UNIVERSITY OF CAPE COAST

RELATIONSHIP BETWEEN INFORMATION ASYMMETRY AND INDIVIDUAL INVESTORS' DECISION ON INVESTMENT

BY

COMFORT EWUSIE AIDOO

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Dissertation submitted to the Department of Finance of the School of Business, College of Humanities and Legal Studies, University of Cape Coast in partial fulfilment of the requirements for the award of Master of Business Administration Degree in Finance.

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DECLARATION

Candidate's Declaration

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

Candidate's Signature …….. Date……

Name: Comfort Ewusie Aidoo

Supervisors' 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 the University of Cape Coast.

Supervisor's Signature…….. Date……

Name: Prof. Anokye M. Adam

ABSTRACT

This research is aimed at assessing the relationship between information asymmetry and individual investor's decisions on investment in Ghana. Specifically, the study identified the determinants of information asymmetry, investment decision-making process by the individual investors, factors that influence investment decision and how information asymmetry affects investment decisions. The research employed quantitative with explanatory and descriptive research designs. A sample size of 280 individuals who undertake investment formed the basis from which primary data were collected from. The results showed that quality of financial statements; product market share and third party's opinion were the major determinants of information asymmetry. Many investment decision-making processed were also followed by the investors. Financial information of the investing firm; previous performance of the investing firms' stock were the leading factors that affect investment decision. There was positively significant association between information asymmetric and investment decisions. The study concluded that there are many determinants of information asymmetric and information asymmetric is influenced by some factors. As there is an improvement in information asymmetry, investment decisions are also well determined. The study recommended that investors have to focus more on the opinions from third parties and also enrich their information asymmetry.

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DEDICATION

This work is dedicated to Mr. Zacharia Obodai Torgbor. He has been my endless source of support and encouragement throughout this journey of life. Thank you for being a blessing to me and the family. Remain blessed to be a blessing onto others, too.

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CHAPTER ONE

INTRODUCTION

This chapter introduced the research. It handled the research background as well as the problem statement. Objectives developed for the research, research questions, significance of the study and the research limitations are discussed in this chapter

Background of the study

In the context of investment decisions, information plays a crucial role. It provides investors with the necessary knowledge and insights to make informed choices about where to invest their money. Having access to accurate and reliable information is essential for making effective investment decisions. Information symmetry refers to a situation where all parties involved in an investment have unequal access to the same information (Bharath et al., 2009). This ensures fairness and transparency, allowing everyone to make decisions based on the same set of information. When there is information symmetry, investors can trust that the playing field is level, and their decisions are based on a comprehensive understanding of the investment opportunities (Madun, 2009).

On the other hand, information asymmetry occurs when one party possesses more information than the other party. This imbalance in information can create advantages for those who possess more information, as they are able to make decisions based on insights that others do not have. This can lead to inefficiencies

and potentially unfair advantages in the investment market. Kulkarni (2000) suggests that information asymmetry creates a gap in information among different individuals. This gap presents opportunities for those with more information to take advantage of the situation and potentially benefit from their knowledge. This can be a concern for investors, as they may be at a disadvantage if they do not have access to the same information as others.

To navigate this challenge, it is advisable for investors to be well-informed and gather enough information before making investment decisions. By doing thorough research and seeking reliable sources of information, investors can enhance their decision-making process and potentially mitigate the negative effects of information asymmetry. It is worth noting that with the advent of the internet, there is a vast amount of information available to investors. However, not all sources of information are equally reliable. Some sources may have questionable quality or provide misleading information. Therefore, investors should exercise caution and carefully evaluate the credibility and accuracy of the information they rely on (Madun, 2009).

Modigliani and Miller (1958) argued that, in the absence of information asymmetry, firms can make effective investments by undertaking projects with a positive net present value. However, previous research suggests that the presence of asymmetric knowledge may reduce investment inefficiency for two main reasons. First, conflicts between principal agents can lead to deviations from effective investment. Managers may prioritize their own interests over making

optimal investment decisions in line with shareholders' interests, which can result in misaligned decisions (Jensen & Meckling, 1976). The presence of information asymmetry limits the shareholders' ability to monitor the managers, increasing the risk of under or over investments. The second reason for investment inefficiency is the imperfections in the capital market. These imperfections provide opportunities for external capital suppliers and insiders with information asymmetry to exploit the situation. This means that those with privileged information may use it to gain an advantage in the market, potentially leading to suboptimal investment decisions.

According to Kisaka (2015), investors encounter a wide range of information in their decision-making process. This information includes financial news from the media, quantitative data in the form of financial data, and various variables such as recent economic indicators, investor suggestions, stock index returns, and information obtained from the internet. Kannadhasan (2015) points out that investment decisions are influenced by multiple factors, including reported accounting information, individual risk profiles, and prominent market characteristics. Wyatt and Frick (2010) found that, in addition to accounting details, factors such as sunken costs and preferences for asymmetrical risk (where the potential benefits or losses are not equal) also play a significant role in investment decision-making.

In the year 2000, the United States witnessed major corporate bankruptcies, including Global Crossing, WorldCom, and Enron. These incidents shed light on the importance of financial analysis and information asymmetry in investment

decision-making. Mehta and Chaudhari (2016) argue that personal investment decisions are consistently influenced by both information asymmetry and market conditions. These events underscored the need for investors to carefully consider the quality and reliability of information, as well as the prevailing market conditions, when making investment decisions.

Phansatan et al. (2012) presented conflicting findings when it came to the trading efficiency of retail traders, indicating that they generally exhibited weaker performance. On the other hand, institutional investors were found to possess knowledge advantages over other types of investors, leading to enhanced investment performance and outcomes. Obamuyi (2013) highlighted that in developing countries, investor considerations are influenced by factors such as the establishment of structured financial markets, government holdings, past stock performance, marketability of stocks, the desire for quick wealth accumulation, and expected corporate earnings.

Jagongo and Mutswenje (2014) observed that investors tend to rely more on market noise and media in their decision-making process. They also found that information asymmetry played a significant role in these investment decisions. Additionally, professional investors tended to focus more on technical and fundamental analysis, often overlooking portfolio analysis, which is more specific in nature.

Information asymmetry is influenced by various factors, including insider trading (Comerton-Forde & Rydges, 2006), stock return volatility (Krishnamurthy

& Subrahmanian, 1999), and trading volume (Bharath et al., 2009). Additionally, Easley et al. (1996) highlighted the importance of the likelihood of informed transactions, while analyst predictions (Krishnamurthy & Subramanian, 1999) and firm size (Chae, 2005) also contribute to information asymmetry. This information asymmetry is often associated with risky securities.

The prevalence of information asymmetry poses challenges for companies, leading them to prefer internal sources of funding rather than relying on external sources. Recognizing the significance of information asymmetry and its impact on investment decisions, this research focuses on assessing the relationship between information asymmetry and investment decisions specifically with individual investors from the banking sector in Ghana.

Problem Statement

The investigation of information asymmetry and its impact on investment decisions is a worldwide concern. This issue has implications for both managers and investors. It is important to recognize that some of these managers and investors may not fully understand the significant relationship between information asymmetry and the investment decision-making process.

Making accurate investment decisions in the Ghanaian market remains a significant challenge for companies and investors. Currently, there is a lack of comprehensive knowledge that would enable investors and firms to make informed investment choices. False information asymmetry can have detrimental effects on investment decisions, but it is often difficult for investors to identify and avoid it.

For instance, Kroger (2004) pointed out that the collapse of Enron in 2001 led to a loss of USD$61 billion for investors. However, the false information asymmetry at Enron went undetected until its collapse, as analysts were unable to identify it. It is the responsibility of investors to actively seek out false information asymmetry, and exercising professional judgment and care is necessary to detect such false information (Jagongo & Mutswenje, 2014). Interpreting and addressing false information asymmetry can be less straightforward and more complex, requiring careful analysis and evaluation.

Numerous investors face challenges in making successful financial decisions due to the absence or limited availability of information asymmetry. The lack of access to relevant information can hinder their ability to benefit from investments. However, effectively managing information asymmetry can lead to improved profitability and long-term survival for investors. Failing to address this issue poses a significant threat to their existence. Despite efforts to mitigate investment failures by considering factors such as trading volume information, stock return volatility, and trading investment, the number of investment failures continues to rise. As a result, investor trust in Ghana has recently experienced a decline.

Despite the importance of improving investment decisions in Ghana, there is a lack of research that specifically focuses on the role of information asymmetry in investment decision-making. Many of the existing studies in this area have been conducted in foreign contexts such as the United States, India, and China. However,

it is important to recognize that the investment environment in Ghana has unique and distinctive characteristics. Existing studies on investment, such as those conducted by Jagongo & Mutswenje (2014), Waweru (2010), and Muthama, Mbaluka & Kalunda (2013), have predominantly examined broader economic and behavioral factors that influence investor decisions.

The existing studies have not specifically examined the role of information asymmetry and its impact on investment decisions. Moreover, the limited studies on information asymmetry and investment decisions have produced varying and inconclusive results. Many of these studies have also overlooked important determinants of information asymmetry that influence investment decisions. This research aims to bridge these research gaps by considering additional factors that affects information asymmetry and their effects on investment decisions among individual investors of financial institutions in Ghana. Additionally, while existing studies have primarily focused on retail investors, this research focuses on investment decisions among individual investors from financial institutions in Ghana.

Purpose of the study

The main purpose of the reserach is geared towards assessing the relationship between information asymmetry and individuals' investment decisions among individual investors from financial institutions in Ghana.

Objectives of the study

To achieve the main purpose of this study the following research objectives are generated;

1. To investigate the factors that affect information asymmetry among individual investors from financial institutions in Ghana.

2. To analyze the investment decision-making process by the investors from financial institutions in Ghana.

3. To examine the factors that affect decisions on investment by the investors from financial institutions in Ghana.

4. To examine the relationship between information asymmetry and individuals investment decisions.

Research Questions

1. What are the factors that affect information asymmetry among individual investors from financial institutions in Ghana?

2. What investment decision making processes are employed by the individual investors from financial institutions in Ghana?

3. What factors influence decisions on investment by investors from financial institutions in Ghana?

4. How does information asymmetry relates with individuals' investment decisions in Ghana?

Significance of the study

The findings from this reserach which entails the factors that affect information asymmetry, investment decision making process and how information asymmetry affects investment decisions is beneficial for different stakeholders such as investors, firms and for other researchers. For investors, it revealed to them the factors that affect information asymmetry in order to depend on such information to make sound decisions on investment. By documenting the views of the investors on their investment decision process, it would inform other investors on how information asymmetry affects investment decisions.

In addition, this study initiated investors to give due emphasis on investment decision from the identified factors of information asymmetry. By getting to know the factors which affects the information asymmetry and how it relates to investment decision helped the investing firms and investors to concentrate on the best factors for good investment decision rather than investing anyhow. In terms of academia, this study served as information for future researchers to help minimize the literature gap in the context of Ghana.

Delimitations of the study

The scope of this study is narrowed towards the factors that affect information asymmetry and investment decision making process and the relationship between information asymmetry and investment decisions are covered in this study. However, the perceptions of information asymmetry and investment

decisions knowledge areas that include, investment risks management, numeracy, and other investment practices were not covered in the study.

Limitations of the Study

This study has some limitations. One of it is that the survey instrument quantitatively assessed the factors that affected information asymmetry, decision making process on investment and factors that influence investment decisions; subjectivity degree affect that collectd data. In addition, there was the possibility of obtaining information which is diluted from the participants.

Lastly, the method adopted for the research does not has the power to handle all the complexities of the link between information asymmetry and the factors that affect investment decisions that have to be resolved. This study focused on only individual investors in Kumasi.

Organization of the study

This study is divided into five different chapters. The first chapter presents the introduction of the research. This consists of the research background, the research problem statement, objectives, research questions, brief overview of methodology, scope of the research, significance of the reserach, limitations of the reserach and organization of the reserach. Chapter two is the review of literature, which look at research works performed by various researchers relating to the topic. Chapter three is the methodology. The fourth chaper focused on the analysis of data

and discussions. The fifth chapter considered the summary of findings, conclusion and recommendations from the results of the study.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This part provides the review of research works that have been previously done to have bearing on this study. It includes review of theories, review of findings from other works, and the conceptual framework.

