Stock Market Literacy: A Systematic Literature Review and Future Research Agenda

Zainuddin[1] and La Ode Sabaruddin[2*]

Abstract

This study provides a systematic review of extant academic literature on financial literacy and stock market participation to enhance our understanding of stock market literacy, pinpoint the literature gaps, and suggest future research directions. Relevant literature was systematically retrieved from two leading academic databases, Scopus and Web of Science, to ensure the rigor and credibility of the review. Employing thematic analysis, we start by delineating the dimensions of stock market literacy and outlining the theories underpinning previous research. Subsequently, we identify the antecedents, consequences, and contingencies of stock market literacy. These analyses provide insights for discerning suggestions and avenues for future research in the nuanced realm of stock market literacy. We highlight stock market literacy as an inseparable part of financial literacy and individual participation in the stock market and identify dimensions of stock market literacy, including basic stock market concepts, advanced investment strategies, behavioral finance insight, risk management, and ethical considerations, and financial planning and long-term investment. Theoretical lenses offer insights into the psychological and behavioral aspects shaping stock market literacy. Moreover, this study explores antecedents, consequences, moderating, and mediating factors, emphasizing demographic characteristics, personality factors, technology access, investment intentions, decisions, and performance. Fundamentally, this study offers a comprehensive overview of existing research and charting potential avenues for future investigation.

Keywords: financial literacy, stock market literacy, stock market participation, investment decision-making, behavioral finance

[1] Faculty of Economics and Business, Airlangga University, Surabaya, Indonesia, and Faculty of Economic and Business, Universitas Khairun, Ternate, Indonesia
zainuddin-2023@feb.unair.ac.id https://orcid.org/0009-0008-4920-2793
[2] Faculty of Economics and Business, Airlangga University, Surabaya, Indonesia
laodesabaruddin@feb.unair.ac.id https://orcid.org/0000-0001-9594-5768
*Corresponding author

1. Introduction

Stock markets are essential for various parties, including individuals, companies, and the economy as a whole. A plethora of research (Bilias et al., 2017; Merkoulova & Veld, 2022a; Yang et al., 2021) demonstrated that engaging in the stock market might improve individuals' well-being by potentially boosting their financial security, wealth, and future financial opportunities. This highlights the crucial significance of stock markets in not only influencing individual financial achievement but also in contributing to broader economic expansion and well-being (Mauricas et al., 2017).

In recent decades, individuals have increasingly actively participated in the stock market (Al-Tamimi & Kalli, 2009; Handranata et al., 2023; Thomas & Spataro, 2018). Stock market participation refers to the percentage of people who invest in the stock market. To achieve success in the stock market, it is advisable for individuals to consistently enhance their level of financial literacy (FL) and, when necessary, consult with professionals for guidance (Spataro & Corsini, 2017; Thomas & Spataro, 2018; Xia et al., 2014; Yamori & Ueyama, 2022). The combination of information and experience can enhance one's engagement in the stock market and yield improved financial outcomes.

There exist numerous definitions of FL. According to Huston (2010), the concept of FL encompasses the allocation of human capital toward financial activities to maximize the anticipated advantages of consumption. Lusardi and Mitchell (2014) define FL as the capacity to comprehend fundamental financial principles, such as interest, inflation, risk, investment, taxes, and debt. Atkinson and Messy (2012) defined FL as an individual's capacity to apply financial knowledge and skills in practical scenarios, enabling them to make well-informed decisions, effectively manage financial risks, and successfully attain financial objectives.

Stock market participation pertains to the engagement of an individual or corporation in the purchase, sale, or investment of shares or other financial instruments that are exchanged on a stock exchange. (Almenberg & Dreber, 2015; Thomas & Spataro, 2018; van Rooij et al., 2011; Xia et al., 2014; Yamori & Ueyama, 2022). FL is closely related to stock market participation. We refer to this relationship as stock market literacy. Stock market literacy refers to an individual's understanding and knowledge of how the stock market operates and how stocks are traded, as well as related aspects such as investment instruments, indices, listed companies, and the regulations governing the stock market (Balloch *et al*., 2015).

The primary objective of this study is to conduct a comprehensive evaluation of stock market literacy by synthesizing existing research, identifying literature gaps, and proposing directions for future studies. Currently, The only existing research on stock market literacy was conducted by Balloch et al., (2015), which has several limitations. First, the review is not specific to a literature review. Instead, it employs stock market literacy as an antecedent factor, in conjunction with trust, for making decisions on stock ownership. Second, the dimensions and indicators employed to assess stock market literacy still lack comprehensiveness. The stock market literacy dimensions and indicators are based on the financial literacy measurements produced by Hung et al., (2009).

This research conducts a literature review on stock market literacy. Therefore, this study amalgamates the prior literature in this domain. This study analyzes the trajectory of stock market literacy up until 2023, identifies the dimensions and indicators of financial literacy, and explores the underlying ideas. Next, establish the specific measurements and criteria for assessing stock market literacy. Based on a systematic literature review (SLR), the study identifies research gaps and offers valuable guidance for future research.

The specific purpose of this review is to answer the following questions:
RQ1. What are the growing trends that characterize current research on stock market literacy up to the year 2023?
RQ2. What dimensions constitute stock market literacy?
RQ3. What theoretical lenses underpin stock market literacy, and how do they relate to individual participation in the stock market?

Based on the conducted review, this study has made multiple significant contributions. Firstly, the study provides a comprehensive understanding of stock market literacy. Furthermore, there has been a notable absence of any literature review research about stock market literacy. The results of this study contribute to defining the various aspects of stock market literacy, explaining the theoretical frameworks used, and identifying the factors that influence outcomes and conditions related to stock market literacy. Furthermore, the study identifies and emphasizes the current deficiencies in research and offers a clear plan for future investigations, encompassing both theoretical and empirical aspects.

The remainder of this paper is organized as follows. Section 2 describes the methodology in the systematic literature review. Section 3 presents the findings with descriptive analysis. Section 4 focuses on thematic analysis to understand trends, patterns, and characteristics of literature or scientific publications in the field of stock market literacy. Section 5 provides suggestions for future research based on the gaps found in this literature review. Finally, Section 6 concludes the paper.

2. Research method

The SLR was applied in the research. It serves as a more objective method of article selection, inclusion criteria, and analysis methods. Regarding the article selection procedure, the preferred reporting items for systematic reviews and meta-analyses (PRISMA) were followed, as recommended for SLRs (Ali, 2021; Permatasari & Tjahjadi, 2023; Prado et al., 2022; Sahoo et al., 2022). PRISMA offers a framework in the form of a checklist of things to promote clarity and transparency in literature review investigations.

2.1. Data sources and collection

Data collection relied on journals indexed in Scopus and Web of Science (WoS) databases following previous researchers (Choudhary & Jain, 2023) because they are the two largest platforms used to index scientific journals and research publications rather than using only one of them, for example using the Web of Science database (Goyal & Kumar, 2021) and Scopus (Garcia et al., 2023; Xiao et al., 2022).

The PRISMA article selection technique encompasses three distinct stages, namely "Identification," "screening," and "included" (Jansen, 2018). Figure 1 illustrates the sequential execution of the aforementioned processes in the present study. The identification stage includes the process of establishing the appropriate search terms, search criteria, databases, and data extraction procedure. The primary search term utilized encompassed a range of relevant concepts, including "stock market literacy," "financial literacy," "financial education," "financial knowledge," "financial planning," "financial capability," and "financial skill." In addition, the search was augmented by incorporating the terms "stock market participation," "investment decision," "investment decisions," and "investment choice". According to the PRISMA 2020 flow diagram, conducting a comprehensive screening of the identified articles is imperative. The screening procedure involved a thorough evaluation of each article to determine its appropriateness for inclusion in the study. The methodology encompassed the retrieval of relevant scholarly publications and subsequent assessment of their suitability based on predetermined criteria. According to Meline (2006), papers that did not meet the specified inclusion criteria were excluded from each task.

The screening procedure was carried out through a combination of automated and manual methodologies. A comprehensive search yielded a total of 580 articles that satisfied the specified inclusion criteria. To enhance the clarity and organization of their presentation, the researchers made the deliberate decision to limit the number of papers included in their analysis to 494 (Hassan et al., 2023). To maintain the integrity and applicability of the dataset, specific publishing types were excluded from the study. The types that are excluded encompass various forms of scholarly content, such as research notes, comments from editors, books, book chapters, book reviews, conference proceedings, unpublished data, and articles written in languages other than English. These excluded types include research notes, editors' comments, books, book chapters, book reviews, conference proceedings, unpublished data, and non-English articles. As a result of this exclusion, the dataset was refined to consist of 239 articles. Continuous improvements in productivity enable firms to more effectively achieve their strategic objectives (Badawi et al., 2023). Following a thorough screening process, it was determined that certain publications were not pertinent to the research issue.

Consequently, the number of articles that proceeded to the review stage amounted to a total of 62. Subsequently, the complete versions of the screened articles were obtained for the subsequent phase of screening, which involved assessing their suitability. The authors conducted the eligibility assessments manually and subsequently had them reviewed by a supervisor and another researcher to minimize any potential subjectivity.

