# “Determinants of investment satisfaction among young investors in Indonesia”


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| **AUTHORS** | Fredella Colline<br>Toto Rusmanto<br>Dezie Leonarda Warganegara<br>Yanthi R. I. Hutagaol |



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**Fredella Colline** (Indonesia), **Toto Rusmanto** (Indonesia),
**Dezie Leonarda Warganegara** (Indonesia), **Yanthi R. I. Hutagaol** (Indonesia)

# DETERMINANTS OF INVESTMENT SATISFACTION AMONG YOUNG INVESTORS IN INDONESIA

## Abstract

Indonesian stock market is dominated by young and relatively inexperienced traders who often depend on the recommendations of influencers or bloggers in social media. This will then make them dependent and conduct frequent trading, which also means higher transaction costs that diminish their profits and increase their risks, thus decreasing investor satisfaction. Therefore, this study aimed to examine the impact of perceived investor sophistication and social media influence on investment satisfaction mediated with perceived investment return as a mediating element. The analysis focused on young investors aged 18 to 30 who have invested in shares on the Indonesian Stock Exchange for at least one year. A quantitative method was adopted using questionnaires to collect data from 344 respondents. Furthermore, data were analyzed using Structural Equation Modeling – Partial Least Square (SEM-PLS) with SMART PLS 4.0 software. The results showed that both perceived investor sophistication and investment return significantly affected investment satisfaction with beta coefficients of 0.416 and 0.358, respectively. Perceived investor sophistication also significantly influenced perceived investment return with a beta coefficient of 0.557. Additionally, social media influence significantly affected perceived investment return with a beta coefficient of 0.103. This social media influence did not directly impact investment satisfaction but through the perceived investment return, which was further found to fully mediate the impact of social media influence on investment satisfaction. Perceived investment return also partially mediated the effect of investor sophistication on Investment Satisfaction.

**Keywords** young investors, investor sophistication, social media influence, investment satisfaction, investment return

**JEL Classification** G41, G11, G53

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Fredella Colline, Graduate Student, Management Department, BINUS Business School Doctor of Research in Management, Bina Nusantara University, Jakarta, Indonesia. (Corresponding author)

Toto Rusmanto, Professor, Management Department, BINUS Business School Doctor of Research in Management, Bina Nusantara University, Jakarta, Indonesia.

Dezie Leonarda Warganegara, Professor, Management Department, BINUS Business School Doctor of Research in Management, Bina Nusantara University, Jakarta, Indonesia.

Yanthi R. I. Hutagaol, Professor, Management Department, BINUS Business School Doctor of Research in Management, Bina Nusantara University, Jakarta, Indonesia.



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## INTRODUCTION

The Indonesia Composite Index (ICI) shows significant growth, rising from 624 in June 1990 to approximately 7,589 in August 2024 (YahooFinance, 2024). The number of stock investors in Indonesia increased from 3.4 million in 2021 to 5.7 million in June 2024, with more than 55% under the age of 30. Despite the high participation of young investors, the assets accounted for only 2.6% of the total as of June 2024 (KSEI, 2024). Compared to other Southeast Asian nations, the percentage of stock investors in Indonesia remains relatively low at 1.5% of the population in 2022. This figure is significantly below Singapore's 16.2%, Malaysia's 8.7%, Thailand's 5%, and Vietnam's 2.2% (CNBC Indonesia, 2022). Although financial inclusion is at 85.10%, financial literacy is significantly lower at 49.68% (Financial Services Authority (OJK) 2022). Based on usage preferences in reference media, 75.10% of respondents (582 of 775) prefer social media as the primary source of capital market information (IDX, 2022). Social media influencers have gained investors' trust, often surpassing financial consultants in guiding investment decisions.

The motivation of investors in stock investment is typically driven by the pursuit of capital gains or dividends distributed by the company. When investors achieve substantial financial gain, they generally experience a sense of satisfaction. However, individual stock investors face several challenges, such as market volatility, varying profiles of investors, information overload, limited experience, and low financial literacy. These challenges can lead to poor investment decisions, including mistimed stock purchases and sales or the selection of unsuitable stocks, eventually leading to financial losses. To address these challenges, stock investment platforms now offer features such as technical charts, fundamental data, and dashboards to assist investors. The rise of social media as a tool for stock investment became particularly pronounced during the COVID-19 pandemic with the evolution of financial communities, forums, and influencers on platforms such as Instagram, YouTube, Facebook, and TikTok. This trend has contributed to rapid market sentiment shifts, viral trends, pump-and-dump schemes, fear of missing out (FOMO), and a focus on short-term investments. Therefore, it is important to conduct research integrating investor sophistication and social media influence on investment returns and satisfaction in the new era of investment 4.0.

