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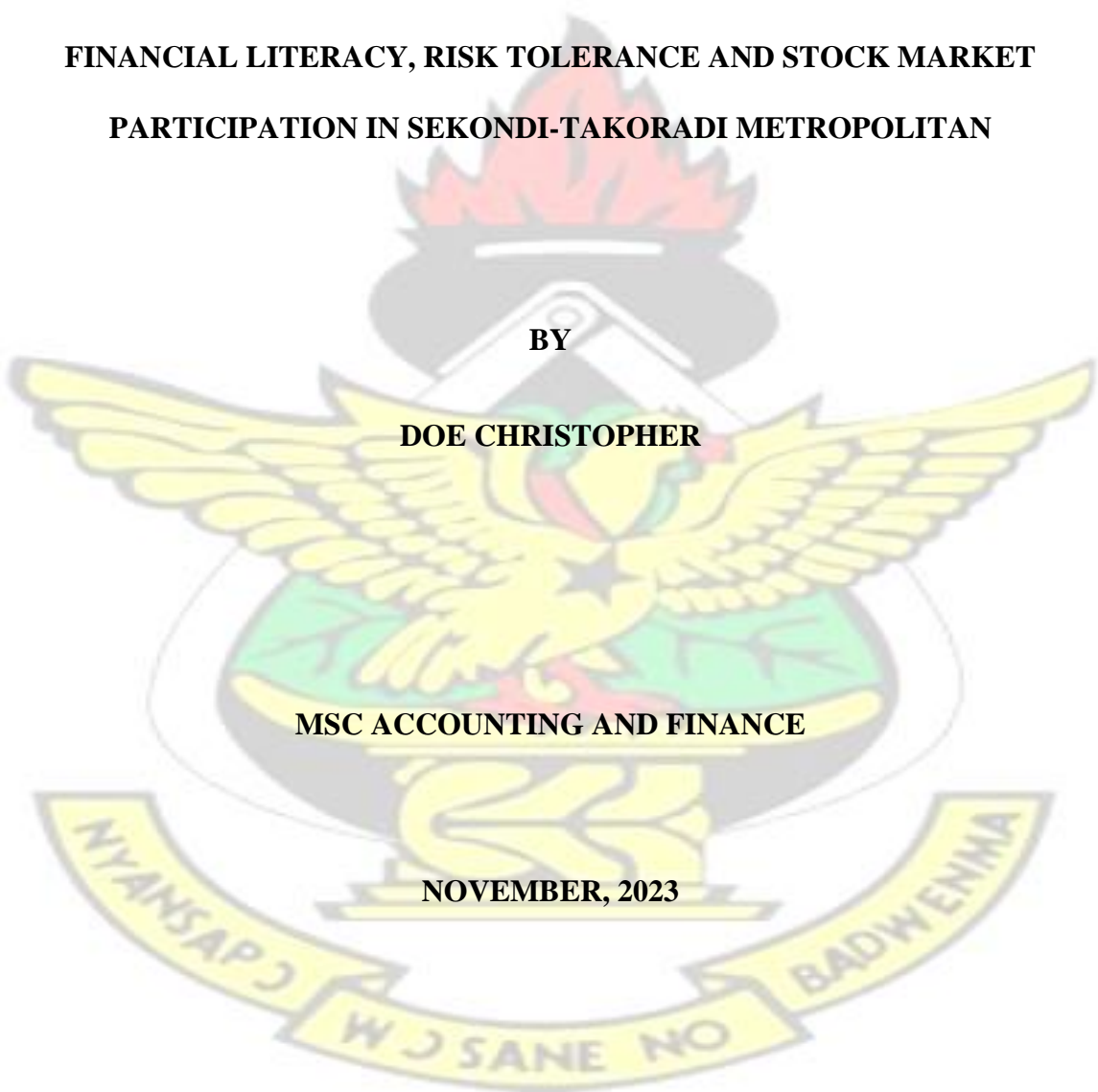
**FINANCIAL LITERACY, RISK TOLERANCE AND STOCK MARKET
PARTICIPATION IN SEKONDI-TAKORADI METROPOLITAN**

BY

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MSC ACCOUNTING AND FINANCE

NOVEMBER, 2023



DECLARATION

I hereby declare that this research work is the result of my original research undertaken for fulfilment of MSc Accounting and Finance and all works and efforts consulted have been dually acknowledged.

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DEDICATION

I dedicate this work to my lovely wife, for her encouragements, prayers and financial support towards my education.

KNUST



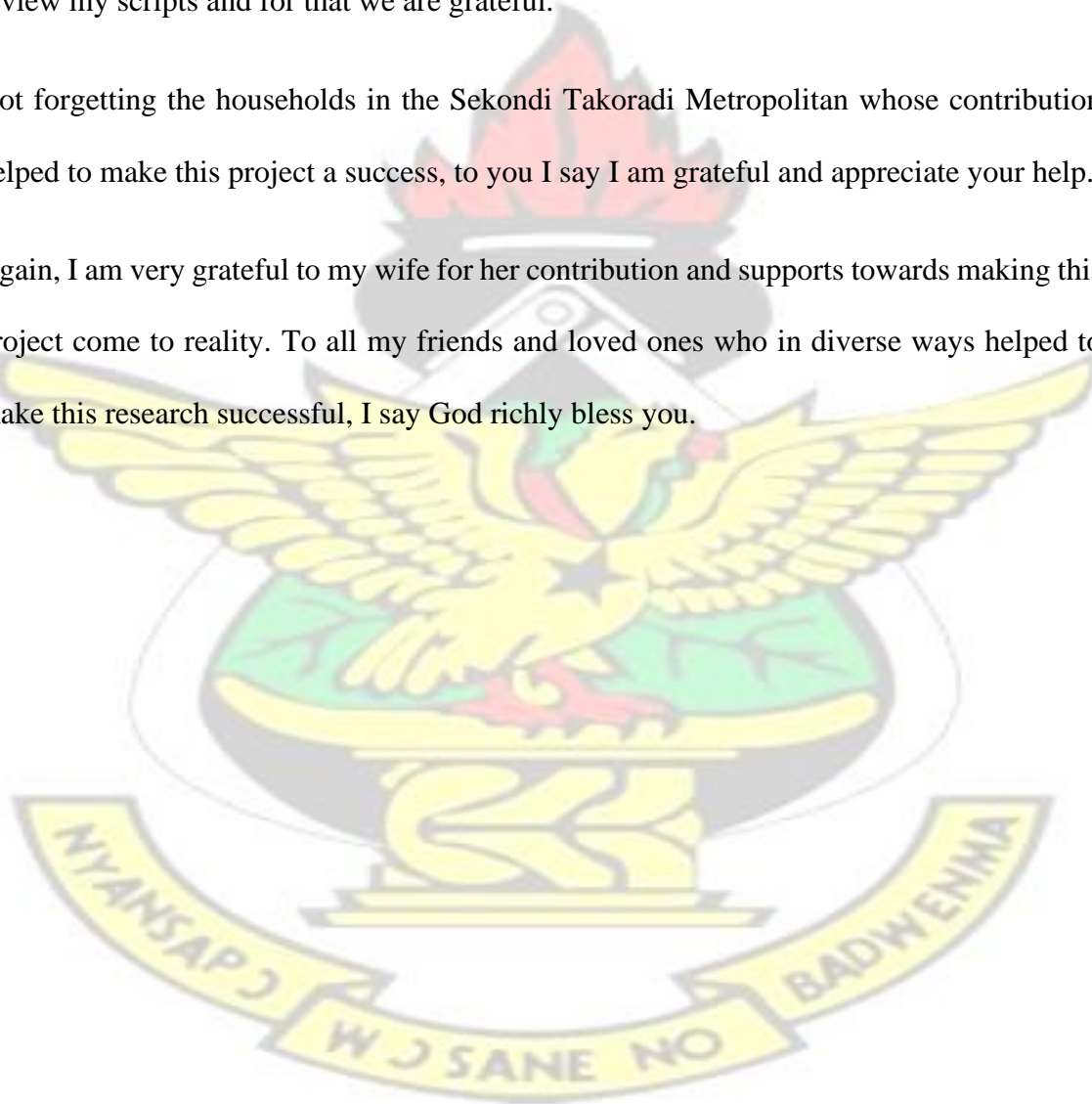
ACKNOWLEDGEMENT

My greatest and ultimate debt of gratitude go to almighty God and creator for given me the ability to put together this material.

Secondly, I would like to acknowledge our supervisor, Dr. K. Ankomah for his constructive criticism and valuable suggestions, despite his tight schedule he always found time to review my scripts and for that we are grateful.

Not forgetting the households in the Sekondi Takoradi Metropolitan whose contribution helped to make this project a success, to you I say I am grateful and appreciate your help.

Again, I am very grateful to my wife for her contribution and supports towards making this project come to reality. To all my friends and loved ones who in diverse ways helped to make this research successful, I say God richly bless you.



ABSTRACT

The main aim of the study is to investigate the effects of financial literacy and risk tolerance on stock market participation of households in the Sekondi Takoradi Metropolitan. The study specifically sought to; Examine the effects of financial literacy on participation on the stock market of households in the Sekondi Takoradi Metropolitan; Examine the effects of tolerance for risk on participation on the stock market of households in the Sekondi Takoradi Metropolitan; and examine the mediation effects of tolerance for risk in the relationship between financial literacy and participation on the stock market of households in the Sekondi Takoradi Metropolitan. The study was a quantitative analysis where data was collected from 399 household heads in the Sekondi Takoradi Metropolitan through convenience sampling. The study employed the use of mediation and multiple regression analysis with the SPSS v 23 as the main data processing tool. The study found that any changes in their level of financial knowledge will lead to a 67.4% increment in their participation in the stock market. Also, the level of financial behavior and financial attitudes of these participants will lead to 29.1% and 62% respective declines in the level of participation on the stock market by these household heads. However, financial awareness levels have no significant negative effects on the level of participation on the stock market by these household heads. Also, the current level of tolerance for risk reduces these household heads' participation in the stock market by an estimated 25.7%. The outcome of the Sobel test indicated that tolerance for risk has a significant negative mediation effect in the relationship between financial literacy and investment decisions of household heads in the Sekondi Takoradi Metropolitan. The study recommends that, the Ghana Stock Exchange inform the public about the securities traded there, what they do, what their purpose is, and how crucial the exchange is to economic progress. This will go a long way toward raising public awareness and encouraging involvement in the process.

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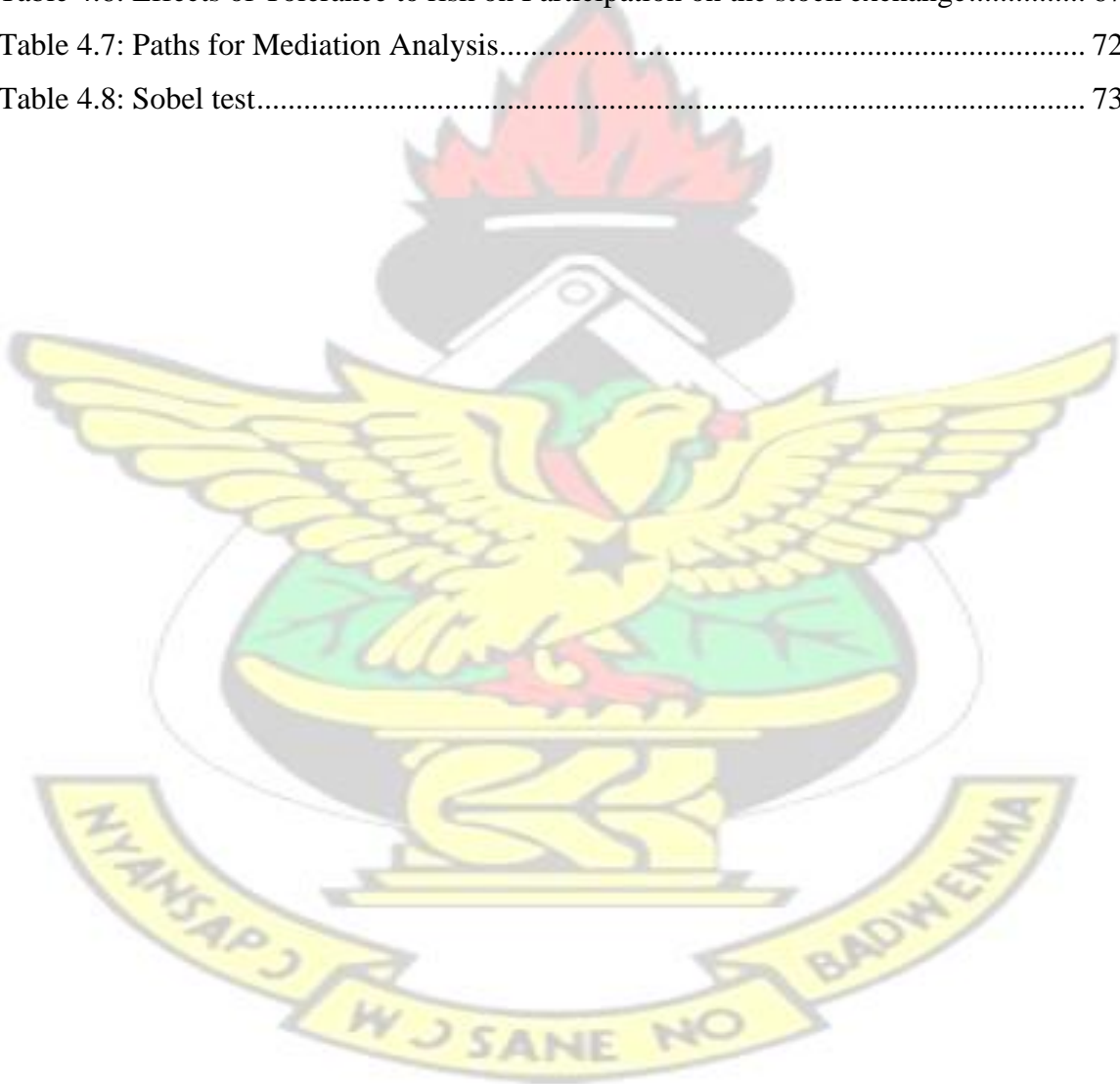
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CHAPTER ONE

Introduction

Ghana has one of the lowest participation rates in equity-related products among developing countries, while having a reasonably high gross domestic savings rate (Trading Economics, 2023); the most recent figure from 2021 is 21.74 percent. Based on 132 nations, the global average in 2021 is 23.47 percent (Trading Economics, 2023). As a result, Ghana has one of the greatest saving rates in the sub-Saharan African region and is rated 70th among the world's top savers (Yakubu, Oumarou, & Abdallah, 2022). More over half of Ghana's total savings come from the home sector (Yakubu, Oumarou, & Abdallah, 2022). While savings in tangible assets fell over the same time, net financial savings rose in 2015–16 over 2014–15 (Kuffour & Adu, 2019). Over time, the choices of Ghanaian home investors for saving and investing have also changed (Baidoo, Boateng, & Amponsah, 2018). Investors would always benefit from having a sizable portion of their portfolio made up of equities or equity-linked products, but participation on the stock market among investors has not yet reached the impressive levels sought (Atkinson, Messy, Rabinovich, & Yoong, 2015).

1.1 Background of the Study

In everyday life, families and individuals must make significant investment choices, yet certain goods may be complicated and difficult to comprehend, particularly for investors who lack financial sophistication. Relevant examples include choices about asset allocation and risk diversification, wealth building and financial planning, retirement savings, mortgage finance, etc (Clark, Lusardi, & Mitchell, 2017). The aggregate of all individual financial choices influences family well-being, economic progress, and the stability of the

financial system as personal investment decisions are made by fully informed people to maximise their predicted lifetime value (Kozak & Sosyura, 2015). It is now understood that people are often not well-prepared to make complicated financial choices because of their poor degree of financial literacy (Berry, Karlan, & Pradhan, 2018). Understanding how Ghanaian families behave while making investment choices might result in efforts that encourage investors' active engagement, supported by their long-term investment objectives while taking into account their immediate requirements (Akakpo, Amidu, Coffie, & Abor, 2022).

It is impossible to overstate the impact that financial markets have on the amount of economic activity in both established and emerging nations. Mobilizing capital is one of the key tasks that financial markets carry out (Ozilli, 2020); yet, contemporary financial markets are characterised by the creation of new and very complex financial products (Akakpo, Amidu, Coffie, & Abor, 2022). Due to the complexity of financial products and the necessity for people to engage in financial markets, it is consequently crucial for people to have a solid understanding of finance (Bamforth, Jebarajakirthy, & Geursen, 2018). Increased financial product complexity without corresponding increases in financial consumer sophistication results in an imbalance (Clark, Lusardi, & Mitchell, 2017). Financial education is, thus, a crucial tool to address this difference and to help consumers accept and utilise goods that they increasingly have access to, according to Bamforth, Jebarajakirthy, & Geursen (2018). For people to effectively participate in today's constantly changing and more complex financial markets, including the stock market, they must have financial literacy (Berry, Karlan, & Pradhan, 2018).