Theoretical Review

There are a variety of theories that relate to information asymmetry and investment decisions. Two theories are noted to have direct relation to this research. These theories are the prospect theory and the agency theory. A discussion of the theories pertaining to the research are below.

Prospect Theory

Tversky and Kahneman developed the prospect theory in 1992. According to the theory, people have different feelings in response to loss and wins. According to the theory, individuals experience more stress when faced with potential losses than they do when faced with comparable rewards (Trepel, Fox & Poldrack, 2005). According to the theory, profits appear smaller compared to a loss, and income loses worth as it gets deeper inside individual's wallets.

Prospect theory makes an additional effort to shed light on why investors hang onto failing stocks by claiming individuals frequently undertake greater risks in their effort to avoid loss compared to an effort to make profits. Applying this

theory towards the Indian market, Chandra and Kumar (2011) discovered the fact investors, like lost gambling who boost the ante to try to recover what they lost, willfully hang onto hazardous equity holdings under the hopes that costs will rise.

Furthermore, using this theory, Jagongo and Mutswenje (2014) found individuals are inclined to value their possessions above how much individuals would typically be prepared to offer for them, notwithstanding having reasonable desire to reap the rewards of any risks individuals undertake. In order to understand why investors choose options about their investments depending upon information they learn from investment companies, it is crucial to understand the theory of prospects. For example, many individuals liquidate their top-performing shares and hang upon the failing stocks because they think that current failures might beat current winners in the near future.

The idea was appropriate for this research since it is common for individuals to chase volatile markets by purchasing alternatives that are under limelight or drawing greater awareness. When applied to investment decisions, prospect theory suggests that investors are more sensitive to potential losses than gains. This leads them to take on excessive risks to avoid losses, which may result in suboptimal investment choices. Understanding prospect theory can help investors become aware of their biases and make more rational decisions that align with their long-term financial goals.

Agency theory

In the field of venture finance, the agency theory elucidates the dynamics of investment partnerships where an agent acts on behalf of a principal (Jensen & Meckling, 1976). This theory explains the presence of information asymmetry when the business seeking funding possesses more information than the venture capitalist regarding planned operations, true intentions, and product quality (Dehlén et al., 2014). According to Osnabrugge (2000), information asymmetry can give rise to challenges such as adverse selection and moral hazard. Adverse selection refers to the situation where the organization seeking financing deviates from the agreed investment contract, while moral hazard pertains to the agent's failure to represent their capabilities due to their informational advantage. Information asymmetry occurs when the organization seeking funds exploits its informational advantage in order to secure the funds.

The organization seeking funding aims to create a perception of high value, but the venture capitalist needs to ascertain the organization's true value before making an investment (Cohen & Dean, 2005). In this context of investment partnerships, it is assumed that the two parties have a separation of ownership and control. Furthermore, assuming that both parties are utility maximizers, this misalignment can lead to conflicting priorities and interests between the principals and the agent (Jensen & Meckling, 1976). To address agency issues and information asymmetry, venture capitalists can employ mitigation techniques

(Jensen & Meckling, 1973; Sohl, 1999). These mitigation strategies often include processes like agreement flow, due diligence, and initial screening.

There is limited research available on strategies to mitigate equity crowdfunding risks. However, a conceptual model for the Australian crowdfunding sector has been developed, encompassing both pre-investment and post-investment factors that contribute to the successful adoption of crowdfunding. Ley and Weaven (2011) suggest that equity crowdfunding platforms can be seen as intermediaries, where the crowd of investors act as the principals and the organizations seeking capital act as agents.

Furthermore, Ley and Weaven (2011) developed a conceptual model in which they identified five pre-investment techniques that address the regulation of information asymmetry. These techniques include Information Sensitivity, Deal Referrals, Deal Screening, Due Diligence, and Crowd Composition. Osnabrugge (2000) acknowledges that equity crowdfunding platforms, acting as intermediaries, can employ mitigation techniques to monitor and manage information asymmetry. As a result, the original conceptual model has been modified to emphasize the significance of addressing information asymmetry.

Factors that affect Information Asymmetry

Factors that affect information Information asymmetry such as insiders trading and the price of stock are discussed undert this section.

Insiders' Trading

Managers often have access to private information, which poses risks in terms of the post-liquidation value. This privileged information can be used by managers to gain an advantage. In a competitive environment where noisy offers from market makers obscure their actions, insiders can exploit their monopoly power to generate profits. Some scholars measure the information asymmetry between investors and managers by examining the probability of insider trading (Huddart & Ke, 2004). Kyle (1985) also considers the trading probability of insiders and suggests that managers prefer strategies that conceal information from investors while they are aware of their own transactions.

Various factors limit the disclosure of information, resulting in quoted prices that only reflect a fraction of the private information available. This includes noise generated by liquidity shocks and strategic behaviors of managers (Bias, 1993). Managers may choose to withhold certain information to influence prices, leading to incomplete disclosure of equilibrium values (Caballé & Krishnan, 1994). Similarly, Huddart and Ke (2004) found a significant correlation between insider transactions and the presence of information asymmetry.

Share Price

Numerous studies have demonstrated that a significant portion of information asymmetry can be explained by the share price. Comerton-Forde and Rydge (2006) provide evidence of a positive correlation between information asymmetry and share price. Attig et al. (2006) suggest that the share price can be

seen as a source of information, and as such, it negatively impacts information asymmetry. Stoll (1978) explains that trading volume and observed risk influence market makers' holding costs. The author suggests that the stock price serves as an observable proxy for the unobserved minimum cost. In an empirical test, the author finds that the bid-ask spread negatively affects trading volume, while return variability is positively influenced by the stock price.

Investment Decision Making Process

Dwyer et al. (2010) characterized investment decisions as choices involving capital budgeting, which entail acquiring assets. The investment process encompasses the execution of investment programs within organizations and companies. Niskanen and Niskanen (2007) observed in their research that while decision-making varies across companies due to differences in organizational behavior and culture, there are commonalities in the process, which typically consists of at least six stages as outlined in Table 1. Tiainen (2013) cited at least five additional conventional studies that support similar findings.

Table 1: Investment process phases

Investment process phases	
Recognition Phase	Examining the investment projects, that are essential for achieving the goals of the company.
Search phase	This is where the investment projects are searched and those targets which are consistent with the strategy of the company and developing those projects into investment proposals which are concrete.
Information retrieval phase	Quantitative and qualitative data are retrieved in the projects invested. Retrieval of information about the risks, cost estimates and income.
Selection phase	Projects invested are ranked on the basis of qualitative factors and investment calculations. Based on the criteria for investment, the project is selected.
Funding phase	Funding methods decisions are made (for instance, income that have to cover the acquisition costs and how much with foreign capital or own)
Implementation of the invested project and monitoring phase	Incomes are implemented and monitored. Monitoring of income from investment and budget comparison.

Niskanen and Niskanen (2007)

Factors Affecting Investment Decisions

Numerous factors affects investment decisions. These factors are instrumental to making critical investment decisions, therefore it is important to discuss some of these factors. The explanation to some of the factors are below.

Herding Effect

The phenomenon of herding in the stock market refers to the tendency of investors to imitate the actions of others. The impact of herding is carefully considered by practitioners, as it can lead to a divergence between the fundamental

value of securities and their market prices, potentially affecting investment opportunities. Herding is also a subject of interest for scholars, as it can influence stock price changes, return models, risk characteristics, and asset pricing theories (Tan, Chiang, Mason & Nelling, 2008). Herding behavior can trigger various emotional biases, such as cognitive conflict, congruity, conformity, gossip, and home bias. If investors believe that herding can provide them with reliable and valuable information, they may be more inclined to engage in herding behavior.

In the financial industry, the performance of professionals like financial analysts and fund managers is often assessed by comparing their results to those of their peers. This evaluation is typically done through subjective periodic assessments, where their performance is judged relative to others in the industry. In this context, herding behavior can play a role in shaping how these professionals are evaluated. Herding refers to the tendency of individuals to imitate the actions of others, particularly when they perceive those actions to be successful or influential.

When it comes to financial professionals, herding behavior can influence their performance assessment. Less competent professionals may try to improve their professional image by mimicking the actions of more skilled or successful peers. By imitating the actions of high-capacity peers, low-capacity professionals may create the impression that they are on par with their more accomplished counterparts. This can be a strategic move to enhance their professional reputation and potentially achieve better performance evaluations. However, it is important to

note that relying on herding behavior as a means to improve professional image may not necessarily lead to genuine improvement in skills or capabilities.

Investment decisions in the securities market are often influenced by herding investors who follow the crowd in buying or selling stocks. In contrast, rational and knowledgeable investors tend to disregard the herd mentality, which contributes to a more successful market. Herding behavior creates market inefficiencies, often referred to as speculative bubbles. Essentially, herding investors operate in a similar manner to early humans who had limited information and knowledge about their surroundings, relying on group dynamics to provide support and protection (Caparrelli et al., 2004).

Various factors influence an investor's tendency to engage in herding behavior, such as investment volume and overconfidence. When investors possess high levels of confidence and rely on their private information, they tend to exhibit less behavioral herding. However, when investors allocate a significant amount of capital to their investments, they often choose to follow the actions of others in order to minimize risks perceived by them.

Furthermore, the decision to engage in herding behavior often varies depending on the type of investors involved. For example, individual investors are more inclined to follow the crowd rather than institutional investors when making investment decisions (Goodfellow, Bohl & Gebka, 2009). Waweru et al. (2008) suggest that herding behavior drives stock trading and creates stock trading

momentum. However, there is a point at which the impact of herding diminishes as the cost of following the crowd increases in order to achieve abnormal returns.

In their study, Waweru et al. (2008) suggested that various factors, such as stock trade volume, holding period, stock selection, buying, and selling, can influence investment decisions in the stock market. The authors argued that an investor's decisions to buy or sell stocks are heavily influenced by the choices of others, and herding behavior allows investors to display a tendency to conform to these choices. However, when it comes to other types of decisions, investors tend to be less susceptible to herding behavior.

It is important to note that these findings were primarily based on observations of institutional investors. When considering individual investors, the results may differ. As mentioned earlier, individual investors tend to exhibit a stronger inclination towards herding behavior in their investments compared to institutional investors.

Risk Aversion

The phenomenon of aversion to loss is gaining increasing attention in economic analysis as a crucial psychological factor. When faced with the possibility of incurring a loss, investors tend to be risk-takers, whereas they become risk-averse when there is potential for increasing their income. Aversion to loss refers to the difference in the mental impact individuals experience from a gain or loss of similar magnitude (Barberis & Huang, 2001). Research suggests that people

are more concerned about the risks associated with potential losses than the potential gains (Barberis & Thaler, 2003).

Moreover, it has been observed that losses following a previous gain are perceived as less painful than usual, while losses following a previous loss are perceived as more painful than usual (Barberis & Huang, 2001). Additionally, Lehenkari and Perttunen (2004) found that both negative and positive returns in the past can intensify the negative relationship between capital losses and investors' inclination to sell, indicating that investors are averse to losses.

Risk aversion is a common behavior among investors, but it can have negative consequences on their wealth. Risk aversion refers to an individual's preference for a known and relatively certain payoff compared to an uncertain payoff that may be higher but carries more risk (Ritter, 2003). For example, a risk-averse investor may choose to deposit their money in a bank account with a lower but guaranteed interest rate rather than investing in stocks that have the potential for higher returns (Barberis & Huang, 2001).

Risk-averse investors may also delay their investment in the stock market until they perceive a more certain return. While risk aversion is a normal behavior exhibited by investors, it can lead to suboptimal decisions that ultimately affect their overall wealth.

Prospecting

The concept of prospect theory focuses on decision-making that is subjective and influenced by investors' value systems (Filbeck, Hatfield & Horvath, 2005). In contrast to expected utility theory, which emphasizes rational decision-making as the primary approach to analyzing risk, prospect theory introduces subjectivity based on investors' risk preferences. However, it has been criticized for its inability to fully explain why people engage in activities like insurance and gambling. People tend to underweight probable outcomes, and their responses to similar situations can vary based on whether the choices are framed in terms of gains or losses.