## 1. LITERATURE REVIEW

This study applied Behavioral Finance Theory, which combined principles from psychology, sociology, and traditional finance to explore how psychological influences and social factors shape investors' financial behaviors, including satisfaction with investment outcomes (Shefrin, 2002). The theory suggested that investors did not act rationally, and their decisions were influenced by cognitive biases, emotions, and social influences (Kahneman & Tversky, 1979). This framework was used to explain the interactions between investor sophistication (knowledge and experience), social media influence (information and trends), investment return (financial performance), and investment satisfaction (contentment with financial decisions and outcomes).

Young investors, typically under the age of 30 (Wang et al., 2020), were often in the early stages of their careers and had relatively low wealth accumulation (Silva, 2021). However, investors have a longer investment horizon compared to older age groups (Jagannathan & Kocherlakota, 1996). These investors, which were predominantly Millennials and Generation Z, were more open to technology (Tan & Tan, 2012). Previous research outlined several key characteristics of young investors: (1) Investors frequently engaged in buying and selling, were price-sensitive, and focused on transaction speed (Barber & Odean, 2005; Chong et al., 2021; Schraeder, 2016). (2) Despite having limited knowledge, investors were willing to take on more risks, often pursuing high-risk investments such as stocks and cryptocurrencies, given the longer time to recover from losses and fewer financial responsibilities (Barber & Odean, 2005; Kannadhasan, 2015). (3) In developing markets, young investors exhibited heuristic and emotional traits which often led to irrational investment behavior (Wang et al., 2020). This was reflected in the case of Jouska, a popular financial planning firm in Indonesia where many young investors suffered significant portfolio losses due to risky investments (Soepriyanto & Limijaya, 2022). (4) Investors were heavily influenced by peers, parents, and social media influencers, frequently following the advice without conducting independent analysis (Soepriyanto & Limijaya, 2022; Tan & Tan, 2012). (5) Growing up with technology, young investors were more familiar with online platforms and relied on digital sources of information (Chong et al., 2021; Tan & Tan, 2012). (6) Socially responsible investing was a priority for many young investors who tended to favor environmentally and socially responsible investments. Investors viewed corporate social responsibility (CSR) disclosures positively, believing these added value to investments (Wang et al., 2020).

Investment satisfaction refers to fulfilling investors' expectations regarding investments (Joo & Grable, 2004; Oliver, 2010; Sahi, 2017). It was a subjective measure of how content investors felt with investment outcomes. Investment satisfaction could be viewed from two perspectives: (1) the external side where investors were perceived as customers of investment products (marketing perspective) (Balasubramanian et al., 2003; Xu et


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al. 2019; Ribeiro-Navarrete et al. 2021; Helm 2007; Argan et al., 2014; Attakora-Amaniampong et al., 2021), and (2) the internal side where investors were regarded as owners expecting profits (financial perspective) (Chang & Shi, 2011; Grosshans & Zeisberger, 2018; Hasuike & Katagiri, 2013; Sahi, 2017; Schwaiger et al., 2020).

The level of satisfaction people experience with the decisions they make and the profits they receive determines investment satisfaction. Some investors expressed satisfaction with the performance even when the profits were modest, while others remained unsatisfied despite relatively high returns (Akhtar et al., 2018; Akhtar & Das, 2020; Luong & Ha, 2011). Investor satisfaction often depends on the price trajectory leading to the eventual returns (Grosshans & Zeisberger 2018). Schwaiger et al. (2020) further observed that professionals exhibited the highest levels of optimism in price expectations and were most satisfied when stock prices initially declined but subsequently recovered. The same research found that investment returns significantly influenced satisfaction levels, with greater returns leading to higher satisfaction. Satisfied investors were more inclined to increase investments and motivate others to invest in the stock market.