Inspection and choice of pinpointed article titles, abstracts, and keywords were conducted following specific suitability standards. Articles not discarded in the earlier phase were thoroughly or partially reviewed to ascertain their inclusion in the research based on these standards. Articles were manually collected using a sheet that listed the author(s), journal title, article headline, theoretical constructs, study backdrop, and investigative approach. Each writer evaluated articles deemed potentially significant. This evaluation involved a complete text review and extraction of vital data. Conversations between the authors resolved any contrasting views. Our initial focus was on the link between FL and stock market engagement, which eventually led to the formation of patterns and themes defining stock market literacy. These findings serve as an assessment tool to determine the effectiveness of management's performance to date (Anggraeni et al., 2024).

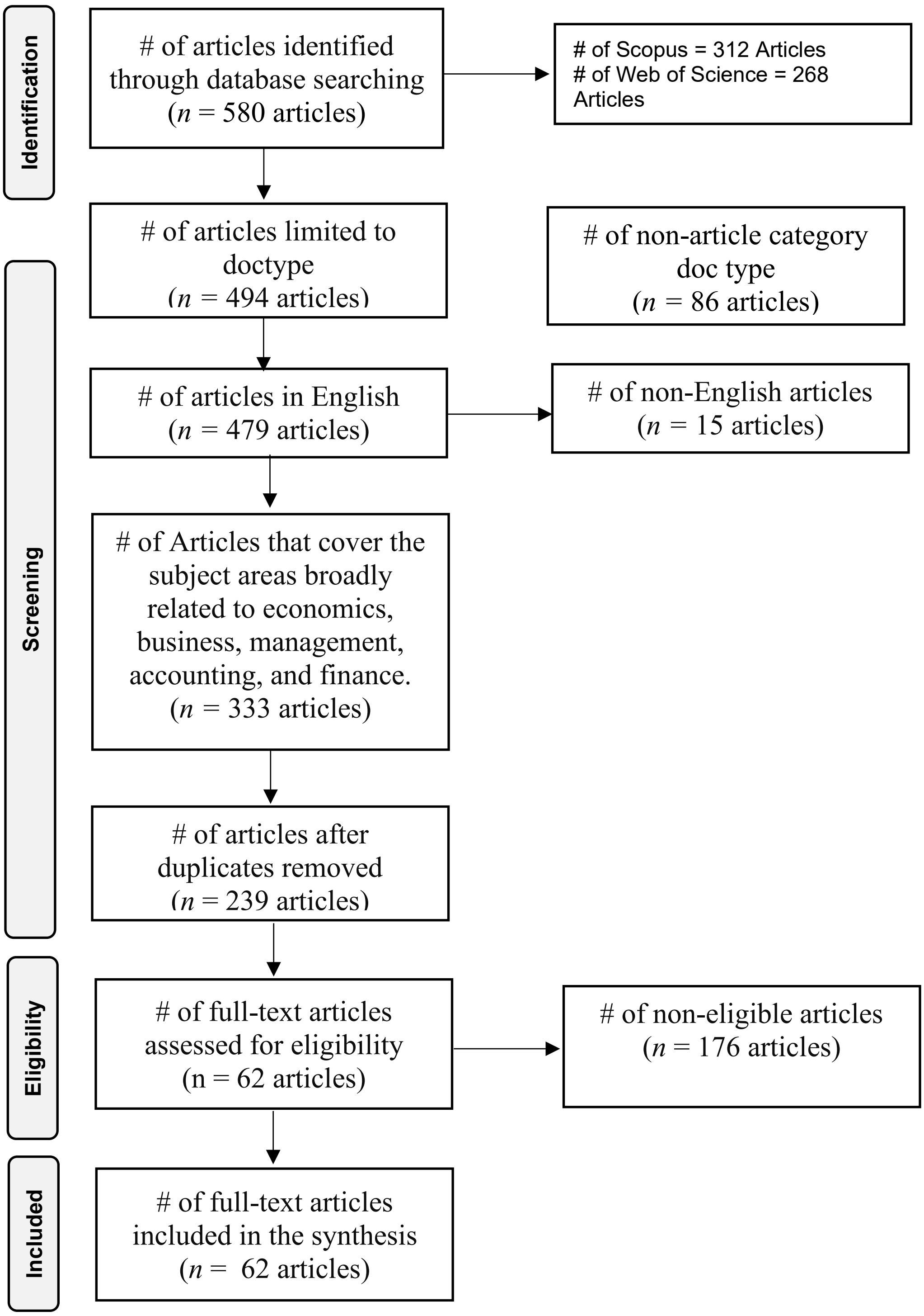


Figure 1. Articles' selection process

2.2. Data analysis

This study's qualitative component was subject to in-depth thematic analysis, informed by an array of scholarly contributions that extend beyond the foundational guidelines set forth by Braun and Clarke (2006). The paradigm proposed by Guest et al., (2014) established a robust approach to code creation, emphasizing the importance of anchoring data-driven themes in empirical evidence. In conjunction with these methodologies, Nowell et al., (2017) emphasized the significance of achieving thematic saturation, a criterion to determine the point at which no novel themes were derived from the data. The aforementioned factor played a pivotal role in ascertaining the extent and thoroughness of the analysis. Moreover, the sophisticated methodology for doing theme analysis, as described by Clarke and Braun (2017), facilitated a more precise understanding of the thematic framework, specifically within the realm of behavioral finance research.

The procedure commences with a comprehensive examination of the data, which is subsequently subjected to an initial coding process enabling the discovery of preliminary reasons. These motives are then further expanded upon and transformed into primary themes. The aforementioned methodology is generally acknowledged for its adaptability and capacity to produce profound understandings of psychological and behavioral phenomena, as evidenced in scholarly works about financial literacy and involvement in the stock market. The themes derived from this methodology are subsequently examined and honed to ensure their fidelity in capturing the intricacies and refinements inherent in the gathered material. The credibility is further enhanced by validating our findings through the use of data triangulation techniques or engaging in discussions with research peers. By adhering to these established principles, this study aims to contribute substantially to the current body of literature by elucidating the intricate connection between financial literacy and an individual's inclination to engage in stock market participation (Braun & Clarke, 2006). The triangulation of these methodologies underscored the study’s commitment to methodological excellence, promising a substantive addition to the literature on financial literacy and stock market engagement.

3. Descriptive analysis of the sampled articles

Balloch et al., (2015) first researched stock market literacy and is the only study that introduces this topic. His research was conducted to illustrate the importance of stock market literacy and trust for stock ownership decisions. Due to limited literature, we then developed by systematically reviewing the literature on financial literacy and stock market participation to provide a comprehensive and coherent picture of the importance of literacy in the stock market.

Notably, van Rooij et al., (2011) started research on the topic of financial literacy and stock market participation, followed by many researchers who developed to date, but none of the academic studies have developed a conceptual understanding of stock market literacy. Our analysis shows how 62 journal articles illustrate the relationship between financial literacy and stock market participation, which will then be defined as stock market literacy. Table 1 lists 10 journals, representing most sources that discuss relevant examples.

Table 1. Leading journal by number of articles

Journal	Number of articles
International journal of bank marketing	5
International review of financial analysis	4
Asian economic and financial review	2
FIIB business review	2
Indian journal of finance	2
Journal of banking and finance	2
Journal of family and economic issues	2
Journal of financial and quantitative analysis	2
Revista finanzas y politica economica	2
Academy of accounting and financial studies journal	1

Sources: Table by author

4. Dimensions of financial literacy and its relationship with stock market participation

The involvement of individuals in stock markets is defined as the dimension of stock market participation. This is agreed upon by all researchers in advance. The different dimensions based on each author are shown in Table 2. For example, van Rooij *et al*. (2011) highlighted the three main dimensions of financial literacy that must be considered, namely financial knowledge that reflects an understanding of basic concepts such as inflation, diversification, and compound interest, financial behavior that applies this knowledge in everyday life through budgeting, saving, investing, and debt management, and financial attitude that includes individual perspectives on money and financial decisions.

Munir et al., (2020) also adopted the same dimensions. Subsequently, Yamori and Ueyama (2022) and Hii et al., (2022) use the same dimensions of financial literacy as Almenberg and Dreber (2015), which tests financial knowledge with questions covering basic concepts such as compound interest, inflation, and risk diversification. However, Almenberg and Dreber's (2015) research also explored gender roles affecting financial literacy.