Additionally, the overall shift in decision-making from the government and businesses to private citizens to prepare for retirement generates a further need for people to take control of their financial wellness (Thomas & Spataro, 2015). Only when an individual has the required financial literacy abilities are they able to take on such responsibilities. Financial literacy offers a wealth of possible advantages. For instance, when people are financially literate, they are often in a position to make better financial choices than they would have in the past. Some of the choices they will likely make will include retirement planning, borrowing, investing, and insurance (Kuffour & Adu, 2019). Additionally, being financially literate provides one an advantage since they are less likely to be financially unstable (Lusardi & Mitchell, 2017). Compared to their colleagues who lack financial literacy, they are better equipped to deal with unanticipated financial challenges and find the money to cover crises or unforeseen events in less time (Clark, Lusardi, & Mitchell, 2017). Despite the advantages of financial literacy, financial illiteracy is a common problem worldwide.

It is difficult because of this phenomenon to fully gain from the stock market (Abdeldayem, 2016). Investing in the stock market is purchasing stock in companies to increase your wealth (Lusardi & Mitchell, 2017). However, in Ghana, 63.6 percent of people opted to put their money in bank accounts in 2016 instead of other types of financial assets (Bamforth, Jebarajakirthy, & Geursen, 2018). Although there are several methods to invest in financial assets, including bonds, mutual funds, shares, and bank accounts (savings and deposits) (Iyer, & Bhaskar, 2012). In reality, one's decision to invest (hence, participation in the stock market) may also be impacted by irrational psychological variables, which are frequently referred to as financial behaviour. But several studies have shown links between

stock market involvement, financial literacy, and other aspects of economic development (Sharma, 2016; Grohmann, Klühs, & Menkhoff, 2018; Basdas, 2021). However, the majority of these studies say nothing about psychological issues like tolerance for risk. The degree of tolerance for risk of an investor may also have an impact on their investing choices. Tolerance for risk is the term used to describe an investor's attitude toward risk (Ariani et al., 2016). The danger in this scenario is the unpredictable nature of investment returns. Risk-takers are often investors who are bold in allocating capital to high-risk assets, and the contrary is also true (Iyer, & Bhaskar, 2012). Investors who are risk-averse cannot endure a lot of risk, but investors who are risk-tolerant can. Risk-averse investors thus get lower returns on their investments as a result of their aversion to risk. Certain psychological traits, such as investor attitudes, preferences, and psychological biases, have an impact on stock market activity, according to published research (Klontz, Britt, & Mentzer, 2011; Shen et al., 2016). A number of factors, including stock market knowledge, have the most impact on the volume of investments made via stock market involvement (Balloch et al., 2015). According to research, variations in Aversion to risk and financial situation are insufficient to fully explain why investors choose to invest or not (Conlin et al., 2015).

In addition to financial literacy, academic research empirically examines the impact of age, gender, income, Aversion to risk/tolerance, and education on participation on the stock market (Almenberg & Dreber, 2015). Despite claims that participation on the stock market rates differ greatly across countries, the average household's asset holdings do not (Kuntze, Wu, Wooldridge, & Whang, 2019). Households with below-average net wealth holdings in countries with high participation on the stock market rates show participation rates that are at least twice as high as those with above-average net wealth holdings in countries with

low participation on the stock market rates, proving that they are sufficiently different from one another (Aydemir, & Aren, 2017). This result shows that focus should be placed on a more recently researched element of incidence, namely the differences in country-specific traits and their influence on participation on the stock market.

According to theory, investors are significantly more worried about predicted losses than they are about expected profits and losses, according to the Prospect Theory (Tapas, 2021). Because of this, investors worry about prospective losses significantly more than they do about potential profits, and the typical investor thinks that losing one dollar hurts twice as much as earning it. In order to avoid losing money, investors seem to be more eager to take on risk than they are to get a commensurate benefit. This emphasises the need of financial knowledge in trading stocks. This research aims to evaluate the impact of tolerance for risk and financial literacy on household participation on the stock market in the Sekondi Takoradi Metropolitan.

1.2 Problem Statement

Development organisations are aware of the value of financial literacy initiatives in promoting access to financial services, especially for families in developing nations (World Bank, 2014).

Financial literacy is crucial since it leads to wise investment choices and higher investment levels. Even though Banyen and Nkuah (2015) found that financial literacy is not a significant predictor of participation on the stock market in Ghana because most Ghanaians do not know much about money, Adam, Frimpong, and Boadu (2017) found that Ghanaians continue to make bad financial decisions because they don't know much about money. Although the factors of interest have been analysed in many research and

correlations between them have been discovered, these interactions have often only been investigated singly (Kozak & Sosyura, 2015; Thomas & Spataro, 2015; Birochi & Pozzebon, 2016; Mishra, 2018; Bongomin et al., 2020). These earlier researches did not examine the interaction between financial literacy and tolerance to risk and how it could affect families' stock market involvement or the participation on the stock market of people who have gained financial inclusion via financial education.

Therefore, this research aims to provide empirical answers to these problems. Do people with financial literacy engage in financial markets? Participate in the financial markets if you like taking risks? The association between financial literacy and stock market involvement may be significantly mediated by Aversion to risk. By examining the relationship between financial literacy, tolerance to risk, and stock market involvement, the research, from an empirical perspective, fills a gap in the literature. In Ghana, where the ratio of gross savings to GDP is large, the research is being done. The study also demonstrated the importance of financial education programs in enhancing family financial literacy and how this benefits families' stock exchange investing choices.

1.2.1 Purpose of the study

The main aim of the study is to investigate the effects of financial literacy and tolerance to risk on participation on the stock market of households in the Sekondi Takoradi Metropolitan. The study seeks to conduct a mediation analysis of tolerance to risk in the relationship between financial literacy and participation on the stock market.

1.3 Research Objectives

The study seeks to achieve the following research objectives;

1. Examine the effects of financial literacy on participation on the stock market of households in the Sekondi Takoradi Metropolitan
2. Examine the effects of tolerance to risk on participation on the stock market of households in the Sekondi Takoradi Metropolitan
3. Examine the mediation effects of tolerance to risk in the relationship between financial literacy and participation on the stock market of households in the Sekondi Takoradi Metropolitan.

1.4 Research Hypothesis

The study provides answers to the following research hypothesis;

1. H_0 : there is no significant effects of financial literacy on participation on the stock market of households in the Sekondi Takoradi Metropolitan
 H_1 : there is a significant effect of financial literacy on participation on the stock market of households in the Sekondi Takoradi Metropolitan
2. H_0 : there is no significant effects of tolerance to risk on participation on the stock market of households in the Sekondi Takoradi Metropolitan
 H_1 : there is a significant effect of tolerance to risk on participation on the stock market of households in the Sekondi Takoradi Metropolitan
3. H_0 : there is no significant mediation effects of tolerance to risk in the relationship between financial literacy and participation on the stock market of households in the Sekondi Takoradi Metropolitan.
 H_1 : there is a significant mediation effects of tolerance to risk in the relationship between financial literacy and participation on the stock market of households in the Sekondi Takoradi Metropolitan.

1.5 Significance of the Study

The study will help policymakers, people who work in the field, and people in academia.

In practice: the results of the study will help financial firms in the Sekondi Takoradi Metropolitan learn more about the people they serve. They will be able to determine how well these individuals understand money and how much risk they are ready to take, which will be useful. This will enable them to enhance their investing strategies and increase their profits.

As a result, the institutions will be better able to develop marketing strategies that can educate the public about investing possibilities and encourage more individuals to adopt them.

Financial Educators: Tailored educational programs: Insights from this study can guide the development of educational initiatives specifically designed to enhance financial literacy and address risk perceptions, thereby empowering individuals to make informed investment choices.

In terms of policy: Informed policy decisions: A comprehensive understanding of financial literacy and risk tolerance in relation to stock market participation will enable policymakers to formulate targeted policies that promote financial inclusion and economic growth

the results of this study could be used to create new rules and educational programs to help households become more comfortable with risk. This would reduce risky behavior and encourage more people to buy stocks. Also, these policies might make these people more willing to take risks

In academia: The study will add to what is known about participation on the stock market through the lens of financial education and tolerance to risk. It will do this by keeping track of how much people who are not financially educated but are willing to take risks participate in the stock market. Since there is a limited number of research on financial literacy, willingness to take risks, and participation in the stock market, this study will be important for adding to the literature in the field. Again, the results of this study will be used as a guide by scholars in the future who want to add to the body of knowledge by doing more research on the same topic in similar or related areas.

Market Regulators: Enhanced regulatory frameworks: The study's findings can contribute to the creation of regulations that align with the risk profiles and financial literacy levels of households, fostering a more secure and accessible stock market environment.

Investors and Households: The research outcomes will equip households with knowledge about the relationship between financial literacy, risk tolerance, and stock market participation, assisting them in making more informed investment decisions aligned with their risk preferences.

By clarifying the problem statement and emphasizing the potential benefits to various stakeholders, this study aims to provide valuable insights that contribute to the overall financial well-being and market engagement of households in the Sekondi-Takoradi region.

Market Regulators: Enhanced regulatory frameworks: The study's findings can contribute to the creation of regulations that align with the risk profiles and financial

literacy levels of households, fostering a more secure and accessible stock market environment.

1.6 Scope of the Study

The study is taking place in the Ghanaian Municipality of Sekondi Takoradi, which is in the Western Region. The Municipality has about 1,035,000 households (as reported by the Ghana Statistical Service), and the average size of a household is about four people. Because of this, the Sekondi Takoradi Metropolitan is a great place to study. This study looks at how much risk household heads in the Sekondi Takoradi Metropolitan are willing to take, and how that affects their participation in the stock market. The study looks at household heads because they are the main people who make money for their families.

1.7 Organization of the Study

This study will be organised into 5 chapters with the first chapter serving as the introduction. Chapter two is the literature review, which is in four sections, a theoretical review, a conceptual review an empirical review followed by a conceptual framework; Chapter three, which is the research methodology, deals with the approach applied in this research study. The sampling techniques and sample size, data processing and mode of analysis, variables, and ethical considerations will also be discussed here; the fourth chapter is the data presentation, analysis and discussion; and finally, Chapter 5 will be the summary of the study, followed by the conclusions and recommendations. Where feasible, key opportunities for further research will be provided.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This section would comprise the theoretical review, conceptual review, and empirical review of the literature. This study would focus on the financial literacy, tolerance to risk and participation on the stock market of individuals in Ghana.

2.1 Theoretical Review

Based on the objectives of the study, the theoretical reviews underpinning includes, prospect theory, heuristics theory and decision theory.

2.1.1 Prospect Theory

Humans frequently express more emotion toward benefits than losses, according to the prospect theory, which Kahneman and Tversky developed in 1979. People are therefore more likely to feel inspired by the prospect of equal gains than they are by the anxiety that comes with potential losses (Hunguru et al., 2020). People give perceived certainty much more weight than perceived likelihood since they are only perceived as risk-averse when they stand to gain and risk-takers when they stand to lose (Hunguru et al., 2020). People frequently base their decisions on the potential value of gains and losses as a result, as opposed to taking the decision's utility into account. According to Likudie (2020), prospect theory, a replacement model for anticipated utility theory, describes how people frame and assess a decision when there is uncertainty. Therefore, the core ideas of the theory are mental accounting, regret aversion, self-control, and loss aversion.

An important concept for decision-making under risk and uncertainty is the prospect theory. Kuffour and Adu (2019) propose the prospect theory as a means of understanding

human cognition. The rational-based framework of the conventional method was proposed by Mishra (2018), but Kahneman & Tversky (1979) provide compelling evidence that people do not act rationally, particularly in risky circumstances. People act in ways that decrease risk when there are gains and raise risk when there are losses under these circumstances. The prospect theory provides an explanation for this behavior (Kahneman & Tversky, 1979; Magendans et al., 2016).

According to prospect theory, which suggests a value function, the framing effect is explained (Likudie, 2020; Kahneman & Tversky, 1979; Nadeem et al., 2020). Prospect theory's core tenet is that value is assessed as gains and losses relative to a reference point (Nadeem et al., 2020). People's preferences will vary based on whether the domain of outcomes is gain or loss. Decision alternatives with outcomes above the reference point are considered as gains, whereas outcomes below that point are viewed as losses (Noor et al., 2020).

The prospect theory also demonstrates that investors are far more concerned about predicted losses than they are about projected profits and losses, according to Rajasekar et al. (2022). A typical investor holds that investors are significantly more concerned about prospective losses than they are about potential gains, and that the anguish of losing one dollar is twice as large as the delight received from one-dollar earnings (Rajasekar et al., 2022). According to research, investors react differently to the same scenario depending on whether it is portrayed as a potential source of gains or losses. Investors appear to be more prepared to accept risk in order to avoid losing money than they are to receive a comparable benefit (Rahmawati et al., 2015). Prospect theory essentially describes an investor's tendency to take less risk when there are potential rewards but greater risk when

there are potential losses. When offered the choice between a guaranteed profit and a risk that might raise or lower the promised profit, an investor is more likely to choose the guaranteed profit. When offered the choice between a loss that is guaranteed and a risk that might cause the loss to rise or reduce, investors are more inclined to take the risk (Rahmawati et al., 2015).

The concept is pertinent to this study since it recognises a person's belief structure as well as their innate drive to get wealth (Salas-Velasco, 2022). This suggests that investors have a thorough understanding of the possible outcomes of a portfolio of assets. Acknowledging the potential for financial literacy and how it relates to the decisions investors make when participating in the Ghanaian stock market. Therefore, by expanding on the idea, it will assist financial institutions in continuously updating their stock so that the general public can evaluate and engage with them in business in the long term. This leads to the formulation of the second hypothesis of the study stated as;

H₀: there is no significant effects of tolerance to risk on participation on the stock market by households in the Sekondi Takoradi Metropolitan.

H₁: there is a significant effect of tolerance to risk on participation on the stock market of households in the Sekondi Takoradi Metropolitan.

2.1.2 Heuristics Theory

In psychology, heuristic biases are taught as mental heuristics that assist investors in making decisions and resolving issues, especially when they are confronted with complex problems and little information (Ritter, 1988). Heuristics may be beneficial when there is little information and little time (Tversky & Kahneman, 1974). Tversky and Kahneman initially proposed three heuristics—anchoring, availability, and representativeness—that

individual investors may apply in their decision-making in 1974. Kasoga (2021) later added overconfidence to the list. People who overestimate their abilities, expertise, and talents and view themselves as passionate participants display overconfidence bias and believe they can earn more money (Kanagasabai & Aggarwal, 2020). Representativeness is a generic test used to examine if an event is more likely to be representative of and comparable to its population. Investors employ representativeness heuristics to avoid lagging equities and purchase briskly rising ones.

A person is considered to depend on information that is easily available rather than all available information while making judgments (Tversky & Kahneman, 1974). A common occurrence in financial markets is the overreaction of stock prices following a spate of positive or bad news. This phenomenon is explained by the availability bias (Waheed et al., 2020). Players on the stock market frequently and unavoidably overreact to new information, which has an effect on an asset's price (Van Rooij et al., 2011). The crucial point is that these mental biases must be supported by tolerance to risk. When making investing decisions, investors prefer to acquire local stock over international stock and rely on the recommendations of their close friends and family as a reliable source of information (Waheed et al., 2020). Other research claim that people make decisions and take risks based on their experience and intuition rather than gathering relevant information that could influence them (Rahmawati et al., 2015; Liu et al., 2020).

The justification is that investors' decisions are influenced by their knowledge, past performance, experiences, and expectations (Magendans et al., 2016). As a result, individual investors frequently display behavioral biases while trading, which leads to trading mistakes. The issue is how different perception of risk and tolerance mediation

mechanisms affect heuristic biases and investment decisions, in any case. Studies conducted in Western settings and in nations with a capitalist system cannot be extrapolated to developing nations and may not necessarily be applicable to Ghanaians due to the distinct contextual perspective. Therefore, based on the Heuristics theory and the preceding research that has been presented, the study is emphasize this to find out the moderating effect of tolerance to risk in the relationship between financial literacy and participation on the stock market. However, the following hypothesis were formulated;

H₀: there is no significant effects of financial literacy on participation on the stock market of households in the Sekondi Takoradi Metropolitan.

H₁: there is a significant effect of financial literacy on participation on the stock market of households in the Sekondi Takoradi Metropolitan.

2.1.3 Decision Theory

Warner created the decision theory in 1968. It is a theory based on how individuals behave. There are prescriptive and descriptive versions of it (Acquah-Sam & Salami, 2013). According to the prescriptive version, one should select a course of action that maximizes predicted utility. According to the description, a person does opt for the course of action that maximizes predicted utility (Acquah-Sam & Salami, 2013).