Perceived investment return refers to how investors personally view the profit or loss from owning specific shares or a portfolio over a defined period (Barber & Odean, 2001; Kahneman & Tversky, 1979). Investment return was defined as the financial gain or loss made on an investment relative to the amount invested, which comprised income plus capital gains or losses (Dimson et al., 2002). Furthermore, stock investment returns refer to the profits or losses originating from holding certain shares or stock portfolios. The stock rate of return was further calculated based on the change in stock price over a certain period, along with dividends paid during that time. Additionally, the source of stock returns was mainly contributed by capital gains (Reilly & Brown, 2012).

Perceived investment return was considered a subjective measure of the return investors expected, influenced by personal perception, expectations, and risk tolerance. Factors such as past experiences, knowledge, emotional state, and the information available impacted these perceptions. For instance, investors who have previously experienced significant losses tended to have lower perceived returns for similar investments, while others with high-risk tolerance and extensive industry knowledge considered returns more optimistically.

Liao et al. (2022) found that financial literacy positively influenced investment returns. Mosenhauer et al. (2022) also observed that frequent trading by individual investors reduced the returns, primarily due to low financial literacy. Individuals would decide to invest in financial knowledge and training to gain access to higher-return assets and better-understood asset performance (Lusardi & Mitchel, 2014). Financial education evolved as an effective method to improve financial decision-making and investment performance (Von Gaudecker, 2015; Zhang et al., 2023).

Perceived investor sophistication refers to the perception of investors' knowledge, experience, and understanding of financial markets as well as investment strategies. It further described the level of expertise that allowed investors to make informed decisions, considering factors such as financial literacy, understanding of market dynamics, and risk management skills. Yadav et al. (2022) defined investor sophistication by the level of knowledge, experience, and engagement in complex financial activities, often coupled with a high net worth. This sophistication played a critical role in determining an investor's ability to make sound decisions and achieve financial objectives. Skilled investors showed higher awareness, allowing investors to manage their money efficiently and make sound investment decisions. Investment awareness further allowed young investors to manage and invest money efficiently, make sound investment decisions, exhibit good financial behavior, and use available investment products and services effectively (Ammer & Aldhyani, 2022).

Several factors contributed to investor sophistication, such as education, professional experience, and access to financial resources. More sophisticated investors generally made larger investments (Hornuf & Neuenkirch, 2017), accurately identifying and analyzing risks and opportunities. Consequently, the investors managed the portfolios more effectively and made informed decisions.

Ribeiro-Navarrete et al. (2021) showed that investor experience positively correlated with investor satisfaction. However, Yulianto and Wijaya (2023) concluded that the experience and training of investors could reduce bias and affect satisfaction. Sophisticated investors further tended to make better decisions, manage portfolios efficiently, and experience greater satisfaction.

Social media influence was defined as the process of an individual adopting the opinions, behavior, or values of others communicated through the digital avenue (Aronson et al., 2019; Bizzi & Labban, 2019). It further referred to the impact of social media platforms on individuals' thoughts, behaviors, and decision-making processes. The influence comprised the ability of social media to shape opinions, affect attitudes, and drive actions among users. The platforms facilitated the exchange of information, ideas, and content among a wide audience, creating a powerful tool for influence and communication. Furthermore, social influence included the perceived expectations of others that motivated an individual to engage in specific behaviors. (Ajzen, 1991). It also comprised the social pressure individuals feel to either perform or avoid certain behaviors, gauging the impact of the pressure on the behavioral intentions (Choong, 1988).

The influence was observed when an individual intentionally tries to change another behavior or attitudes (Aronson et al., 2019). This could also be the process of an individual adopting the opinions, behaviors, or values of others which was an external element shaping the tendency to change attitudes (Aisyahrani et al., 2020). Additionally, investment decisions could be swayed by the choices or opinions of others which was a phenomenon known as social influence (Zheng et al., 2021). Social media influence occurred through a variety of mechanisms including persuasion, social comparison, and conformity. Based on social influence theory, it could be conceptualized as the collective emotions communicated by users of the platforms towards company shares with the dissemination of investment success stories contributing to stock market fluctuations (Yang et al., 2021). Communication through social media included online channels such as the Internet, Instagram, Facebook, and YouTube, as well as offline channels comprising television programs, seminars, articles, various reports, and company information news on stock exchanges, providing essential investment and financial information (Hussein, 2009).