Table 2. Dimensions of financial literacy and its relationship with stock market participation

Author	Relationship between financial literacy and stock market participation	Dimensions of financial literacy
van Rooij *et al*., (2011), Munir *et al*., (2020)	Financial literacy influences financial decision-making. Those with low literacy are much less likely to invest in stocks. A lack of understanding of economics and finance is a significant barrier to stock ownership. Financial literacy is an important determinant of stock market participation.	• Financial knowledge • Financial behavior • Financial attitude
Mate and Dam (2018)	Investors who lack financial literacy tend to make unwanted financial decisions and can experience adverse conditions in the long run. The level of financial literacy is influenced by the experience of investors in the stock market.	• Understanding of stock market-related terms and concepts
Rieger (2020)	Individuals with higher levels of financial literacy are more likely to invest in the stock market. Financial literacy significantly impacts stock market investment decisions and general attitudes toward long-term returns.	• Inflation knowledge • Financial Knowledge • Mathematical Skill • Cognitive Reflection
Fong et al., (2021)	In the elderly population of individuals, the probability of participation in the stock market is largely determined by the level of financial literacy score.	• Numeracy and capacity to do calculations related to interest rates • Understanding of inflation • Understanding of risk diversification
Almenberg and Dreber (2015)	Gender differences in financial literacy affect participation in the stock market, with women participating less than men. Basic and advanced financial literacy have different effects. Basic financial literacy does not require knowledge of the stock market, while advanced financial literacy involves familiarity with financial products and concepts.	• Interest Rate Knowledge • Inflation knowledge • Risk Diversification skill
Yamori and Ueyama (2022), Hii et al., (2022)	Poor financial literacy leads to low stock market participation, even after considering endogeneity. Financial education can effectively increase the number of stock investors. However, households with higher financial literacy do not always have a higher ratio of stock ownership to financial assets.	• Interest Rate Knowledge • Inflation knowledge • Risk Diversification skill

Handranata et al., (2023)	Financial literacy has a significant positive influence on stock market participation, which means that individuals with higher levels of financial literacy are more likely to participate in the stock market. However, the effects of financial education, which is a key component of financial literacy, may decline over time. Therefore, timely financial education focused on the topic of the desired decision is needed.	• Investment diversification • Inflation knowledge • Interest rate knowledge • Compound interest.
Xu et al., (2022)	Religiosity can influence individuals to participate in the stock market. Religious activity can reduce the time spent on obtaining financial information, such as economic and financial news, which can further damage financial literacy levels. Therefore, religious beliefs can decrease stock market participation in a positive correlation between financial literacy and stock market participation by reducing financial literacy.	• Interest compounding • Inflation knowledge • Investment risk knowledge

Source: Table by authors

In an in-depth analysis, Rieger (2020) proposes a holistic view of financial literacy, combining traditional aspects with sophisticated cognitive exploration. Through the lens of "Inflation Knowledge," this research reveals the importance of understanding the dynamics of inflation, a key concept that drives the value of money and investment decisions. In "Financial Knowledge," research dives into essential knowledge of financial products and concepts, opening the door to a broader understanding of financial markets and strategies.

Furthermore, Rieger also highlighted "Mathematical Skills" as the backbone of financial literacy, emphasizing the importance of calculation skills in managing budgets and investments. And perhaps most innovatively, "Cognitive Reflection" invites us to think critically and reflectively, questioning our impulses and prejudices in making financial decisions. Rieger's approach not only enriches our insight into financial literacy but also challenges us to improve our analytical and reflective abilities in managing our personal and professional finances.

5. Definition, dimensions, and indicators of stock market literacy

Integration of various dimensions of financial literacy and stock market participation mentioned by leading researchers such as van Rooij et al., (2011), Almenberg and Dreber (2015), Mate and Dam (2018), Munir et al., (2020), Rieger (2020), Fong et al., (2021), Yamori and Ueyama (2022), Hii et al., (Hii et al., 2022), Xu et al., (2022), Handranata et al., (2023), and others form a multidimensional stock market literacy framework. *Basic Stock Market Concepts* are derived from basic financial knowledge (Munir et al., 2020; van Rooij et al., 2011). Focusing on the basic finances of the stock market, we get a foundation on the types of stocks, market indices, and trading mechanisms that are the gateway to the world of the stock market. Then, *Advanced Investment Strategies* (Mate & Dam, 2018; Rieger, 2020) takes us deeper, diving into more complex investment strategies, fundamental and technical analysis, as well as a deep understanding of market cycles and economic indicators.

Furthermore, *Behavioral Finance Insights* opens a window into the world of financial psychology, uncovering how cognitive habits and emotions influence investment decisions. This refers to the financial literacy dimension (Almenberg & Dreber, 2015; Yamori & Ueyama, 2022). Meanwhile, *Risk Management and Ethical Considerations*, concerning the work of Xu et al., (2022) and Handranata et al., (2023), underline the importance of risk management and portfolio diversification, as well as the importance of ethics and regulatory compliance in investing. Finally, *Financial Planning and Long-Term Investment* integrate a long-term perspective and the formation of a balanced investment portfolio, affirming that stock investment is not just a short transaction but rather an integral part of a broader and sustainable financial strategy. With its breadth and depth, this stock market literacy framework not only adds to our insight into the stock market but also emphasizes the importance of a holistic understanding of the market, investor behavior, and a sustainable strategic approach in navigating the dynamic and challenging world of stock investing.

Table 3. Definition, dimension, and indicators of stock market literacy

Definitions of stock market literacy	Dimensions and Indicators Stock Market literacy
Stock market literacy refers to a person's ability to use knowledge of the stock market, apply careful investment behavior, and demonstrate a mature attitude towards risk, which overall strengthens their participation in investing and improves the quality of investment decisions taken (Balloch et al., 2015; Hung et al., 2009; Munir et al., 2020; van Rooij et al., 2011)	• Basic Stock Market Concepts - Basic knowledge of stocks, such as types of shares, principles of the stock market, stock market terminology, and stock trading process. • Advanced Investment Strategies - Fundamental and technical analysis - Portfolio diversification - Derivative instruments - Time-based investment strategy • Behavioral Finance Insights - Overconfidence - Loss aversion - Herd behavior anchoring bias - Emotional bias • Risk Management and Ethical Considerations - Risk analysis - Risk mitigation - Regulation and ethics - Transparency and accountability in financial statements • Financial Planning and Long-Term Investment - Budgeting and debt management - Liquidity management and emergency funds - Investments for retirement purposes - Long-term portfolio management

Source: Table by authors

6. Theoretical lenses

We delve into theories from the disciplines of economics, psychology, and behavioral science to understand the factors that influence individual decisions in participating in the stock market. The utilization of a multi-disciplinary approach enables a full examination of the current body of literature and the establishment of a future research agenda capable of addressing fundamental inquiries within this field in a holistic and diversified manner.

According to the data presented in Figure 2, it can be observed that Behavioral Finance Theory holds the highest prevalence, constituting around 31.43% of the overall number of hits. Subsequently, the Theory of Planned Behavior accounted for 12.86% of the responses, whereas Investment Decision Theory constituted 8.57% of the responses. In addition, several different theories can serve as alternate conceptualizations for the definition of financial literacy and stock market participation. The subsequent exposition delineates the amalgamation of numerous concepts that have been synthesized to comprehend the theoretical implications in the domain of stock market literacy study.

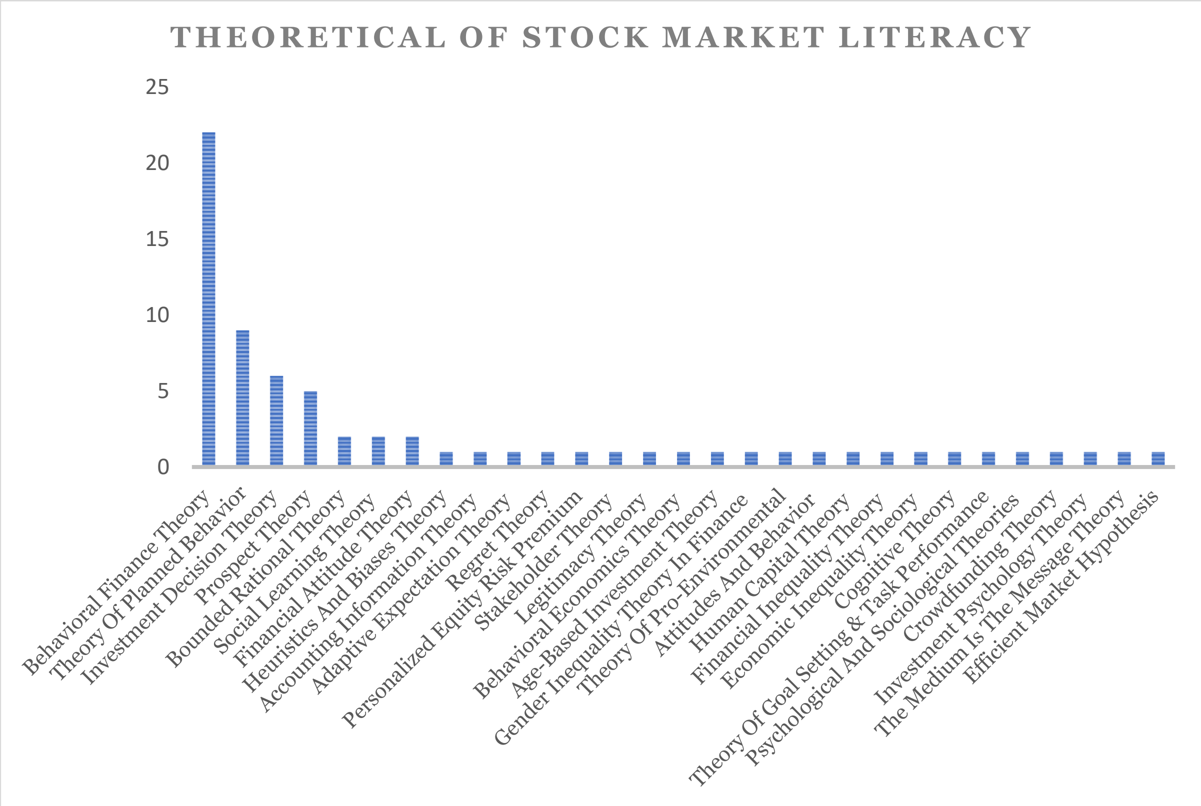


Figure 2. Theoretical lenses of stock market literacy
Source: Figure by authors

6.1. Behavioral finance theory

The theory of behavioral finance makes clear the impact of behavioral and psychological elements on the decision-making process of individuals in the realm of finance. This has noteworthy ramifications, particularly within the domains of financial literacy and participation in the stock market. The theory posits that the conduct of investors is frequently impacted by cognitive and emotional biases, including but not limited to overconfidence, framing, and loss aversion. Individuals with a heightened degree of financial literacy are inclined to possess a greater awareness of these cognitive biases, enabling them to engage in more logical decision-making processes regarding investments.