It is impossible to think of a circumstance that does not entail these decision-making challenges, but investors should limit their focus to challenges that arise in the business world and have outcomes that can be expressed in terms of profit or revenue, cost or loss (Akakpo, 2020). It may be reasonable to consider the solution that yields the highest profit or revenue, or the lowest cost or loss, on average, over the long term, as the best alternative for these issues (Baskoro et al., 2019). This mainly relates to having financial literacy on a

specific stock market of a specific company in order to select the best one that suits the investors' preferences. Although this optimality criteria have several drawbacks, it should nevertheless be a helpful guide for behavior in routine circumstances when the implications are not life or death. The maximum of predicted utility, another criteria of optimality, offers a more individualized and subjective road map for action for a reliable decision-maker (Baskoro et al., 2019).

Listing the potential financial repercussions and the corresponding probabilities for each choice, calculating the anticipated monetary values of all alternatives, and choosing the alternative with the highest expected monetary value helps solve the most straightforward decision-making difficulties (Amidu et al., 2021). Financially uneducated people run the danger of picking the wrong value for a company's stock or even opting not to invest because they are unable to judge a company's financial health or profitability. When the choices entail decision-making sequences, determining the best option becomes slightly more difficult (Akhter & Hoque, 2022). In a different class of issues, it is frequently possible to obtain extra knowledge on an unknown variable for a given cost. Rarely is this extra knowledge completely correct. Its worth, and hence the greatest sum one would be ready to pay to get it, should be determined by the difference between the best one anticipates doing with the assistance of this knowledge and the best one anticipates accomplishing without it (Akhter & Hoque, 2022).

This idea is pertinent to the research since it guides investors in making the best decisions for their stock market investments (Acquah-Sam & Salami, 2013). Daily decisions are made because people want to pick the greatest options to maximize the return on their investment (Acquah-Sam & Salami, 2013). As a result of occasionally inadequate stock

market communication to the general public, some people have limited information about selecting the greatest value for money on a particular investment. Since decision-making has a substantial impact on tolerance to risk on the stock market, financial literacy, and tolerance to risk on participation on the stock market in Ghana.

2.2 Conceptual Review

This section will define the meaning of the basic concepts in relation to the objectives of the study, so that the readers can have a fair idea of the work that has been done. Under the conceptual review it would elaborate on the financial literacy, determinants of financial literacy, concept of tolerance to risk, determinants of tolerance to risk, concept of participation on the stock market and determinants of participation on the stock market.

2.2.1 Concept on Financial Literacy

Academics have given many different definitions of financial literacy, but according to Hunguru et al. (2020), it is a person's capacity to understand and apply financial concepts. Furthermore, Baskoro et al. (2019) asserted that individuals with high levels of financial literacy are aware of compound interest rates. People that appreciate time and money would participate in formal financial markets and stock markets, according to Akhter and Hoque (2022). There are several options for investing. Financial products such as gold, bonds, mutual funds, real estate, and equities are included (Yao & Curl, 2016). In actuality, the main objective is to put your money to work in order to increase income or profit, regardless of the strategy you choose (Salas-Velasco, 2022).

Contrarily, financial literacy is the ability to read critically, assess, manage, and effectively explain one's personal financial condition as it affects one's material well-being, according to study by the Fannie Mae Foundation (Salas-Velasco, 2022). Making wise financial

judgments, communicating about money and financial issues with ease, creating future goals, and effectively navigating barriers in life that influence daily financial decisions, such as financial events in the economy as a whole, are all part of it. Consumers with financial literacy are given the resources they need to make financial decisions that maximize expected lifetime benefits (Rekik, 2016).

Financial literacy is demonstrated by an investor's capacity to evaluate financial risk and opportunities, comprehend financial concepts and products, and make astute financial decisions to improve their financial well-being (Rothwell & Wu, 2016). Understanding how money functions in our daily lives, particularly how people invest and share it with one another, is referred to as financial literacy (Noor et al., 2020). It specifically refers to the body of ideas and information that empowers people to make wise financial decisions. Financial literacy, according to the Organisation for Economic Co-operation and Development (OECD), is the capacity to make informed decisions in a variety of financial situations, improve one's own financial well-being and the financial well-being of society, and ease participation in the economy. Financial literacy involves more than just being aware of financial hazards and concepts (Noor et al., 2020).

Contrarily, according to the Fannie Mae Foundation Report, financial literacy is the capacity to read, critically evaluate, manage, and effectively explain one's own financial problems as they relate to material well-being (Nadeem et al., 2020). It includes being able to handle life's obstacles that affect every day financial decisions, such as financial events that have an effect on the economy as a whole. It also requires being able to communicate effectively about money and financial concerns. Customers who are financially knowledgeable are given the resources they need to handle their money in a way that

maximizes predicted lifetime benefit (Ramudzuli & Muzindutsi, 2018). An investor's ability and dependability to evaluate financial risks and opportunities and make well-informed decisions that will improve their financial well-being are referred to as having financial literacy. They also have understanding of financial concepts and goods (Ramudzuli & Muzindutsi, 2018). Financial literacy is the understanding of how money functions in daily life, how people manage to invest it, and how they trade it with one another (Akhter & Hoque, 2022). It specifically refers to the knowledge and abilities that allow people to make intelligent financial decisions (Akakpo, 2020).

Financial literacy is a survival skill that individuals must obtain in order to thrive in the contemporary world. It is not only a convenience or piece of knowledge that everyone possesses (Harahap et al., 2022). The most evident and prevalent element of the numerous conceptual definitions of financial literacy is knowledge (Akhter & Hoque, 2022). Authorities, financial experts, and consumer advocates have all used the word "loosely" to describe the knowledge, skills, self-assurance, and motivation required to manage money responsibly, according to Ankrah Twumasi et al. (2021). According to Ankrah Twumasi et al. (2021), the conceptual definition of financial literacy currently in use only speaks of one's skills, knowledge, and abilities without attempting to identify the specific aspects of money management that make up one's financial literacy.

2.2.1.1 Determinants of Financial Literacy

Numerous macroeconomic and social variables, according to Kuffour and Adu (2019), have an impact on people's financial literacy. In addition to family and education, they also contain things like attitudes, views, and faith, to mention a few social and cultural components. Age, gender, marital status, employment, level of education, and income are

additional demographic data that are taken into account. However, a select few have been discussed in the paragraphs that follow for the sake of the study.

2.2.1.2 Age and Financial Literacy

There are conflicting study findings in the literature addressing the influence of age on financial literacy. Because of this, some researchers have found a clear link between age and financial knowledge, while others have found the opposite (Kuffour & Adu, 2019). Additionally, according to some studies, there is a positive link between the two variables up to a certain age range but a negative correlation after that. For example, Baskoro et al. (2019) found that those under the age of 60 imply a favorable association between age and financial literacy. This finding comes from their study on financial literacy among older Americans. But once a person reaches the age of 60, these ties begin to break down. The ability to manage money effectively may be impacted by a decline in fluid and crystallized intelligence as people get older, claim Magendans et al. (2016).

Additionally, Mishra (2018) discovered a negative association in their research between age and personal saving habits. This shows that a person's capacity to comprehend financial issues and render sensible financial decisions declines as he ages. This might be connected in part to old age syndrome, which happens when a person reaches old age and loses interest in money problems.

2.2.1.3 Gender and Financial Literacy

According to Magendans et al. (2016), women are more likely to admit they don't know the answer and are much less likely to answer the questions properly. This phenomenon is astonishingly comparable in nations with different economic systems (Likudie, 2020).

However, women also give a more conservative assessment of their own level of financial knowledge. This finding holds true for both rich and developing countries, according to Noor et al. (2020). Research by Rahmawati et al. (2015) adds to the body of research showing that women struggle more with financial calculations and have lower levels of understanding, which ultimately impairs their capacity to make wise financial decisions. The socialization of people may be to blame for the gender variations observed. According to a study by Edwards, Yao, and Curl (2016), parents have different expectations for their boys and daughters because they place greater value on labor and saving for their sons, who are also more likely to engage in financial conversations with their parents. In contrast, the authors found that since females receive greater financial support from their parents than sons do at the age of entering college, parents teach their daughters to be financially dependent. Therefore, it appears that the stark difference between men and women can be attributed to the fact that males typically view money as a source of power and think that possessing money will make them more desirable to others, whilst women appear to take a more passive attitude toward it (Yang et al., 2021).

2.2.1.4 Marital Status and Financial Literacy

The degree of financial literacy is also connected with marital status. Van Rooij et al. (2011) found that single people are significantly more likely than married people to have lower levels of financial literacy. In general, those who lack financial literacy run the risk of making poor financial decisions that, over time, may result in debts, which, in turn, affect their ability to maintain healthy relationships (Twumasi et al., 2022). According to Sunden and Surette (2021), who corroborated these findings, consumer debt poses a serious threat to marital pleasure and is the reason why married people tend to have greater levels of

financial awareness. The same justification as above might be made in regard to the number of dependent family members: in order to ensure the welfare of their family, people with dependent family members may be more concerned with their financial situation. However, the empirical findings do not support this hypothesis. According to Rekik (2016), persons who have one child are less likely to have poor financial literacy than those who have two or three children. Ramudzuli and Muzindutsi (2018) also discovered that dependent families were more likely to have low financial literacy levels. Reverse causality offers a possible explanation for these findings: People with high (low) financial literacy levels are more (less) interested about family planning.

2.2.1.5 Occupation and Financial Literacy

Kuffour and Adu (2019), who examined profession, discovered that people with more work experience encounter a greater variety of financial scenarios; as a result, they learn more, which makes it easier for them to analyze more complex data and provides a foundation for decision-making. However, Likudie (2020) asserts that untrained or jobless people typically exhibit inferior performance because they are less exposed to financial problems. In addition, poor job performance and low worker productivity are linked to financial illiteracy (Hunguru et al., 2020). Working conditions may also have an impact on one's financial views and habits because stable income gives people more possibilities to plan and arrange their financial lives (Hunguru et al., 2020).

2.2.1.6 Education level and Financial Literacy

Higher educated people and those with more access to financial information tend to have higher degrees of financial literacy. There seems to be a lot of consensus in the studies regarding whether a person's degree of financial literacy is influenced by their educational

achievement. Baskoro et al. (2019) discovered that there is often a positive link between educational achievement and financial literacy in their empirical investigation on this topic. This suggests that a person's likelihood of becoming financially literate increases with their level of awareness of financial education. This study also makes the academic community aware of the distinction between financial literacy and knowledge of finances. Again, the research by Akhter and Hoque (2022) back up Baskoro et al. (2019) conclusion that financial literacy is positively connected with one's degree of education since educated people are more inclined to participate in money management courses.

According to the literature, parents can have a significant impact on their children's consumer behavior by acting as a role model for them. Many people learn more about managing their finances from their parents, according to studies (Acquah-Sam & Salami, 2013; Baskoro et al., 2019). Amidu et al. (2021) discovered that parents had a big impact on their kids' knowledge, attitudes, and financial conduct, and Harahap et al. (2022) discovered that a person's financial literacy is consistently correlated with their parents' educational attainment. These factors suggest that parental education may have a big impact on their kids' literacy.

2.2.1.7 Income Level and Financial Literacy

Noor et al. (2020) discovered that low-income levels are linked to poorer financial literacy levels in terms of income. According to Sunden and Surette (2021), money has a negligible but beneficial impact on financial literacy. In response, Thanki and Baser (2021) offer experimental proof that wealth and financial literacy are associated. Children from high-income households had much more financial literacy than students from low-income

families, according to research on the topic. Additionally, those with low incomes are more likely to drop out of school, which over time worsens their financial literacy (Rothwell & Wu, 2016). In this situation, there is also a chance of reverse causation: people with high financial literacy levels have greater income levels than people with low financial literacy levels because they make wiser financial decisions.

2.2.2 Concept on Tolerance to risk

Tolerance to risk is the degree to which a person is willing to incur risks when investing (Baskoro et al., 2019). It also describes a person's response to and management of financial risk. Investors may enjoy taking risks, avoid taking risks, or even have no interest in doing so (Magendans et al., 2016). Depending on their level of tolerance to risk, a person might be categorized as a risk-seeker, risk neutral person, or risk avoider (Noor et al., 2020). Understanding the level of risk associated with investments, as well as tolerating and balancing current risks to suit one's investment goals, can help someone better understand the risks involved in investing. This can help them make sure that the level of risk they are willing to accept is consistent with the rate of return they will eventually experience (Mishra, 2018). The level of risk an investor is willing to take affects the various investment alternatives they choose (Rahmawati et al., 2015). Someone with a high tolerance to risk may frequently take calculated risks while investing in high-risk assets, whilst someone with a low tolerance to risk will probably avoid them (Rothwell & Wu, 2016).

While approaching retirement, a person with a high tolerance to risk does not reduce their investment in low-risk products like bonds in favor of high-risk securities like stocks (Rothwell & Wu, 2016). Thus, tolerance to risk is one factor that affects investors' investment decisions. Tolerance to risk is the capacity to invest in various amounts over a

lengthy period of time (Harahap et al., 2022). Financial market participants frequently have a higher risk appetite than passive investors (Brown et al., 2018). Financial risk is the desire or reluctance to undertake an unreasonable share of the activity undertaken (Akakpo, 2020). Risk is an unknown that may result in unforeseen loss situations. Planning and implementation might result in hazards if the tolerance to risk is not taken into account (Amidu et al., 2021). Investors' degrees of investment tolerance to risk vary, and tolerance to risk is impacted by a number of variables such as age, gender, education, and income (Hunguru et al., 2020). Investor capacity for accepting risks is influenced by investor attitudes toward acceptable risk, particularly the sort of investor who actively seeks out risk, avoids risk, or is indifferent to risk (Brown et al., 2018).

2.2.2.1 Determinants of Tolerance to risk

The characteristics that affect how risky an investor is are of great interest to the behavioral finance field. The level of risk that a person can bear while making an investment determines whether or not they should invest. Although there isn't just one factor that affects tolerance to risk and affects the choices made by individual investors, numerous studies conducted by several authors have emphasized factors like gender, education, age, money, etc. The aforementioned factors are covered in the next section.

Gender - Gender is the factor that has been studied the most when assessing a person's tolerance to risk (Brown et al., 2018). Since men are essentially different from women in terms of their tendency to suffer negative outcomes, gender differences have an influence on tolerance to risk (Likudie, 2020). Men are more capable of handling the danger than women are.

Education - Education is essential because, as professionals suggest, you should never gamble on a circumstance or a commercial arrangement unless you are fully informed of the type and scope of the risk involved (Kuffour & Adu, 2019). Education is the only thing that can help someone understand everything. The level of education a person has an impact on their tolerance to risk. This indicator of earning potential has a significant correlation with investor income. Business students might thus get the conclusion that business people take a lot of risks. Consequently, how earning a business degree will impact a person's tolerance to risk.

Age – is yet another important factor in deciding on a person's financial plan. According to some researchers, young people are less risk-averse than older persons (Nadeem et al., 2020). As people age, their need for investment liquidity and willingness for risk both increases. Without children, young professionals would make significant stock investments (Baskoro et al., 2019). Younger businesspeople and professionals are more willing to take risks in the workplace.

Wealth – is another factor that affects an investor's decision. Any sort of riches is given up in favor of risk in the quest for bigger benefits (Acquah-Sam & Salami, 2013). Wealth elevates one's predisposition for taking risks (Acquah-Sam & Salami, 2013). Affluent individuals are better prepared to handle risk because they have the means to accumulate wealth and offset their losses (Baskoro et al., 2019). Various research have revealed numerous connections between affluence and degrees of tolerance to risk (Akhter & Hoque, 2022). Since everyone likes to spend money on their basic needs first before utilizing the leftover amount to take risks for gain, this approach seems sensible.

2.2.3 Concept of Participation on the stock market

As a result, participation on the stock market is more concentrated on the process of selecting one stock over another (Rekik, 2016). But one must first comprehend the stock market in order to comprehend stock market involvement. The term "stock market" refers to a group of exchanges where shares of publicly listed firms may be purchased and sold (Rekik, 2016). Such financial exchanges and over-the-counter (OTC) marketplaces operate in accordance with a set of regulations (van Rooij et al., 2011).

Because stock markets are so important to the growth of economies, exchanges have been set up all over Africa. Africa, like many other continents, has 30 structured exchanges that make it easier for publicly traded companies to buy, sell, and give out shares. This helps them raise money more cheaply (van Rooij et al., 2011). They also encourage saving by giving customers access to financial products that fit their preferences for risk and liquidity. The African financial markets are, nevertheless, dominated by a very small number of large exchanges. However, the bulk of these markets are modest and undeveloped by global standards (Weber, 2014). Despite the importance of stock markets, participation rates are low in both established and emerging economies. In industrialized economies including Italy, United States, United Kingdom, France, the Netherlands and Germany, inadequate family and individual participation is shown by Rothwell and Wu (2016) and Magendans et al. (2016).