Shive (2010) asserted that social media influence impacted individual investors' returns with information exchanged among investors holding value for forecasting short-term stock performance. Chen et al. (2014) found that opinions shared on popular social media websites strongly predicted future stock returns and earnings surprises. Socially motivated traders showed the ability to predict stock returns and the effects were not reversed. Social media influence on young investors who tended to trade frequently affected investment decisions (Chong et al., 2021; Schraeder, 2016). Reports showed that the 20% of investors who traded the most actively achieved an average net annual return of 7.2% lower than the least active (Barber & Odean, 2000). By digging social data mines, investors could analyze stock better due to more information leading to better results (Desokey et al., 2016). Therefore, social media influence aided young investors by enhancing stock analysis with better information access and decision-making.

Based on the literature review, this research aimed to investigate the impact of perceived investor sophistication and social media influence on investment satisfaction mediated by perceived investment return. The following seven research hypotheses were proposed through this understanding.

*H1: Perceived investor sophistication affected investment satisfaction.*

*H2: Perceived investor sophistication affected perceived investment return.*

*H3: Social media influence affected investment satisfaction.*

*H4: Social media influence affected perceived investment returns.*

*H5: Perceived investment return affected investment satisfaction.*


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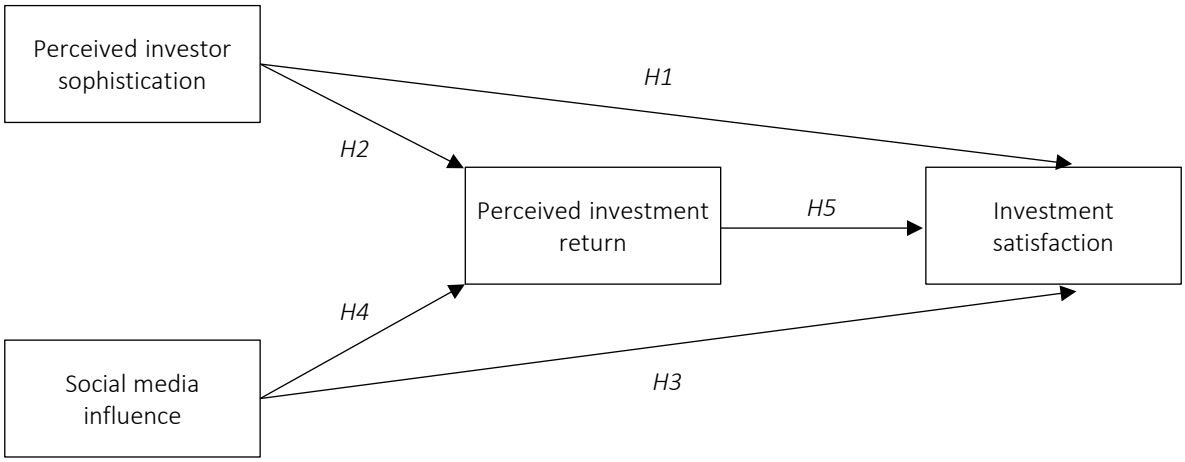


**Figure 1.** Research model

*H6: The impact of perceived investor sophistication on investment satisfaction was mediated by perceived investment return.*

*H7: The impact of social media influence on investment satisfaction was mediated by perceived investment return.*

The proposed hypotheses were further outlined in the diagrams (see Figures 1-3).

In the diagrams (Figure 1), there were four variables: perceived investor sophistication, social media influence, perceived investment return, and investment satisfaction. Investor sophistication and social media influence were exogenous variables, while investment satisfaction was endogenous. Furthermore, perceived investment return acted as an exogenous, endogenous, and mediating variable.

## 2. METHOD

This empirical study used a quantitative method with a survey design where data collection was conducted through questionnaires. The unit of analysis focused on young investors in Indonesia. Primary data were gathered using a cross-sectional method, capturing information at a single point in time. The questionnaires were distributed through the tSurvey platform and selected for the advanced survey-building capabilities, which allowed for easy customization of question types to meet the research needs (tSurvey, 2023). The analysis tool and solution used in this research was Structural Equation Modeling (SEM) using SMART PLS 4.0. The measurement scale applied in the questionnaire was a 1-5 Likert scale, where 1 represented "strongly disagree" and 5 suggested "strongly agree". The Likert scale, first introduced by Rensis Likert in 1932, has been widely adopted for measuring attitudes and perceptions (Arnold et al., 1967).