On the other hand, those lacking sufficient financial literacy may exhibit a greater vulnerability to this prejudice, thereby impeding their engagement in the stock market. Through a comprehensive comprehension of the principles and concepts encompassed within the field of Behavioral Finance, it becomes possible to enhance our ability to discern the impact of financial literacy levels on individuals' investment behaviors. Moreover, this understanding enables us to devise more efficacious strategies for financial education and foster a greater degree of enduring engagement in stock market activities. The theory of behavioral finance has been employed by numerous previous researchers, including van Rooij et al., (2011), Mouna and Jarboui (2015), Khan et al., (2019), Ady and Hidayat (2019), Darmayanti et al., (2023), and others.

6.2. Theory of planned behavior

The idea of planned behavior theory emphasizes the influence of individual beliefs, intentions, and self-regulation in determining behavior. Within the realm of financial literacy, this idea posits that individuals who possess a robust goal to enhance their financial literacy are more inclined to undertake tangible measures toward its improvement. The intention of individuals to acquire and enhance their financial literacy is influenced by their ideas of the advantages of financial literacy, their perceptions of self-control in the learning process, and their judgment of attitudes toward financial literacy. That means individuals who possess a strong purpose to engage in the stock market are more inclined to actively participate in stock investment activities. The individual's attitudes towards the stock market, opinions regarding the advantages of engaging in stock market participation, and perceptions of self-regulation in investing decision-making are factors that will impact their preference for engaging in the stock market (Akhtar and Das, 2019; Akhter and Hoque, 2022; Arena et al., 2023; Farida et al., 2023; Handranata et al., 2023; Nag and Shah, 2022).

6.3. Investment decision theory

Investment decision theory is a theoretical framework that examines the process by which individuals make investment decisions, considering a multitude of considerations. Within the domain of financial literacy, Investment decision theory posits that persons possessing elevated levels of literacy tend to exhibit enhanced knowledge and comprehension about diverse investment vehicles and associated risks. This enables individuals to make financial decisions predicated on more comprehensive analysis. This idea posits that individuals with a high level of financial literacy are more likely to engage in the stock market with increased confidence and effectiveness. Individuals can do a more thorough analysis of stocks and portfolios, enhancing their comprehension of risk implications and enabling them to make better-informed investing decisions. The use of this theory can facilitate the development of a financial education strategy that places greater emphasis on cultivating robust investment decision-making abilities, hence fostering increased engagement in the stock market (Arifah & Dalimunthe, 2020; Hii et al., 2022; Nyakurukwa & Seetharam, 2022)

6.4. Prospect theory

Prospect Theory is a theoretical framework that holds relevance in comprehending the cognitive processes underlying individuals' financial decision-making, encompassing their choices about engagement in the stock market. This theory explains how individuals react to risk and uncertainty when making financial decisions. Within the scope of financial literacy, prospect theory suggests that individuals have a tendency to assign varying degrees of value to financial losses and gains, which may not always align with logical decision-making. This idea posits that individuals exhibit a greater degree of sensitivity towards losses compared to gains, thereby influencing their investment behavior.

Individuals with elevated degrees of financial literacy demonstrate enhanced aptitude in comprehending and effectively navigating the psychological dimensions inherent in investment decision-making. In addition to increasing the efficiency and effectiveness of government budget implementation, performance-based budgeting is also expected to improve accountability for government performance (Giri et al., 2022).This encompasses their ability to comprehend and regulate their responses to prospective losses, as well as their capacity to make investment decisions in a more sophisticated manner. Regarding engagement in the stock market, prospect theory acknowledges that individuals tend to exhibit risk-averse behavior due to their aversion toward prospective losses. However, with good financial literacy, individuals can understand investment risks and opportunities better and are more inclined to view stock investing as part of an extensive financial strategy (Abideen et al., 2023; Ahmad & Shah, 2022; Lim & Kim, 2019; Sabir et al., 2019)

6.5. Other theories
Other theories that have been identified in the financial literacy literature and their relation to stock market participation are bounded rationality, social learning theory, financial attitude theory, and theory of goal setting, among others (Figure 2). These theories require further investigation, opening up opportunities for future research.

7. Antecedents, consequences, and contingencies of stock market literacy
This paper examines the empirical data on the elements that influence stock market literacy and their impact after discussing the definition and dimension of stock market literacy, theoretical perspectives, and research methods. Furthermore, this study examines the factors that determine how stock market literacy impacts results. Before the discussion, the layout shown in Figure 3 summarizes the findings.

7.1. Antecedents
7.1.1. Demographic characteristic
The influence of demographic variables on an individual's participation in the stock market is significant. Existing literature suggests that there is a significant association between various demographic and socioeconomic factors of investors, such as gender, age, marital status, education, ethnicity, experience, occupation sector, income, and their level of stock market literacy (Anderson & Robinson, 2022; Arifah & Dalimunthe, 2020; Fong et al., 2021; Hii et al., 2022; Khan et al., 2019; Lim & Kim, 2019; Mate & Dam, 2018; Merkoulova & Veld, 2022a; Mouna & Jarboui, 2015; Munir et al., 2020). The comprehension of investors' demographic characteristics facilitates a meticulous examination of how distinct cohorts perceive and engage with financial markets. Through the analysis of these features, researchers can acquire useful insights into the various aspects that contribute to stock market literacy within distinct demographic groupings.

7.1.2. Personality/psychosocial factor
The conduct of investors strongly correlates with the personality traits and psychological elements inherent to each individual. The literature on stock market literacy emphasizes the significance of psychological factors, including risk tolerance, attitude, and perceived behavioral control, in influencing individuals' investment choices (Ady & Hidayat, 2019; Akhter & Hoque, 2022; Awais et al., 2016; Darmayanti et al., 2023; Farida et al., 2023; Fong et al., 2021; Mauricas et al., 2017; Mishra, 2018).

Lim and Kim (2019) concluded that anxiety has a significant negative effect on stock market participation. Anxious individuals are less likely to participate in the stock market and invest in risky assets. Religiosity factors can also have an impact on literacy in the stock market, such as research conducted by Zhang et al., (2020), Xu et al., (2022), and Lim and Kim (2019). Interpreting the interaction between personality and financial choices provides a comprehensive understanding of the cognitive and emotional aspects that influence investor engagement with the stock market.

7.1.3. Technology and media access
Technology and media are essential for improving stock market literacy. The proliferation of technology and the widespread availability of media have facilitated convenient access to stock

market information, up-to-date news, comprehensive analysis, and educational materials. Barber and Odean (2008) conducted research that shows how the Internet aids in spreading financial information, enabling investors to make better-informed choices. Moreover, a study conducted by Kumar and Lee (2006) validates that being exposed to financial information through media enhances one's understanding and knowledge of the stock market. In summary, technology and media not only improve the broad comprehension of investing but also strengthen individual investment proficiency and knowledge. Moreover, Ravikumar et al. (2022) asserted that possessing digital financial literacy is essential to efficiently utilize digital financial services. Frimpong et al., (2022) assert that access to digital finance was perceived as a means of acquiring information and was positioned as a requirement for managers to enhance the performance of their firms.

7.2. Consequences

7.2.1. Investment intention

Akhtar and Das (2019) state that individuals who are knowledgeable about finance have the intention to invest. An individual's intention to invest is greatly influenced by their level of stock market literacy. An individual with knowledge of the stock market typically exhibits greater assurance when making investment choices, comprehending the associated hazards, and recognizing lucrative investment prospects. Having this knowledge allows individuals to expand the variety of investments in their portfolio more efficiently and react suitably to fluctuations in market circumstances. Stock market literacy not only improves an individual's capacity to invest but also encourages them to actively engage in the stock market. Therefore, enhanced comprehension of market dynamics and improved risk management immediately result in an elevated inclination to invest. Nag and Shah (2022) showed that local financial literacy has the highest indirect effect on investment intention.

7.2.2. Investment decisions

Stock market literacy plays a vital role in shaping investment decisions, influencing trading frequency to risk and reward assessment. Investors who deeply understand the market tend to trade more wisely, choosing frequency based on analysis rather than instant reaction to market movements. They have clear investment intentions, oriented towards long-term goals rather than just short-term profits, which encourages more active and informed participation in the stock market. This knowledge also assists them in identifying and managing risky stock investments, ensuring healthy portfolio diversification, and making more accurate risk and reward assessments. Thus, stock market literacy not only strengthens overall investment decisions but also improves the quality and sustainability of investment strategies (Abideen et al., 2023; Darmayanti et al., 2023; Farida et al., 2023; Khan et al., 2019; Suresh, 2021).

