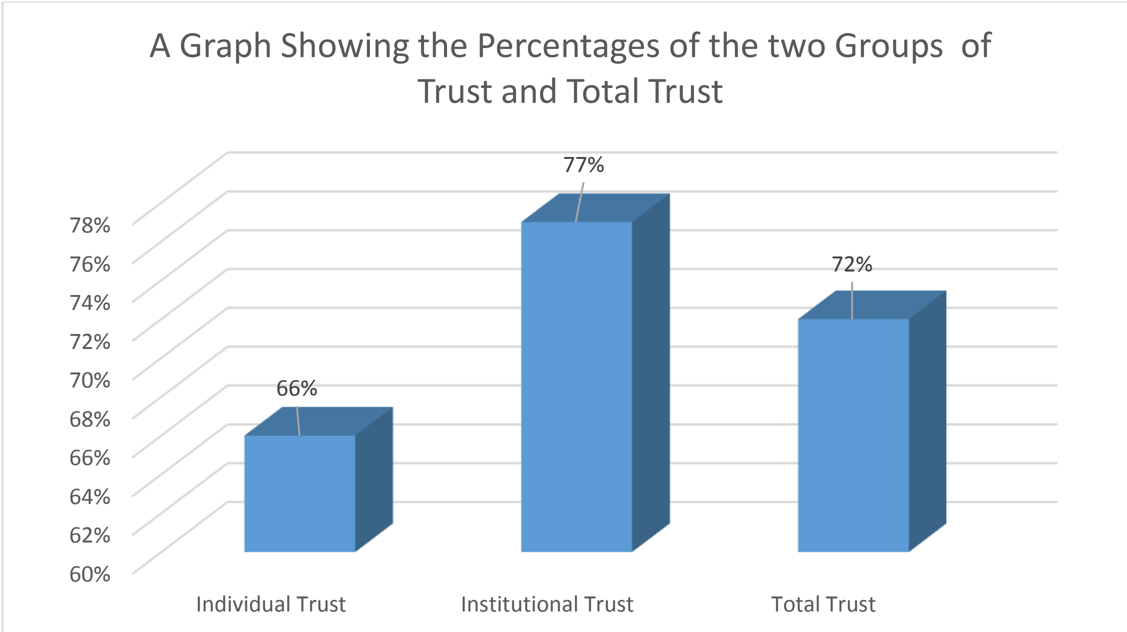

Figure 4.4: A Graph Showing the Percentages of the two Groups of Trust and Total Trust

The Figure 4.4 above indicates how investors tend to think that the general activities and management on the GSE is trustworthy than dealings with the broker. This is a key finding because according to Glaeser et al (2000) people tend to trust individuals they feel closer. Based on this, we initially assumed that people will tend to trust their brokers more than the entire market. However this proved otherwise; investors had more trust for the institutions that regulate the market and the entire market than individuals (i.e. brokers). Figure 4.5 below indicates that 71% of respondents had a strong trust individual trust while Figure 4.6 shows that 91% had a strong trust level for the institutions.