Brown et al. (2018) look at the reasons why individuals avoid the stock market. They look at the macroeconomic and non-economic variables that influence stock market involvement using the Center panel, a surveying data collection that is reflective of the Dutch community. They talk about the PERP theory (perceived equity risk premium),

which they contend is related to people's generally low stock market involvement, and they look at the effects of attitude, trust, and financial literacy. They observe that non-investors who claim they would never purchase stocks had lower PERP and worse financial knowledge.

The Ghana Stock Exchange makes it possible for anyone to trade stocks in Ghana. Since its inception in 1990, the exchange has been authorized to carry out bond, stock, and ETF trading. GSE trading takes place on the GSE Automated Trading System, an electronic trading platform (GATS). There were 42 companies listed on the exchange as of August 2018, and their aggregate market value was GHS 55,971.16 million (Amidu et al., 2021). The Ghanaian stock market finished 2018 in the negative after rising as high as over 35% in April. Losses for the GSE Composite Index were 0.29%, while losses for the GSE Financial Stock Index were 6.79%. The capital market in Ghana, on the other hand, did quite well, and by the end of 2004, it was named the best performing market in the world. (Amidu and others, 2021). Despite the success recorded on the international front, Acquah-Sam & Salami (2013) observe a low level of public engagement in the market where the quantity of participation was insufficient from both firms and investors. The primary obstacle to Ghanaians participating in the capital market is a lack of awareness of how it operates, according to Acquah-Sam's analysis of the state of the capital market in Ghana. The biggest cause of Ghana's poor stock market involvement, which was cited by 35.1% of all respondents, was ignorance. Other factors that emerged were interest in real estate or landed holdings, a preference for money market instruments, information asymmetry and low incomes. The study recommends more public education as a strategy to improve Ghanaians' comprehension of the operation of the capital market (Akhter & Hoque, 2022).

2.2.3.1 Determinants of Participation on the stock market

Market participation is influenced by the characteristics of the financial assets traded on such markets as well as the number and composition of potential investors (Baskoro et al., 2019). A financial market with skilled participants who are averse to risk and want to commit cash for extremely short periods of time, where short-term, extremely liquid, and secure items are exchanged, is one example where participation is likely to be high. The following are a few variables that influence participation on the stock market:

2.2.3.2 Behavioral Finance and Participation on the stock market

Recently, it has become more common to use behavioral finance to describe the intensity and structure of activities of the stock market. Numerous writers have made an effort to use investor behavior qualities and link them to market, institutional, and other participant traits in order to explain why there is so little participation on the stock market. It has been shown that a variety of factors, including the risk-return tradeoff relationship in the market, affect stock market investing choices. Further explanations of this by behavioral finance theorists include how much risk and loss aversion investors have (Baskoro et al., 2019; Brown et al., 2018; Hunguru et al., 2020).

The amount of information disseminated and the likelihood that people will learn about financial assets and, after doing so, make an investment decision are correlated. The cost of stock market transactions, the price of information dissemination, and the degree of investor trust in the market, however, have a negative influence on this (Harahap et al., 2022).

2.2.3.3 Awareness and Participation on the stock market

The relationship involving stock market involvement and knowledge is demonstrated in Harahap et al., (2022). The majority of households and people just don't know enough about the stock market, claim Harahap et al. (2022). Their research indicates that about 50% of households are uninformed of mutual funds and about 35% of households are unaware of stocks. The notion of a fair price, they argue, will depend on the information that investors have access to if the efficient market hypothesis is correct and investors will only buy an item if they feel they are paying a fair price for it. The authors conclude that the volume of information an investor possess about a an asset will have an impact on the choice to trade that asset (Brown et al., 2018). They assert further that knowledge of the assets' availability, the market on which they are exchanged, their liquidity, and other characteristics is necessary for investors to make wise judgments. Businesses have an incentive to grow their investor base since doing so will lower the cost of borrowing outside capital, claim Akhter and Hoque (2022).

2.2.3.4 Trust and Participation on the stock market

Trust is defined by Brown et al. (2018) as "the arbitrary probability that one actor attributes to the potential that another actor or group of actors will take a certain action. Trust is crucial in all situations as a result "When one has knowledge about oneself or the world that the other does not, and what one should do depends on how much one knows about these subjects (Kuffour & Adu, 2019). When choosing whether to invest in a stock, a person must take into account not only the "real" distribution of returns but also the possibility that the company is fraudulent, the manager is keeping all the profits, or the broker is merely collecting the money without investing it. Nyakurukwa and Seetharam

(2022) found that investors take the likelihood of being scammed into account when deciding whether to buy stocks. They also showed that the perception of this risk is influenced by the investor's subjective characteristics as well as the stock's actual characteristics. Less dependable individuals are less likely to purchase equities, and if they do, they will purchase less. Similar to this, more trustworthy people are likely to buy more stocks (Nyakurukwa & Seetharam, 2022). It is common knowledge that investors are risk averse and choose to invest primarily in assets that they are familiar with.

2.2.3.5 Role of Friends and Family

Ramudzuli and Muzindutsi (2018) looked at how peers affected participation on the stock market. They found that peer effects significantly contribute to the explanation of financial market participation. Rekik (2016) found that peer influence had an eerily similar effect on market participation. Additionally, high school pupils consider their parents as their main knowledge source, according to Sunden and Surette's findings from (2021.) talking about financial matters and that kids from wealthy, highly educated households tend to do well on financial literacy exams. Thanki and Baser (2021) also point out that investment habits that are handed down from father to child account for a sizeable amount of the correlation of wealth across generations. Yang et al. (2021) further claim that households with poorer financial literacy depend more on relative and friends for information and are much less inclined to make stocks investment.

2.2.3.6 Education and Participation on the stock market

Van Rooij et al. (2011) found that owning shares increases significantly with education. Few individuals with minimal education own stocks, they emphasized. Weber (2014) found inconsistent results when he examined participation on the stock market and family

education. Higher-educated households are more likely to engage in financial markets, according to the authors' research. Salas-Velasco (2022) further discovered that "even the vast majority of people with a college education do not engage in the share-market." Ownership of shares thus may be restricted by criteria other than educational achievement. Discount rates and educational attainment have a sizable inverse connection, claim Nyakurukwa and Seetharam (2022). Of course, it's challenging to make sense of this correlation—does education result in lower discount rates, or do more impatient people choose to enter the workforce earlier? Rajasekar et al. (2022) also assert that education may affect market participation through ideas and attitudes. According to Mishra (2018), informed investors show greater confidence and make bigger overseas investments. According to study by Harahap et al., optimistic people put more of their capital into stocks than into other financial items (2022).

2.2.3.7 Age and Participation on the stock market

Market involvement rises dramatically with age. At age 35, about 17% of persons report having positive investment income, and by age 55, this number increases by about 11 points, according to Harahap et al. (2022). They underlined that "controlling for money and education does not impact this link." The life cycle concept is further supported by the fact that average investment income increases with age (Akakpo, 2020). Even if this relationship is diminished when age and wealth are taken into account, the proportion of recorded investment earnings and the average amount increase with education. Others disagree, arguing that because young people cannot get loans, they lack the money needed to invest in stocks (Amidu et al., 2021). Even though these lifecycle variables and the disparity between borrowing and lending rates can contribute to the lack of owning shares,

they fall short of providing a complete explanation for why such a large proportion of families do not own stocks (Baskoro et al., 2019). Van Rooij et al. discovered age-related gains in stock market engagement (2011). They found that the majority of stock owners are above 40.

2.3 Empirical Review

Based on the objectives underpinning the study, the review will concentrate on several studies conducted by different authors to add knowledge to the existing literature.

2.3.1 Effects of financial literacy on participation on the stock market of households in Ghana

Based on the objectives underpinning the study, the review will concentrate on several studies con Akakpo (2020), who focused on the impact of financial inclusion and literacy on stock market involvement in Ghana, employed quantitative approaches and descriptive research. The study discovered that financial literacy has a significant and positive influence on financial inclusion. The study also shown that financial literacy does not significantly impact participation on the stock market in Ghana. The study also discovered a substantial link between participation on the stock exchange and financial inclusion, which is attained through utilizing an account to save. Finally, the effect of both financial inclusion and stock exchange literacy on participation demonstrates that there is no appreciable difference. Despite the authors' sophisticated study, they found no link between stock exchange involvement and tolerance to risk.

Van Rooij et al. (2011) focused on participation on the stock exchange and financial literacy in their study, which employed descriptive analysis with an emphasis on qualitative approach. Even if understanding of fundamental economic ideas like inflation and interest

rate compounding is far from perfect, the study finds that it outperforms understanding of stocks, bonds, the concept of risk diversification, and how financial markets function. The study also found a clear link between financial literacy and stock exchange involvement, with low levels of financial literacy being strongly linked to lower rates of stock investing. Although the study by the authors was insightful, the qualitative technique utilized in the study caused researcher bias when transcribing the study's data to arrive at a conclusive analysis. Ducted by different authors to add knowledge to the existing literature. According to Kuffour and Adu's (2019) study, which focused on trust, financial literacy and participation on the stock exchange in Ghana, descriptive analysis, especially using a quantitative technique, was performed. The study found that investors with lower financial literacy are substantially less likely to invest in stocks when risk attitudes and sociodemographic characteristics are taken into account. The person's subjective degree of trust in the stock exchange does not, however, account for their choice to invest in equities. Consequently, financial literacy contributes to the explanation of the dilemma relating to participation on the stock exchange and non-participation. It has been discovered that one's level of education and access to financial information both have an impact on financial literacy. As a result, emphasis should be placed on developing financial literacy initiatives, particularly through the use of electronic media. Although the authors' inquiry was insightful, a clear conclusion needed to be reached after theoretical and conceptual analysis.

Mishra (2018) focused on financial literacy, tolerance to risk, and participation on the stock exchange while doing descriptive research, especially using a quantitative technique. According to the study, a person's level of tolerance to risk, financial literacy, and investing

knowledge all have a significant impact on the stock exchange investments they make. The study also demonstrated the importance of financial education programs in enhancing family financial literacy and how this benefits families' stock exchange investing choices. The investigation conducted by the authors was insightful, however theoretical and conceptual assessment were not incorporated to support the study's capacity to arrive at a conclusive analysis.

Twumasi et al. (2022) examined the factors influencing financial literacy (FL) and how that influences access to financial services using data acquired from rural Ghana (AFS). The results demonstrated that household heads' levels of financial literacy are influenced by their age, gender, education, asset ownership, homeownership, and economic literacy. Although its square shows a negative link with saving mobilization, the study also indicated a robust and positive relationship between financial literacy and AFS. The study also found that FL affects AFS differently for homes with male household heads and high incomes compared to households with female household heads. Despite the authors' comprehensive inquiry, there was no theoretical or conceptual analysis to support the results.

The research showed that financial literacy has an impact on participation on the stock exchange because some criteria affect the choice to trade on a specific stock exchange. Less research has been done to further the subject as a result, and the study is centered against this backdrop in order to arrive at a conclusive analysis.

2.3.2 Effects of tolerance to risk on participation on the stock exchange of households in Ghana

Likudie (2020), who focused on the tolerance to risk and investment choices of young people in Ghana, employed descriptive analysis and a quantitative method. The study discovered that gender substantially affected tolerance to risk, but education, occupation, and religion were not significant predictors. The study found a significant relationship between tolerance to risk and investment preferences and further showed that Christians, high school students, women, and younger investors are risk averse. The author's inquiry was smart, but there weren't enough hypotheses to support it for a thorough analysis.

Nyakurukwa and Seetharam (2022) focused on how financial literacy and other proxies of social interaction are associated with stock exchange involvement in South Africa since the study employed descriptive analysis, specifically using a quantitative technique. According to the survey, as respondents' financial literacy increases, so does their propensity to trade stocks. Among the controlling characteristics, age, race, and educational achievement are significant predictors of participation on the stock exchange. The study also revealed that, in terms of social contact, participation in the stock exchange is closely related to membership in a men's association. The authors' study was sufficiently intuitive, but it lacked the theoretical and conceptual underpinnings necessary to draw a firm conclusion.

The Amidu et al. (2021) study use descriptive analysis, more especially the qualitative approach, to examine the activities that families that are financially involved and actively trade stocks engage in for a living. The study finds that people who own accounts, utilize them to save money, have access to credit, and often withdraw money from them engage

in more sustainable forms of living. Another finding of the study was that people are more likely to trade equities when their income is higher (SMP, using agent visits). Thirdly, the paper contends that financial inclusion—specifically, the use of accounts for savings—has a detrimental effect on SMP (participation on the stock exchange), as consumers prefer to store liquid funds in savings accounts versus taking on greater risk. Last but not least, the SMP's sensitivity to livelihood (employment and income) and financial inclusion demonstrates that as people's financial inclusion rises, their tendency to engage in the stock exchange diminishes. Although the study was insightful, because it was qualitative, the researchers who had to convert the data into a concise analysis were biased as a result.

Yao and Curl (2016) concentrated on changes in tolerance to risk levels over time in reaction to stock exchange results in their descriptive analysis of their study, especially using qualitative approaches. The study found that tolerance to risk tended to increase during times of higher market returns and decline during times of lower market returns. The study also revealed that those who change their tolerance to risk in this manner are more likely to purchase stocks at a premium and sell them at a discount. Although the authors' inquiry was insightful, a clear conclusion needed to be reached after theoretical and conceptual analysis.

The authors' research lends credence to the hypothesis that risk appetite influences participation on the stock exchange. However, each person's tolerance to risk was influenced by their age, gender, line of work, and level of financial awareness. The bulk of the author's investigations, albeit insightful, lacked theoretical and conceptual analysis to support the study and aid the researcher in coming to a clear conclusion.

2.3.3 The mediation effects of tolerance to risk in the relationship between financial literacy and participation on the stock exchange.

Kanagasabai and Aggarwal (2020) adopted a descriptive research design that was especially based on a quantitative technique to focus on the mediating role of tolerance to risk in the link between financial literacy and investment success. According to the study, more financially literate investors are more risk-tolerant, which results in greater and more satisfactory investment performance.

Harahap, Thoyib, Sumiati, and Djazuli (2022) concentrated on the influence of financial literacy on retirement planning with serial mediation of financial tolerance to risk and saving behavior as the study used descriptive research design and collected data from medium-scale business owners in Indonesia. According to the study, a positive association between financial literacy and stock exchange involvement is mediated by financial tolerance to risk and herding tendency.

Waheed et al. (2020) investigated the mediating influence of investors' perception of risk in their investment decisions and literacy in finances using a descriptive study design with a quantitative technique. The study's conclusions indicate that investing decisions are greatly increased by literacy in finances. The relationship between literacy in finances and investing choices is largely mediated by perception of risk. Although demographic characteristics like gender and age have a detrimental impact on investment choices, the author's study was insightful but was unable to provide the theoretical and conceptual underpinning necessary to draw firm conclusions from the data.

Kanagasabai and Aggarwal (2020) utilized a descriptive research methodology, especially employing a qualitative technique, and their attention was notably drawn to the mediating

function of tolerance to risk in the association between literacy in finances and investment success. According to the study, more financially literate investors are more risk-tolerant, which results in greater and more satisfactory investment performance. Although the authors' study was insightful, the qualitative methodology they employed led to bias in the researchers' transcription of the findings and their ability to draw firm conclusions.

Tolerance to risk and literacy in finances are linked to participation on the stock exchange, according to the author's study, since they both have a positive effect on how individual holdings and savings interact inside financial institutions. However, as there hasn't been much research on the subject, the majority of it hasn't included a theoretical or conceptual analysis to back up the study and come to a firm conclusion.

2.3.4 Stock Market Participation

In reality, one's decision to invest (hence, participation in the stock market) may also be impacted by irrational psychological variables, which are frequently referred to as financial behaviour. But several studies have shown links between stock market involvement, financial literacy, and other aspects of economic development (Sharma, 2016; Grohmann, Klühs, & Menkhoff, 2018; Badas, 2021). More specifically, research by Chikalipah (2017) on the elements that contribute to financial inclusion in Sub-Saharan Africa shows that illiteracy is a significant barrier to financial inclusion. This implies that there may be some kind of connection between financial inclusion and financial literacy.

According to common knowledge, investors' levels of Aversion to risk vary, and a number of factors might affect the investments they make (Balloch, Nicolae, & Philip, 2014). Aversion to risk has been proven to have a major impact on participation on the stock market decisions in the literature (Barasinska, Schäfer, & Stephan, 2012; Noussair et al.,

2013). In other models, less Aversion to risk has been shown to be a predictor of participation (Balloch, Nicolae, & Philip, 2014). Additionally, risk attitudes act as a mediating factor in the relationship between social capital and participation on the stock market (Clark, Lusardi, & Mitchell, 2017). Saurabh and Nandan (2018) verified the mediation role of risk attitudes for financial happiness.