7.2.3. Investment Performance

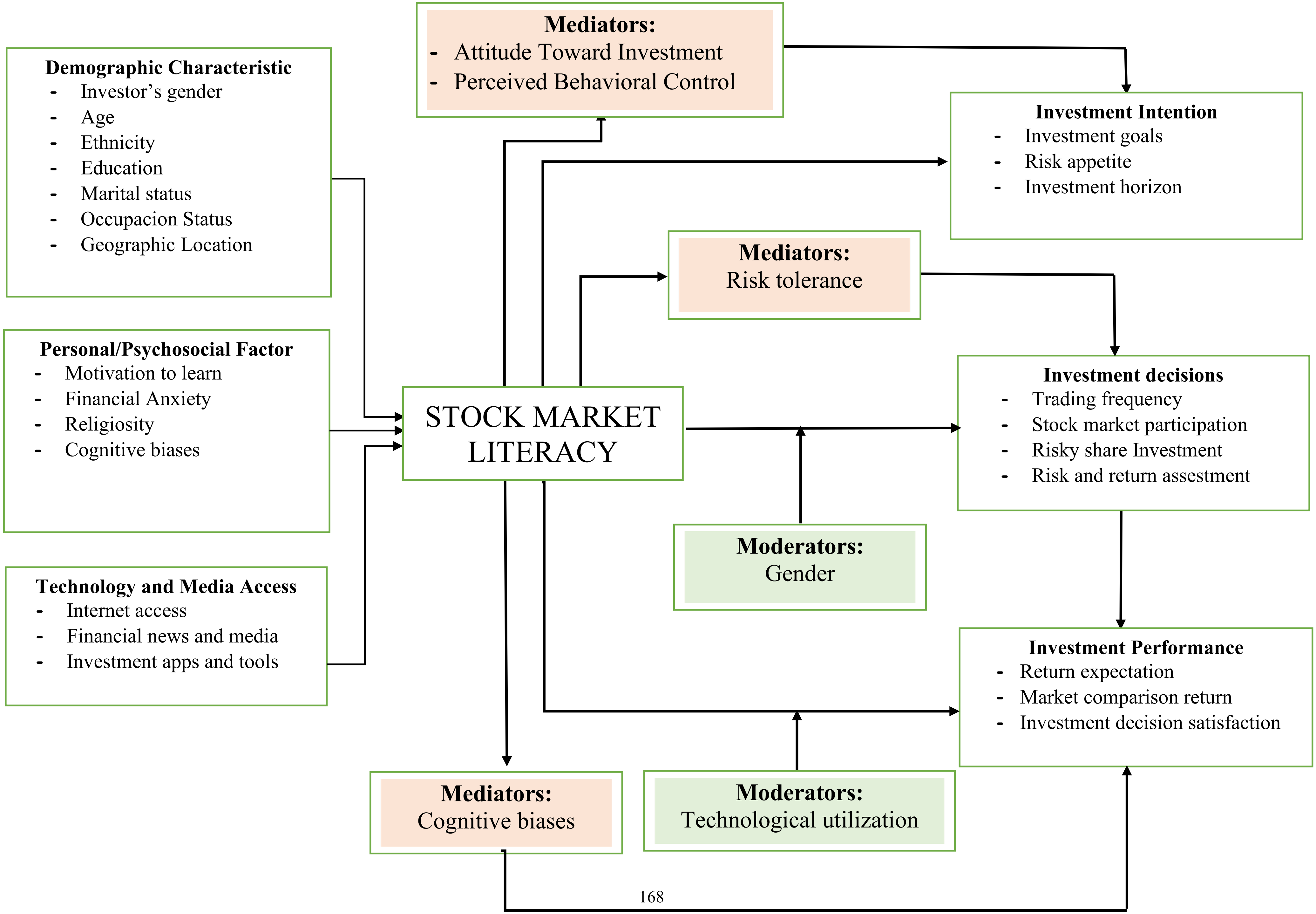
The correlation between knowledge of the stock market and investment performance is vital, as the former substantially impacts the latter. A comprehensive comprehension of stock market dynamics by an investor can result in more accurate return projections, thereby aligning their actual investment returns with their earlier projections. Acquiring this literacy also empowers investors to comprehend and maneuver market movements more effectively, perhaps attaining returns equivalent to or surpassing the market average. Furthermore, an investor with extensive knowledge is likely to experience greater contentment with their investment choices, which includes the process of purchasing, selling, and selecting stocks.

The satisfaction obtained from making informed investment selections goes beyond just money rewards and includes a sense of confidence and peace of mind. Hence, metrics such as anticipated returns, market benchmark returns, and satisfaction with investment choices not only gauge investment efficacy but also mirror the influence of stock market knowledge on an individual's financial trajectory. The research conducted by Ahmad and Shah (2022) provides evidence of a strong and positive relationship between financial literacy and investment performance. This suggests that those with a greater level of financial literacy tend to achieve better investment results.

7.3. Moderating effect

The literature that has been reviewed identified several effects of moderator variables. Regarding the association between stock market literacy and consequences, moderator variables were proposed by Munir et al., (2020), i.e., the association between financial literacy and investment decisions is moderated by gender. They discovered that the chances of participation in the stock market for male respondents were 34% higher than for females. Furthermore, the interaction term of financial literacy and stock market participation was positive and significant, indicating a higher probability of participation in the stock market with an increase in financial literacy for males compared to females.

Additionally, Blaschke (2022) showed that categorizing financial literacy into fundamental and advanced literacy significantly enhances comprehensibility when examining gender disparities. The use of technology can mitigate the impact of stock market literacy on investment performance by offering investors enhanced access to market information, analytical tools, and streamlined transaction execution. Investors who possess a comprehensive comprehension of the stock market and adeptly employ technology can promptly react to news and market fluctuations, render more knowledgeable judgments, and optimize the possible gains on their investments. The research undertaken by Jiao et al., (2020) has demonstrated the significant impact of technology on improving efficiency and investment performance. Hence, technology plays a crucial role in optimizing the advantages of a strong understanding of the stock market on investment outcomes.


Mediators:
- Attitude Toward Investment
- Perceived Behavioral Control
Demographic Characteristic
- Investor's gender
- Age
- Ethnicity
- Education
- Marital status
- Occupacion Status
- Geographic Location
Investment Intention
- Investment goals
- Risk appetite
- Investment horizon
Mediators:
Risk tolerance
Personal/Psychosocial Factor
- Motivation to learn
- Financial Anxiety
- Religiosity
- Cognitive biases
STOCK MARKET LITERACY
Investment decisions
- Trading frequency
- Stock market participation
- Risky share Investment
- Risk and return assessment
Moderators:
Gender
Technology and Media Access
- Internet access
- Financial news and media
- Investment apps and tools
Investment Performance
- Return expectation
- Market comparison return
- Investment decision satisfaction
Mediators:
Cognitive biases
Moderators:
Technological utilization

7.4. Mediating effect

Awais et al. (2016) found that risk tolerance mediates the relationship between financial literacy and investment decisions. This suggests that individuals with higher levels of financial literacy and investment experience are more likely to take risks in their investment decisions. Risk tolerance has a crucial role in influencing investing decisions, acting as a mediator between stock market literacy and those decisions. In essence, a greater knowledge of the stock market enables individuals to comprehend and effectively handle investing risks. This comprehension enables individuals to select investments that align with their risk tolerance, resulting in more knowledgeable and appropriate investment decisions.

Furthermore, Nag and Shah (2022) stated that attitude toward investment and perceived behavioral control (PBC) can mediate the effect of financial literacy on investment intention. Attitude is an individual's outlook toward things, which can be both positive and negative. If an individual holds a positive attitude toward certain behaviors, then there are greater chances of the individual engaging in such behavior. Attitude toward investment has a strong influence on investment intention when compared individually. Attitude toward investment has the highest correlation coefficient with investment intention. It relates to the perception of one's ability to perform a particular behavior. PBC has a strong influence on investment intention. Thus, if Gen Z feels that they can invest in the stock market with some ease based on their knowledge and ability, then there are greater chances that he/she intends to invest in the stock market.

In addition to the previous mediating variables, cognitive biases are also included in the other variables. It can impair individuals' ability to effectively utilize their stock market expertise in investment decisions, frequently resulting in suboptimal outcomes. For instance, someone with extensive knowledge may nevertheless engage in perilous decision-making due to excessive self-assurance or disregard novel evidence that contradicts their preexisting convictions (confirmation bias). Studies, such as the one conducted by Barber and Odean (2001), indicate that investors who display excessive confidence tend to engage in excessive trading, which ultimately hurts their investment success. Furthermore, research such as the study conducted by Rabin and Schrag (1999) demonstrates how anchoring bias might cause investors to depend excessively on initial information, thus influencing their decision-making. Despite possessing a strong grasp of the market, these biases can divert investors from making optimal selections.

8. Future research direction

Subsequently, this part delineates the potential paths for future investigation in the domain of stock market literacy. Expanding our understanding in both theoretical and empirical dimensions is crucial for enhancing the field.