Waweru et al. (2008) further suggest that prospect theory accounts for the mental state that influences an individual's decision-making process. This mental state includes factors such as aversion to regret, mental accounting, and aversion to failure. It provides a framework for understanding how individuals make decisions in situations involving risk and uncertainty, taking into account their psychological responses to gains and losses.

Regret refers to the emotional response individuals experience when they make mistakes or errors. Investors tend to avoid selling declining shares to avoid feelings of regret, while they are more willing to sell off shares that are increasing in value. They tend to regret holding onto losing stocks for too long rather than selling winning stocks too quickly (Lehenkari & Perttunen, 2004; Forgel & Berry, 2006). Aversion to loss can be understood as the difference in the psychological

impact individuals feel from a gain or loss of similar magnitude (Barberis & Huang, 2001).

Anchoring

Anchoring refers to the tendency of individuals to heavily rely on a specific piece of information or a single characteristic when making decisions. Investors demonstrate a slow adjustment to new information or changes in value scales, as they often anchor their decisions based on recent findings. They tend to expect earnings trends to continue following historical patterns, which can lead to potential shifts in these trends. The concept of anchoring can be explained by the desire to cling to a reference point, even if it may not be logically valid for the decision at hand (Del Missier, Ferrante & Costantini, 2007).

Mental anchoring can influence how individuals evaluate and make decisions. For instance, some investors tend to believe that stocks that have experienced a significant drop over a short period of time can now be purchased at a discounted rate. This misconception arises from the investor's mental anchoring to a higher price previously associated with that particular stock, which serves as a reference point or guide.

The higher price that is mentally anchored is perceived as the "correct" or "rightful" price for the stock, regardless of the reasons behind its apparent drop. This mental anchoring leads individuals to assume that the stock will eventually rebound within a certain timeframe. Anchoring is closely related to

representativeness, as it suggests that individuals often rely heavily on their recent experiences. They tend to be more optimistic when the market is on the rise, and more pessimistic when the market is declining (Waweru et al., 2008).

According to Hvide (2002), overconfidence leads individuals to overestimate their abilities and the accuracy of their knowledge. This overconfidence often manifests in excessive trading behavior among investors. Research indicates that financial analysts may persistently hold incorrect assessments of a company, despite clear evidence to the contrary. In areas where they possess expertise, both analysts and investors tend to display overconfidence (Evans, 2006).

Overconfidence is believed to have certain effects such as increasing persistence, commitment, risk tolerance, and mental capabilities. It is thought that overconfidence can contribute to professional success by promoting a strong sense of self-belief. Additionally, it has been observed that overconfidence can lead others to perceive an individual as highly competent, which can result in rapid promotion and increased investment opportunities (Oberlechner & Osier, 2004).

Empirical Review

Various research works have been done to determine the factors that influence investment decisions. This section therefore reviews previous studies done on some determinants of information asymmetry and investment decisions.

Stocks' Affordability and Investment Decisions

Merikas et al. (2011) embarked on a research about investor's activities in the Greek's Athens Stock Exchange (ASE) and its corresponding economic factors. They sampled a total number of 150 respondents. The results from the study indicated an association among the variables noted in the theory of behavioural finance literature and the trends that prevailed during the time of the study. The results from their research further indicated that the status of the firm or financial statement conditions, and the expected corporate earnings falling under classic criteria for optimizing wealth were noted as having a high effect on the investment decisions of the respondents. These factors were observed by the study for having reliable criteria that can be noted as measuring stock investments.

As suggested by Lakonishok et al., 1992), from their research that investing in a stock growth is one of the investment strategies that is based on the fundamentals of a company, such as company earnings, book value, cash flows, and dividends, and is regarded on behalf of investors as a rational style. Qureshi and Hunjra (2012), conducted a research on the factors that contribute to making decisions on investment. The study used 327 sample who are managers of equity fund of banks and insurance companies. Sampling technique adopted for the study was the stratified random sampling. The findings from the research showed that making decision on investment, corporate governance level of the firm, risk aversion, the use of financial tools and heuristics have a positive and significant relationship. The findings also showed that issues of corporate governance have

played a key role at the business level and are important factors in the assessment of options for investment. Heuristics and financial tools have been used by institutions and equity fund managers in making decisions on investment. It was also found that institutional equity fund managers demonstrated risk averse behaviour.

Obamuyi (2013) embarked on a study to assess the influential factors of capital market decisions on investment in Nigeria. The results from his research showed that the mentality of getting rich quick, the policy of dividend, firm earnings projections, security capital bonus projections, and previous performance of the stock of the firm were the five significant investment factors. The study noted that potential losses in other investments, brand loyalty to the services of the organization, religious affiliation, rumours and the views of family members have little effect on decisions on investment. The research also determined that retail investors' demographic, economic and social factors, including academic achievement, marital status, age and gender had a significant effect on decisions on investment.

In Kenya, Aroni, Namusonge and Sakwa (2014) conducted a study on how information on finances impacts on investment of share by using retail investors as the respondents. Primary data was employed for the study which was accessed with a questionnaire from 311 randomly chosen respondents from 836 investors participating in the Nairobi Stock Exchange. Descriptive and regression analysis were performed on the variables of the study. The findings showed that information

on finances had significantly positive effect on shareholder decisions on investment in Kenya.

Information and Investment Decisions

In the United States, Murphy (2010) researched into investment decisions and ethical behaviour. The study revealed that the ability of investors to make good ethical choices is hindered by the quality and consistency of information obtained. The findings from the study further reported that investors do not accept that they have purposefully made their products overly addictive in the case of tobacco firms, and the regulations by the government have not completely identified this problem.

The authenticity of other environmental reports and emissions released by information publishing companies like WorldCom and Enron and key corporations like Exxon that have been found guilty of significant fraudulent and false practices of accounting. As suggested by Jagongo and Mutswenje (2014), the most significant factors affecting decisions on investments were: dividend expected by investors, economic sentiments, share price, past performance firms stock, condition of statement and profit, expected corporate earnings, market position of the company and business credibility.

While researching into investment portfolio management, Maginn et al. (2007) identified that knowing the past performance of assets is necessary in order to allow investors in making decisions on investment. The research further identified that the risk tolerance of investors, based on their obligations and personalities, must be weighed before investing in assets that carry significant risk.

The authors reported that the amount anticipated once the investments mature should be driven by personal investment decisions about how much money the investor is prepared to contribute per month.

In addition, it was indicated that factors like stock market liquidity and growth in the economy of the country must be weighed by investors who have the gut to expand their portfolios to include international holdings. The investor has to understand the tax policies of a country's capital gains and the credibility of its system of dispute resolution. The investor needs to make sure that the rights of foreign investors are respected in the country and that there are sufficient currency reserves kept by its central bank.

Lam (2014) opined that before planning for investment, decisions factors such as knowing past performance of changes in different classes of asset, appetite for risk, past market patterns and the ability to tolerate risk, should be considered. These factors vary from person to person. The scholar further indicated that the capability to contain risks may depend on factors like personality characteristics, financial obligations, that makes it important to understand the ability to contain the risks for making investment decisions. The research also found that, since it guides investment choice, the anticipated rate of returns was a key factor. An investor can determine if it is worthy to invest more in debt or equity or balance the portfolio on the basis of expectations.

In Kenya, Ndiege (2012) conducted a research about the factors affecting decisions on investment on equity stock. The respondents considered for the study

were teachers in Kisumu municipality. The research identified that investors were subjected to pessimism and optimism that routinely caused prices to differ from fundamental values and showed a reversion later on. This was in line with the theory of behavioural decision in which investors are chronically more confident in the capacity to predict future corporate earnings or future stock prices.

In addition, the study selected subjective factors like involvement of the community, feelings about company services and goods, perceived ethics of the company and employees, political statements and as well as impartial information by media coverage were very vital in the relative negligence of considering important traditional variables in the municipality of Kisumu. There was a high negative association between decision making on investment and subjective factors.

Third Parties' Opinion and Investment Decisions

The factors affecting financial decision making by individuals on the Islamabad Stock Exchange were analysed by Sarwar and Hussan (2016). Primary data were accessed by the researchers from 253 investors trading on the Islamabad Stock Exchange with questionnaire. The results show positive and significant association between the individual investors in making decisions on investment, firm image convergence/self-image, unbiased information, and advocate advice. The research, however, showed lack of evidence with respect to the association between individual financial needs, maximization of classical wealth and accounting information.

The study acknowledged the need for more studies based on advocacy factors because of the possibilities that financial markets might easily be manipulated in their decisions on investment as the investors depend on other advices. Wendo (2015), on her research on the factors which affects the involvement of investors of the Nairobean stock market. In the case of Nairobi County advocates, the researcher noted that decisions on investment are informed by the views of colleagues and friends, profitability, current trends in returns and by market sentiments.

Gunathilaka (2014) analysed Sri Lankan retail investors' investment decision process by employing data from 168 participants who reported that the perceived company value has the greatest effect on decisions on equity. The research further reported that firm-image/self-image, advocates' recommendations and accounting information were important homogeneous groups of variables that have an effect on the selection of stock. The historical prices and risk were defined by the study as the second other variables in the process.

The research further found that financial decisions were affected by good governance, economic status/outlook, expectations of political stability. The research described public news of the company, the goodwill, dividend payment, and liquidity as marginal factors affecting decisions on investment. It was found that the annual financial statement's content, viewpoint of family history supporters, and religious values did not impact the process of decision making.

In Pakistan, Ali and Tariq (2013) embarked on a research about factors that affect the making of decision by individual equity investors. In addition to advocating proposals on individual decisions on decision making by the investor, the study found significant impact through the combination of firm-image, and self-image and impartial information. On the other side, the research identified that factors such as accounting information, maximization of classic wealth, the financial needs of individuals did not affect the making of decesions on finances by the investors in Pakistan.

Sultana and Pardhasaradhi (2012) performed an empirical study of the effect of different variables on the decision-making and behaviours of investors in India. Factor analysis was applied in the research where 10 variables were formed from 40 attributes. These variables were classified as advocate advice, economic outlook, government together with the media, accounting disclosures, financial opportunities, brand awareness, risk avoidance, wealth maximization, social responsibilities, and individual eccentrics. The variables had to have different degrees of impact on the individual market participants' investment decisions.

Chong and Lai (2011) embarked on a study about how advice from advocates, social relevance, unbiased information, and accounting disclosures impact on decisions on investment among Malaysian investors. Data were gathered from 199 participants. The findings from the research, indicated that the most important factor for the investors in Malaysian was unbiased information. Accounting disclosures was noted to be the second most significant factor. Social

relevance and advocates' advice followed suit as influential factors affecting the selection of equity process. While accounting disclosures correlated negatively with expected returns, unbiased information was positively correlated with expected returns. For female investors, unlike their male counterparts, the social relevance factor was observed to be significant.

With respect to the experience of stock market, investors with 5 to 10 years of experience and those who have 15 to 20 years of experience were observed to prioritize disclosures in accounting in order to make decision on investment, whereas investors with over 20 years experience preferred not to use information on accounting. Their reserach concluded that numerous interlinked advocacy factors influenced investment in investors making decisions.

Herding and Investment Decisions

Using data obtained from individual investors and equity fund managers in Pakistan, Farooq and Sajid (2015) analysed the factors that influence decisions on investment. The research was geared towards analysing the impact of factors of behavioural tendencies such as internal corporate governance, financial tools usage, heuristics and aversion to risk in making decisions on investments. The research used 100 research questionnaires that were administered to equity fund managers and investors. The study identified that internal corporate governance, heuristics, the dependence on financial tools have significant effect in making decisions on investment. Contrary, the research noted that aversion to risk tolerance had a negative and significant impact on decision making on investment. Also, both

behavioural variables, the decision-making of investors and internal corporate governance have strong positive association with each other.

The variabilities in herding behaviour among individual investors and institutional investors in the Chinese market were studied by Li, Rhee and Wang (2009). The results from their study showed that, relative to less informed individual investors, institutional investors who are well informed, displayed high herding, while individual investors show more possibility to manipulate market demand and market sentiments as they continued to depend more on information from the public.

