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Sharia Financial Literacy: Conceptualizing Its Role as a Moderator in the Relationship Between Personality Traits and Investor Risk Behavior

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Abstract

Investment decisions are influenced by inherent psychological and emotional factors, undergoing a filtration process shaped by various emotional and psychological elements. The Big Five personality traits play a significant role in shaping attitudes and behaviors, exerting a causal impact on investor decision-making. Despite possessing knowledge and professional training, investors may occasionally make suboptimal financial decisions due to the influence of emotions, cognitive errors, and psychological biases. This study seeks to explore the correlation between personality traits and the inclination towards risk in investors' decision-making regarding investments. Additionally, the research investigates the impact of Sharia financial literacy on the connection between personality traits and investor risk behavior. Utilizing a quantitative methodology, the study employs a survey as the data collection method, with the findings analyzed through the partial least squares structural equation modeling (PLS-SEM) technique.

Keywords: *Personality, Investor Risk Behavior, Sharia Financial Literacy, Investment*

Introduction

The decision-making processes of investors are influenced by inherent psychological and emotional factors, as highlighted by Nofsinger (2018). These factors, which pass through various emotional and psychological filters, are evident in the impact of the Big Five personality traits on attitudes and behavior, as pointed out by Akhtar and Malik (2022). Despite being knowledgeable professionals, investors sometimes make suboptimal financial decisions due to emotions, cognitive errors, and psychological biases.

The introduction of the Big Five personality framework in the 1980s and 1990s garnered scholarly attention, focusing on individual differences in traits, general behavior, and attitudes. Personality, considered a vital discipline in psychology, significantly shapes human behavior (Dollinger & Orf, 1991). Researchers have long sought to establish a strong connection between investor behavior and personalities, as highlighted by studies such as those by Grable (2000) and Mayfield et al. (2008). Nonetheless, market incentives, public policies, and investor education also play roles in influencing decision-making (Bucciol & Zarri, 2017). Investors, however, interpret information based on their personality (Oehler et al., 2018).

The conventional finance assumption that "investors always act rationally" (Ahmad & Maochun, 2019) is challenged in reality, where irrational behavior is prevalent. Prospect theory, elucidated by Kahneman and Tversky (1979), aptly describes decision-making under conditions of risk and uncertainty. Investor psychology has become a predominant factor in the decision-making process, with psychology and emotions gaining increasing recognition in financial decisions over the last decade.

The 2022 National Survey of Financial Literacy and Inclusion (SNLIK) in Indonesia indicates an improvement in the financial literacy index to 49.68 percent, compared to 38.03 percent in 2019. Financial inclusion also increased to 85.10 percent from 76.19 percent in 2019. The Indonesian government actively promotes financial literacy to protect the public from investment fraud. This research, focusing on Islamic financial literacy, contributes significantly to understanding the socio-economic development of investors and preventing fraud.

The study responds to portfolio managers call for evidence-based solutions by integrating conceptual models related to personality, investor tolerance, and Islamic financial literacy. The findings offer actionable insights for investment firms to tailor options based on investors' personality traits. The research explores individual decisions under risk and uncertainty, providing practical strategies for expected returns while considering the influence of personality on investment decisions.

Examining the relationship between Islamic financial literacy, personality, and risk tolerance provides a unique context. The study sheds light on the role of personality traits and Islamic financial literacy in determining an investor's risk tolerance, contributing to the understanding of the financial literacy landscape. Investors with higher financial literacy actively participate in financial markets, impacting investment decisions positively and discouraging informal borrowing.

The study addresses a gap in existing literature by analyzing the impact of the big five personality traits on investors' risk tolerance in emerging societies like Indonesia. Additionally, it explores whether Islamic financial literacy mitigates the influence of personality on risk tolerance, especially in the face of complex financial choices for socio-economic development in emerging markets. In summary, this study aims to examine the relationship between personality traits and investor risk tolerance in making investment decisions. This research also examines the role of Islamic financial literacy on the relationship between personality traits and investor risk tolerance.