2.3.5 Financial Literacy and Financial Inclusion

Given the importance of participation on the stock market and financial literacy to economies, it has become necessary to pay close attention to this discussion in order to make sure that their potential is fully realised for financial growth. Financial inclusion is consistently correlated with financial literacy, according to previous research (Grohmann et al., 2018), and families' participation in the stock market is hampered by a lack of financial literacy, especially in equities (Balloch, Nicolae, & Philip, 2015).

For instance, Van Rooij, Lusardi, & Alessie, (2011) developed two independent modules for the DNB household survey to assess financial literacy and analyse how it is connected to stock market involvement, which is an economic consequence in the Netherlands. The author responds to inquiries on the relationship between financial literacy and stock market involvement and reports that owning shares increases steadily as one's level of literacy rises.

However, Ozilli (2020) challenges the school of thinking that asserts financial literacy or education as a means of achieving inclusive finance. He contends that just possessing a respectable degree of financial knowledge will not be sufficient to remove the structural obstacles that prevent individuals from gaining access to money. This is so that they may get access to and have trust in a market that offers a relevant selection of products as well

as a safety net of consumer protection and industry regulation, particularly in the aftermath of the financial crisis (Giannetti & Wang, 2016).

2.4 Conceptual Framework

Based on the research objectives and the theoretical underpinning of this study, a conceptual framework is proposed for this study. Figure 1 displays the conceptual framework.

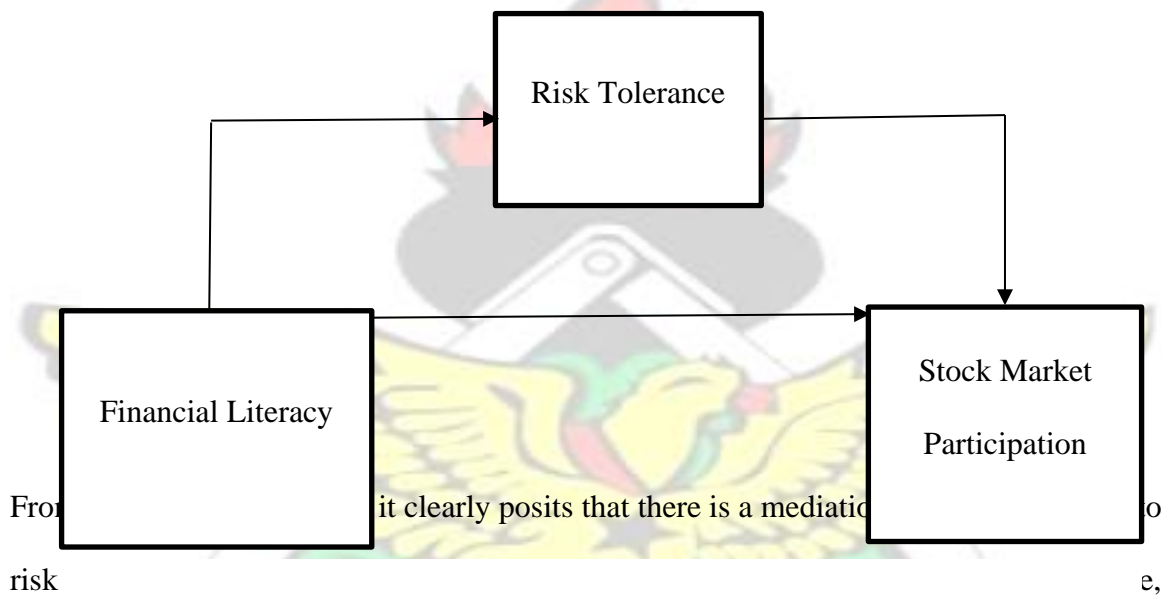


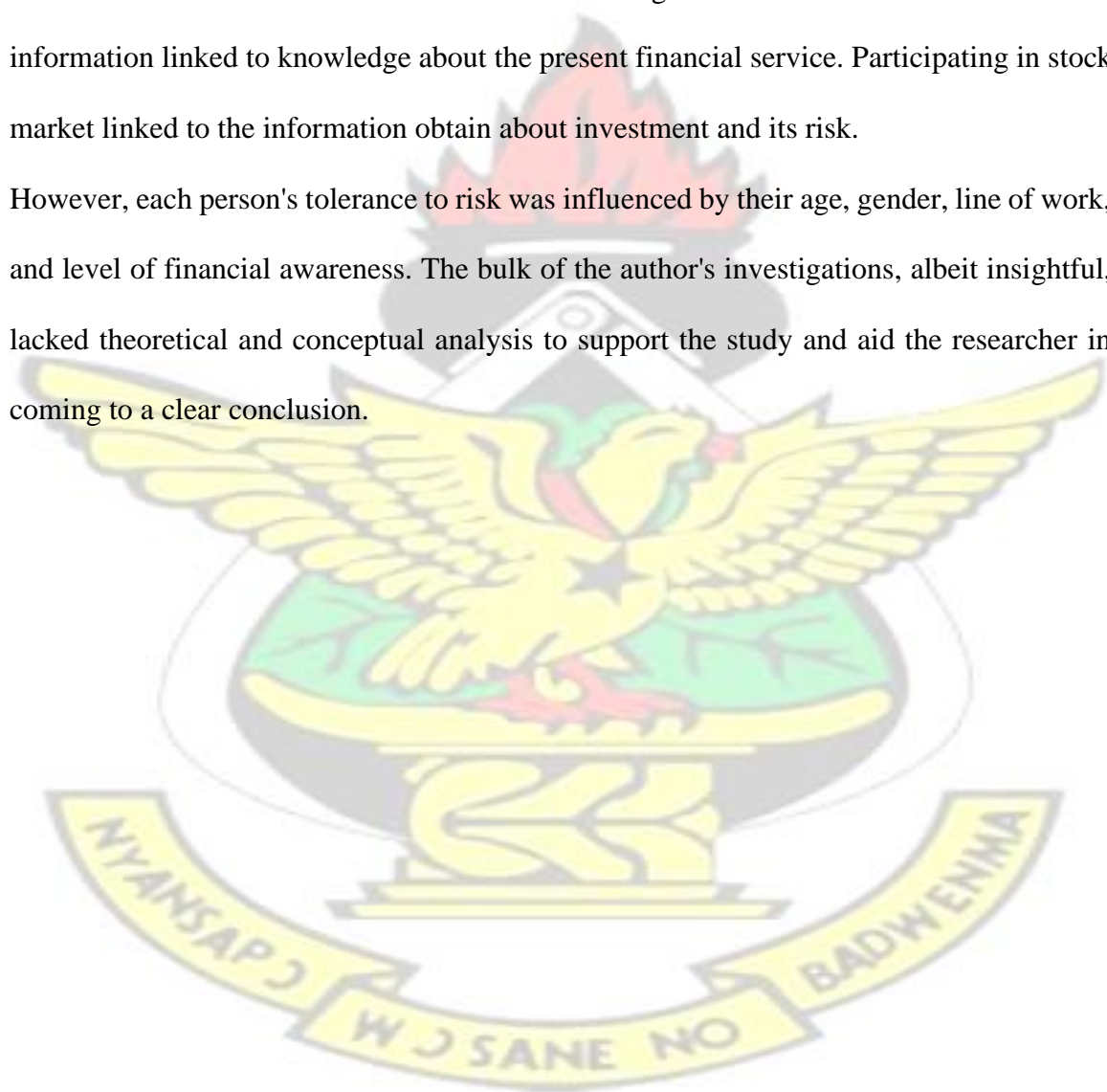
Figure 1: Conceptual Framework Adapted From (Magendans et al., 2016)

as the zeal or ability of the investor or individual depends on their willingness to invest. financial knowledge is a blend of mindfulness, information, ability, defiance, and behavior are essential to make comprehensive financial conclusion and eventually achieve individual financing security. Financial knowledge as the capacity to gather significant information, and similarly distinguishing between varied financial opportunity, deliberating on financial matters, forecasting and proficiently have effect on your financial decision one takes. However, there are some determinants, as the study highlighted, in

regards to choosing or preferring to include themselves in the stock exchange. Furthermore, the framework examines how the tolerance to risk of the investor or individual is related to literacy in finances and participation on the stock exchange, as the determinants used in the study account for stock selection.

Financial matters associated with the understanding about financial problems of individual or household are associated with the understanding the basic financial idea. Financial information linked to knowledge about the present financial service. Participating in stock market linked to the information obtain about investment and its risk.

However, each person's tolerance to risk was influenced by their age, gender, line of work, and level of financial awareness. The bulk of the author's investigations, albeit insightful, lacked theoretical and conceptual analysis to support the study and aid the researcher in coming to a clear conclusion.



CHAPTER THREE

METHODOLOGY

3.0 Introduction

The primary goal of the research is to look at how families in the Sekondi Takoradi Metropolitan participate in the stock market in relation to their financial literacy and tolerance for risk. The goal of the research is to undertake a mediation analysis of tolerance for risk in the link between financial literacy and stock market involvement. Thus, the approach used for the investigation was covered in this chapter. The research strategy, research design, study population, sample size and sampling methodologies, data collecting tools, and method of data analysis are all thoroughly covered in this chapter.

3.1 Research Approach

This study used a quantitative research approach to examine the association between literacy in finances, tolerance to risk, and stock exchange involvement among families in the Sekondi Takoradi Metropolitan. The study will use a quantitative research approach as it aids in the testing of hypotheses. A quantitative research technique may be used to assess the hypotheses that this study presents. As a result, this study will be able to investigate the association between literacy in finances, tolerance to risk, and stock exchange involvement via the implementation of a quantitative research technique.

The goal of quantitative research is to quantify the data collecting and processing process. It is derived from a deductive method that emphasises the validation of theory and is influenced by the empiricist and positivist schools of thought (Shaver, 2021). The quantitative research methodology will be used since it will enable the researcher to support the assertions she makes on the links between literacy in finances, tolerance to risk, and

stock exchange involvement in the Sekondi Takoradi Metropolitan. Additionally, quantitative research gives the researcher the ability to examine and present data in a mathematical format as opposed to a descriptive one. Last but not least, this approach will improve the objectivity, reproducibility, and generalisation of results and is naturally interested in generating potential predictions for further investigations.

3.2 Research Design

This study will use an explanatory research design, one of the quantitative strategy research types. Explanatory research is a study technique that investigates the reasons behind an event when there is little evidence available (Kandiero, 2022). It may assist the researcher in deepening his grasp of a certain subject, determining how or why a specific phenomenon is happening, and making future predictions (Mamorobela, 2022). Explanatory research, which examines patterns and trends in existing data that have not previously been examined, may also be interpreted as a "cause and effect" paradigm (George & Merk, 2021). It is often seen as a kind of causal research as a result, which makes it perfect for the present study. Therefore, this study will be able to establish the relationship between literacy in finances, tolerance to risk, and the involvement of household heads in the stock exchange in the Sekondi Takoradi Metropolitan via the use of an explanatory research methodology. Cross-sectional research will be used in this study as part of the explanatory research strategy. This is so that the phenomena under discussion may be seen in a sample of homes at a certain moment.

This study used a descriptive survey design. Descriptive survey design does in-depth analysis and understanding of specific phenomena existing in the current situation Cooper & Schindler, 2008. In descriptive survey design, the goal is predetermined, allowing data

collection to be relevant and sufficient for the research question (Kothari, 2004). By using quantitative and qualitative data collection procedures, descriptive survey designs enable researchers to collect thorough information in a way that reduces the cost of data collection. According to Kombo & Delno (2009), a study raised questions that require interviews and data collection questionnaires, and survey design should be used. The same author further explained and quoted the definition of Orodho (2003) that a descriptive survey is a method of collecting information through interviews or questionnaires to sample individuals. Of course, this is required for the problem I am researching, so it will guide me to choose the design, because the design is for the main data collection.

3.3 Target Population

A population of the research is often a large collection of individuals or objects that serve as the main focus of a scientific investigation (Agénor, 2020). Research is carried out to benefit the general populace. However, since populations tend to be huge, it is often not feasible for researchers to examine every member of the population because doing so would be costly and time-consuming (Salaria, 2012). Researchers use sampling strategies because of this. A well-defined group of people or things that are known to have common features is referred to as a research population (Agénor, 2020). Typically, every person or thing within a population has some kind of unifying quality. The 296,814 households that make up the Sekondi Takoradi Metropolitan are being considered as the population of the study.

3.4 Sampling Technique and Sample Size

It is seldom feasible to get data from every member of a group of individuals while performing research on them. Alternatively, samples are chosen (Taherdoost, 2016). How

to choose the sample that is representative of the group as a whole must be carefully considered in order to draw accurate conclusions from the findings (Alvi, 2016). It is referred to as a sampling technique. You may utilise one of the two main sampling techniques in your study. Data collection is made easier by non-probability sampling, which involves non-random choosing based on simplicity or other considerations. Probability sampling, which uses random selection, enables you to make meaningful statistical inferences on the whole group (Singh, & Masuku, 2013).

Simply said, a sample is a portion of the population. The researchers' inability to evaluate every member of a particular group gives birth to the idea of a sample (Taherdoost, 2016). The sample must be adequate in size to support statistical analysis and representative of the population from which it was chosen (Sharma, 2017). The primary purpose of the sample is to enable the researchers to perform the research on members of the public in order to draw generalizable conclusions from the study's findings (Taherdoost, 2016). It is quite similar to a give-and-take exchange. The sample is "given" by the population, which then "takes" inferences from the sample's findings (Alvi, 2016). All household heads who indicated interest in participating in the survey were taken into consideration in order to increase the statistical power of the investigation. On the basis of the Slovin (1960) method for determining sample size, which is shown in equation 1, the study was able to gather trustworthy data from a substantial number of respondents in the selected towns.

$$n = \frac{N}{1 + Ne^2}$$

Where n = sample size (determined after applying the formula)

N = population size (which is the estimated 296,814 households in the Sekondi Takoradi Metropolitans)

e = margin of error (for the purpose of this study, a 5% margin of error is used)

Base on the sample size formulae above, the sample size for the study was computed as follows;

$$\frac{296,814}{1 + 296,814(0.05)^2} = 399.461667305$$

Thus, 399 household heads were considered for the study.

3.5 Data Collection Instrument

A questionnaire was used to collect data for the research. In order to enable the researcher to collect the most accurate replies from the participants, the questionnaire include closed-ended and Likert Scale items. The goals of the research, which functioned as a guide throughout the data analysis portion, were used to arrange questions into parts. There were six key components to the questionnaire. Section I covered personal data with Household Size, age, educational attainment, income level and gender; Section II will assess the household heads' literacy in finances using key indicators and a Likert scale as evaluated by Nadeem et al. (2020); these included Financial Behaviour, Financial Attitude, Financial Awareness and Financial Knowledge; Section III will assess their degree of tolerance to risk using an adaptation of Nguyen, Gallery, and Newton's (2017) tolerance to risk test; and participation on the stock exchange of household heads was surveyed in Section IV of the questionnaire which included Eight items from Luotonen (2009) graded on a 5-point Likert scale.

3.6 Data Collection Procedure

To request an appointment with the respondents and provide formal verification of studentship, the researcher needed an introduction letter from their department. Primarily, the researcher visited respondents at their homes. In addition, social distancing rules was

followed because to the Covid-19 outbreak when questionnaires are given to participants at their houses. The questionnaire was given to each responder with plenty of time to complete it, and then it was collected by the researcher. Only in connection with the participants' arranged meetings were questionnaires sent out. In circumstances when participants believe a question is not self-explanatory, the researcher clarified the question to them. The researcher stayed for further assistance needed by the participants, especially those people who lack literacy. Being present improved response rates and reduced mistakes.

3.7 Data Reliability and Validity

The basic data for the research was altered and checked for consistency and reliability. Before distributing the same instrument to the household heads, the reliability of the instrument was verified by pre-testing. Some household heads in the researcher's area was gathered and given questionnaires to complete initially in order to find any abnormalities in replies. Additionally, respondents were asked to complete surveys and offer comments on the readability of the instructions and the applicability of each question as it was presented on the form. Through pilot testing, the researcher was able to identify instrument defects such ambiguity, unclear instructions, clustered questions, wrong numbers and spellings, and other problems. Additionally, the researcher will provide the supervisor a copy of the questionnaire for review.

The study performed reliability and validity tests. The study used Cronbach's Alpha for reliability. The study also used the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's test of Sphericity. KMO measures the strength of the partial correlation (how the factors explain each other) between the variables. Bartlett's test of

Sphericity is used to test the null hypothesis that the correlation matrix is an identity matrix. An identity correlation matrix means that the study variables are unrelated and not ideal for factor analysis. The results from the tests are summarized in Table 3.1.