The population for this research comprised all individual stock investors in Indonesia. A non-probability method, specifically purposive sampling, was adopted. According to Hair et al. (2017), the minimum sample size should be 10 times the number of indicators. Using 23 indicators in this study, the minimum sample size was set at 230. However, 344 samples were eventually collected with the following criteria, (1) young investors under 30 years old (Wang et al., 2020), (2) investors actively transacting on the Indonesian Stock Exchange, and (3) those with a minimum of one year of investment experience on the exchange.

Indicators for the key constructs were adapted from previous publications. Investment Satisfaction (IS) was measured using items from Ahmad and Wu (2022), Argan et al. (2014), Balasubramanian et al. (2003), Pandey and Jessica (2019), Shim et al. (2008), and Wang et al. (2006). Perceived Investor Sophistication (ISO) was adapted from Xiao and Porto (2017), Lusardi and Mitchel (2014), Bellofatto et al. (2018), and Yadav et al. (2022). Social Media Influence (SMI) was measured based on Bizzi and Labban (2019). Perceived Investment Return (IR) was assessed using items from Ahmad and Wu (2022), Akhtar et al. (2018), Helm (2007), and Pandey and Jessica (2019).

**Table 1.** Demographic profile

| Variables | Frequency | Percentage, % |
|---|---|---|
| **Age (in years)** | | |
| 18-21 | 55 | 16 |
| 22-25 | 105 | 31 |
| >25-30 | 184 | 53 |
| **Gender** | | |
| Male | 218 | 63 |
| Female | 126 | 37 |
| **Monthly Expenses (in million IDR)** | | |
| < 5 | 224 | 65 |
| 5 < 10 | 94 | 27 |
| 10 to < 15 | 15 | 4 |
| 15 to < 20 | 8 | 2 |
| >25 | 3 | 1 |
| **Education** | | |
| Junior High School | 2 | 1 |
| Senior High School | 76 | 22 |
| Associate's degree (Diploma 3) | 33 | 10 |
| Bachelor | 213 | 62 |
| Master | 16 | 5 |
| Others | 4 | 1 |
| **Risk Preference** | | |
| Aggressive | 56 | 16 |
| Conservative | 74 | 22 |
| Moderate | 214 | 62 |
| **Experience** | | |
| 1 to < 2 year | 188 | 54,7 |
| 2 to < 5 years | 145 | 42,2 |
| 5 to < 10 years | 10 | 2,9 |
| >10 years | 1 | 0,3 |

Based on the data in Table 1, 53% of respondents were aged between 25 and 30 years, while 16% were between 18 and 21 years. Among the respondents, 63% were male and 37% were female. Most respondents reported monthly expenses of less than 5 million rupiahs, suggesting that the majority had modest incomes. Educational levels varied, ranging from junior high school to a master's degree, with 62% holding a bachelor's degree. Regarding risk preference, 62% of respondents had moderate risk tolerance. In terms of investment experience, 54.7% had been investing for 1 to less than 2 years, while 42.2% had between 2 to less than 5 years of experience, which reflected the relatively young age of the respondents (30 years old or younger).

# 3. RESULTS

## 3.1. Measurement model (validity and reliability)

The measurement model was tested to determine whether each construct indicator effectively measured the intended variables, ensuring reliable and valid results. The outer model was evaluated using both validity and reliability tests.

Several measures were adopted to assess the effectiveness of the model's validity and reliability, including cross-loading, Average Variance Extracted (AVE), Cronbach Alpha (CA), and Composite Reliability (CR). Consistent with Hair et al. (2022), the outer loading values needed to exceed 0.5, AVE values should be greater than 0.5, CR values needed to be above 0.6, and Cronbach's Alpha had to surpass 0.7 to confirm acceptable reliability.

Table 2 presents the validity and reliability of variables and indicators. Social media influence had the highest Cronbach's Alpha (CA = 0.903), Composite Reliability (CR = 0.931), and Average Variance Extracted (AVE = 0.772). The indicator with the highest outer loading was from Social Media Influence (SMI2), which measured the statement, "I am influenced by recommendations from experts conveyed through social media". None of the indicators had an outer loading value below 0.5, showing that all indicators were acceptable.

Both Cronbach's alpha and Composite Reliability for each variable exceeded 0.70, confirming that the indicators were reliable for use in the research. Additionally, the AVE for each variable was greater than 0.5, suggesting all indicators met the criteria for validity.

## 3.2. R-Square

R-square values were calculated to measure the impact of all independent variables on the dependent elements. For social science, an R-square of 20% or higher was considered acceptable (Chin, 1998). Using SMART PLS 4.0, the R-square values obtained for this study were as follows (see Table 3).