Research Method

By referring to prospect theory (Kahneman & Tversky, 1979), this research examines the influence of the big five personality traits on investor risk behavior and the relationship between Islamic financial literacy. This research uses quantitative methodology. This research integrates survey methods to collect data through questionnaires by applying snowball sampling techniques. Personal and professional links are used to approach investors through brokerage houses and stock exchanges. The unit of analysis is individual investors on the Indonesian Stock Exchange (IDX) to explain behavioral characteristics related to investment.

To measure the big five personality traits, a scale based on research conducted by (John et al., 1991) was used. To measure investor risk behavior, a scale is used (Wood &

Zaichkowsky, 2004). Sharia financial literacy is measured using a three-item scale which is in line with research (Akhtar et al., 2018; Akhtar & Malik, 2022; Akhtar & Muhammad, 2017). This study uses a five-point likert scale measurement starting from 1 = "strongly disagree", 2 = "disagree", 3 = "neutral", 4 = "agree" and 5 = "strongly agree". The questionnaire responses will be analyzed through partial least squares structural equation modeling (PLS-SEM) with the help of Smart PLS 3 software. PLS-SEM is a second generation exploration technique that measures the hypothesized effect of exogenous variables on certain endogenous variables (Hair, J.F. et al., 2012).

Literature Review

Personality, as defined by Crysel et al. (2013), pertains to an individual's manner of interacting, reacting, and behaving in social contexts. A comprehensive understanding of one's personality is instrumental in elucidating and predicting decision-making processes. Previous studies indicate that personality traits play a significant role in shaping individual investment choices (Crysel et al., 2013). This influence extends to various aspects of life, including gambling, social interactions, and investment decisions (Back and Seaker, 2004). The investment intentions and risk aversion of investors are notably impacted by their personality traits (Sarwar et al., 2020). Moreover, an individual's long-term trading decisions are also subject to the influence of their personality, as evidenced by studies such as those conducted by Rizvi and Fatima (2015), Bucciol and Zarri (2017), and Chen et al. (2019). Among the myriad personality models, the big five personality traits are widely employed in research due to their effectiveness in describing genetically inherent characteristics in humans.

1. Extroversion and Investor Behavior

Extroversion refers to the degree to which individuals are outgoing, assertive, and sociable, as opposed to being reserved, timid, and quiet (Salgado, 1997). Extroverted individuals are known for their innovation, actively seeking information, and capitalizing on opportunities within their extensive social networks (Pompian and Longo, 2004). High extroversion is associated with a preference for innovation and a willingness to take risks in acquiring new assets. It significantly influences investor risk behavior, making individuals less risk-averse (Oehler and Wedlich, 2018) and fostering higher risk tolerance and risk-taking behavior (Harlow and Brown, 1990; Pan and Statman, 2012).

The correlation between extroversion and the inclination to hold risky assets is well-established (Oehler et al., 2018). Consequently, there is a positive relationship between risk attitude and the level of extroversion (Becker et al., 2012). High extroversion acts as a motivating factor for increased risk-taking (Nicholson et al., 2005) and is associated with high-risk tolerance behavior (Pak and Mahmood, 2015). Investors with high extroversion exhibit a positive attitude toward financial risk (Nandan and Saurabh, 2016) and display a favorable risk attitude in bonds and mutual fund investments (Pinjisakikool, 2018).

A positive overall outlook on life and events tends to lead to an overestimation of the market and underestimation of potential risks (Lo et al., 2005). Moreover, a higher level of extroversion primes individuals with greater independence and self-control for seizing investment opportunities (Gambetti and Giusberti, 2019). Therefore, the hypothesis posits that:
H1: The greater the level of extroversion, the greater the chances of investment in risky assets

2. Neuroticism and Investor Behavior

Neuroticism involves the extent to which an individual experiences insecurity, anxiety, depression, and emotional instability as opposed to being calm, self-confident, and composed (Salgado, 1997). Individuals high in neuroticism often encounter more negative life events than their counterparts (Magnus et al., 1993). Neurotic behavior inclines individuals towards negative feelings and is associated with a pessimistic nature (Durand et al., 2008). Those with high neuroticism tend to experience feelings of depression (Costa and McCrae, 1992) and primarily focus on negative information. They typically harbor fear of uncertainties, concentrate more on negative aspects, and express lower satisfaction with their lives (Costa and McCrae, 1980).