Table 3.1: Data Reliability and Validity

Variables	Components	Cronbach's Alpha	KMO	Bartlett's test of Sphericity
Financial literacy	Financial	0.836	0.811	Chi-square=109.964
	behaviour			P=0.000
	Financial	0.791	0.711	Chi-square=158.88
	awareness			P=0.000
	Financial	0.804	0.766	Chi-square=105.57
	attitude			P=0.000
	Financial	0.881	0.827	Chi-square=106.99
Stock market participation	knowledge			P=0.000
	-	0.779	0.718	Chi-square=146.47
				P=0.000
Risk tolerance	-	0.897	0.773	Chi-square=117.85
				P=0.000

From Table 3.1, the Cronbach's alpha score for each construct is more than 0.7, indicating that each construct is reliable. Also, KMO for each construct is high, that is more than 0.5, and this implies the appropriateness of the factor analysis for the data in hand. Also, the Bartlett test of sphericity for all the constructs in Table 3.1 were all statistically significant

at 5% significant level, suggesting that there exists a significant relationship among the variables.

3.8 Study Variables

3.8.1 Dependent Variable

The main dependent variable in this study is participation on the stock exchange (STK). This is measured on a Likert scale and involves the measurement of how individual household heads buy equities either, in the past or in the future. This is adapted from Luotonen (2009) and measured on a 5-point Likert Scale.

3.8.2 Independent Variable

The main independent variables in this study are Literacy in finances and Tolerance to risk of household heads. These are operationalized as;

Literacy in finances – This is measured based on four metrics, financial behavior, financial attitudes, financial awareness and financial knowledge adapted from Nadeem et al. (2020).

3.8.3 Mediator Variable

Tolerance to risk – involves the measurement of the capacity of household heads to accommodate risk. This is adapted from Nguyen, Gallery, & Newton, (2017) and measured on a 5-point Likert Scale.

3.8.4 Control Variables

In this study, key sociodemographic variables was used as controls in the model. These includes;

Age – How old a household head is, as measured on interval scale

Gender – the sex of household head measured on nominal scale (1= Male; 2= Female)

Educational Level – Highest level of educational attainment measured on an interval scale

Income Level – This is measured by the average monthly income earned by a household head.

3.9 Mode of Data Analysis

The data was examined, characterized, organized and coded to address the purpose of the study. The statistical package for social sciences (SPSS) v23.0 was used as the main tool for analysing results. The study employed the use of frequencies and percentages in the analysis of the socio-demographic elements within the study.

In relation to the first objective, the study employed a multiple regression analysis method to estimate the effects of literacy in finances on participation on the stock exchange of household heads in the Sekondi Takoradi Metropolitan.

The study will control for demographic factors in the model. The acceptable significance level was at 5% ($p \leq 0.05$).

In relation to the second objective the study again employed a multiple regression analysis method to estimate the effects of tolerance to risk on participation on the stock exchange of household heads in the Sekondi Takoradi Metropolitan.

The study again used gender, educational attainment and income level as controls in the model. The acceptable significance level was at 5% ($p \leq 0.05$). The regression models are specified as;

$$STK_i = \alpha_0 + \alpha_1 Fin_i + \alpha_2 Sex_i + \alpha_3 AGE_i + \alpha_4 Edu_i + \alpha_5 Y_i + \varepsilon_i \dots\dots\dots \text{Equation}$$

1 (Objective 1)

$$STK_i = \alpha_0 + \alpha_1 RT_i + \alpha_2 Sex_i + \alpha_3 AGE_i + \alpha_4 Edu_i + \alpha_5 Y_i + \varepsilon_i \dots\dots\dots$$

Equation 2 (Objective 2)

In relations to the third objective, the study will employ a mediation model to examine the mediation effects of tolerance to risk in the relationship between literacy in finances and participation on the stock exchange of household heads in the Sekondi Takoradi Metropolitan. The acceptable significance level was 5% ($p \leq 0.05$). The model is specified as;

$$STK_i = \alpha_0 + \alpha_1 Fin_i + \alpha_2 AGE_i + \alpha_3 Edu_i + \alpha_4 Sex_i + \alpha_5 Y_i + \varepsilon_i$$

Where; $RT_i = \alpha_0 + \alpha_1 Fin_i + \varepsilon_i$; and $STK_i = \alpha_0 + \alpha_1 RT_i + \varepsilon_i$

Fin – Literacy in finances of Household Heads; RT – Tolerance to risk; STK – Participation on the stock exchange; Age – Age of household Head; Edu – Educational Attainment of household head; Sex – Gender of Household Head; Y= income level of household heads; ε = error term.

The study interprets all Likert Scale questions as presented in Table3. 1.

Table 3.2: Decision Rule for Objective One

Responses	Scoring	Weighted average range	Implication
Strongly Disagree/Not True At all	1	1.0-1.49	Respondents disagree to a statement
Disagree/ Not True	2	1.50-2.49,	
Neutral / Uncertain	3	2.50-3.49	Respondents are indifferent
Agree/ True	4	3.50-4.49	
Strongly Agree/ Exactly True	5	4.50-5.50	Respondents agree to a statement

Source: Researcher's own Construct

3.9.1 Regression Model

The study used Ordinary Least squares (OLS) for all the regression analysis in the work.

OLS is a common technique for estimating coefficients of linear regression equations

which describe the relationship between one or more independent quantitative variables and a dependent variable.

3.10 Ethical Consideration

Like any other study project, certain ethical concerns were taken. Participants in the research exclusively volunteered their time and only did so out of pure self-interest. Every participant had the option to leave the research at any time if they so desired. Additionally, the respondents gave their agreement after being fully informed. The participants were therefore provided with enough information and guarantees prior to taking part. The guarantees were intended to help the participants comprehend the ramifications of their involvement and make an educated choice about whether or not to participate without being forced. Respondents' privacy and anonymity were of utmost importance. The utmost level of neutrality was maintained throughout the research, and all sources of literature used in it were appropriately acknowledged.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction

The main aim of the study is to investigate the effects of literacy in finances and tolerance to risk on participation on the stock exchange of households in the Sekondi Takoradi Metropolitan. The study seeks to conduct a mediation analysis of tolerance to risk in the relationship between literacy in finances and participation on the stock exchange. This chapter therefore presents an overview of the data collected from the respondents in the data collection area, followed by an analysis and a discussion. The study however began by presenting data on the personal data of the respondents considered for the study.

4.1 Personal Data of Participants

As part of the survey, the personal data of the participants who agreed to take part in the survey was collected to form the basis of the analysis. As aforementioned, the study considered educational attainment of the participants, their age, sex and their estimated monthly income which was gathered based on the tax thresholds in Ghana. A summary of the results is displayed in Table 4.1.

Table 4.1: Personal Information of Respondents

Variables	Items	Frequency	Valid Percentage
Gender	Male	199	49.9
	Female	200	50.1
Age	Less than 25 years	19	4.8
	25 – 34 years	107	26.8
	35 – 44 years	184	46.1
	At least 45 years	89	22.3
	No Formal Education	13	3.3
Educational Attainment	Basic School	55	13.8
	Senior High School	198	49.6
	Vocational/Technical	35	8.8

Household Size		Tertiary	98	24.6
		3 or less	98	24.6
		Between 4 and 6	211	52.9
		More than 6	90	22.6
Estimated Monthly Income		Less than 365	78	19.5
		GHS 366 – GHS 475	70	17.5
		GHS 476 – GHS 605	108	27.1
		GHS 606 – GHS 3605	130	32.6
		More than GHS 3605	13	3.3

Source: Field Data (2022)

Table 4.1 reports that 199 (49.9%) of the participants are males, whereas 200 (50.1%) were females. These statistics indicates that, in terms of age of these household heads, 19 (4.8%) were less than 25 years old, 107 (26.8%) were between 25 and 34 years old, 184 (46.1%) were between 35 and 44 years old, whereas 89 (22.3%) were at least 45 years old. Table 4.1 reports that, in terms of the level of education of these participants, 13 (3.3%) had no formal education, 55 (13.8%) had basic school education, 198 (49.6%) had secondary school education, 35 (8.8%) had some vocational and technical training whereas 98 (24.6%) had tertiary education. In terms of household size, 98 (24.6%) had a family size of 3 or less, 211 (52.9%) had a family size of between 4 and 6, whereas 90 (22.6%) had a family size of more than 6 individuals. These statistics again confirms that 78 (19.5%) of the participant earn GHS 365 or less monthly, 70 (17.5%) earn between GHS 366 and GHS 475 monthly, 108 (27.1%) earn between GHS 476 to GHS 605, whereas 130 (32.6%) and 13 (3.3%) respectively earned between GHS 606 and GHS 3605 and more than GHS 3605 respectively

4.1.1 Discussions of Personal Data

Evidence reveals that males possess more high-risk assets globally than women on average (OECD, 2013). The reason for this is that women are less risk-taking than men. However, recent studies sought to look at two other causes (Nur, 2019). First off, if men and women

have different expectations for future returns and different perspectives on the riskiness of financial assets, they may have different asset allocations (Jacobsen, Lee, Marquering & Zhang, 2014). Men and women own different amounts of higher-risk assets, with women more likely to foresee a greater level of market risk than men owing to their lower future market performance optimism (Alaaraj & Bakri, 2020). Men may have more confidence and a stronger perception of their ability to influence events when they are optimistic (Jacobsen et al., 2014). Beyond the stock exchange and into other aspects of the economy and personal life, gender inequalities in optimism exist (Alaaraj & Bakri, 2020). Thus, optimism is a trait that usually results in mistakes due to overconfidence (Oteng, 2019). As a result, males are more likely than women to experience a significant financial loss, which is consistent with their greater tolerance to risk (Samsuri, Ismiyanti, & Narsa, 2019). Statistics showing that three out of every four pre-retirement investors are the victims of investment fraud may also be explained by the gender gap (Alaaraj, & Bakri, 2020).

According to study funded by a grant from the US FINRA Investor Education Foundation, elder investors make more errors when choosing higher-risk assets (**Stanford University, 2014**). The anticipation of rewards is connected to investing errors, demonstrating that older people may make too optimistic predictions about the potential profitability of risky stocks (Alaaraj, & Bakri, 2020). However, these mistakes may be avoided by providing "decision aids" for risk investment. Surprisingly, the presentation of these choice aids is crucial since older people choose differently when presented with these brief projections of value as opposed to a detailed history of each asset's historical performance over time (Oteng, 2019). Thus, decision-making is influenced by a person's age, socioeconomic status (SES), and cognitive capacity (Mahfudh, 2014). Age-related changes in decision-

making performance occur; that is, as cognitive functions decline, so does the concept of decision-making performance (Amponsah, 2015). The concept that older people prefer fewer alternatives than younger people may also be supported by older persons who are overconfident in their capacity to do so (Samsuri, Ismiyanti, & Narsa, 2019).

4.2 Effects of Literacy in finances on Participation on the stock exchange

This section of the analysis concerned itself with answering the first research question which was to, “investigate the effects of literacy in finances on participation on the stock exchange of household heads in the Sekondi Takoradi Metropolitan”. The study employed the use of the multiple regression analysis in this section. The study first conducted a variable transformation by finding the average responses of each respondent on the individual components to get single variables each measuring financial knowledge, financial behavior, financial awareness and financial attitudes. The study conducted the regression analysis by controlling for personal data such as age, gender, income level and educational attainment in the model. The summary of the results is displayed in Table 4.4. The study however reported the descriptive statistics on the level of literacy in finances of these participants displayed in Table 4.2 and 4.

Table 4.2: Literacy in finances Levels of Households

Financial Knowledge	Min	Max	Mean	Std. Dev	Remarks
Ovr Mean= 3.0644 STD= 0.22219	Participants have moderate Financial Knowledge				
Purchasing business stock often yields a safer return than investing in stock mutual funds.	1.0	5.0	3.3985	1.2151	
How much do you agree that investing in individual stocks of companies rather than stock mutual funds often offers a safer return?	1.0	5.0	3.1955	.9547	
When bonds price decline and rate of interest increases	1.0	5.0	2.3609	1.2936	
Company stocks are riskier than bonds	1.0	5.0	2.4261	1.4984	

Bonds compared to savings accounts and stocks considering a long investment period gives highest interest return 2.0 4.0 2.8246 .5753

Consider a scenario in which inflation was 2% per year and your Sinapi Aba investment account's interest rate was 1% per year. How much do you concur that the products and services you might purchase with the funds in this account after a year would cost less than 1.0 5.0 3.4662 1.3885

The danger of losing money is reduced when investors diversify their capital over a variety of assets. 1.0 5.0 3.7794 1.2467

Financial Behaviour

Ovr Mean=3.75 STD= 0.64106

Participants' Financial Behaviour is Good

I have a personal budget 1.0 5.0 3.9273 1.3099

My household income each month is regular and reliable 2.0 4.0 2.7870 .8189

I owe a friend or member of my family money that I borrowed. 1.0 5.0 2.1429 1.4079

I owe money on my mobile wallet right now. 1.0 5.0 2.8070 1.6746

Source: SPSS output (2023)

Table 4.2 reports that, in terms of financial knowledge (Ovr Mean= 3.0644; STD= 0.22219) as a measure of literacy in finances, overall, these participants had moderate financial knowledge. Within this measure, majority of the participants agreed (M= 3.7794; STD= 1.2467) that the danger of losing money is reduced when investors diversify their capital over a variety of assets. Majority of the participants were however neutral to the assertions that, if inflation was 2% per year and their Sinapi Aba investment account's interest rate was 1% per year, the products and services they might purchase with the funds in this account after a year would cost less (M= 3.4662; STD= 1.3885); that Purchasing business stock often yields a safer return than investing in stock mutual funds (M= 3.3985; STD= 1.2151); Purchasing shares in a single firm often yields a safer return than investing in a stock mutual fund (M= 3.1955; STD= 0.9547); and that bonds compared to savings accounts and stocks considering a long investment period gives a highest interest return

(M= 2.8246; STD= 0.5753). Within this measure, majority of the participants disagreed to the assertions that, when interest rate rises, the price of bonds fall (M= 2.3609; STD= 1.2936) and that company stocks are riskier than bonds (M= 2.4261; STD= 1.4984). Table 4.2 reports that, in terms of financial behavior (Ovr Mean= 3.75; STD= 0.64106), overall, these household heads are good on this measure. Within the measure, majority of the participants had a personal budget (M= 3.9273; STD= 1.3099). majority were neutral that their household income each month is regular and reliable (M= 2.7870; STD= 0.8189), whereas majority disagreed that they owed money to their relatives (M= 2.1429; STD= 1.4079).

Table 1.3: Literacy in finances Levels of Households [cont'd]

Financial Awareness	Min	Max	Mean	Std. Dev	Remark
Ovr Mean= 4.25 STD= 3.4229 Participants have high Financial Awareness					
Financial Education introduce in school curriculum	1.0	5.0	3.0802	1.4084	
I am confident in making financial decisions	3.0	5.0	4.1378	.7219	
I always have money left over at the end of my budgeting period	1.0	5.0	2.6391	1.5385	
The need for financial education	3.0	5.0	3.8346	.7178	
Financial Attitude					
Ovr Mean= 3.2575 STD= 0.27884 Participants have moderate Financial Attitudes					
Regarding my financial status, I feel in charge	1.0	5.0	3.1153	1.2884	
I believe I can use my future earnings to accomplish my financial objectives.	1.0	4.0	2.8496	.9524	
I'm unsure of how my money is being used.	3.0	4.0	3.3709	.48367	
Having things is crucial to my fulfillment.	2.0	4.0	2.7544	.5801	
Credit terrify me.	1.0	5.0	2.6692	1.1031	
I consider using credits to be excessively expensive.	1.0	5.0	2.9724	1.2203	
I believe it's crucial to set aside money each month for investments or savings	3.0	5.0	3.8972	.5509	
Before I sign anything, I believe it's critical to comprehend loan agreements and apartment rentals	4.0	5.0	4.4311	.4959	

Source: SPSS Output (2023)

Table 4.3 reports that, in terms of financial awareness (Ovr Mean= 4.25; STD= 3.4229) overall, these participants have high financial awareness which is a good indicator. Within this measure, majority of the participants agreed that they are confident in making financial decisions (M= 4.1378; STD= 0.7219) and that they needed financial education (M= 3.8346; STD= 0.7178). However, majority of these participants were neutral to the assertion that financial education should be introduced in school curriculum (M= 3.0802; STD= 1.4084) and that they always have money left over to the end of their budgeting period (M= 2.6391; STD= 1.5385).

Table 4.3 again reports that, in terms of financial attitudes (Ovr Mean= 3.2575; STD= 0.27884), these participants had moderate attitudes to their finances. Within this measure, majority of the participants agreed that before they signed anything, they believe it's critical to comprehend loan agreements and apartment rentals (M= 4.4311; STD= 0.4959) and that they felt saving for future investment every month is critical (M= 3.8972; STD= 0.5509). However, majority of the participants were neutral to the assertions that, regarding their financial situation, they are in charge (M= 3.1153; STD= 1.2884), that they are uncertain about where their money is spent (M= 3.3709; STD= 0.48367), that they feel the cost of using credits is expensive (M= 2.9724; STD= 1.2203), they believe their future earnings will help them attain their financial goals (M= 2.8496; STD= 0.9524), that making purchases is very crucial to their happiness (M= 2.7544; STD= 0.5801) and that they are afraid of credits (M= 2.6692; STD= 1.1031).