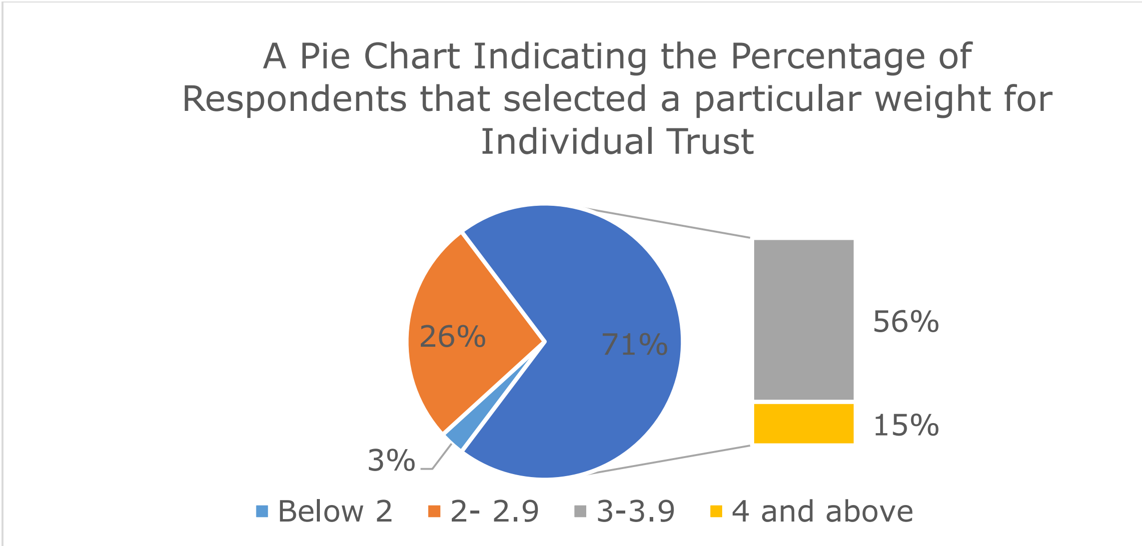

Figure 4.5: A Pie Chart Indicating the Percentage of Respondents that selected a particular weight for Individual Trust

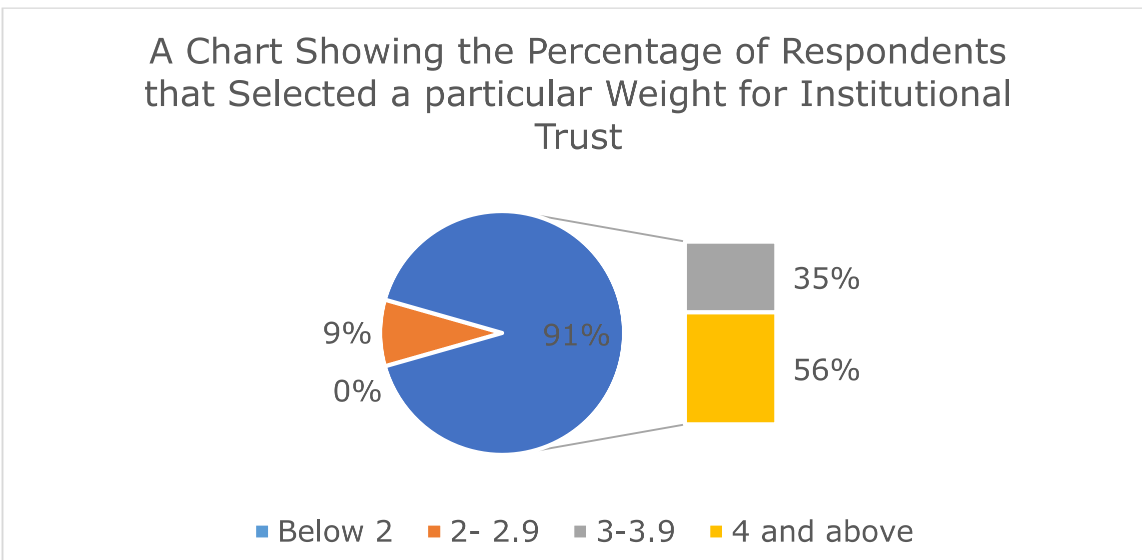

Figure 4.6: A Pie Chart Showing the Percentage of Respondents that selected a particular Weight for Institutional Trust

Chapter Five: Conclusions and Recommendations

5.1 Introduction

This chapter discusses the findings in chapter four in relation to the objectives of the study, reviewed literature and the interviews conducted with industry professionals. The conclusion of the findings and literature is that the Ghanaian stock market is not entirely efficient since there are discrepancies in terms of capitalization and liquidity. In essence this research has shown that all these can be explained to some extent by the investors profile and their trust levels. Although investor profiles do not have a strong significance on market efficiency, it is still a very key aspect of market since it adds up to the entire significance of the study. Trust on the other hand forms a significant component of market efficiency, as per the results of this research. Recommendations will be made to suggest ways to increase trust on the stock market thereby increasing market efficiency.