Individuals with high neuroticism tend to perform poorly in long-term investment decisions (Chen et al., 2019) due to their overall aversion to risks. Their focus on threats and losses in investments outweighs consideration of opportunities, leading to a lesser inclination to invest in risky assets. Anxiety during investment decision-making is a common trait, and their conservative behavior often causes them to miss out on favorable investment opportunities (Oehler and Wedlich, 2018). Higher neuroticism is associated with lower risk tolerance (Harlow and Brown, 1990), and studies have identified a negative association between neuroticism and risk tolerance (Pan and Statman, 2013). The degree of neuroticism inversely correlates with the likelihood of holding risky assets in one's portfolio (Oehler et al., 2018). Risk attitude for investments is negatively linked to neuroticism (Becker et al., 2012). Neuroticism also provides less motivational drive for engaging in high-risk activities (Nicholson et al., 2005). The trait of neuroticism reflects low-risk tolerance behavior (Pak and Mahmood, 2015) and a tendency to avoid investments with higher risks (Gambetti and Giusberti, 2019). Therefore, the hypothesis posits that:

H2: The greater the level of neuroticism, the less the chances to invest in risky assets

3. Openness to Experience and Investor Behavior

Individuals characterized as creative, curious, and culturally inclined, as opposed to being practical with narrow interests, exhibit traits of openness (Salgado, 1997). They are known for being open-minded, culturally aware, and imaginative (Durand et al., 2008). This natural inclination towards openness prompts them to seek new experiences and perspectives (Costa and McCrae, 1992). Their receptivity to new information allows them to apply it effectively, and they are often considered freethinkers (Tauni et al., 2015). While maintaining an analytical approach, they contemplate the gains and losses associated with particular assets. Despite their thoughtful approach, their innovative and adaptive nature, coupled with curiosity and a willingness to experiment, leads them to invest in risky assets and explore new investment opportunities without fear.

Openness to experience is typically associated with high risk tolerance (Pan and Statman, 2013), and individuals with this trait tend to embrace more risks (Durand et al., 2008). Those with high openness generally exhibit a positive attitude toward risk tolerance (Pak and Mahmood, 2015) and actively prefer taking risks (Mayfield et al., 2008). Investors characterized by high openness are more likely to take risks (De Bortoli et al., 2019). Therefore, the hypothesis suggests that:

H3: Openness to experience motivates individuals to invest in risky assets

4. Agreeableness and Investor Behavior

Agreeableness pertains to the extent to which individuals exhibit cooperative, warm, and agreeable qualities as opposed to being cold, disagreeable, and antagonistic (Salgado, 1997). Agreeable individuals tend to value respect, empathy, and humanitarianism (Durand et al., 2008), with a high degree of agreeableness reflecting politeness (Tauni et al., 2015). This personality trait is linked to acceptance, fostering positive interpersonal relationships (Gleason et al., 2004). Agreeable individuals prioritize maintaining transparent, honest, and trustworthy relationships within their social network, often placing more emphasis on these connections than on other daily matters. They tend to trust others more than themselves and are inclined to defer to the decisions of their social network, even in financial matters.