4.2.1 Discussions of Findings

The connection between stock exchange knowledge and participation is established in the studies of Harahap et al., (2022). The authors opine that majority of households and people

just do not know enough about the stock exchange. This was established when they found that 50% of households are uninformed of mutual funds and about 35% of households are unaware of stocks. Brown et al., (2018) concluded that the amount of information an investor has about a financial asset will have an impact on the choice to trade that asset. The authors assert that knowledge of the assets' availability, the market on which they are exchanged, their liquidity, and other characteristics is necessary for investors to make wise judgments.

Academics have given many different definitions of literacy in finances, but according to Hunguru et al. (2020), it is a person's capacity to understand and apply financial concepts. Furthermore, Baskoro and Aulia, (2019) asserted that individuals with high levels of literacy in finances are aware of compound interest rates. People that appreciate time and money would participate in formal financial markets and stock exchanges, according to Akhter and Hoque (2022). There are several options for investing. Financial products such as gold, bonds, mutual funds, real estate, and equities are included (Yao & Curl, 2016). In actuality, the main objective is to put your money to work in order to increase income or profit, regardless of the strategy you choose (Salas-Velasco, 2022). These definitions point to financial knowledge as influential in the literacy in finances discourse. As reported, financial knowledge is moderate amongst these household heads implying that their level of literacy in finances is appreciable.

Contrarily, literacy in finances is the ability to read critically, assess, manage, and effectively explain one's personal financial condition as it affects one's material well-being, according to study by the Fannie Mae Foundation (Salas-Velasco, 2022). Making wise financial judgments, communicating about money and financial issues with ease, creating

future goals, and effectively navigating barriers in life that influence daily financial decisions, such as financial events in the economy as a whole, are all part of it. Consumers with literacy in finances are given the resources they need to make financial decisions that maximize expected lifetime benefits (Rekik, 2016).

Literacy in finances is demonstrated by an investor's capacity to evaluate financial risk and opportunities, comprehend financial concepts and products, and make astute financial decisions to improve their financial well-being (Rothwell & Wu, 2016). Understanding how money functions in our daily lives, particularly how people invest and share it with one another, is referred to as literacy in finances (Noor et al., 2020). It specifically refers to the body of ideas and information that empowers people to make wise financial decisions. OECD supports this claim as they proposed that, the capacity to make informed decisions in a variety of financial situations, improve one's own financial well-being and the financial well-being of society, and ease participation in the economy. Literacy in finances involves more than just being aware of financial hazards and concepts (Noor et al., 2020).

Table 4.4: Effects of Literacy in finances on Participation on the stock exchange

Coefficients^a							
Model		Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics	
		B	Std. Error	Beta	T	Sig.	Tolerance VIF
1	(Constant)	4.347	.259		16.762	.000	
	FinKnow	.674	.070	.452	9.676	.000	.469 2.131
	FinBehaviour	-.291	.024	-.563	-11.919	.000	.458 2.185
	FinAwareness	-.003	.038	-.003	-.070	.944	.452 2.210
	FinAttitudes	-.620	.054	-.522	-11.398	.000	.488 2.048
a. Dependent Variable: StockMarket							
Adj R=		0.593					
R Square=		0.597					
F=		145.891					
p-value=		0.000					

Source: SPSS Output (2023); *FinKnow*= *Financial Knowledge*; *FinBehaviour*= *Financial Behaviour*; *FinAwareness*= *Financial Awareness*; *FinAttitudes*= *Financial Attitudes*; *StockMarket*= *Participation on the stock exchange*

Table 4.4 reports that, the current financial knowledge ($B = 0.674$; Std. Err= 0.070; p-value= 0.000) of the participants has a significant positive effect on their level of participation on the stock exchange. Thus stated, any changes in their level of financial knowledge will lead to a 67.4% increment in their participation in the stock exchange. These statistics are significant at 1% confidence level. These statistics however reports that, the current financial behavior ($B = -0.291$; Std. Err= 0.024; p-value= 0.000) and Financial Attitudes ($B = -0.620$; Std. Err= 0.054; p-value= 0.000) of the participants have significant negative effects on the degree of participation of these participants on the stock exchange. Thus reported, changes in the level of financial behavior and financial attitudes of these participants will lead to 29.1% and 62% respective declines in the level of participation on the stock exchange by these household heads. These statistics are reported to be significant at 1% indicating strong statistical relationship. These statistics however indicates that, financial awareness levels ($B = -0.003$; Std. Err= 0.038; p-value= 0.944) has no significant negative effects on the level of participation on the stock exchange by these household heads.

Overall, Table 4.4 reports that, the variation in the predictor variables (Adj R= 0.93) explains an estimated 59.3% of the variation in the dependent variable. These statistics again indicates that, overall ($F = 145.891$; p-value= 0.000), the estimated model is statistically fit for predicting the effects of literacy in finances (financial knowledge, financial awareness, financial attitudes and financial behavior) on participation on the stock exchange.

4.2.2 Discussions of Findings

The above statistics provides support for several empirical studies but contradicts several others. For instance, Akakpo (2020), who discovered that literacy in finances does not significantly impact participation on the stock exchange in Ghana. However, Van Rooij et al. (2011) found a clear link between literacy in finances and stock exchange involvement, with low levels of literacy in finances being strongly linked to lower rates of stock investing. For Kuffour and Adu (2019), investors with lower literacy in finances are substantially less likely to invest in stocks when risk attitudes and sociodemographic characteristics are taken into account. As per the authors, a person's subjective degree of trust in the stock exchange does not, however, account for their choice to invest in equities. Consequently, literacy in finances contributes to the explanation of the dilemma relating to participation on the stock exchange and non-participation. Mishra (2018) also found that a person's level of tolerance to risk, literacy in finances, and investing knowledge all have a significant impact on the stock exchange investments they make. The study also demonstrated the importance of financial education programs in enhancing family literacy in finances and how this benefits families' stock exchange investing choices. Twumasi et al. (2022) showed that literacy in finances has an impact on participation on the stock exchange because some criteria affect the choice to trade on a specific stock exchange.

4.3 Effects of Tolerance to risk on Participation on the stock exchange

This section of the analysis focused on achieving the second objective of the study which was to, “examine the effects of tolerance to risk on participation on the stock exchange of household heads in the Sekondi Takoradi Metropolitan”. The study again employed the use of multiple regression analysis in order to achieve this objective. The study controlled

for some demographic factors such as age, educational attainment, monthly income and gender in this model with an acceptable significance level of 5%. Table 4.6 summarizes the outcome of the analysis. However, the study reports on the level of tolerance to risk of these participants prior to conducting the regression analysis displayed in Table 4.5.

Table 4.5: Tolerance to risk of Households

Tolerance to risk Index	Min	Max	Mean	Std. Dev	Remarks
Overall Mean= 1.9511; STD= 0.59366					Participants have low tolerance to risk
What comes to your mind when you consider "risk" in the context of investments?	1.0	2.0	1.7870	.40996	
Which of the following statements about your risk-taking tendencies while investing or saving is true?	2.0	4.0	2.8120	.76825	
Which of these investments would you make if you had GHS 50,000 to spend in?	1.0	6.0	2.2607	1.55380	
Suppose you made a GHS 100,000 initial investment. However, because to market circumstances, your investment decreased by GHS 60,000 in a month. How will you proceed?	1.0	3.0	1.6767	.74229	
supposing you got GHS 20,000 as a present from a family member. Which of the following investments appeals to you?	1.0	2.0	1.1955	.39707	
What proportion of your pay, after all your costs, would you prefer to save or invest if you were working today and earning a consistent salary?	1.0	4.0	2.5890	.93855	
How long can you stand a market where your asset continues to lose value?	1.0	2.0	1.2757	.44742	

Source: SPSS Output (2023)

Table 4.5 reports that, overall, these participants have low tolerance to risk (Overall Mean= 1.9511; STD= 0.59366) which implies that these participants do not have the capacity to accept risk making them risk neutral. Within the measure, these participants were neutral that they were willing to take risks (M= 2.8120; SD=0.76825), that they will save between 25% to 40% of their salaries (M= 2.5890; SD= 2.5890). However, majority of the participants would invest in bonds rather than mutual funds and stocks (M= 2.2607; SD=

1.55380), that a possibility of loss comes to their minds when they hear the word risk in investment ($M= 1.7870$; $SD= 0.40996$), they would sell some of the portfolio to reduce losses and then invest it in more safe investment sectors if they were given an initial investment of GHS 100,000 that dropped by GHS 60,000 within a month owing to market circumstances ($M= 1.6767$; $SD= 0.74229$). Additionally, if they got GHS 20,000 as a present from a relative, they would choose an investment with a risk level of 6% low risk, 30% medium risk, and 10% high risk ($M= 1.1955$; $SD= 0.39707$). Majority of the participants can tolerate a financial market which is constantly losing value for less than a year ($M= 1.2757$; $SD= 0.44742$).

4.3.1 Discussions of Findings

Tolerance to risk is the degree to which a person is willing to incur risks when investing (Baskoro & Aulia, 2019). It also describes a person's response to and management of financial risk. Investors may enjoy taking risks, avoid taking risks, or even have no interest in doing so (Magendans et al., 2016). Depending on their level of tolerance to risk, a person might be categorized as a risk-seeker, risk neutral person, or risk avoider (Noor et al., 2020). Understanding the level of risk associated with investments, as well as tolerating and balancing current risks to suit one's investment goals, can help someone better understand the risks involved in investing. This can help them make sure that the level of risk they are willing to accept is consistent with the rate of return they will eventually experience (Mishra, 2018). The level of risk an investor is willing to take affects the various investment alternatives they choose (Rahmawati et al., 2015). Someone with a high-tolerance to risk may frequently take calculated risks while investing in high-risk assets,

whilst someone with a low tolerance to risk will probably avoid them (Rothwell & Wu, 2016).

While approaching retirement, a person with a high-tolerance to risk does not reduce their investment in low-risk products like bonds in favor of high-risk securities like stocks (Rothwell & Wu, 2016). Thus, tolerance to risk is one factor that affects investors' investment decisions. Tolerance to risk is the capacity to invest in various amounts over a lengthy period of time (Harahap et al., 2022). Financial market participants frequently have a higher risk appetite than passive investors (Brown et al., 2018). Financial risk is the desire or reluctance to undertake an unreasonable share of the activity undertaken (Akakpo, 2020). Risk is an unknown that may result in unforeseen loss situations. Planning and implementation might result in hazards if the tolerance to risk is not taken into account (Amidu et al., 2021). Investors' degrees of investment tolerance to risk vary, and tolerance to risk is impacted by a number of variables such as age, gender, education, and income (Hunguru et al., 2020). Investor capacity for accepting risks is influenced by investor attitudes toward acceptable risk, particularly the sort of investor who actively seeks out risk, avoids risk, or is indifferent to risk (Brown et al., 2018).

Table 4.6: Effects of Tolerance to risk on Participation on the stock exchange

Coefficients^a							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std.Error	Beta			Tolerance	VIF
1 (Constant)	4.917	.183		26.857	.000		
RiskTolerance	-.257	.054	-.460	-4.725	.000	.108	9.248
Age	-.226	.027	-.557	-8.517	.000	.240	4.174
Education	-.037	.020	-.122	-1.878	.061	.244	4.101
Household Size	.124	.032	.257	3.852	.000	.229	4.367

Estimated Monthly Income	-.126	.023	-.448	-5.421	.000	.150	6.686
a. Dependent Variable: StockMarket							
R=	0.773						
Adj R=	0.593						
F=	116.797						
p-value=	0.000						

Source: SPSS Output (2023);

Table 4.6 reports that, the level of tolerance to risk of the participants ($B = -0.257$; Std. Err= 0.054; $p\text{-value} = 0.000$) has a significant negative effect on the participation on the stock exchange of these participants. Thus stated, the current level of tolerance to risk reduces these household heads' participation in the stock exchange by an estimated 25.7%. These statistics are significant at 1% confidence level. The above statistics again reports that, amongst the control variables within the model, household size ($B = 0.124$; Std. Err= 0.032; $p\text{-value} = 0.000$) has a significant effect on participation on the stock exchange of household heads within the Sekondi Takoradi Metropolitan. Thus stated, the higher the size of a participant's household, their participation on the stock exchange increases by an estimated 12.4%. For the other control variables, Age ($B = -0.226$; Std. Err= 0.027; $p\text{-value} = 0.000$) and monthly income of the household ($B = -0.126$; Std. Err= 0.023; $p\text{-value} = 0.000$) both have negative significant effect on participation on the stock exchange. Thus reported, older household heads have a 22.6% less likelihood to engage in the stock exchange whereas the household heads who earned more have a 12.6% less likelihood to engage in the stock exchange.

Educational attainment ($B = -0.037$; Std. Err= 0.020; $p\text{-value} = 0.061$) has negative effects on participation on the stock exchange however, this is only significant at 10% confidence level. Thus reported, more educated household heads in the Sekondi Takoradi Metro surprisingly have a 3.7% less likelihood to participate in the stock exchange. Overall, Table

4.6 indicates that the explanatory variables in this model explains an estimated 59.3% of the variation in the dependent variable (participation on the stock exchange) [$R = 0.773$; Adj $R = 0.593$]. The model as a whole is statistically fit ($F = 116.797$; $p\text{-value} = 0.000$) for predicting the effects of tolerance to risk on the participation on the stock exchange of household heads in the Sekondi Takoradi Metropolitan.

4.3.2 Discussions of Findings

The degree to which a person is ready to take risks from investing is known as tolerance to risk (Baker, Kumar, Goyal, & Gaur, 2019). Additionally, it refers to how an individual reacts to and handles financial risk. Investors may like taking risks, avoid taking risks, or maybe not care about taking risks at all (Wulandari & Iramani, 2014). Kumari, (2020) thus classifies individuals into a risk-seeker, a risk neutral person, or a risk avoider depending on their degree of tolerance to risk. This is reiterated by Pak & Mahmood, (2015) who find that investors' choices about various investing options are influenced by their tolerance to risk. Nguyen et al., (2016) also confirms this by asserting that, when investing in high-risk assets, someone with a high-tolerance to risk is often daring, whilst someone with a low tolerance to risk is more likely to steer clear of them.

The above statistics can be explained by the Heuristics theory which affirms that heuristic biases are taught mental shortcuts in psychology that help investors make choices and resolve difficulties, particularly when they are faced with complicated challenges and insufficient information (Ritter, 1988). When information is few and time is restricted, heuristics may be useful (Tversky & Kahneman, 1974). When people think of themselves as enthusiastic participants and overestimate their aptitude, knowledge, and talents, they exhibit overconfidence bias and think they can make more money (Asad et al. 2018). The

general rule of thumb used to determine whether an occurrence is more likely to be representative of and comparable to its population is known as representativeness (Tversky & Kahneman, 1974). Investors use representativeness heuristics to buy hot stocks and steer clear of underperforming ones (Waweru et al., 2008).

The rationale is that knowledge, previous performance, prior experiences, and expectations all make an investor risk tolerant which have an impact on investors' choices (Baker, Kumar, Goyal, & Gaur, 2019). Individual investors consequently often exhibit behavioral biases during trading, which causes them to commit trading errors. The problem, in any event, is how various tolerance to risk mediation processes impact heuristic biases and investment choices. Because of the different contextual perspective, studies done in Western settings and in countries with a capitalist system cannot be extended to developing nations and may not necessarily be relevant to Ghanaians. Thus, the hypotheses of this study which was based on the Heuristics theory and the earlier research as discussed is accepted.

These statistics however contradicts the findings of Aini and Lutfi (2019) who found that loss aversion has little bearing on investment decision-making, whereas tolerance to risk and overconfidence have large positive effects. Additionally, Aren and Zengin (2016) looked at factors influencing the investing choices of individual investors. The researchers discovered that personality traits are not a significant factor, but perception of risk. These authors further found that gender, and marital status all have an impact on perception of risk to varying degrees. Kumar, Kambuaya, Jamil, Muneer, and Teknologi (2015) provide support for these findings when they found that males are less risk-averse than women are, and educated investors are more willing to take risks. Additionally, investors who are less

rich are less risk-tolerant than wealthy ones. Though the tolerance to risk of each age group is noticeably varied, the scientists also discovered that there is not a clear correlation between age and degree of individual tolerance to risk. However, it was shown that tolerance to risk was closely connected with both money and education. The findings also highlight the significance of appropriate risk assessment, acceptance, and management training programs.