5.2 Key Findings

There was a positive correlation between investor profile and trust. This implies that the kind of individuals based on their investment horizon and risk tolerance will influence their trust levels for the stock market. Similarly one of the industry professionals interviewed stated that an investor with a high level risk who allocates money to the GSE and loses heavily will not be ready to invest again if they do not understand how the market really operates.

Furthermore, there was a strong significant positive correlation between trust and Stock Market efficiency. This implies that if trust is improved then Stock Market efficiency is likely to be boosted in Ghana. Despite the existence of

Securities Exchange Commission to oversee activities and reforms in the financial sector in Ghana, trust has remained a big challenge to the efficiency of stock market. This is evidenced by the low and slow stock market participation by the investing public and the level of market capitalization. At the moment there are only 36 listed equities on the GSE (Securities and Exchange Commission, 2012). The head of Broker-Dealer & Advisors at SEC also described that the overall assessment of the quality of transactions indicates low levels of trust among the key players. There is need to pay attention to every detail to ascertain capacity since most investors do not participate in the market after buying assets.

According to the results, the greatest predictor of the variation in relation to the magnitude of the beta co-efficient is Trust. Trust of the stock Market is very important for economic transactions. Lack of Trust if not checked may result to declining numbers of listed companies per year, decreased market capitalization, reduced stock traded and turnover percent, which in turn will hamper effective stock market participation. According to the probit model in the capital market analysis, not only does trust increase the likelihood an individual invests in stock, but it also increases the share of wealth invested in stocks, conditional on investing in them (Myres, 2001).

5.3 Conclusions

In order to prevent the adverse effects of investor profiles, awareness programs should be introduced to both existing and prospective investors of the stock market. Awareness creation will therefore be a key aspect addressing issues that arises from having a certain profile. For instance, an investor that has a long term profile who is aware of the operations of the stock market should not withdraw when the frequent fluctuations in the market. However the Know Your Client (KYC) of most brokerage firms in Ghana has shown to be very shallow.

Moreover Rooij and Lusardi (2007) argue that lack of understanding of economic and financial information is a significant deterrent to stock ownership and lack of literacy prevents households from participating in the stock market. Additionally broadening the investor base lowers the cost of raising external capital for issuers and increases revenue for distributors and this can be done by mailing, advertising in the financial press or with direct contact to potential investors. The GSE needs to have a special unit that handles awareness and they have to work hand in hand with brokers. Awareness should not only be concentrated on getting people to the market but in making them financial literates as well.

Guiso and Jappelli (2005), provide evidence that lack of trust affects stock market participation. The determinants of awareness, and they reveal the probability that survey respondents are aware of stocks, mutual funds and investment accounts is positively correlated with education, household resources, long-term bank relations and proxies for social interaction, and concluded that lack of financial awareness has important implications for understanding the stockholding puzzle and for estimating stock market participation costs (Guiso et al, 2001).

In conclusion the inefficiencies in the Ghanaian stock market is driven partly by the kind of investors on the market and to a great extent by their trust levels. There is therefore the need for individual businesses to consider how they can form inter-company linkages, harness and use them to improve sharing of knowledge and best practices. Trust affects economic transactions in the Ghanaian stock market and will pose serious problems if not managed properly. Affirmative actions can be taken by government through sponsoring staff on professional courses like the Certified Financial Analysts (CFA). This will help boost the individual trust.

5.4 Recommendations

In summary, the study recommends stepping up the awareness campaigns, restructuring the curricular to have stock market studies in high school that focuses on financial literacy and to have a more flexible tax system for firms listed on the exchange. Government should also make it a policy to divest through the stock exchange instead of looking for a strategic partner. The locals should be targeted first before any foreign investors are brought on board when it comes to selling local company shares. This will help boost the confidence of the domestic investors since there will be more activity because more firms are listed.

The GSE should also encourage cross boarder listing. Cross border listings will boost activity on the exchange and at the same time assure investors that activities of the GSE will be monitored by other investors and institutions outside Ghana. Brokerage firms need to also have an extensive method for determining clients' profiles because the KYC is too shallow and to a large extent does not help determine the real profile of the investor. Brokers also need to have personal conversations with their clients and develop a strong relationship with their investors to boost confidence in the brokers' decisions and recommendations.