8.1. Future theoretical directions

The review undertaken for this study reveals that academics commonly rely on behavioral finance theory to explain stock market literacy. This theory emphasizes the psychological and behavioral factors that influence financial decision-making. This theory elucidates the phenomenon of irrational behavior in investment decision-making and highlights the role of stock market literacy in mitigating biases and errors in decision-making, as demonstrated by the studies conducted by (Khan et al., 2019; Mouna & Jarboui, 2015; van Rooij et al., 2011; Xu et al., 2022). The theory of planned behavior is also the most widely used among them (Adil et al., 2022; Akhter & Hoque, 2022; Arena et al., 2023; Farida et al., 2023; Handranata et al., 2023; Nag & Shah, 2022; Saliya, 2021). This idea asserts that an individual's behavior can be anticipated based on their intention to engage in that behavior. Within the realm of stock market literacy, this theory is employed to comprehend the determinants that impact individuals' inclinations to participate in the stock market, including their views toward stock investment and the societal conventions that shape their choices.
Moreover, applying investment decision theory and prospect theory can also provide insights into understanding stock market literacy. Investment decision theory is employed to examine the impact of stock market literacy on the process of making investment decisions, particularly how individuals evaluate and handle risk in their investment portfolios. Prospect theory is employed to comprehend how an individual's investment behavior might be influenced by their perception of rewards and losses. This elucidates the reason behind individuals' tendency to refrain from undertaking logical risks in stock market investments. Hii et al. (2022) and Nyakurukwa and Seetharam (2022) utilize investment decision theory, while Ahmad and Shah (2022), Lim and Kim (2019), and Sabir et al. (2019) employ prospect theory.

Additional theories with limited application include stakeholder theory and legitimacy theory, as employed by Akakpo et al., (2022). The stakeholder theory emphasizes the acknowledgment that companies have several stakeholders with distinct interests in the company. Within the realm of stock market literacy, this theory can be employed to analyze the effects of individual involvement in the stock market on different stakeholders, such as corporations, governments, and the broader society. An area of potential research is the impact of stock market literacy on this connection and its influence on individual investment decisions. The legitimacy theory posits that organizations strive to uphold their "legitimacy" or credibility in the perception of society. Within the realm of stock market literacy, this theory can be employed to comprehend the impact of an individual's stock market literacy on their assessment of companies listed on the stock market. Exploring the impact of stock market literacy on perceptions of corporate social responsibility and its contribution to society is a worthwhile inquiry.

Furthermore, cognitive theory and efficient market hypothesis are two theories that can be further refined in their application to elucidate stock market literacy. Stock market literacy involves the application of cognitive theory to comprehend how individuals perceive information about stock investment. Studying cognitive theory frameworks can help analyze market data, make investment decisions, and manage risk (Ahmad & Shah, 2022). Utilizing the efficient market hypothesis in stock market literacy can determine if persons engaging in the stock market have a practical comprehension of market efficiency. An intriguing area of research is the impact of these views on investing decisions, trading methods, and portfolio performance (Isidore & Arun, 2023). Figure 2 presents numerous possibilities that future scholars can further explore.

8.2. Future empirical directions

First, Stock market literacy lacks a definitive measurement component. Examine the study conducted by Balloch et al., (2015) that utilizes the Stock Market Literacy dimensions, which are based on the Financial Literacy measurement developed by Hung et al., (2009). Subsequent research could conduct empirical analysis on the proposed dimensions of measuring stock market literacy, which integrate the elements of financial literacy assessment identified by earlier researchers.

In addition, future studies may validate the results (Almenberg & Dreber, 2015; Mahastanti & Hariady, 2014; Munir et al., 2020; Prast et al., 2014) as the current study on the connection between gender and stock market literacy remains highly restricted. Furthermore, forthcoming research endeavors may encompass diverse aspects, such as the inclusion of Figure 3 as a variable dimension. Subsequent researchers could investigate the impact of financial technology advancements, such as investment applications or stock trading platforms, on individuals' understanding of the stock market and decisions about investments (Aryan et al., 2024; Theodorus et al., 2023).

The current research on the connection between gender and stock market literacy remains highly restricted. Furthermore, forthcoming research endeavors may encompass diverse aspects, such as the inclusion of Figure 3 as a variable dimension. Subsequent researchers could investigate the impact of financial technology advancements, such as investment applications or stock trading platforms, on individuals' understanding of the stock market and decisions about investments (Aryan et al., 2024; Theodorus et al., 2023).

9. Conclusion

This study offers a thorough examination of stock market literacy through a methodical analysis of existing literature. After conducting a comprehensive assessment, it is evident that the field of stock market literacy research is experiencing significant changes, with many trends shaping its landscape till 2023. The extant literature has uncovered these tendencies, which are influencing our comprehension of stock market literacy and its consequences. An especially notable trend is the growing focus on technical progress, namely in the field of financial technology (FinTech). Researchers are progressively examining the influence of mobile applications, online trading platforms, and robo-advisors on the level of knowledge and understanding of the stock market. This aligns with the overarching pattern of technology advancement in the financial industry, which is impacting how individuals can access and engage in the stock market.

Moreover, a comprehensive examination of existing literature uncovered a growing fascination with the behavioral components of stock market literacy studies. The focal point of the discussion revolved around behavioral finance, which encompasses the examination of cognitive biases and emotional factors that impact investment choices. Researchers are further exploring the relationship between the psychological characteristics of stock market literacy and investment behavior. Moreover, the current state of research demonstrates the continuous investigation into demographic variables and their influence on an individual's knowledge and understanding of the stock market. Scholars are examining how age, gender, ethnicity, education, marital status, occupation, and income influence individuals' participation in the stock market. The patterns observed in stock market literacy research, namely technology innovation, behavioral insights, and demographic effects, demonstrate the dynamic nature of this field. These combined trends offer a more comprehensive comprehension of stock market literacy and its many consequences for individual involvement in the stock market and investment conduct.

Furthermore, from the results of previous literature reviews, we mapped the dimensions of financial literacy from previous research, then defined stock market literacy and formulated its dimensions. First, basic stock market concepts, namely the basic concepts of the stock market, an understanding of stocks as a form of ownership in companies, how stocks are traded in the stock market, and the role of stock market indices. Second, advanced investment strategies involve a more complex approach to selecting stocks or other assets. Third, behavioral finance insights examine the influence of psychology on investor behavior and investment decisions. It includes an understanding of cognitive biases such as overconfidence and herding and how emotions can influence investment decisions. Fourth, risk management and ethical considerations include risk management that involves identifying, analyzing, and mitigating financial risks. It also covers ethical aspects of investing, such as ensuring transparency, avoiding conflicts of interest, considering the social and environmental impacts of investing, and financial planning and long-term investment. Financial planning and long-term investing involve creating strategies to achieve long-term financial goals. This includes determining financial goals, structuring an investment portfolio that fits the risk profile and investment maturity, and considering factors such as inflation, taxes, and retirement planning.

Regarding theoretical frameworks, we have identified behavioral finance theory, planned behavior theory, investment choice theory, and prospect theory as the predominant ones employed by scholars. Theories such as the efficient market hypothesis, legitimacy theory, stakeholder theory, regret theory, and age-based investment theory require additional research. In addition, we have discovered other elements that have the potential to influence stock market literacy, including demographic characteristics, personal and psychological factors, as well as access to technology and media. Furthermore, we have identified characteristics that are susceptible to the influence of stock market literacy, including investment intention, investment decision, and investment performance. Gender and technological utilization variables can potentially moderate the relationship between stock market literacy and subsequent variables. Additionally, cognitive biases, risk tolerance, attitude, and perceptual behavioral control can act as mediating variables.

This study contributes substantially to the existing body of literature on stock market literacy by offering a comprehensive overview of prior research, pinpointing areas where gaps exist, and proposing potential avenues for further investigation. In this study, we provide a systematic representation of prior research by organizing it into a comprehensive list of variables categorized as independent, dependent, mediating, and moderating. By delineating a comprehensive network of connections, we offer insights into the domain of stock market literacy, an area that remains relatively underexplored in scholarly investigations.

The study's ramifications extend beyond the scholarly community to encompass capital market practitioners as well. This study offers a comprehensive analysis of financial education's significance in enhancing investors' investment decision-making efficacy. With a better understanding of the stock market, investors can manage risk more effectively, implement more sustainable long-term investment strategies, and respond calmly and strategically to market volatility. In addition, stock market literacy leads investors to understand the important value of portfolio diversification, which is key in reducing risk and maximizing investment growth, which increases the potential for long-term investment success.

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Author contributions statement

Conceptualization, Z.Z & L.S; Methodology, Z.Z & L.S; data interpretation and formal analysis, Z.Z & L.S; writing-original draft preparation, Z.Z & L.S; writing-review and editing, Z.Z & L.S.; visualization, Z.Z & L.S.; supervision, Z.Z & L.S. All authors have read and agreed to the published version of the manuscript.