The agreeableness trait may introduce unpredictability or a lack of focus in investment decisions. High agreeableness individuals often prioritize positive relationships and may agree with decisions that go against their own benefit. Their reliance on others' decisions in stock market investments, aiming to maintain good relations, may lead them to engage in risky investments due to the influence and guidance of others (Costa and McCrae, 1992). Their interest in new investments is limited, and they may accept risky propositions. Agreeableness is notably associated with short-term investments, where individuals following market trends may engage in excessive trading, often waiting for guidance before investing in risky assets. Higher agreeableness is linked to lower confidence (Pan and Statman, 2013) and a negative association with risk tolerance behavior (Pak and Mahmood, 2015). Therefore, the hypothesis suggests that:

H4: The individual high in agreeableness has a probability of investing less in a risky asset

5. Conscientiousness and Investor Behavior

Conscientiousness gauges the degree to which individuals exhibit qualities such as hardworking, organized, dependable, and persevering, in contrast to being lazy, disorganized, and unreliable (Salgado, 1997). Individuals high in conscientiousness are characterized by traits like responsibility, trustworthiness, purposefulness, focus, and goal orientation (Durand et al., 2008). This trait is associated with strong performance in long-term investment decisions (Chen et al., 2019), as conscientious individuals consistently strive to achieve their goals (Costa and McCrae, 1992). Their self-control, coupled with access to high-quality information, aids them in effectively executing their tasks. Conscientiousness is recognized as a reliable predictor of performance compared to other behavioral dimensions (Barrick and Mount, 1991) and shows a positive association with all learning styles (Komarraju et al., 2011).

Due to their self-control, intelligence, and goal orientation, conscientious individuals are less impacted by investment losses. They are considered reliable and consistently possess relevant information regarding investments. These individuals set a limited number of goals and exert effort to achieve them, avoiding impulsive investment decisions and typically incorporating a modest number of risky assets into their portfolio. While personality traits can demonstrate varying levels of risk tolerance during investment decisions (Ahmad and Maochun, 2019), conscientiousness exhibits a low association with risk tolerance (Pan and Statman, 2013). Conscientious individuals tend to make cognitive decisions with conformity (Nicholson et al., 2005), and their conscientiousness is negatively associated with risk tolerance

(Pak and Mahmood, 2015). It does not significantly explain the risk attitude of investors (Nandan and Saurabh, 2016). Consequently, the hypothesis posits that:
H5: The higher conscientiousness restricts individuals to invest in risky assets

6. Sharia Financial Literacy and Investor Risk Behavior

Financial literacy encompasses the effective management of money, including aspects such as investing, insuring, saving, and budgeting (Hogarth, 2002). It is shaped by an individual's expertise, experiences, and specific needs (Jonubi and Abad, 2013). The level of financial literacy is positively correlated with an individual's active involvement in financial markets, as a solid understanding of basic financial concepts aids in making informed financial decisions (Hogarth, 2002). While investor risk behavior is a key aspect of investment behavior, each investor's approach varies (Wood and Zaichkowsky, 2004).

Financial literacy plays a crucial role in encouraging stock market participation while discouraging informal borrowing methods (Klapper et al., 2013). Additionally, it acts as a significant link between personality traits and participation in the stock market (Akhtar et al., 2018). Research over time has explored the intricate connections between emotions, personality, and financial literacy, guiding future directions in these areas. Higher levels of financial literacy reduce entry barriers for financial products, enabling individuals to actively engage in financial markets and positively correlating with stock market participation, while negatively associating with informal borrowing (Klapper et al., 2013).

Extroverted investors are more likely to handle finances, drawing them toward investments. The relationship between extroversion and financial literacy is notable, as extroverted investors are more inclined to take risks. This suggests that financial literacy orientation prompts extroverts to make rational financial decisions, selecting the most beneficial products and guiding them toward wealth accumulation (Bannier and Schwarz, 2018). Financially literate investors tend to make more informed investment choices compared to those with lower financial literacy levels (Bellofatto et al., 2018).

Neurotic individuals exhibit low-risk tolerance behavior, avoiding risky investments and experiencing anxiety during investment decisions (Pak and Mahmood, 2015; Gambetti and Giusberti, 2019). However, sharia financial literacy provides sufficient sharia financial knowledge and may guide neurotic individuals toward more informed, less risk-averse investment decisions.

Investors with openness to experience personality traits approach new information analytically. Their innovative and curious nature leads them to explore new investment opportunities, and sharia financial literacy complements this trait by assisting them in investing in risky assets without fear.