The study concentrated on the stock exchange. However further research needs to be carried out on why investors opt out of the stock market. Further research also needs to be carried out on the reason behind the low propensity to list stocks on the stock market. Also the link between the other financial institutions like banks, money markets and the stock exchange in terms of complimenting each other have to be explored.

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Appendix

Appendix I: Consent Form

Consent to Participate in Research

Introduction and Purpose

My name is Edmund Afeyram Dugbaza. I am student at the Ashesi University College, Berekuso, working with my faculty advisor Mr. Anthony Essel-Anderson in the Business Administration Department. I would like to invite you to take part in my research study, which concerns the effect of investor's profile and trust on stock market efficiency using evidence from the Ghanaian Stock Exchange (GSE).

Procedures

If you agree to participate in my research, I will conduct a questionnaire and/or an interview with you at a time and location of your choice. The questionnaire will last for about 10 -15 minutes and the interview about 15-25 minutes. With your permission, I will audiotape and take notes during the interview. The recording is to accurately record the information you provide, and will be used for transcription purposes only. If you choose not to be audiotaped, I will take notes instead. If you agree to being audiotaped but feel uncomfortable at any time during the interview, I can turn off the recorder at your request. Or if you don't wish to continue, you can stop the interview at any time.

I expect to conduct only one interview; however, follow-ups may be needed for added clarification. If so, I will contact you by mail/phone to request this. The follow up will last for just a few minutes. It will just be a built up question on the first one.

Benefits

There is no direct benefit to you from taking part in this study. It is hoped that the research will help provide information that will be used to enhance performance of the GSE.

Risks/Discomforts

Some of the research questions may make you uncomfortable or upset. You are free to decline to answer any questions you don't wish to, or to stop the interview at any time. As with all research, there is a chance that confidentiality could be compromised; however, we are taking precautions to minimize this risk.

Confidentiality

Your study data will be handled as confidentially as possible. If results of this study are published or presented, individual names will not be used, unless you give explicit permission.

To minimize the risks to confidentiality, the data will be stored on hard disk that will be encrypted and there will be limited access to the records as well.

When the research is completed, I may save the tapes and notes for use in future research done by myself or others. The same measures described above will be taken to protect confidentiality of this study data.

Compensation

You will not be paid for taking part in this study.

Rights

Participation in research is completely voluntary. You are free to decline to take part in the project. You can decline to answer any questions and are free to stop taking part in the project at any time. Whether or not you choose to participate in the research and whether or not you choose to answer a question or continue participating in the project, there will be no penalty to you or loss of benefits to which you are otherwise entitled.

Questions

If you have any questions or concerns about this research, please feel free to contact me. I can be reached at +233540607639 or afeyram@gmail.com.

This research protocol has been reviewed and approved by the Ashesi University Human Subjects Review Committee. If you have questions about the approval process, please contact Chair, Ashesi University HSCR, (rdouglass@ashesi.edu.gh).

CONSENT

I have read and understood the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

You will be given a copy of this consent form.

If you wish to participate in this study, please sign and date below.

______________________________	______________________________
Participant's Name	Email or Phone number
______________________________	________________
Participant's Signature	Date

Appendix II: Questionnaire for Individual Investors

Please spare some time and respond to the following questions.

Section A: Investor Profile

Section 1: Personal Information

a. Basic Information

1. What is your gender? Male ☐ Female ☐
2. What is your age?
   60 and over☐ ☐ 30-44☐ 18-29☐
3. What is your marital status?
   Married ☐ Single ☐ Divorced☐ Widow ☐
4. What is your level of education?
   No formal Education ☐ Basic/Senior High☐
   Undergraduate ☐ Post-graduate ☐
5. How many children do you ☐
6. What is your employment status?
   Self-Employed/Business Owner ☐ Employee ☐
   Retired ☐ Unemployed ☐
7. Do you own a home?
   Yes☐ No ☐ If no please state your accommodation status: ……….
8. a. Do you invest on other stock exchanges aside the GSE? Yes ☐ ☐ No
   b. If no, do you plan of investing in other stock exchanges? Yes☐ ☐ No