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**Table 2.** Construct validity and reliability

Source: Test Results SmartPLS.

| Indicators | Outer Loading |
|---|---|
| **Perceived Investment Return (IR) (CA = 0.858, CR = 0.899, AVE = 0.640)** | |
| IR1. I get investment profits from the increase in stock prices that I own. | 0.735 |
| IR2. I get sufficient dividends from stock investments. | 0.810 |
| IR3. Investment results I received are greater than I expected. | 0.824 |
| IR4. Investment results I receive are greater than the market return - Jakarta Composite Index (JCI)/Indonesia Composite Index (ICI). | 0.854 |
| IR5. Investment results I received are greater than the inflation rate in Indonesia. | 0.771 |
| **Investment Satisfaction (IS) (CA = 0.897, CR = 0.916, AVE = 0.551)** | |
| IS1. I am satisfied with the stocks I own. | 0.761 |
| IS2. I would recommend others to invest in stocks. | 0.581 |
| IS3. I am satisfied with my stock investment experience. | 0.793 |
| IS4. I want to continue increasing the amount of money I invest in stocks. | 0.678 |
| IS5. I am satisfied with my decision to invest in stocks. | 0.814 |
| IS6. I feel I have made the right decision in choosing the types of stocks I invest in. | 0.761 |
| IS7. I always choose the right time to buy or sell the stocks I invest in. | 0.696 |
| IS8. By investing in stocks, I can achieve my financial goals. | 0.775 |
| IS9. Investing in the stock market correlates with my values. | 0.793 |
| **Perceived Investor Sophistication (ISO) (CA = 0.754, CR = 0.836, AVE = 0.640)** | |
| ISO1. The education I received is useful for my investment decisions. | 0.598 |
| ISO2. I have good knowledge of stock investment. | 0.821 |
| ISO3. I have enough experience in stock investment. | 0.752 |
| ISO4. I invest in stocks to achieve long-term financial goals. | 0.588 |
| ISO5. I easily get information about the stocks I will buy. | 0.780 |
| **Social Media Influence (SMI) (CA = 0.903, CR = 0.931, AVE = 0.772)** | |
| SMI1. I am influenced by investment advice from relatives/friends conveyed through social media. | 0.883 |
| SMI2. I am influenced by recommendations from experts conveyed through social media. | 0.913 |
| SMI3. I am influenced by stock bloggers/influencers on social media. | 0.873 |
| SMI4. I am influenced by comments from people (fellow stock investors) in social media groups such as WhatsApp/ Telegram/etc. | 0.845 |

*Note:* CA = Cronbach Alpha, CR = Composite reliability (rho_c), AVE = Average Variance Extracted.

**Table 3.** *R*-square

| | R-square | R-square adjusted |
|---|---|---|
| Perceived Investment Return | 0.348 | 0.345 |
| Investment Satisfaction | 0.461 | 0.456 |

The R-square values for Perceived Investment Return and Investment Satisfaction were considered adequate as both were above 20%. Specifically, the R-square value for Perceived Investment Return was 0.348, implying that 34.8% of the variation could be explained by Investor Sophistication and Social Media Influence, while the remaining 65.2% was attributed to other factors not included in the model. The R-square value for Investment Satisfaction was 0.461, showing that 46.1% of the variation could be explained by Perceived Investment Return, Investor Sophistication, and Social Media Influence with the remaining 53.9% influenced by other factors outside the model.

## 3.3. Hypothesis testing

The hypothesis testing aimed to assess the significance of the relationships between the variables. A path relationship was considered significant when the T-statistic was greater than 1.96 and the P-value was less than 0.05.

The results showed that the direct relationships between Investor Sophistication and Investment Satisfaction (H1), Investor Sophistication and Investment Return (H2), as well as Investment Return and Investment Satisfaction (H5), were positive and significant at the 1% level (P-value = 0.000), with standard beta values of 0.416, 0.557, and 0.358, respectively. The relationship between Social Media Influence and Investment Return (H4) was also positive and significant at the 5% level (P-value = 0.044) with a standard beta of