References

Abideen, Z. U. I., Ahmed, Z., Qiu, H., & Zhao, Y. (2023). Do Behavioral Biases Affect Investors' Investment Decision Making? Evidence from the Pakistani Equity Market. Risks, 11(6), 109. https://doi.org/10.3390/risks11060109

Adil, M., Singh, Y., & Ansari, M. S. (2022). Does financial literacy affect an investor's planned behavior as a moderator? Managerial Finance, 48(9-10), 1372-1390. https://doi.org/10.1108/MF-03-2021-0130

Adrianto, F., & Hamidi, M. (2020). Analysis of Retail Investment Behaviour in Indonesian Stock Market. Academy of Accounting and Financial Studies Journal, 24(SpecialIssue-2), 1-13. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85101398056&partnerID=40&md5=beadbf9f1203bc763684b3bb8dd4e060

Ady, S. U., & Hidayat, A. (2019). Do young Surabaya's investors make rational investment decisions? International Journal of Scientific and Technology Research, 8(7), 319-322.

Ahmad, M., & Shah, S. Z. A. (2022). Overconfidence heuristic-driven bias in investment decision-making and performance: mediating effects of risk perception and moderating effects of financial literacy. Journal of Economic and Administrative Sciences, 38(1), 60-90. https://doi.org/10.1108/JEAS-07-2020-0116

Akakpo, A. A., Amidu, M., Coffie, W., & Abor, J. Y. (2022). Financial literacy, financial inclusion, and participation of individuals on the Ghana stock market. Cogent Economics and Finance, 10(1). https://doi.org/10.1080/23322039.2021.2023955

Akhtar, F., & Das, N. (2019). Predictors of investment intention in Indian stock markets: Extending the theory of planned behavior. International Journal of Bank Marketing, 37(1), 97-119. https://doi.org/10.1108/IJBM-08-2017-0167

Akhter, T., & Hoque, M. E. (2022). Moderating Effects of Financial Cognitive Abilities and Considerations on the Attitude-Intentions Nexus of Stock Market Participation. International Journal Of Financial Studies, 10(1). https://doi.org/10.3390/ijfs10010005

Al-Tamimi, H. A. H., & Kalli, A. A. Bin. (2009). Financial literacy and investment decisions of UAE investors. Journal of Risk Finance, 10(5), 500-516.
https://doi.org/10.1108/15265940911001402

Ali, M. (2021). A systematic literature review of sustainable entrepreneurship with thematic analysis. World Journal of Entrepreneurship, Management and Sustainable Development, 17(4), 742-764.
https://doi.org/10.1108/WJEMSD-11-2020-0150

Almenberg, J., & Dreber, A. (2015). Gender, stock market participation, and financial literacy. Economics Letters, 137, 140-142.
https://doi.org/10.1016/j.econlet.2015.10.009

Anderson, A., & Robinson, D. T. (2022). Financial Literacy in the Age of Green Investment. Review of Finance, 26(6), 1551-1584.
https://doi.org/10.1093/rof/rfab031

ANGGRAENI, L., Minanari MINANARI, Yessie, A., & Indriawati, F. (2024). The Influence of Free Cash Flow, Profitability, Managerial Ownership, Institutional Ownership and Company Size on Debt Policy (Empirical Study of Industry Sector Listed on the Indonesian Stock Exchange 2015-2019). International Journal of Environmental Sustainability and Social Science, 5(1), 74-90.
https://doi.org/10.38142/ijesss.v5i1.818

Arena, C. M. R., Batac, A. A. S., Religioso, A. M. A., Magbata, E. V. S., & Mandigma, M. B. S. (2023). Influences on the StockMarket Investing of Tertiary Students in the National Capital Region, Philippines. Review of Integrative Business and Economics Research, 12(2), 148-166.
https://www.scopus.com/inward/record.uri?eid=2-s2.0-85158024187&partnerID=40&md5=110a0483c9ee89c27c6959d8cde5de7c

Arifah, J. N., & Dalimunthe, Z. (2020). The impact of financial literacy on the investment decision of non-donation-based crowdfunding in Indonesia. International Journal of Business and Society, 21(3), 1045-1057.
https://doi.org/10.33736/ijbs.3310.2020

Aryan, L. A., Alsharif, A., Alquqa, E. K., Al Ebbini, M. M., Alzboun, N., Alshurideh, M. T., & Al-Hawary, S. I. S. (2024). How digital financial literacy impacts financial behavior in the Jordanian millennial generation. International Journal of Data and Network Science, 8(1), 117-124.
https://doi.org/10.5267/j.ijdns.2023.10.011

Awais, M., Fahad Laber, M., Rasheed, N., & Khursheed, A. (2016). Impact of financial literacy and investment experience on risk tolerance and investment decisions: Empirical evidence from Pakistan. International Journal of Economics and Financial Issues, 6(1), 73-79. https://econjournals.com/index.php/ijefi/article/view/1414/pdf

Balloch, A., Nicolae, A., & Philip, D. (2015). Stock Market Literacy, Trust, and Participation. Review of Finance, 19(5), 1925-1963.
https://doi.org/10.1093/rof/rfu040

Barber, B. M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. Quarterly Journal of Economics, 116(1), 261-292.
https://doi.org/10.1162/003355301556400

Barber, B. M., & Odean, T. (2008). All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors. Review of Financial Studies, 21(2), 785-818.
https://doi.org/10.1093/rfs/hhm079

Bilias, Y., Georgarakos, D., & Haliassos, M. (2017). Has Greater Stock Market Participation Increased Wealth Inequality in the US? Review of Income and Wealth, 63(1), 169-188.
https://doi.org/10.1111/roiw.12225

Blaschke, J. (2022). Gender differences in financial literacy among teenagers - Can confidence bridge the gap? Cogent Economics and Finance, 10(1). https://doi.org/10.1080/23322039.2022.2144328

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Choudhary, H., & Jain, H. (2023). Addressing Financial Exclusion through Financial Literacy training programs: a Systematic Literature Review. In Empirical Research in Vocational Education and Training (Vol. 15, Issue 1). https://doi.org/10.1186/s40461-023-00147-9

Clarke, V., & Braun, V. (2017). Thematic analysis. Journal of Positive Psychology, 12(3), 297-298. https://doi.org/10.1080/17439760.2016.1262613

Darmayanti, N. P. A., Wiagustini, N. L. P., Artini, L. G. S., & Candraningrat, I. R. (2023). Driving Millennials To Be Investors: The Case Of Investment Decision Performance In Indonesian Capital Market. Quality - Access to Success, 24(196), 167-174. https://doi.org/10.47750/QAS/24.196.22

Farida, Y. N., Matin, C. A., Suyono, E., Suparlinah, I., & Wiratno, A. (2023). Factors Influencing the Behavior of Young Investors' Investment Decisions: the Emerging Market Analysis. Corporate and Business Strategy Review, 4(2 Special Issue), 280-288. https://doi.org/10.22495/cbsrv4i2siart7

Fong, J. H., Koh, B. S. K., Mitchell, O. S., & Rohwedder, S. (2021). Financial literacy and financial decision-making at older ages. Pacific Basin Finance Journal, 65. https://doi.org/10.1016/j.pacfin.2020.101481

Frimpong, S. E., Agyapong, G., & Agyapong, D. (2022). Financial literacy, access to digital finance and performance of SMEs: Evidence From Central region of Ghana. Cogent Economics and Finance, 10(1). https://doi.org/10.1080/23322039.2022.2121356

GIRI, H. A., KASE, P., & ROZARI, P. E. de. (2022). Analysis of Performance-Based Budget Management in Christian Colleges (Stakn) Kupang. Journal of Governance, Taxation and Auditing, 1(2), 142-155. https://doi.org/10.38142/jogta.v1i2.449

Goyal, K., & Kumar, S. (2021). Financial literacy: A systematic review and bibliometric analysis. International Journal of Consumer Studies, 45(1), 80-105. https://doi.org/10.1111/ijcs.12605

Guest, G., MacQueen, K., & Namey, E. (2014). Introduction to Applied Thematic Analysis. Applied Thematic Analysis, 3-20. https://doi.org/10.4135/9781483384436.n1

Handranata, Y. W., Arief, M., Warganegara, D. L., & Hamsal, M. (2023). Financial Literacy, Hassle Factor, and Stock Market Participation: Empirical Evidence from Indonesia Stock Exchange. WSEAS Transactions on Business and Economics, 20, 730-739. https://doi.org/10.37394/23207.2023.20.67

Hassan, M. K., İslam, M. T., Ahmed, Z., & Sarker, J. I. (2023). Islamic banking in Bangladesh: a literature review and future research agenda. International Journal of Islamic and Middle Eastern Finance and Management, 16(5), 1030-1054. https://doi.org/10.1108/IMEFM-05-2022-0185

Hii, I. S. H., Ho, P. L., Yap, C. S., & Philip, A. P. (2022). Financial Literacy, Financial Advice, and Stock Market Participation: Evidence From Malaysia. Journal of Financial Counseling and Planning, 33(2), 243-254. https://doi.org/10.1891/JFCP-2021-0011

Hung, A. A., Parker, A. M., Yoong, J. K., Parker, A. M., & Yoong, J. (2009). Defining and Measuring Financial Literacy. https://doi.org/10.2139/ssrn.1498674

Huston, S. J. (2010). Measuring Financial Literacy. Journal of Consumer Affairs, 44(2), 296-316. https://doi.org/10.1111/j.1745-6606.2010.01170.x