b. Financial Position

1. How much is your net monthly income?
   ☐Below GHS 2000
   ☐At least GHS 2000 but less than GHS 3500
   ☐At least GHS 3500 but less than GHS 6000
   ☐GHS 6000 and above
2. How much is your investments on the GSE?
   ☐Below GHS 1000
   ☐At least GHS 1000 but less than GHS 2500
   ☐At least GHS 2500 but less than GHS 5000
   ☐GHS 5000 and above
3. How much do you allocate to other investments apart from the GSE in a month (excluding savings at the bank)?
   ☐Below GHS 1000
   ☐At least GHS 1000 but less than GHS 2500
   ☐At least GHS 2500 but less than GHS 5000
   ☐GHS 5000 and above
4. How much of your monthly income do you save in the bank?
   ☐Below GHS 750
   ☐At least GHS 750 but less than GHS 1500
   ☐At least GHS 1500 but less than GHS 2500
   ☐GHS 2500 and above

5. In 2013 how much did you generate as a result of activities on the GSE?
   - [ ] Below GHS 750
   - [ ] At least GHS 750 but less than GHS 2000
   - [ ] At least GHS 2000 but less than GHS 3750
   - [ ] GHS 3750 and above

Section 2: Investment Horizon

1. How long have you been investing on GSE?
   - [ ] Less than 3 years
   - [ ] 3- 6 years
   - [ ] 7 years or longer
2. How would you describe your investments on the GSE?
   - [ ] Short term
   - [ ] Medium term
   - [ ] Long term
3. What is your primary financial goal?
   - [ ] Safeguard the principal amount
   - [ ] Maximizing income return
   - [ ] Long-term wealth accumulation
4. Five years from now, what do you expect your standard of living to be?
   - [ ] Decrease
   - [ ] The same that it is now
   - [ ] Improve
5. What is your current requirement from your portfolio?
   - [ ] I need a substantial amount of return
   - [ ] I need a small to moderate amount of return
   - [ ] I need little or no return from my portfolio
6. What do you seek to do with the returns generated from your portfolio on the GSE?
   - [ ] Receive all returns
   - [ ] Receive some and reinvest some on the GSE
   - [ ] Reinvest all returns on the GSE

Section 3: Risk Tolerance

1. If you received a substantial amount of money, how would you invest it?
   - [ ] In an investment that would provide safety of principal and low return
   - [ ] In something that offered moderate income with a moderate amount of risk
   - [ ] In something that offered potential for high total return with a high amount of risk
2. Consider the scenario below:
   Imagine that in the past three months, the overall stock market lost 25% of its value. An individual stock investment you own also lost 25% of its value. What would you do?
   - [ ] Sell all of my stocks
   - [ ] Sell some of my stocks
   - [ ] Do nothing
   - [ ] Buy more stocks

3. Which of the following statements best describes your reaction if the value of your portfolio suddenly declined by 20%?
   ☐ I would be very concerned, because I cannot accept fluctuations in the value of my portfolio
   ☐ If I still have more assets than what I initially invested, it would not bother me
   ☐ I invest for long-term growth, but would be concerned about even a temporary decline
   ☐ I invest for long-term growth and accept temporary fluctuations due to market influences
4. You are on a TV game show and can choose only one of the following options. Which would you take?
   ☐ GHS 1,000 in cash
   ☐ 50% chance at GHS 5,000
   ☐ 25% chance at GHS 10,000
   ☐ 5% chance at GHS 100,000
5. Two weeks before you leave for your dream vacation, you lose your job. You would:
   ☐ Cancel the vacation
   ☐ Take a more modest vacation
   ☐ Extend your vacation
   ☐ Proceed as scheduled

Section B. Trusting the GSE

Here are a number of statements that describe what you expect or get from the GSE. Using the scale below please answer the questions that follow.
Where 1-strongly disagree; 2-disagree; 3-neither agree or disagree; 4-agree; 5-strongly agree

Section 1: Interpersonal trust

[The following statements are in no particular order]