Chandra and Kumar (2011) researched the determinants of individual investor conduct and observed that decisions on making investments was affected by some psychological problems, including information asymmetry, conservatism, caution and low confidence. The research also showed that factors that relates to psychological issues have a dominant effect in the process of making decisions by investors and that both social factors and microeconomic variables influence the selection of investment securities.

Phuoc and Doan (2011) used semi-structured interview administered to managers at the Ho Chi Minh Stock Exchange to investigate how factors of behavioural issues affect investors decisions. The findings revealed that the investment decisions had five behavioural factors influencing them. These were biases associated with anchoring ability, overconfident gamblers' fallacy herding, and market outlook. Heuristic behaviours have been noted to possess the highest

positive effect on the performance of investment, whereas herding behaviours have been documented to show positive effect on lower-level performance of investment.

On the opposite, prospective, attitudes have been shown to have a negative influence on the investment decision. Mwangi (2011) researched behavioural factors affecting decisions on investment in the property market in Kenya. The findings emerged that heuristic factors such as the ability to anchor, representativeness and accessibility bias had a major effect on investment decisions in property market.

Relationship between information asymmetry and investment decision

The effect of information asymmetry on the decisions on finances of companies was examined by Bharath, et al., (2009). In their study information asymmetry is linked to the characteristics of the firm. Such characteristics included, institutional ownership and lifespan, volatility of capital, research and development intensity level, tangibility of assets, profitability, opportunities for growth, and size of the firm.

The prevailing information asymmetry between external investors and company management give accurate explanations and justifies the financing decisions taken by the companies (De Jong et al. 2011). The scholars concluded by indicating that information asymmetry is an essential component in making decisions on investment and that the information asymmetry is strongly linked to financial and investment decisions.

Sahar and Vaez (2013) demonstrate that information asymmetry between external investors and managers is a significant determinant in making financing decisions. Their study considered a sample size of 170 firms found on the Teheran Stock Exchange (TSE) in the years of 2009 to 2011. A significant and positive relationship between information asymmetry and financial decisions was noted by the authors after applying Pearson's correlation analysis.

Kremer (2011) has shown that information asymmetry in investment decisions does not influence herding behaviour. This has paved the way for information asymmetry to have a negative association with decisions on finances. The flaws in Kremer's (2011) research was the adoption of the size of the firm as a representative of information asymmetry, by which the size of firm does not accurately stands as proxy for information asymmetry. According to her research on the financial statements' role in making decisions on investment, Amedu (2012) found that financial statements as part of information asymmetry play an essential role in making decisions on investments. Information asymmetry of financial statements helps investors to forecast the company's future success and its profitability.

In his research on the influence of the factors of behavioural finance on decisions on stock investment in Kenya, Kisaka (2015) noted a significant and positive association between information asymmetry and investment decisions. Krishnaswami, and Subramaniam, (1999) suggested in their research on Corporate Spin-Off Decision, valuation and information asymmetry that information

asymmetry positively affects investment decisions of companies. Lam (2014) witnessed some positive correlation between information availability and financial decisions. In Pakistan, Sarwar and Hussan (2016) used questionnaires to collect data from investors who trade at the Islamabad Stock Exchange. The results of their study showed positive and significant association between information asymmetry and financial and investment decisions. Authors like Mehta and Chaudhari (2016), studied investors in making decisions on investment in the stock market by the use of information from the Indian stock market. Their findings reflected positive correlation between investment decisions and information asymmetry.

Conceptual Framework

The aim of this research is to assess the relationship between information asymmetry and individuals' investment decisions in Ghana. As discussed previously from the review of literature, information asymmetry and decisions on investment are influenced by some factors. From the review part, investment decision are well made from availability of information asymmetry. This makes it conceptually clear that there is some connection between information asymmetry and decisions on investment.

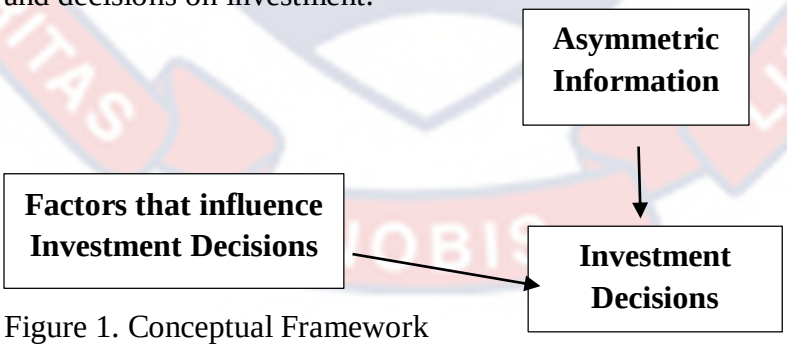

Figure 1. Conceptual Framework
Source: Ewusie Aidoo, (2020).

Chapter Summary

This chapter covered the review of theories. Theories such as the agency theory and signalling theory were found to have some link to information asymmetry. Also, empirical review, and conceptual framework were also discussed. Successively, the empirical review discusses the findings from other research works that have bearing on asymmetry information and investment decisions. The conceptual framework displays the idea of the researchers on the relationship between information asymmetry and investment decision.

CHAPTER THREE

RESEARCH METHODS

Introduction

The methods employed in this research is discussed in detailed manner in this chapter. It is arranged in orderly manner of research design, research population, size of the sample and the techniques in sampling, survey instrument, and other important issues.

Research Design

The design of the research describes the architectural work proposed for the study and it is in accordance to the research objectives. According to Saunders et al., (2012), the design of the research includes explanatory, exploratory and descriptive research design.

Exploratory research helps in familiarizing with the research problem and is in qualitative form (Trafimow, 2014). It is merit with adaptability to change and flexibility (Saunders et al., 2012). It lacks the advantage of determining causes and effects between the factors or variables. This makes it unfit for this study.

According to Marshall and Rossman, (2016) explanatory research gives the opportunity in assessing how variables are impacted by other varibels. It gives the ability to determine the association between two or more factors or variables. Since explanatory research is consistent with assessing the relationship between

information asymmetry and investment decision, hence, it is employed in this study.

Descriptive research is used when the sample size is large (Englander, 2016). It gives the possibility of using numerical values in describing the factors or variables employed in the research. It is quantitative by nature (Kamil et al., 2014). Included in its merit are; (i) identify the population by the use of number, (ii) the application of percentages in describing the population exhibiting specific behaviours and (iii) measure central tendencies such as mode, mean and median. Descriptive and explanatory research are therefore employed in the research.

Research Approach

Under this section, research approaches such as qualitative and quantitative research approaches are discussed to determine the one that is appropriate for the study. According to Saunders et al., (2012), there exists two research approaches. These are qualitative and quantitative research approach.

In qualitative research approach, interview by the help of spoken languages are used to collect data. It does not give the opportunity to use numbers in describing the variables (Saunders et al., 2012). Qualitative data are obtained through interviews and observations of respondents (Allen, 2015). By this reason, it is not situatble for this research.

With respect to the quantitative research, it encourages the test of hypothesis by theoretically comparing what is to be occurred. It enhances a large coverage of

events which allows statistics to be combined with huge sample size (Trafimow, 2014). More so, quantitative approache helps to make conclusions which is concrete (Kamil et al., 2014). Hence, in reference to the aim of the research, quantitative research approach is more appriate for the analysis of the findings from the research.

Population Size

Rowley (2012), defined population as persons or objects in a group which serves as a source from which a sample is taken from. A sample selected should represent the population. Infering from this description, the population used for this research are all individual investors from financial institutions in Ghana. The country has around 1,000 local investors from financial institutions (afsic.net). This constitutes the sample population.

Sampling Size and Sampling Technique

A sample represents the total number of observations or respondents which is taken from a population (Englander, 2016). The research used the sample size determination formula developed by Hair et al., (2003); Kessler and Sheila, (1996) and Maiyaki (2011). Table 2 shows the sample size required for each population as as indicated by Kessler and Sheila, (1996). Based on the table, a sample size of not less than 280 is recommended for a population of 1,000 individual investors. To say it in another way, from a 95% population proportion and 95% confidence level, the size of the sample from Table 2 was 280.

Table 2: Sample Size Determination

Population Size	Sample Size
50	45
100	80
200	132
500	218
1,000	280
1,500	306
2,000	323
5,000	347
10,000	370
20,000	377

Source: Kessler & Sheila, (1996)

The sampling technique used is the purposive sampling. With this technique, only individual investors who have invested in firms or businesses before are selected for the study. The total number of individual investors of the various institutions were obtained by the researcher and only individual investors were chosed for the research.

Data Collection Instruments

The instrument used in the collection of data from the participants are soley were structured questionnaires. Questionnaires in a close-ended format are used due to its flexibility in collection and analysis. Section A of the instrument dealth with the demographic characteristics of the individual investors, section B recorded some statements that identifies the factors that affects information asymmetry,

section C focused on investment decision-making process by the individual investors, and section D dealt with factors that influence investment decision. The statements were rated by the respondents using a five point Likert scale.

The Likert scale used in this study are "Strongly Agree" to "Strongly Disagree" and with "Neutral" in the middle. Numbers are indicated to every level of scale. The coding starts from 1 and is increased sequentially to the last ordered scale of 5.

Validity and Reliability

The study tool was originally tested on a small group of chosen individuals in order to confirm its validity and reliability. Any questions which those who participated felt were unclear throughout the trial period were cleared up and fixed afterwards. The completion of the finalized questionnaires was rendered feasible by that. A reliability analysis of the piloted research yielded a Cronbach's Alpha coefficient for reliability value of 0.858.

Data Processing and Analysis

The research questionnaires were assessed to identify any worng recorded responses before being included in the sample questionnaire. Questionnaires that were well responded are given code numbers and carefully entered into the Software Package for Social Sciences (SPSS V. 21).

After accurate responses were ontained, statistical tools which includes charts, correlation analysis and frequency tables are used for making important

analysis for all of the items stated on the research instrument. This give the chance to get a vivid view of the nature of the explored data and the level of accuracy in the responses indicated by the participants.

Ethical Issues

The follow the issues of ethics, the research participants were shown the Identity Card to serve as an evidence that the researcher is a student from UCC. The resondents were also assured that the information they provide is for the purpose of academices and not to embarrass anybody. In view of this, statement indicating the confidentiality of the responses was stated on top of the questionnaire. In addition, the time required for providing answers to the research questions were agreed upon by the respondents.

Chapter Summary

The study seeked to assess the relationship between information asymmetry and investment decisions of individual investors from financial institutions in Ghana. The section looked at the research design adopted for the research, research population, techniques in sampling and sample size, instrument used for the data collection, data analysis procedures, ethical issues, and chapter summary. In terms of the research design, the quantitative research methodology was employed for the research. Also, the study adopted the explanatory and descriptive design. The study used a target population of 1,000 individual investors from financial institutions in Ghana from which 280 individual investors were purposivel selected.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

The chapter presents the research findings and the discussions of the results. The research is aimed at assessing the relationship between information asymmetry and investment decision of individual investors from financial institutions. Data was collected based on the demographics of the respondents, the factors that affects information asymmetry, investment decision-making process by the individual investors, and the factors that affect investment decision. A total number of 280 individual investors from financial institutions in Ghana were considered in the research and data were gathered with a structured questionnaire. The results were presented by means of charts and Tables.

Demographics of the respondents

The responses on the gender of the individual investors, age group, level of education, and how many years the individual investors have been performing investments are highlighted in the following sub section.

Gender of respondents

The details concerning the gender of the individual investors is displayed in Figure 2.