**Table 4.** Path coefficient and hypothesis test results

| Hypotheses | Relationships | Standard Beta | Sample mean | Standard deviation | *t*-values | *p*-values | Conclusion |
|---|---|---|---|---|---|---|---|
| *H1* | ISO → IS | 0.416 | 0.419 | 0.049 | 8.558 | 0.000 | Accepted |
| *H2* | ISO → IR | 0.557 | 0.559 | 0.040 | 14.084 | 0.000 | Accepted |
| *H3* | SMI →IS | –0.043 | –0.042 | 0.041 | 1.026 | 0.305 | Not accepted |
| *H4* | SMI →IR | 0.103 | 0.107 | 0.051 | 2.018 | 0.044 | Accepted |
| *H5* | IR →IS | 0.358 | 0.356 | 0.055 | 6.561 | 0.000 | Accepted |
| *H6* | ISO →IR →IS | 0.200 | 0.200 | 0.036 | 5.529 | 0.000 | Accepted |
| *H7* | SMI→IR →IS | 0.037 | 0.037 | 0.018 | 2.023 | 0.043 | Accepted |

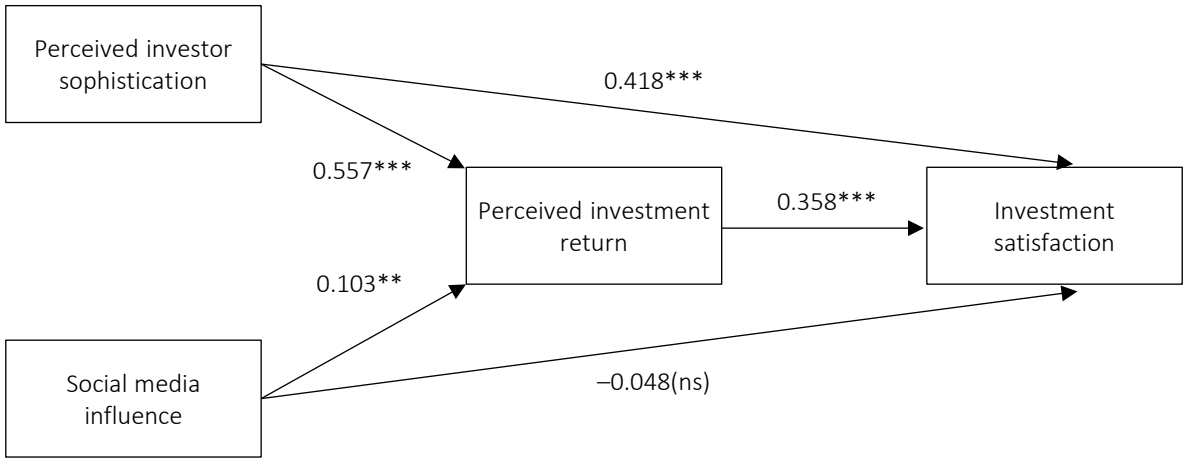
0.103. However, the relationship between Social Media Influence and Investment Satisfaction (H3) was not significant. The mediation effects of Investment Return were found to be significant. Investment Return partially mediated the relationship between Investor Sophistication and Investment Satisfaction (H6), with a P-value of 0.000 and a standard beta of 0.200. Additionally, Investment Return fully mediated the relationship between Social Media Influence and Investment Satisfaction (H7) with a P-value of 0.043.

Perceived Investor Sophistication had a positive and significant impact on both Investment Satisfaction and Perceived Investment Return. Social Media Influence did not significantly impact Investment Satisfaction, but it did positively influence Perceived Investment Returns. Furthermore, Perceived Investment Return positively influenced Investment Satisfaction and mediated the impact of both Investor Sophistication and Social Media Influence on Investment Satisfaction.

# 4. DISCUSSION

The first hypothesis, "Perceived Investor Sophistication had a positive significant impact on Investment Satisfaction," correlates with the results of Saurabh and Nandan (2018). This publication showed that financial knowledge influenced individual financial satisfaction. Yulianto and Wijaya (2023) similarly concluded that training programs, investor experience, and confidence reduced the disposition effect and enhanced investor satisfaction. Sophisticated investors are better prepared to handle volatile market conditions. The understanding of market trends and economic indicators allows investors to form realistic expectations which can lead to improved satisfaction. These investors typically have well-defined financial objectives and investment strategy correlating with the targets, contributing to higher satisfaction when investments support long-term objectives. Furthermore, sophisticated young investors tend to adjust their strategies in response to changing market conditions, which increases sat-

Source: SmartPLS test results.