Isidore, R., & Arun, C. J. (2023). The Moderating Effect of Financial Literacy on the Relationship Between Decision-Making Tools and Equity Returns in the Indian Secondary Equity Market. Revista Finanzas y Politica Economica, 15(1), 185-211. https://doi.org/10.14718/revfinanzpolitecon.v15.n1.2023.8

Jansen, E. P. (2018). Bridging the gap between theory and practice in management accounting: Reviewing the literature to shape interventions. Accounting, Auditing and Accountability Journal, 31(5), 1486-1509. https://doi.org/10.1108/AAAJ-10-2015-2261

Jiao, P., Veiga, A., & Walther, A. (2020). Social media, news media, and the stock market. Journal of Economic Behavior and Organization, 176, 63-90. https://doi.org/10.1016/j.jebo.2020.03.002

Khan, M. T. I., Tan, S. H., & Gan, G. G. G. (2019). Advanced Financial Literacy of Malaysian Gen Y Investors and Its Consequences. Margin, 13(1), 83-108. https://doi.org/10.1177/0973801018800085

Kumar, A., & Lee, C. M. C. (2006). Retail investor sentiment and return comovements. Journal of Finance, 61(5), 2451-2486. https://doi.org/10.1111/j.1540-6261.2006.01063.x

Lim, Y., & Kim, K. T. (2019). Afraid of the stock market. In Review of Quantitative Finance and Accounting (Vol. 53, Issue 3). Springer US. https://doi.org/10.1007/s11156-018-0766-x

Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. Journal of Economic Literature, 52(1), 5-44. https://doi.org/10.1257/jel.52.1.5

Mahastanti, L. A., & Hariady, E. (2014). Determining the factors that affect the stock investment decisions of potential female investors in Indonesia. International Journal of Process Management and

Benchmarking, 4(2), 186-197.
https://doi.org/10.1504/IJPMB.2014.060407

Mate, R., & Dam, L. (2018). Financial Literacy about the Stock Market among the Participants of the Bombay Stock Exchange. International Journal of Emerging Research in Management and Technology, 6(7), 173.
https://doi.org/10.23956/ijermt.v6i7.208

Mauricas, Ž., Darškuviene, V., & Mariničevaite, T. (2017). Stock market participation puzzle in emerging economies: The case of Lithuania. Organizations and Markets in Emerging Economies, 8(2), 225-243.
https://doi.org/10.15388/omee.2017.8.2.14190

Meline, T. (2006). Selecting Studies for Systemic Review: Inclusion and Exclusion Criteria. Contemporary Issues in Communication Science and Disorders, 33(Spring), 21-27.
https://doi.org/10.1044/cicsd_33_S_21

Merkoulova, Y., & Veld, C. (2022a). Does it pay to invest? The personal equity risk premium and stock market participation. Journal of Banking and Finance, 136(xxxx), 106220.
https://doi.org/10.1016/j.jbankfin.2021.106220

Merkoulova, Y., & Veld, C. (2022b). Stock return ignorance. Journal of Financial Economics, 144(3), 864-884.
https://doi.org/10.1016/j.jfineco.2021.06.016

Mishra, R. (2018). Financial literacy, risk tolerance, and stock market participation. Asian Economic and Financial Review, 8(12), 1457-1471.
https://doi.org/10.18488/journal.aefr.2018.812.1457.1471

Molina-García, A., Diéguez-Soto, J., Galache-Laza, M. T., & Campos-Valenzuela, M. (2023). Financial literacy in SMEs: a bibliometric analysis and a systematic literature review of an emerging research field. Review of Managerial Science, 17(3), 787-826.
https://doi.org/10.1007/s11846-022-00556-2

Mouna, A., & Jarboui, A. (2015). Financial literacy and portfolio diversification: an observation from the Tunisian stock market. International Journal of Bank Marketing, 33(6), 808-822. https://doi.org/10.1108/IJBM-03-2015-0032

Munir, I. U., Yue, S., Ijaz, M. S., Hussain, S., & Zaidi, S. Y. (2020). Financial literacy and stock market participation: does gender matter? Singapore Economic Review. https://doi.org/10.1142/S0217590820500757

Nag, A. K., & Shah, J. (2022). An Empirical Study on the Impact of Gen Z Investor's Financial Literacy to Invest in the Indian Stock Market. Indian Journal of Finance, 16(10), 43-59. https://doi.org/10.17010/ijf/2022/v16i10/172387

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. International Journal of Qualitative Methods, 16(1), 1-13. https://doi.org/10.1177/1609406917733847

Nyakurukwa, K., & Seetharam, Y. (2022). Household stock market participation in South Africa: the role of financial literacy and social interactions. Review of Behavioral Finance. https://doi.org/10.1108/RBF-03-2022-0083

Permatasari, I., & Tjahjadi, B. (2023). A closer look at integrated reporting quality: a systematic review and agenda of future research. Meditari Accountancy Research. https://doi.org/10.1108/MEDAR-08-2022-1782

Prado, S. M. M., Franco, M. J. Z., Zapata, S. G. Z., García, K. M. C., Everaert, P., & Valcke, M. (2022). A Systematic Review of Financial Literacy Research in Latin America and The Caribbean. Sustainability (Switzerland), 14(7), 1-43. https://doi.org/10.3390/su14073814

Prast, H., Rossi, M., Torricelli, C., & Druta, C. (2014). Do Women Prefer Pink? Netspar International Pension.

https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID2416122_code1111030.pdf?abstractid=2416122&mirid=1

Rabin, M., & Schrag, J. L. (1999). First Impressions Matter : A Model of Confirmatory Bias. The Quarterly Journal of Economics, 114(1), 37-82. https://www.jstor.org/stable/2586947 https://doi.org/10.1162/003355399555945

Rieger, M. O. (2020). How to Measure Financial Literacy? Journal of Risk and Financial Management, 13(12). https://doi.org/10.3390/jrfm13120324

Sabir, S. A., Mohammad, H. Bin, & Shahar, H. B. K. (2019). The role of overconfidence and past investment experience in herding behavior with a moderating effect of financial literacy: Evidence from Pakistan stock exchange. Asian Economic and Financial Review, 9(4), 480-490. https://doi.org/10.18488/journal.aefr.2019.94.480.490

Sahoo, S., Kumar, A., Mishra, R., & Tripathi, P. (2022). Strengthening Supply Chain Visibility With Blockchain: A PRISMA-Based Review. IEEE Transactions on Engineering Management, PP, 1-17. https://doi.org/10.1109/TEM.2022.3206109

Saliya, C. A. (2021). Driving Forces of Individual Investors in Stock Market Participation. Review of Economics and Finance, 19, 73-79. https://doi.org/10.55365/1923.x2021.19.08

Spataro, L., & Corsini, L. (2017). Endogenous Financial Literacy, Saving, and Stock Market Participation. FinanzArchiv, 73(2), 135. https://doi.org/10.1628/001522117X14877521353555

Suresh, G. (2021). Impact of Financial Literacy and Behavioural Biases on Investment Decision-making. FIIB Business Review. https://doi.org/10.1177/23197145211035481

Theodorus, F., Patricia, V. I., & Meiryani. (2023). The Influence of Financial Technology, Minimum Capital, and Financial Literacy on Student Investment Interest. E3S Web of Conferences, 426. https://doi.org/10.1051/e3sconf/202342601109

Thomas, A., & Spataro, L. (2018). Financial Literacy, Human Capital and Stock Market Participation in Europe. Journal of Family and Economic Issues, 39(4), 532-550. https://doi.org/10.1007/s10834-018-9576-5

van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. Journal of Financial Economics, 101(2), 449-472. https://doi.org/10.1016/j.jfineco.2011.03.006

Xia, T., Wang, Z., & Li, K. (2014). Financial Literacy Overconfidence and Stock Market Participation. Social Indicators Research, 119(3), 1233-1245. https://doi.org/10.1007/s11205-013-0555-9

Xiao, J. J., Huang, J., Goyal, K., & Kumar, S. (2022). Financial capability: a systematic conceptual review, extension, and synthesis. International Journal of Bank Marketing, 40(7), 1680-1717. https://doi.org/10.1108/IJBM-05-2022-0185

Xu, Z., Ma, J., Li, D., & Fu, W. (2022). Religious beliefs and stock market participation: Evidence from urban households in China. Research in International Business and Finance, 63(August 2021), 101795. https://doi.org/10.1016/j.ribaf.2022.101795

Yamori, N., & Ueyama, H. (2022). Financial Literacy and Low Stock Market Participation of Japanese Households. Finance Research Letters, 44(April), 102074. https://doi.org/10.1016/j.frl.2021.102074

Yang, M., Al Mamun, A., Mohiuddin, M., Ali Al-Shami, S. S., & Zainol, N. R. (2021). Predicting stock market investment intention and behavior among Malaysian working adults using partial least squares structural equation modeling. Mathematics, 9(8). https://doi.org/10.3390/math9080873

Zhang, X., Ouyang, R., Liu, D., & Xu, L. (2020). Determinants of corporate default risk in China: The role of financial constraints.

Economic Modelling, 92(August), 87-98. https://doi.org/10.1016/j.econmod.2020.07.005