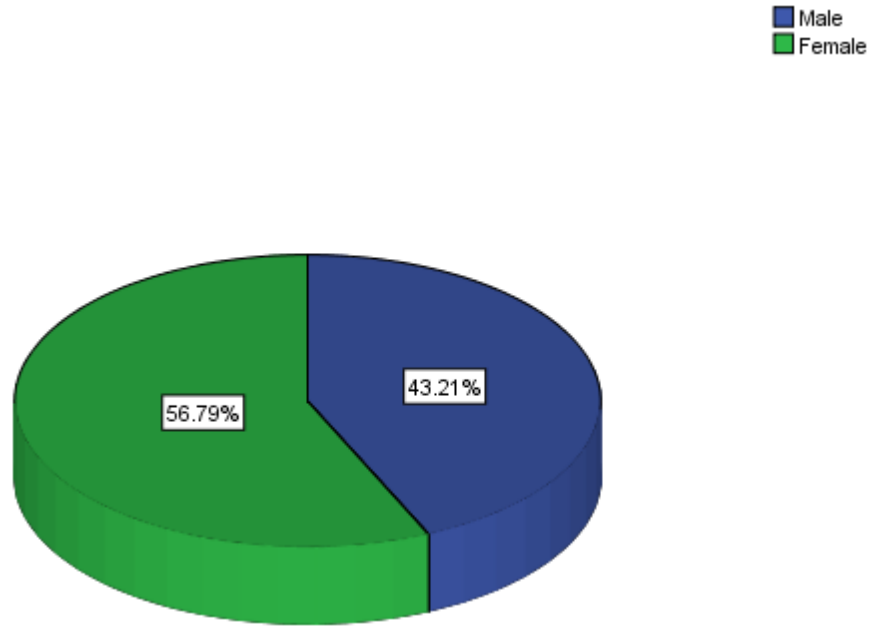

Figure 2: Gender of respondent
Source: Ewusie Aidoo, (2020)

Per the presentation in the Figure, 56.79% of the individual investors which form the major part of the respondents were females, whereas 43.21% were males. This means that the ratio of female to male involved in the study was not high. Moreover, both sexes were considered for the study based on their views about the research.

Age of respondents

Age distribution of the respondents who were also the individual investors in Ghana is displayed in Figure 3.

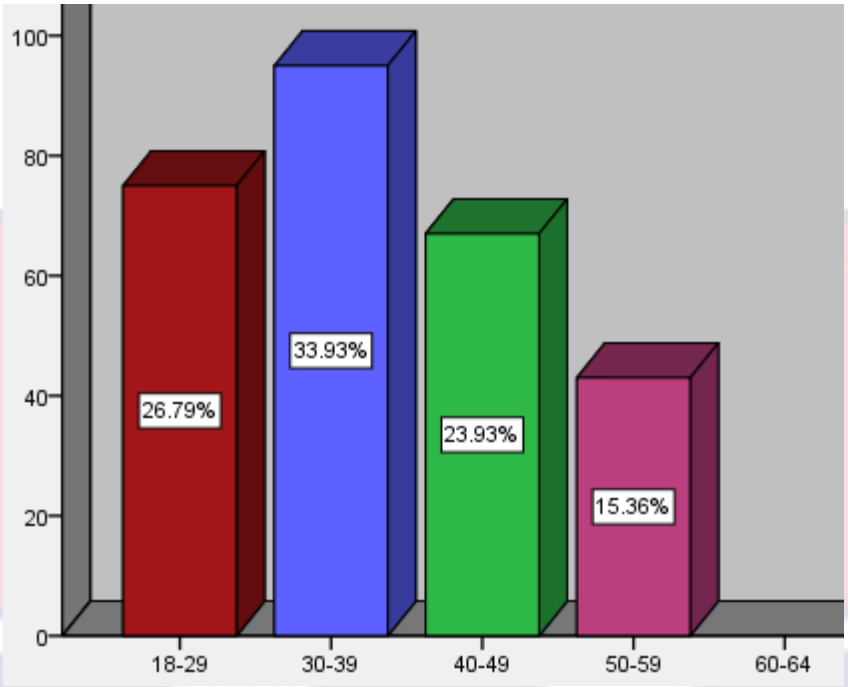

Figure 3: Age of respondent
Source: Ewusie Aidoo, (2020)

As presented in the Figure, majority of the individual investors with 33.93% fall in the age cohorts of 30-39 years, which was followed suit by the individual investors between 18-29 years. Those who are in the age category of 40-49 years and between 50-59 years respectively constituted 23.93% and 15.36%. This indicates the mean age for the individual investors in Ghana is between 30 to 49 years, hence most of the individual investors were young adults.

Educational level of respondents

Details about the level of education of the individual investors were collected and the findings are displayed in Figure 4.

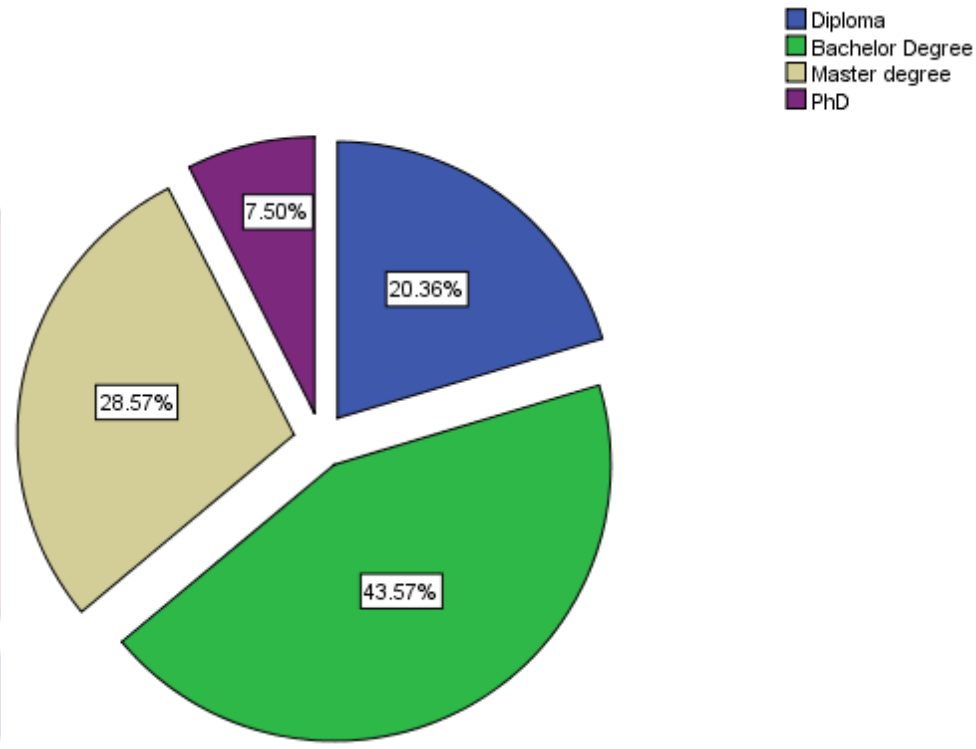

Figure 4: Educational level of respondents
Source: Ewusie Aidoo, (2020)

It is very clear from the Figure that, the individual investors with bachelor's degree were the majority of the respondents represented with 43.57%, those with master's degree followed suit with 28.57%. The individual investors with diploma certificates and PhD certificates were made up of 20.36% and 7.50% respectively. This means that the individual investors have vibrant educational background and due to the nature of the investmeng activities, their level of education is required to undertake investments.

Number of years in investment

The years the individual investors have conducted investments were sought for the purpose of knowing their level of experience in the field of investment. Figure 5 presents this.

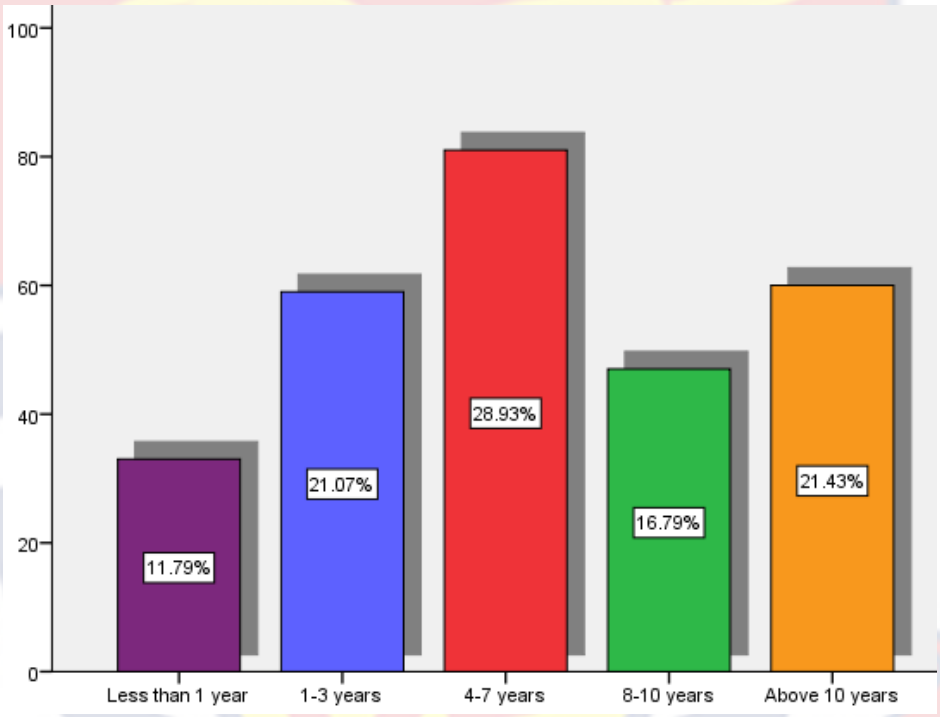

Figure 5: Longevity of service
Source: Ewusie Aidoo, (2020)

Most of the individual investors with 28.93% have conducted investments for the periods of 4-7 years, 21.43% have invested for over 10 years and 21.07% have also invested for 1-3 years. Those who have invested for 8-10 years and less than a year were noted to be 16.79% and 11.79% respectively. This means that majority of the individual investors have invested for not less than 5 years, hence their responses would reflect what pertains to the information asymmetry and decisions on investment in Ghana.

Reliability of survey data

The Cronbach Alpha(α) reliability is employed to determine how reliable of the data gathered. This would help to determine the rate at which the data collected will provide consistent results when there is the need to repeat the study. Leech, Barrett, and Morgan (2008), recommended that when the Cronbach's Alpha(α) is below 0.5 the data is likely to be poor, Alpha values of more than 0.6, but below 0.8, are noted to be acceptable but Alpha values more than 0.8 are likely to be good, and becomes more reliable if the Alpha values is near to 1.

Table 3: Cronbach's Alpha Reliability Coefficient Score

	Number of items	**Alpha value**
Factors that affect information asymmetry	10	0.821
Investment decision-making process	12	0.951
Factors that affect investment decision	10	0.809
Overall measure		0.907

Source: Ewusie Aidoo, (2020)

According to the Table, all the constructs have Alpha values above 0.8. this suggest that items on the questionnaire are good for data analysis. The overall measure for the research instrument is observed to be 0.907 and this indicated that the consistency level of the survey instrument is 90.7%.

Factors that affect information asymmetry

The first objective of the research was to investigate the factors that affect information asymmetry among investors in Ghana. The individual investors rated

some statements under the factors that affect information asymmetry by adopting five point Likert scale which ranges from strongly disagree to strongly agree. The ratings of the responses are presented in Table 4.

Table 4: Factors that affect information asymmetry

	N	Mean	Std. Deviation
Quality of financial statements	280	4.5607	.61919
Product market share	280	4.3571	.83448
Third party's opinion	280	4.3179	.60674
Share pricing information	280	4.2750	.77558
Accruals quality	280	4.1893	.82298
Accurate information on stock return	280	4.1786	.74070
Insider's disclosure of information	280	4.1750	.78614
Informed traders stock exchange	280	4.1036	.70329
Analysts' forecasts on earnings per share	280	3.7964	.83257
Information on trading volume	280	3.7679	1.14208

Source: Ewusie Aidoo, (2020)

From the Table, the individual investors were of the view that quality of financial statements; product market share and third party's opinion were some of the determinants of information asymmetry by assigning values of 4.56, 4.36, and 4.32 respectively to these determinants. These values fall near the agree scale of 4

confirming the individual investors agreeing to these determinants. The disparities in the responses are indicated with respective deviation values of 0.62, 0.83, and 0.61. The individual investors further reported that share pricing information; accruals quality and accurate information on stock return were part of the determinants of information asymmetry as provided with values of 4.28, 4.19, and 4.18 respectively. Differences in the ratings are indicated with deviation values of 0.78, 0.82, and 0.74 respectively.

Other factors reported by the individual investors includes; insider's disclosure of information (4.18); informed traders stock exchange (4.10); analysts' forecasts on earnings per share (3.80); and information on trading volume (3.77). The corresponding standard deviation values signal the level of deviations in their responses to these determinants.