Easley, Hrickjaer, and O'Hara (2010) claim that when choosing whatever form of investment to make, investors often start by assessing a company's financial health using indicators like equity or profits per share. Usually, how individuals feel about these assessments affects how they justify investing in a certain business. Chong and Lal (2011), who discovered that individuals hunt for information regarding the firm's success as well as the investing habits of other market players, reaffirm this position. Investor decision-making was greatly influenced by the timeliness and delivery of such market information (Karan Gupta & Negi, 2014).

Again, in terms of the demographics, these statistics contradicts the findings of Van Rooij et al. (2011) who found that owning shares increases significantly with education. Few individuals with minimal education own stocks, they emphasized. However, Weber (2014) observed that families with greater levels of education are more likely to engage in financial markets, which supported the findings of the present research. Salas-Velasco (2022), who discovered that "even the vast majority of individuals with a university degree do not invest in the stock market," provides more evidence for this. Thus reported, owning shares may be restricted by criteria other than educational achievement. Discount rates and educational attainment have a sizable inverse connection, claim Nyakurukwa and Seetharam (2022).

According to Mishra (2018), informed investors show greater confidence and make bigger overseas investments. According to study by Harahap et al., optimistic people put more of their capital into stocks than into other financial items (2022).

4.4 Mediating Effects of Tolerance to risk

This section of the analysis focused on achieving the final research objective which was to, “examine the mediating effects of tolerance to risk in the relationship between participation on the stock exchange of household heads in the Sekondi Takoradi Metropolitan”. The study employed the use of a mediation analysis and relied on Sobel test to ascertain if tolerance to risk has any mediating effects on the relationship between literacy in finances and participation on the stock exchange. To test for mediation, the study first started with a simple regression analysis to test if literacy in finances as an independent construct (variable transformation of the our constructs used) has an overall effects on participation on the stock exchange (displayed in Table 4.7) after which three paths were identified; Path A which is the effects of Literacy in finances on tolerance to risk, Path B and Path C a multiple regression of the effects of Tolerance to risk and Literacy in finances on participation on the stock exchange. The coefficients of Paths A and B then used to run a Sobel test to ascertain the statistical significance of the mediation analysis. This is displayed in Table 4.7.

Table 4.7: Paths for Mediation Analysis

Coefficients^a							
Model	Unstandardized Coefficients		Standardized Coefficients		Sig.	Collinearity Statistics	
	B	Std. Error	Beta	t		Tolerance	VIF
1 (Constant)	5.557	.231		24.096	.000		
FinLiteracy	-.639	.073	-.404	-8.791	.000	1.000	1.000
a. Dependent Variable: StockMarket							

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Collinearity Statistics Tolerance VIF
	B	Std. Error	Beta				
1 (Constant)	.203	.443			.459	.646	
FinLiteracy	.552	.140	.195		3.954	.000	1.000 1.000

a. Dependent Variable: RiskTolerance

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Collinearity Statistics Tolerance VIF
	B	Std. Error	Beta				
1 (Constant)	5.628	.171			32.892	.000	
FinLiteracy	-.446	.055	-.282		-8.113	.000	.962 1.039
RiskTolerance	-.350	.019	-.627		-18.043	.000	.962 1.039

a. Dependent Variable: StockMarket

Source: SPSS Output (2023); *FinLiteracy*= Literacy in finances

Table 4.7 reports that Literacy in finances (B= -0.639; Std. Err= 0.231; p-value= 0.000)

has a significant effect on participation on the stock exchange. That being established that mediation analysis was possible and as such proceeded to identifying the paths for the mediation analysis. The outcome of Path A (independent variable and mediator variable) and Path B (mediator variable on dependent variable) produced unstandardized coefficients of (A_B: 0.552; A_{SE}: 0.140; B_B: -0.350; B_{SE}: 0.019). Using the outcome of the coefficients, the study run a Sobel test to determine the mediation effects of tolerance to risk in the relationship between literacy in finances and participation on the stock exchange of household heads in the Sekondi Takoradi Metropolitan. This is displayed in Table 4.8.

Table 4.8: Sobel test

Sobel test statistic:	-3.85552858
One-tailed probability:	0.00005774
Two-tailed probability:	0.00011548

Source: Sobel Calculator Output (2023)

Table 4.8 reports that, tolerance to risk (Sobel = -3.8556; p-value= 0.0001) has a significant negative mediation effect in the relationship between literacy in finances and investment decisions of household heads in the Sekondi Takoradi Municipality.

4.4.1 Discussion of Findings

The research by Waheed et al. (2020) is backed up by the results that investing choices are significantly influenced by financial literacy, which is effectively moderated by tolerance for risk. According to the mediation findings, Hussain and Rasheed (2022) discovered that investor personality, overconfidence bias, and investment choices are all highly impacted by tolerance for risk. In his analysis of the Tanzanian stock market using a variety of tolerance for risk and financial literacy mediation mechanisms, Kasoga (2021) discovered that tolerance for risk positively mediates the heuristics of availability, anchoring, overconfidence, and representativeness in investment choices.

The findings of Kanagabai and Agarwal (2020), who discovered that there is a strong positive association between personal finance and investment success and that the degree of tolerance for risk is somewhat moderating that relationship, corroborate the aforementioned figures. According to Economic Times (2013), "a larger risk is related with a greater chance of higher return and a lower risk is linked to a bigger potential of low-level return. The trade-off between risk and return while evaluating investment choices is referred to as the risk-return trade-off. Empirical proof for this is provided by studies by Sharpe (1964), Koutmos et al. (1993), and Salman (1994). (2002). The performance of investments is correlated with financial literacy, according to studies by Grable (1997), Sabri et al. (2012), Mahdzan and Tabiani (2013), Sabri and Juen (2014), Agarwal et al. (2015). According to studies by Sjöberg and Engelberg (2009), Huhmann and McQuitty

(2009), and Gustafsson and Omark (2009), literacy in finance and tolerance for risk are considerably positively associated (2015). These studies have not yet been able to assess the overall effects of literacy in finance and tolerance for risk on engagement on the stock market. This study clarified the nexus in its attempt at achieving that by presenting stock market involvement as an endogenous construct, tolerance for risk risk as a mediator, and financial literacy as an independent factor.



CHAPTER FIVE

DATA PRESENTATION, ANALYSIS AND DISCUSSIONS

5.0 Introduction

The main aim of the study is to investigate the effects of literacy in finances and tolerance to risk on participation on the stock exchange of households in the Sekondi Takoradi Metropolitan. The study sought to conduct a mediation analysis of tolerance to risk in the relationship between literacy in finances and participation on the stock exchange. This chapter presents a summary of major findings followed by a conclusion. Some recommendations are made as well as key opportunities for further research.

5.1 Summary of Findings

The main aim of the study is to investigate the effects of literacy in finances and tolerance to risk on participation on the stock exchange of households in the Sekondi Takoradi Metropolitan. The study sought to conduct a mediation analysis of tolerance to risk in the relationship between literacy in finances and participation on the stock exchange.

The study specifically sought to; Examine the effects of literacy in finances on participation on the stock exchange of households in the Sekondi Takoradi Metropolitan; Examine the effects of tolerance to risk on participation on the stock exchange of households in the Sekondi Takoradi Metropolitan; and Examine the mediation effects of tolerance to risk in the relationship between literacy in finances and participation on the stock exchange of households in the Sekondi Takoradi Metropolitan.

The study was a quantitative analysis where data was collected from 399 household heads in the Sekondi Takoradi Metropolitan through convenience sampling. The study employed

the use of mediation and multiple regression analysis with the SPSS v 23 as the main data processing tool.

5. 2 Key Findings

In relation to the first objective of the study which was to, “Examine the effects of literacy in finances on participation on the stock exchange of households in the Sekondi Takoradi Metropolitan” the study found that any changes in their level of financial knowledge will lead to a 67.4% increment in their participation in the stock exchange. Also, the level of financial behavior and financial attitudes of these participants will lead to 29.1% and 62% respective declines in the level of participation on the stock exchange by these household heads. However, financial awareness levels has no significant negative effects on the level of participation on the stock exchange by these household heads. The study found that financial literacy has a positive effect on stock market participation.

The second objective which was to, “Examine the effects of tolerance to risk on participation on the stock exchange of households in the Sekondi Takoradi Metropolitan”, the study found that, the current level of tolerance to risk reduces these household heads’ participation in the stock exchange by an estimated 25.7%. Amongst the control variables, the higher the size of a participant’s household, their participation on the stock exchange increases by an estimated 12.4%. Older household heads have a 22.6% less likelihood to engage in the stock exchange whereas the household heads who earned more have a 12.6% less likelihood to engage in the stock exchange. Educated household heads in the Sekondi Takoradi Metropolitan surprisingly have a 3.7% less likelihood to participate in the stock exchange however, this was not a strong predictor of participation on the stock exchange.

In relation to the third objective which was to, “Examine the mediation effects of tolerance to risk in the relationship between literacy in finances and participation on the stock exchange of households in the Sekondi Takoradi Metropolitan”, the outcome of the Sobel test indicated that tolerance to risk has a significant negative mediation effect in the relationship between literacy in finances and investment decisions of household heads in the Sekondi Takoradi Metropolitan.

Finally, tolerance to risk has a significant negative mediation effect in the relationship between literacy in finances and investment decisions of household heads in the Sekondi Takoradi Metropolitan.

5.3 Conclusion

The main aim of the study is to investigate the effects of literacy in finances and tolerance to risk on participation on the stock exchange of households in the Sekondi Takoradi Metropolitan. The study sought to conduct a mediation analysis of tolerance to risk in the relationship between literacy in finances and participation on the stock exchange. Based on the outcomes, the study concludes that, overall, literacy in finances has a significant effect on participation on the stock exchange amongst household heads in the Sekondi Takoradi Metropolitan. Also, financial knowledge increases participation on the stock exchange whereas financial behavior and financial attitudes of these household heads reduces the level of participation on the stock exchange. Again, the study concludes that absence of financial awareness levels does not affect participation on the stock exchange by these household heads.

The study further concludes that, the current level of tolerance to risk affects household heads' participation in the stock exchange whereas higher household sizes affect

participation on the stock exchange. Older persons and educated person in the municipality are less likely to participate in the stock exchange. Finally, tolerance to risk has a significant negative mediation effect in the relationship between literacy in finances and investment decisions of household heads in the Sekondi Takoradi Metropolitan.

5.4 Recommendations

Based on the findings of the study, the following recommendations are proposed;

1. The study found that although certain characteristics within the literacy in finances construct, such as financial awareness, did not significantly influence stock exchange involvement in Ghana, other variables do. As a result, it is advised that the Ghana Stock Exchange inform the public about the securities traded there, what they do, what their purpose is, and how crucial the exchange is to economic progress. This will go a long way toward raising public awareness and encouraging involvement in the process.
2. Given that the study discovered a significant relationship between tolerance to risk and participation on the stock exchange, agents who introduce new stocks to clients in an effort to encourage participation should take into account their clients' risk and return preferences, investment goals, and level of Aversion to risk. Instead of focusing only on their income, agents should look out for the interests of their clients and avoid becoming exploitative. They should refrain from insider trading and clearly communicate the risk and potential rewards of investing in equities.
3. It is advised that credit societies improve educational campaigns in or to develop the financial attitudes of these household heads in order to make them risk tolerant in order to increase favorable participation on the stock exchange. It was discovered

that tolerance to risk actually mediates the relationship between literacy in finances and investment decisions. This is done to increase the number of risk-tolerant people in the Municipality.

4. And last, it is advised that the rights of financial consumers be sufficiently safeguarded by current legislation so that even those with no financial background feel secure owning and using their accounts and taking part in the stock exchange. Financial institutions may also take the effort to educate their customers on fundamental financial principles and assist them in developing excellent saving and investing habits. These actions go a long way toward increasing account ownership and subsequent use from customers.

5.5 Opportunities for Further Research

Future research might also look at the causes of Ghana's lower participation on the stock exchange rates among those with literacy in finances, despite the fact that there is evidence to support this claim. Additionally, a thorough examination of country-specific characteristics may provide insightful data that may promote the engagement of financially savvy people. Since the study's results were obtained using just a quantitative technique. In contrast to what would have happened if structured interviews had been used, these respondents were unable to elaborate on the reasons behind their individual responses. As a consequence, in the future, different researchers may use a variety of approaches to look into the problem. Due to the fact that the research was also conducted in the Sekondi Takoradi Metropolitan, some characteristics, such as the household heads' level of tolerance to risk and literacy in finances, which affect their participation on the stock exchange, might not be applicable to all household heads in Ghana's numerous districts

and municipalities. Future research may thus concentrate on more Ghanaian districts and municipalities, such as the Kumasi Metro and other Municipalities, for in-depth study in order to increase the relevance of the results.

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APPENDICES

SECTION I: Demographic Characteristics of Respondents

Please Tick [✓] the appropriate box where applicable

1. What is your gender? (tick One) [] Male [] Female
2. Please indicate your age in years [] Less than 25 [] 25 to 34 years [] 35 to 44 years [] 45 years and above
3. What is your highest level of education? [] No formal education [] Basic School [] Senior High [] Vocational/Technical [] Tertiary (Diploma, Degree, HND etc) [] Others (Specify).....
4. What is your household size? [] 3 or less [] between 4 and 6 [] more than 6
5. Estimated Monthly Income [] GHS 365 or Less [] GHS 366 - 475 [] GHS 476 - 605 [] GHS 606 – 3605 [] more than 3605

SECTION II: Financial Literacy

6. On a scale of 1 – 5, indicate the level of your agreement to the following statements 1= Strongly Disagree; 2= Disagree; 3= Neutral; 4= Agree; 5= Strongly Agree

Construct

1 2 3 4 5

Financial Behaviour

I have a personal budget

My household income each month is regular and reliable

I owe a friend or member of my family money that I borrowed.

I owe money on my mobile wallet right now.

Financial Awareness

Financial Education introduce in school curriculum

I am confident in making financial decisions

I always have money left over at the end of my budgeting period

The need for financial education

Financial Attitude

Regarding my financial status, I feel in charge

I believe I can use my future earnings to accomplish my financial objectives.

I'm unsure of how my money is being used.

Having things is crucial to my fulfillment.

Credit terrify me.

I consider using credits to be excessively expensive.

I believe it's crucial to set aside money each month for investments or savings.

Before I sign anything, I believe it's critical to comprehend loan agreements and apartment rentals.

Financial Knowledge

Purchasing business stock often yields a safer return than investing in stock mutual funds.

How much do you agree that investing in individual stocks of companies rather than stock mutual funds often offers a safer return?

When interest rate rises the bond price falls

Company stocks are riskier than bonds

Bonds compared to savings accounts and stocks considering a long investment period gives highest interest return

Consider a scenario in which inflation was 2% per year and your Sinapi Aba investment account's interest rate was 1% per year. How much do you concur that the products and services you might purchase with the funds in this account after a year would cost less than

The danger of losing money is reduced when investors diversify their capital over a variety of assets.

SECTION III: Stock Market Participation

7. On a scale of 1 – 5, indicate your agreement to the following statements as pertaining to your investment decisions. 1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree

1 2 3 4 5

I have a plan to make an investment option switch in the next 12 months.

I prefer saving in bonds as compared to stocks

It is a good idea to buy less insurance for an old car than for a new one

I prefer long term investment such as investing with SSNIT

I invest in Treasury Bills, and Fixed Deposits

Source: Muto (2016)

SECTION IV: Risk Tolerance

8. What comes to your mind when you consider "risk" in the context of investments? []

A sure loss of money [] A possibility to lose money [] An opportunity to make money

[] Thrill/Adventure

9. Which of the following statements about your risk-taking tendencies while investing or saving is true? [] Avoid any losses [] Cautious [] Willing to take up some level

risk [] Ready to take up a higher risk to get the expected returns

10. Which of these investments would you make if you had GHS 50,000 to spend in? []

Deposit the money in a bank account [] Invest it in bonds [] Prefer to invest all in

- mutual funds ☐ Invest all in the stocks market ☐ Purchase Commodities ☐ Foreign currency
11. Suppose you made a GHS 100,000 initial investment. However, because to market circumstances, your investment decreased by GHS 60,000 in a month. How will you proceed? ☐ Sell off the investments ☐ Sell a portion of the portfolio to cut down on losses and later invest it into more secured investment sectors. ☐ Keep the investment with the hope of a better market conditions ☐ Invest additional funds to lower the average investment price.
12. supposing you got GHS 20,000 as a present from a family member. Which of the following investments appeals to you? ☐ A 60% low-risk investment, 30% in medium-risk investment, and 10% high-risk investment ☐ A 30% low-risk investment, 40% in medium-risk investment, and 30% high-risk investment ☐ A 10% low-risk investment, 40% in medium-risk investment and 50% high-risk investment
13. What proportion of your pay, after all your costs, would you prefer to save or invest if you were working today and earning a consistent salary? ☐ Less than 10% ☐ 10%-20% ☐ 25%-40% ☐ More than 40%
14. How long can you stand a market where your asset continues to lose value? ☐ Less than one year ☐ one to three years ☐ Three to five years