	Statements	1	2	3	4	5
1	I believe my broker gives me the best possible advice he or she can					
2	My broker clearly explains the reasons behind the investments he or she recommends on the GSE					
3	My broker clearly explains how I can make or lose money on the investments we discuss on the GSE					
4	My broker will recommend the product that is best for me even if it means less money for the broker					
5	There are some things about my finances that I just won’t tell my broker					
6	I believe my broker is legally bound to put my best interests ahead of his or her own					
7	My broker tells me all the costs before asking me to buy or sell an investment on the GSE					
8	My broker tells me how much they get paid for the investments I buy on their recommendation					

9	The best way to know if my broker is looking out for my best interests is by looking at how much money I make or lose					
10	I rely on my broker to decide which investments are best for me					
11	I always accept my brokers' advises					
12	I blame my broker for my losses					
13	I make all the decisions regarding my investment and simply use the broker to make the trades					

Section 2: Institutional trust

	Statements	1	2	3	4	5
1	Institutions and individuals operating on the GSE live by the code of ethics or conduct within their respective companies					
2	I have confidence in the transactions of the other supporting institutions to the exchange such the Securities and Exchange Commission, Licensed Dealing Members, etc.					
3	The agents of the stock exchange are well trained and know what they are doing					
4	The transactions on the stock exchange are transparent					
5	The legal framework in place is conducive for the proper operation of the exchange					

Section C: Market Efficiency

	Statements					
1	I plan to continue investing if operations and regulations on the GSE stay the same					
2	It is profitable to invest on the GSE					
3	The returns on my portfolio from investing in the GSE are higher than those from other investments					
4	On average the performance of my investments has improved over the years due to activities on the GSE					
5	On the whole my financial wealth has improved as result of operations with or on the GSE					
6	If there is the same investment opportunity on other stock exchanges as the GSE, I will take up the opportunity on the GSE					
7	The stock prices on the GSE reflect a fair value of the current performance of the listed companies					
8	I will increase the proportion of my total wealth invested on the GSE even if my monthly income remains the same					
9	I am able to sell my assets to meet sudden needs for cash					
10	I am more optimistic about investments on the GSE than investments outside Ghana					

Appendix III: Interview Guide Questions for Industry Professionals

1. Do you think the kind of investors (i.e. investors risk tolerance, investment objective and financial position) affect their level of trust for the GSE?

2. If yes, what do you think are the reasons for this and what should be done to control its effect?

3. What is your impression about the Ghanaian Stock Market in terms of its efficiency?

4. What do you think motivates investors to allocate their money to the GSE apart from returns?

5. Do you agree that the investors' level of trust for the market affects the efficiency of the market?

6. If yes, what do you think enhances trust?

7. What suggestions would you make to address trust in order to improve the efficiency of the GSE?

8. What other factors can be considered to be the causes of stock market inefficiencies?

9. Who are the main stakeholders needed to be involved to increase investors trust levels and efficiency of the market?

10. What are your impressions about the performance of the Ghanaian bourse and what do you think is the way forward?

11. What other thoughts do you have on the issues discussed?

Appendix IV: List of Brokers on the GSE

CAL BROKERS LIMITED

CDH SECURITIES LTD

DATABANK BROKERAGE LIMITED

EDC STOCKBROKERS LIMITED

FIRST ATLANTIC BROKERS LTD

GN INVESTMENTS LIMITED

HFC BROKERAGE SERVICES LTD

IC SECURITIES (GHANA) LIMITED

MERBAN STOCKBROKERS LIMITED

NEW WORLD SECURITIES

NTHC SECURITIES LIMITED

PRUDENTIAL SECURITIES LTD.

SDC BROKERAGE SERVICES LTD.

SIC BROKERAGE LIMITED

STRATEGIC AFRICAN SECURITIES LTD.

WORLDWIDE SECURITIES LIMITED

AFRICAN ALLIANCE SECURITIES GHANA LIMITED

LIBERTY SECURITIES LIMITED

FIRSTBANC BROKERAGE SERVICES LTD.

SBG SECURITIES GHANA LIMITED

CHAPEL HILL DENHAM SECURITIES GHANA LIMITED