Investment decision-making process by the individual investors

This part of the analysis presents the responses to the ratings on the process of making decisions on investment by the individual investors. Table 5 presents the results.

Table 5: Investment decision-making process by the individual investors

	Mean	Std. Deviation
Determination of projects to be invested which are important to achieving my financial and investment goals.	4.3821	.59300
Profitability assessment	4.3036	.73127

Consideration of investments which follows my strategic goals	4.1750	.81743
An examination of the cash flows from the investment	3.9929	.84239
Perform market analysis	3.9714	.88348
Ranking of investment projects based on income, cost and risk of the investment	3.8857	.89671
Screening of available investment and considers the best for investment	3.8429	.75035
Collection of information relevant to the investment decision	3.7964	.83257
Quantitative estimation of the income, cost and risk of the investment	3.7857	1.05603
Payback period of the investments	3.7214	.95840
Careful consideration of the funding methods for the investment	3.6464	.88394
Examining the condition of financial statements of the investing firm	3.6321	.91014

Source: Ewusie Aidoo, (2020)

Per the descriptions on the Table, the individual investors indicated that determination of projects to be invested which are important to achieving their financial and investment goals; profitability assessment; and searching for the investment that are in line with the individual investors' strategic goals were part of the investment decision-making process by the individual investors as indicated

with mean values of 4.38, 4.30, and 4.18 respectively. The differences in the ratings are provided with the deviation values of 0.59, 0.73, and 0.82 respectively. In addition, the individual investors indicated that examination of the cash flows from the investment (3.99); performing market analysis (3.97); ranking of investment projects based on income, cost and risk of the investment (3.89); screening of available investment and considers the best for investment (3.84); and collection of information relevant to the investment decision (3.80) were considered during the process of making decisions on investment by the individual investors. The differences in the responses are provided with the respective standard deviation values reported in the Table.

More so, the individual investors stipulated that quantitative estimation of the income, cost and risk of the investment; and payback period of the investments were also considered in the process of making investment decisions by the individual investors as indicated with values of 3.79, and 3.72 respectively with values of 1.06, and 0.96 measuring the level of differences in their responses. Nevertheless, the individual investors slightly agreed to it that careful consideration of the funding methods for the investment; and examining the condition of financial statements of the investing firm were employed during the investment decision-making process by the individual investors by giving mean values of 3.65 and 3.63 respectively to the statements. The variations in the rating are provided with deviation values of 0.88 and 0.91.

Factors affecting individual investors' decisions on investment

One of the objectives of the research was to determine the factors affecting the decisions on investment by the individual investors. These factors were rated by the respondents. The ratings of the factors are presented in Table 6.

Table 6: Factors that affect investment decision

	N	Mean	Std. Deviation
Financial information of the investing firm	280	4.3571	.83448
Previous performance of the stock of the investing firm	280	4.2429	.80653
Information on reputation of the investing firm	280	4.1893	.82298
Information on expected rate of returns	280	4.1857	.90070
Expected corporate earnings	280	4.1143	.83461
Projected security capital bonus	280	4.0929	.68152
Advocate advice	280	4.0643	.88969
Dividends from investment	280	4.0357	.77052
Condition of financial statements	280	3.9179	1.00378
Risk level of the investment	280	3.7964	.83257

Source: Ewusie Aidoo, (2020)

According to the table, the individual investors provided that financial information of the investing firm; previous performance of the stock of the investing firm; and information on reputation of the investing firm were some of

the factors affecting the investment decision by the individual investors as indicated by values of 4.36, 4.24 and 4.19 respectively. The differences in the ratings are provided with deviation values of 0.83, 0.81 and 0.82 respectively. The individual investors further asserted that information on expected rate of returns (4.19); expected corporate earnings (4.11); projected security capital bonus (4.09) and advocate advice (4.06) were also some of the factors affecting the investment decision by the individual investors. The differences in their responses are provided with values of 0.90, 0.83, 0.68, and 0.89 respectively.

Other factors given by the individual investors were dividends from investment; condition of financial statements and risk level of the investment as provided with respective values of 4.04, 3.92, and 3.80 respectively. The variations in their views are given by the respective deviation values of 0.77, 1.00, and 0.83.

Since, the individual investors agreed to all the factors affecting the investment decisions, then to determine the degree of agreement of the factors, Kendall's coefficient of concordance (W) were employed find out the rate of agreement in the rankings of the statements by the individual investors. Table 7 displays the rankings of the factors.

Table 7: Factors that affect investment decision - Kendall's coefficient of concordance

	Mean Rank	Rank position	
Financial information of the investing firm	6.44	1	
Previous performance of the investing firm's stock	6.03	2	N =280
Information on expected rate of returns	5.84	3	
Information on reputation of the investing firm	5.73	4	Kendall' W =0.475
Expected corporate earnings	5.52	5	Chi – Square =119.561
Advocate advice	5.38	6	Df =9
Projected security capital bonus	5.35	7	Asymp. Sig =0.000
Dividends from investment	5.20	8	
Condition of financial statements	5.07	9	
Risk level of the investment	4.44	10	

Source: Ewusie Aidoo, (2020)

The analysis from the Table shows the factors in descending order of means. The results show that financial information of the investing firm; previous performance of the investing firm's stock; information on expected rate of returns; information on reputation of the investing firm; and expected corporate earnings were the top five factors affecting the investment decision by the individual investors. These factors held the positions of 1st, 2nd, 3rd, 4th, and 5th respectively.

Nonetheless, factors such as dividends from investment; condition of financial statements; and risk level of the investment trailed in the 8th, 9th, and 10th

positions respectively indicating that they are the least agreed upon factors affecting the investment decision by the individual investors. More so, the coefficient of concordance of 0.47 with 9 df at 99% level of confidence, implies that there is 47.5% of concordance or agreement in the rankings of the statements by the individual investors concerning these factors.

Relationship between information asymmetry and investment decisions

To determine the association between information asymmetric and investment decisions the correlation analysis was used. According to Berk and Devore (2007), correlation coefficient below 0.5 is considered poor, when it is above 0.5 but below 0.8 it is noted to be moderate. If the coefficient is above 0.8 it is noted to be strong association between the variables. In determining whether the association would be insignificant or significant the p-value is used. If the P-value is below 0.05 it indicates that the association is significant, if not otherwise. The association between information asymmetry and investment decisions is in the Table at the appendix.

From the Table, the Pearson Correlation coefficient and the p-values were used for the integpretation of the data analysis. From the Table, the following is observed.

- There is a moderate positive (r=0.642) and significant (p-value = 0.00) relationship between information on trading volume and investment decisions.

- There is very waek positive (r=0.351) and significant (p-value = 0.00) relationship between accurate information on stock return and investment decisions.
- There is very weak positive (r = 292) and significant (p-value = 0.00) relationship between insider's disclosure of information and investment decisions.
- There is very weak positive (r=0.317) and significant (p-value = 0.00) relationship between share pricing information and investment decisions.
- There is very weak positive (r=0.267) and significant (p-value = 0.00) relationship between informed traders exchange stocks and investment decisions.
- There is very weak positive (r=0.025) and insignificant (p-value = 0.681) relationship between analysts' forecasts on earnings per share and investment decisions.
- There is moderate positive (r=0.655) and significant (p-value = 0.00) relationship between accruals quality and investment decisions.
- There is weak positive (r=0.405) and significant (p-value = 0.00) relationship between quality of financial statements and investment decisions.
- There is moderate positive (r=0.504) and significant (p-value = 0.00) relationship between product market share and investment decisions.
- There is weak positive (r=0.396) and significant (p-value = 0.00) relationship between investment decisions and investment decisions.

Discussion of findings

The discussions of the research findings are presented under this section. It discusses the findings in relation to the objectives of the research and compares the results with the findings from other researchers who performed similar study.

One of the objective of the research was to find out the factors that affect information asymmetry. The findings under this revealed that quality of financial statements was one of the factors that affected information asymmetry. When information received on financial statement is diluted it affects the quality of information. Hence, the quality of the financial statement is a very instrumental factor that affects information asymmetry. This is consistent with the finding from Murphy (2010). This author from his findings regarded quality of financial statement to be very keen to information asymmetry. This was supported by scholars such as Block et al., (2017); Jagongo and Mutswenje (2014); and Dehlén et al., (2014).

Another factor that was noted from the study was product market share. Information about the market share for a particular product serves as a good information for the individual investors to reconsider whether to invest in the product or not. This assertion is in congruence with the findings from Madun, (2009); Kannadhasan (2015); and Obamuyi (2013) who all supported the need for having information about the market share of a product so as to make informed decisions on investments.

Third party's opinion was also observed to be one of the factors that affected information asymmetry. Opinions from third parties provide important information as to whether to invest in a product or not. This is in line with the research findings from Ley and Weaven (2011); Daniel and Titman, (2016). These authors supported this claim as they highlighted that opinions from third parties provides information for investor communication. Other factors included accurate information on stock return which is also in tandem with Kisaka (2015).

Another objective was to determine the investment decision-making process by the individual investors. The findings on this indicated that determination of projects to be invested which are essential for achieving the goals of the company was one of the investment decision-making process. This is very necessary when making investment decisions. When investment projects are determined to achieve company goals, it gives direction for making good investment decision. This is in agreement with the findings from Dwyer et al. (2010); Wilkinson (2013). These researchers stipulated that firms should make sure that investment projects are in agreement with the firm goals when making investment decisions.

Profitability assessment was also observed to be one of the processes in making investment decisions by the individual investors. It is ideal to make profitability assessment when deciding to choose investment options. This is in accordance with the findings from Wendo (2015); Bharath et al (2009). These writers recommended that profit assessment should not be left out when making

investment decisions and that high profitable investments should be considered. Another investment decision-making process identified was the need in searching for the investments that follows the company's strategic goals. The investment to be chosen should be consistent with the financial goals of the individual investors. If the goal of the individual investors is to make profit, then investments that would generate good profit should be considered by the individual investors. This is in agreement with the findings from Tiainen (2013).

The study further sought to determine the factors affecting decisions on investment by the individual investors. The findings revealed that financial information of the investing firm was the leading factor that affects investment decision by the individual investors. When the financial information of the investing firm is bad such that the investing firm has poor financial records, it sends signals that investing in such firm would be disastrous. This is in tandem with the results from Kisaka (2015); Ahlers et al., (2015). The financial information about the investing form should be analysed before investing in such firm. Another factor was previous performance of the of the stock of the investing firm. Investment performance is very essential when it comes to making investment decisions. According to Obamuyi (2013); Krishnawami and Subrahmanian, (1999); Tan et al., (2008), it is highly necessary for firms to take into consideration the financial performance of the firm to be invested in. The findings from this study supports this claim.

Information on expected rate of returns was also one of the factors affecting investment decision by the individual investors. This is in accordance with the results from Kisaka (2015); Blackwell et al., (1990); Huddart and Ke, (2004), who indicated that there are some sought of connections between expected rate of returns and investment decision and that expected rate of returns highly affects investment decision.

The last objective was to assess the relationship between information asymmetry and investment decisions. The findings indicated that there was a positive correlation between all the factors that affects information asymmetry and investment decisions. When quality information asymmetry is received, good investment decisions are made. This agrees with the findings from Huddart and Ke (2004) who observed a close association between information asymmetry and investment decision. This was further supported by Safitri (2012). However, it disputes the research findings from Lehenkari & Perttunen (2004); Ndiege (2012) who noted a negative association between information asymmetry and investment decision.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

Introduction

The chapter presents the summarized findings from the research. The summary was made in relation to the results from the previous chapters. The findings from the results of the research are grouped in relation to the objectives set for the research. The summary of findings is followed by the conclusion, recommendations and suggestions for further research. Moreover, the recommendations developed in relation to the findings from the research and limitations identified in the research.

Summary of Findings

This part entails the summarized findings of the research. The collected data for the research comprises of the demographic information of the individual investors, the factors that affected information asymmetry; the investment decision-making process by the individual investors; and the factors affecting decisions on investment. The summary of the findings sub-headed in relation to the objectives of the research. The research considered a sample size of 280 from which all the individual investors provided their responses.