Agreeableness-oriented investors prefer decisions guided by their social network, waiting for guidance before investing. Financially literate friends may influence their investment decisions, encouraging them to invest in risky assets.

Conscientiousness-oriented investors are focused, trustworthy, and purposeful, consistently striving to achieve their goals. Sharia financial literacy aids in improving their self-control and intelligence for making sound investment decisions. However, conscientiousness is negatively associated with risk tolerance and tends to make decisions conforming to the norm.

Financially literate investors prefer diversification and hold a small set of different stocks, leading to a more diversified and less risky portfolio. This is positively associated with those possessing diversified and complex portfolios (Koh et al., 2020). Additionally, financially literate investors tend to experience fewer income shocks, pre-calculate expected losses, and report lower stress levels, indicating a link between financial literacy and informed financial decisions (Mouna and Anis, 2017). Higher sharia financial literacy contributes to the financial depth of investors and aids in making sound financial investment decisions (Grohmann et al., 2018; Grohmann, 2018). Consequently, it is proposed that:
H6: Financial literacy moderated the relationship between personality traits and investor risk behaviour

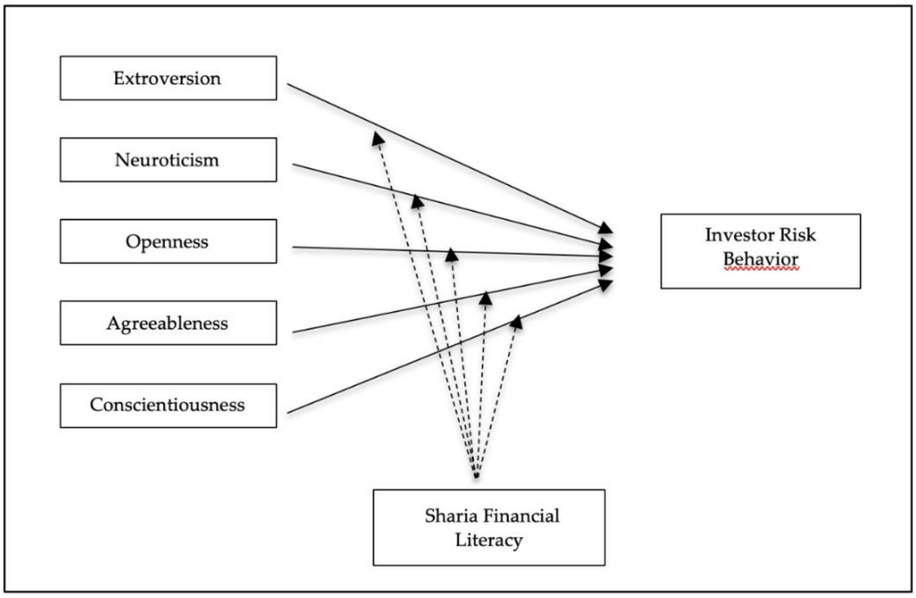

Figure 1. Conceptual Framework

Conclusion

The conceptual model proposed in this study aims to investigate the correlation between personality traits and the inclination towards risk in investors decision-making regarding investments. Additionally, the research investigates the impact of Sharia financial literacy on the connection between personality traits and investor risk behavior.

The research addresses the need for evidence-based solutions in portfolio management by incorporating conceptual models related to personality, investor tolerance, and sharia financial literacy. The results offer practical insights for investment firms to customize options based on investors' personality traits. The study delves into individual decision-making under conditions of risk and uncertainty, providing pragmatic strategies for expected returns while taking into account the influence of personality on investment choices.

A distinctive aspect of the research is the examination of the relationship between sharia financial literacy, personality, and risk tolerance, providing a unique contextual framework. The study illuminates the role played by personality traits and sharia financial literacy in shaping an investor's risk tolerance, contributing to a deeper understanding of the financial literacy landscape. Investors with heightened financial literacy actively engage in financial markets, exerting a positive impact on investment decisions and discouraging informal borrowing.

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