Factors that affect information asymmetry

The first objective of the research was to assess the factors that affects information asymmetry. The findings under this revealed that financial statements; product market share and third party's opinion were the leading factors that affects

information asymmetry. Other factors observed were share pricing information; accruals quality and accurate information on stock returns. More so, issues such as insider's disclosure of information; informed traders stock exchange; analysts' forecasts on earnings per share were raised by the individual investors.

Investment decision-making process by the individual investors

The second objective was to find out the process of making investment decisions by the individual investors. It was identified from the results that determination of projects to be invested which are essential for achieving the goals of the company; profitability assessment; and searching for the investment that are in line with the company's strategic goals were part of the investment decision-making process by the individual investors.

More so, examination of the cash flows from the investment; performing market analysis; ranking of investment projects based on income, cost and risk of the investment; screening of available investment and considering the best for investment; and collection of information relevant to the investment decision were also noted to be included in the investment decision-making process by the individual investors. Other important issues like quantitative estimation of the income, cost and risk of the investment; and payback period of the investments were also indicated by the individual investors.

Factors that affect investment decision

From the findings on the factors that affect investment decision, it was observed that financial information of the investing firm; previous performance of the investing firm's stock; information on expected rate of returns; information on reputation of the investing firm; and expected corporate earnings were the top five factors affecting the investment decision by the individual investors. The least factors identified were dividends from investment; condition of financial statements; and risk level of the investment.

Relationship between information asymmetry and investment decisions

The last objective of the research was to determine the association between information asymmetry and investment decisions. After applying correlation analysis it was observed that all the factors that affects information asymmetry has positive association investment decisions. Hence, improvement in information asymmetry resulted in better decisions on investment.

Conclusion

The aim of this study is to assess the relationship between information asymmetry and individuals' investment decisions in Ghana. Issues such as the factors that affects information asymmetry; the process of making decisions on investment by the individual investors; factors affecting the decisions on investment; and the association between information asymmetry and investment decisions. Some important findings were identified and discussed. Descriptive statistics, quantitative analysis and correlation analysis were used for the study. The

results from the study were that quality of financial statements; product market share and third party's opinion were some of the factors that affected information asymmetry. Other factors were share pricing information; accruals quality and accurate information on stock return. On the investment decision-making process it was identified that determination of projects to be invested which are essential for achieving the financial goals of the individual investors; profitability assessment; and searching for the investment that are in line with the individual investors' strategic goals were part of the processes in making decisions on investment by the individual investors.

Examination of the cash flows from the investment; performing market analysis; and ranking of investment projects based on income, cost and risk of the investment were considered during the process of making decisions on investment by the individual investors. The factors affecting decisions on investment by the individual investors showed that financial information of the investing firm; past performance of the investing firm's stock; information on expected rate of returns; and information on reputation of the investing firm were the leading factors affecting the investment decision by the individual investors. When correlation analysis was applied a positive association between information asymmetry and investment decisions was noted.

It is imperative to mention that, the factors that affects information asymmetry, investment decision-making process, factors that affect investment decisions and the association between information asymmetry and investment

decisions identified in this study should be taken into account by the institutions and other investors to help make informed investment decisions. From the results, the study finally concludes that there are many factors that affected information asymmetry; factors that affect investment decisions and that there was positive association between information asymmetry and decisions on investment. The study recommends that individual investors should make use of information from third parties, and profitability assessment in their investment decisions.

Recommendations

From the analysis and discussions in this study, the recommendations below are made so as to deal with some issues noted from the study.

One of the factors that affected information asymmetry noted was quality of financial statements. Based on this the study recommends that the individual investors have to make sure that the financial information they receive from the investing firm should be of good quality. This can be determined by the individual investors assessing and analysing the financial statements of the firm to be invested in.

Another recommendation is that the individual investors have to focus more on the opinions from third parties. This is because third parties make use of mitigation strategies to govern and control information asymmetry which helps to give the individual investors more credible information.

It is also recommended that the individual investors continue with their profitability assessments in their processes of making decisions on investment. By effectively analysing the profitability of the firms to be invested in, it contributes to helping the individual investors to know which firm to invest in. The profitability of the firm can be assessed by the use of returns on asset, returns on equity and the expected corporate earnings of the firms.

Since, there is positive association between information asymmetry and investment decisions, strengthening the information asymmetry process such as having accurate information on stock returns, third party's opinion, and analysts' forecasts on earnings per share are highly recommended. Improving information asymmetry process would lead to better investment decisions.

Suggestions for further study

Since this study used primary data to assess the determinants of information asymmetric, it is suggested that using secondary data to assess the determinants of information asymmetric would be a good move.

In addition, future research could be geared towards the effect of the determinants of information asymmetric on investment decisions.

Finally, research work that focused on the role of information asymmetric in attracting foreign investors into the country is highly suggested.

REFERENCES

Ahlers, G. Cumming, D. Günther, C. & Schwezer, D. (2015). *Signaling in Equity Crowdfunding, Entrepreneurship Theory and Practice theory and Practise*. 955-981.

Ali, I., & Tariq, A. (2013). *Factors Affecting Individual Equity Investor's Decision Making in Pakistan.*

Allen, D. C. (2015). Research, when you know what you are doing: A review of essentials of *qualitative inquiry*. Qualitative Report, 20, 451-453.

Aroni, J., Namusonge, G., & Sakwa, M. (2014). The Effect of Financial Information on Investment in Shares-A Survey of Retail Investors in Kenya. *International Journal of Business and Commerce,* 3(8), 58-69.

Attig, N., Fong, W.- M., Gadhoum, Y. & Lang, L. H. P. (2006). Effects of Large Shareholding on Information Asymmetry and Stock Liquidity. *Journal of Banking and Finance*, 30, 2875 2892.

Barberis, N. & Huang, M. (2001). Mental Accounting, Loss Aversion, and Individual Stock Returns. *The Journal of Finance*. 56 (4), 1247-1292.

Barberis, N., & Thaler, R. (2003). *A survey of behavioral finance*. In: Constantinides, G., Harris, M., Stulz, R. (Eds.), Handbook of the Economics of Finance. North Holland, Amsterdam.

Belleflamme, P. Omrani, N. & Peitz, M. (2015). The economics of crowdfunding platforms. *Information Economics and Policy*. 33. 11-28

Bharath, S. T., Pasquariello, P. & Wu, G. (2009). Does Information asymmetry Drive Capital Structure Decisions? *Review of Financial Studies*, 22, 3211-3243.

Blackwell, D. W., Marr, M. W. & Spivey, M. (1990). Shelf Registration and the Reduced due Diligence Argument: Implications of Underwriter Certification and the Implicit Insurance Hypotheses, *Journal of Financial and Quantitative Analysis*, 25, 245-259.

Block, J. Hornuf, L. & Moritz, A. (2017). *Which updates during an equity crowdfunding campaign increase crowd participation*? Small Business Economics. 50 (1) 3-27.

Caballé, J. & Krishnan, M. (1994). Imperfect Competition in a Multi-Security Market with Risk Neutrality, *Econometrica*, 62, 695-705.

Caparrelli, F.D., Arcangelis, A.M & Cassuto, A. (2004). Herding in the Italian stock market: a case of behavioral finance. *Journal of Behavioral Finance*, 5 (4), 222–230.

Chae, J. (2005). Trading Volume, Information Asymmetry, and Timing Information, *The Journal of Finance*, 61, 413-442.

Chandra, A., & Kumar, R. (2011). *Determinants of individual investor behaviour: An orthogonal linear transformation approach*. MPRA, Paper No. 29722.

Chong, T. P., & Lai, M. M. (2011). An empirical evidence of factors in equity selection process in Malaysia. *African Journal of Business Management*, 5(15), 6221.

Cohen, B. & Dean, T. (2005). Information Asymmetry and Investor Valuation of IPOs: Top Management Team Legitimacy as a Capital Market Signal. *Strategic Management Journal*. 26(7) 683-690.

Comerton-Forde, C. & Rydge, J. (2006). *Director Holding, Sharehoder Concentration and Illiquidity,* Working Paper, University of Sydney NSW 2006.

Connelly, B.L. Certo, S.T. Ireland, R.D. & Reutzel, C.R. (2011). Signaling theory: A review and assessment. *Journal of Management*. 37. 39–67.

Courtney, C. Dutta, S. & Li, Y. (2017). *Resolving information asymmetry: Signaling, Endorsement and Crowdfunding success.* Sage publications Inc. 265-291.

Daniel, K. & Titman, S. (2016). Market reaction to tangible and intangible information. *Journal of Finance.* 61, 1605–1643.

Dehlen, T. Zellweger, T. Kammerlander, N. & Halter, F. (2014). The role of information asymmetry in the choice of entrepreneurial exit routes. *Journal of business venturing*. 29, 193-209.

Del Missier, F., Ferrante, D & Costantini, E. (2007). Focusing effects in pre decisional information acquisition. *Acta Psychologica*, 125, 155-174.

Dwyer, L., Forsyth, P., & Dwyer, W. (2010). *Tourism Economics and Policy*. Channel View Publications.

Easley, D., Kiefer, N. M., O'Hara, M. & Paperman, J. B. (1996). Liquidity,

Information, and Infrequently Traded Stocks, *Journal of Financial Economics*, 19, 69-90.

Evans, D.A. (2006). Subject perceptions of confidence and predictive validity in financial cues. *Journal of behavioural Finance*, 7(1), 12-28.

Fama, E. & Jensen, M. (1983). Agency Problems and Residual Claims. *The Journal of Law and Economics.* 26(2), 327-349.

Farooq, A., & Sajid, M. (2015). Factors Affecting Investment Decision Making: Evidence from Equity Fund Managers and Individual Investors in Pakistan. *Research Journal of Finance and Accounting* 6 (9).

Fee, C. E. & Thomas, S. (2000). *Corporate Diversification, Asymmetric Information, and Firm Value: Evidence from Stock Market Trading Characteristics*, Working Paper. Michigan State University.

Filbeck, G., Hatfield, P. & Horvath, P. (2005). Risk aversion and personality type. *Journal of Behavioral Finance*, 6 (4), 170–180.

Fogel, O. & Berry, T. (2006). The disposition effect and individual investor decisions: the roles of regret and counterfactual alternatives. *Journal of Behavioral Finance*, 7 (2), 107–116.

Goodfellow, C., Bohl, M. T. & Gebka, B. (2009). Together we invest? Individual and institutional investors' trading behaviour in Poland. *International Review of Financial Analysis*, 18 (4), 212–221.

Guldiken, O. Tupper, C. Nair, A. & Yu, H. (2016). The impact of media coverage on IPO stock performance. *Journal of Business Research*. 72, 24–32.

Gunathilaka, C. (2014). *Factors Influencing Stock Selection Decision the Case of Retail Investors in Colombo Stock Exchange*.

Hyide, H. K. (2002). Pragmatic beliefs and overconfidence. *Journal of Economic Behaviour & Organization*, 48 (1), 15-28.

Jagongo, A. O., & Mutswenje, V. S. (2014). A survey of the factors influencing investment decisions: the case of individual investors at the NSE. *International Journal of Humanities and Social Science,* 4 (4), 92-102.

Jensen, M. & Meckling, W. (1976). Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure. *Journal of Financial Economics* 3, 305-360.

Kallinterakis, V., Munir, N. & Markovic, M. R. (2010). Herd Behavior, Illiquidity, and Extreme Market States: Evidence from Banja Luka. *Journal of Emerging Market Finance*, 9(3), 305–324.

Kamil, M. L., Mosenthal, P. B., Pearson, P. D., & Barr, R. (2014). *Handbook of reading research* 3. New York, NY: Routledge.

Kannadhasan, M. (2015). Retail investors' financial risk tolerance and their risk-taking behaviour: The role of demographics as differentiating and classifying factors. *IIMB Management Review*, 27(3), 175-184.

Kessler, & Sheila. (1996). *Measuring and Managing Customer Satisfaction: going for the gold*. Milwaukee, Wisconsin: ASQC Quality Press.

Kisaka, E. K. (2015). *The Effect of Behavioral Finance Factors on Stock Investment decisions in Kenya.* Unpublished Doctoral Dissertation, South Eastern Kenya University.

Kremer, S. (2011). *On the Causes and Consequences of Short-Term Herding by Institutional Traders.* Freie Universität Berlin.

Krishnaswami, S. & Subramaniam, V. (1999). Information Asymmetry, Valuation, and the Corporate Spin-Off Decision, *Journal of Financial Economics*, 53, 73-112.

Kroger, R. J. (2004). *Enron, Fraud and Securities Reform: An Enron Prosecutor's Perspective*

Kulkarni S.P., (2000). The influence of information technology on information asymmetry in product markets, *Journal of Business and Economic Studies* 6(1), 55–71.

Kyle, A. S. (1985). Continuous Auctions and Insider Trading, *Econometrica*, 6, 1315-1335.

Lakonishok, J., A. Shleifer & R.W. Vishny (1992). The Impact of Institutional Trading on Stock Prices, *Journal of Financial Economics* 32, 23 - 43.

Lam, J. (2014). *Enterprise risk management: from incentives to controls.* Hoboken, NJ: John Wiley & Sons.

Lehenkari, M. & Perttunen, J. (2004). Holding onto the losers: finish evidence. *The Journal of Behavioral Finance*, 5 (2), 116–126.

Ley, A. & Weaven, S. (2011). Exploring agency dynamics of crowdfunding in

start-up capital financing. *Academy of Entrepreneurship Journal*. 17 (1) 85-110.

Löher, J. (2017). *The interaction of equity crowdfunding platforms and ventures: an analysis of the preselection process*, Venture Capital. 19(1) 51-74.

Madun, A., (2009). *The impact of financial analyst coverage on stock properties: The experience of the Malaysian research incentive scheme*.

Maginn, J. L., Tuttle, D. L., McLeavey, D. W., & Pinto, J. E. (Eds.). (2007). *Managing investment portfolios: a dynamic process* (Vol. 3). Hoboken, NJ: John Wiley & Sons.

Maiyaki, A. A. (2011). Factors Determining Bank's Selection and Preference in Nigerian Retail Banking. *International Journal of Business and Management*, 6(1).

Marshall, C., & Rossman, G. (2016). *Designing qualitative research (6th ed.).* Thousand Oaks, CA: Sage.

Mehta, S., & Chaudhari, J. (2016). The Existence of Behavioural Factors Among Individual Investors for Investment Decision In Stock Market: Evidence From Indian Stock Market. *Global Journal of Research in Management*, 6(1), 57-76.

Merikas, A. A., Merikas, A. G., Vozikis, G. S., & Prasad, D. (2011). Economic factors and individual investor behavior: The case of the Greek stock exchange. *Journal of Applied Business Research* (JABR), 20(4), 93-98.

Modigliani, F & Miller, M., H (1958). The cost of capital, corporate finance and the theory of investment, *American Economic Review*, 3, 261-98.

Murphy, S. A. (2010). *Investing in life: Insurance in Antebellum America*. Baltimore: JHU Press.

Muthama, C., Mbaluka, P., & Kalunda, E. (2013). An Empirical Analysis of Macro-Economic Influences on Corporate Capital Structure of Listed Companies in Kenya. *Journal of Finance and Investment Analysis*, 2(2), 41-62.

Mwangi, G. G. (2011). *Behavioural factors influencing investment decisions in the Kenyan property markets.* Unpublished Thesis, Strathmore University.

Ndiege, C. O. (2012). *Factors influencing investment decision in equity stocks at*

the Nairobi Securities Exchange among teachers in Kisumu Municipality Kenya. Unpublished Thesis, University of Nairobi.

Niskanen, J. & Niskanen, M. (2007). *Yritysrahoitus. Edita Publishing Oy.*

Obamuyi, T. M. (2013). *Factors influencing investment decisions in capital market: A study of individual investors in Nigeria*. Organizations and markets in emerging economies, 4 (1), 141-161.

Oberlechner, T. & Osier, C., L. (2004). *Overconfidence in currency markets*.

Osnabrugge, M.V. (2000). *A comparison of business angel and venture capitalist investment procedures: An agency theory-based analysis*. Venture Capital. 2(2), 91-109.

Phansatan, S., Powell, J. G., Tanthanongsakkun, S., & Treepongkaruna, S. (2012). Investor type trading behavior and trade performance: Evidence from the Thai stock market. *Pacific Basin Finance Journal*, 20(1), 1-23.

Phuoc L. L. & Doan T. T. H. (2011). *Behavioral factors influencing individual investors´ decision-making and performance: A survey at the Ho Chi Minh Stock Exchange*.

Qureshi, S. A., & Hunjra, A. I. (2012). Factors affecting investment decision making of equity fund managers. *Wulfenia Journal*, 19 (10), 280-291.

Ritter, J. R. (2003). Behavioral Finance. *Pacific-Basin Finance Journal*, 11 (4), 429-437.

Rowley, J. (2012). Conducting research interviews. *Management Research Review*, 35(3/4), 260-271.

Sarwar, S., & Hussan, W. (2016). Factors Affecting the Individual Decision Making: a Case Study of Islamabad Stock Exchange. *European Journal of Economic Studies*, 15 (1) 242-258.

Saunders, M., K., Lewis, P., & Thornhill, A. (2012) *Research methods for Business Students*, 5th ed., London, Pearson.

Sohl, J.E. (1999). *The early-stage equity market in the USA.* Venture Capital, Vol. 1. No. 2. 101-120.

Spence, M. (1973). Job Market signaling. *The Quarterly Journal of Economics*. 87(3), 355–374.

Stoll, H. R. (1978). The Pricing of Security Dealer Services: An Empirical Study of NASDAQ Stocks, *The Journal of Finance*, 1153-1173.

Sultana, S. T., & Pardhasaradhi, S. (2012). An empirical analysis of factors influencing Indian individual equity investors' decision making and behavior. *European Journal of Business and Management*, 4(18), 50-61.

Tan, L., Chiang, T. C., Mason, J. R. & Nelling, E. (2008). Herding behavior in Chinese stock markets: An examination of A and B shares. *Pacific-Basin Finance Journal*, 16 (1-2), 61–77.

Tiainen, P. (2013). *Driving Factors of Tourism Investment Decisions and Lapland's Attractiveness in Tourism Investments.* Master's thesis for Degree Programme in Service Innovation and Design. Laurea University of Applied Sciences.

Trafimow, D. (2014). Considering quantitative and qualitative issues together. *Qualitative Research in Psychology*, 11(1), 15-24.

Waweru, N. M. (2010). Do dividends matter? Some evidence from an emerging market. *South African Journal of Accounting Research*, 24(1), 1-11.

Waweru, N., M., Munyoki, E., & Uliana, E. (2008). The effects of behavioral factors in investment decision-making: a survey of institutional investors operating at the Nairobi Stock Exchange. *International Journal of Business and Emerging Markets*, 1 (1), 24-41.

APPENDICES

APPENDIX 1

Correlations

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Information on trading volume	Pearson Correlation	1	.274**	.532**	.505**	.552**	.173**	.344**	.230**	.463**	.474**	.642**
	Sig. (2-tailed)		.000	.000	.000	.000	.004	.000	.000	.000	.000	.000
(2) Accurate information on stock return	Pearson Correlation	.274**	1	.254**	.051	.136*	.170**	.085	.140*	.285**	.439**	.351**
	Sig. (2-tailed)	.000		.000	.391	.022	.004	.154	.019	.000	.000	.000
(3) Insider's disclosure of information	Pearson Correlation	.532**	.254**	1	.632**	.447**	.279**	.192**	.151*	.303**	.409**	.292**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.001	.011	.000	.000	.000
(4) Share pricing information	Pearson Correlation	.505**	.051	.632**	1	.710**	.192**	.188**	.208**	.241**	.172**	.317**
	Sig. (2-tailed)	.000	.391	.000		.000	.001	.002	.000	.000	.004	.000
(5) Informed traders exchange stocks	Pearson Correlation	.552**	.136*	.447**	.710**	1	.379**	.059	.088	.102	.116	.267**
	Sig. (2-tailed)	.000	.022	.000	.000		.000	.326	.140	.090	.053	.000

(6) Analysts' forecasts on earnings per share	Pearson Correlation	.173**	.170**	.279**	.192**	.379**	1	-.090	-.244**	-.303**	-.326**	.025
	Sig. (2-tailed)	.004	.004	.000	.001	.000		.133	.000	.000	.000	.681
(7) Accruals quality	Pearson Correlation	.344**	.085	.192**	.188**	.059	-.090	1	.333**	.240**	.281**	.655**
	Sig. (2-tailed)	.000	.154	.001	.002	.326	.133		.000	.000	.000	.000
(8) Quality of financial statements	Pearson Correlation	.230**	.140*	.151*	.208**	.088	-.244**	.333**	1	.756**	.373**	.405**
	Sig. (2-tailed)	.000	.019	.011	.000	.140	.000	.000		.000	.000	.000
(9) Product market share	Pearson Correlation	.463**	.285**	.303**	.241**	.102	-.303**	.240**	.756**	1	.610**	.504**
	Sig. (2-tailed)	.000	.000	.000	.000	.090	.000	.000	.000		.000	.000
(10) Third party's opinion	Pearson Correlation	.474**	.439**	.409**	.172**	.116	-.326**	.281**	.373**	.610**	1	.396**
	Sig. (2-tailed)	.000	.000	.000	.004	.053	.000	.000	.000	.000		.000
(11) Investment decisions	Pearson Correlation	.642**	.351**	.292**	.317**	.267**	.025	.655**	.405**	.504**	.396**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.681	.000	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

APPENDIX 2

RESEARCH QUESTIONNAIRE

The researcher is a student at the UCC. She is conducting a research into the "Information Asymmetry and Investment Decisions - a case of some selected banks in Ghana" The researcher will be most grateful for answering the following research questions. Absolutely, all information provided will be used for academic purposes only. Time spent answering the questionnaire is highly appreciated

Section A: Demographics

1. Gender of respondent: Male [ ] Female [ ]

2. Age group: 1) 18-29 [ ] 2) 30-39 [ ] 3) 40-49 [ ] 4) 50-59 [ ] 5) 60-64 [ ]

3. Educational level: 1) Diploma [ ] 2) Bachelor Degree [ ] 3) Master degree [ ] 4) PhD [ ]

4. For how long have you been an investors? 1) Less than 1 year [ ]

2) 1 - 3 years [ ] 3) 3 - 7 years [ ] 4) 7 - 10 years [ ] 5) Above 10 years [ ]

Section B: Factors that affect information asymmetry

In the table below are some factors that affect information asymmetry. Please TICK the number that most reflects your answer on a scale of 1 to 5 (where 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree).

	Scale				
	1	2	3	4	5
Information on trading volume					
Accurate information on stock return					
Insider's disclosure of information					
Share pricing information					
Informed traders exchange stocks					
Analysts' forecasts on earnings per share					
Accruals quality					
Quality of financial statements					
Product market share					
Third party's opinion					

Section C: Investment decision making process by individual investors

In the table below are some investment decision making process. Please TICK the number that most reflects your answer on a scale of 1 to 5 (where 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree).

	Scale				
	1	2	3	4	5
Determination of investment projects which are necessary to achieve individual investors' financial goals					
Search for the investment that are in line with the individual investors' strategic goals					
Quantitative estimation of the income, cost and risk of the investment					
Ranking of investment projects based on income, cost and risk of the investment					

Careful consideration of the funding methods for the investment					
An examination of the cash flows from the investment					
Payback period of the investments					
Perform market analysis					
Screening of available investment and considers the best for investment					
Examining the condition of financial statements of the investing firm					
Collection of information relevant to the investment decision					
Profitability assessment					

Section D: Factors that affect investment decision

In the table below are some factors that affect investment decision. Please TICK the number that most reflects your answer on a scale of 1 to 5 (where 1= very uninfluential, 2= uninfluential 3= neutral, 4= influential, 5= very influential)

	Scale				
	1	**2**	**3**	**4**	**5**
Condition of financial statements					
Expected corporate earnings					
Dividends from investment					
Past performance of the investing firm's stock					
Projected security capital bonus					
Risk level of the investment					
Information on reputation of the investing firm					
Financial information of the investing firm					
Information on expected rate of returns					
Advocate advice					

Thank you