*Note:* ns = not significant; * p-value < 0.1; ** p-value < 0.05; *** p-value < 0.01.

**Figure 2.** Path diagram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isfaction by actively managing portfolios. Investor sophistication often correlates with emotional resilience as experienced investors are less inclined to panic during market downturns, thereby contributing to overall satisfaction.

The second hypothesis is "Perceived Investor Sophistication had a positive significant impact on Perceived Investment Return". The result was consistent with Gambacorta et al. (2023), who asserted that sophisticated investors generated higher capital returns than unsophisticated counterparts. More sophisticated investors are more inclined to recognize the significance of diversification and proficient risk management, which can further mitigate crash risk (Hendra & Utama, 2024). A well-diversified portfolio can lead to positive investment returns (Statman, 2017). Investors with a high level of sophistication also possess a deeper understanding of market trends and may be more adept at timing investments, potentially impacting returns (Barber & Odean, 2000). Financial literacy as a component of sophistication is positively associated with better financial decisions (Lusardi & Mitchell, 2008). Financial education has also been shown to improve both financial decisions and investment performance (Von Gaudecker, 2015; Zhang et al., 2023). Additionally, sophisticated investors are more adaptable to market changes which can positively influence portfolio performance (Grinblatt & Keloharju, 2001).

The third hypothesis, "Social Media Influence had no significant impact on Investment Satisfaction," suggests that social media platforms often reflect market sentiment, impacting investor confidence and satisfaction. Positive sentiment might motivate confidence, while negative sentiment could lead to anxiety and dissatisfaction. Social media is also prone to misinformation and rumors, which lead to poor investment decisions and dissatisfaction when expected outcomes are not achieved. Furthermore, social media can amplify behavioral biases such as overreaction or fear of missing out (FOMO), which may influence satisfaction either positively or negatively. The influence of social media on investment satisfaction remains debatable. However, Fu et al. (2019) suggested that social media could influence job satisfaction. Social media can be an educational tool, allowing investors to learn from experts, follow financial news, and participate in discussions. Increased financial literacy may contribute to more satisfactory investment experiences. Participation in online investment communities and forums can also create a sense of community, where investors may find support, share experiences, and gain insights, potentially enhancing satisfaction. In other words, Social Media Influence cannot directly affect investment satisfaction but has an indirect effect. Madhumitha and Lekshmi (2022) further showed that Social Media Influence significantly affected the Adoption of Health Fitness Mobile Apps (HFM) and the integration had a significant positive impact on satisfaction. Bhutto et al. (2023) also observed that the influence of social media and brand purchases affected brand awareness and consumer satisfaction. Additionally, Hoang et al. (2024) showed that social media had a moderating effect on the relationship between tourist satisfaction and ecotourism loyalty.

The fourth hypothesis, "Social Media Influence had a positive significant impact on Perceived Investment Return", shows that social media provides real-time information on market trends, news, and investment opportunities. This enables investors to make timely decisions that positively affect returns. Social media can also foster herding behavior where investors follow popular trends, leading to short-term price movements and impacting returns. Social media influencers and experts also play a role in shaping investment decisions. Chen et al. (2014) found that opinions expressed on popular social media platforms could strongly predict future stock returns and earnings surprises. Positive endorsements may motivate investments in certain assets, impacting returns. Shive (2010) further suggested that social influence could affect individual investors' returns and the information exchanged between investors held predictive value for short-term stock returns. Participation in online investment communities can provide valuable insights and collective wisdom. Knowledge sharing and diverse perspectives may contribute positively to investment decisions and returns. By digging into social data mines, investors also can analyze stock better because of getting more information and better yields (Desokey et al., 2016). Yang et al. (2018) asserted that extreme positive sentiment provided highly effective trading signals across various market conditions, leading to risk-adjusted returns significantly surpassing the S&P 500 index. It has been observed through empirical research that news sentiment strongly affects financial market returns.

The fifth hypothesis, "Perceived Investment Return had a positive significant impact on Investment Satisfaction," suggests that higher investment returns lead to greater satisfaction. Investment returns directly influence investor contentment as positive returns often generate satisfaction while losses may cause dissatisfaction. Correlation between returns and financial objectives is crucial when returns help investors meet the targets, contributing positively to overall satisfaction. The results were consistent with the studies by Grosshans and Zeisberger (2018), Keswani et al. (2020), and Schwaiger et al. (2020), confirming that Investment Returns affect Satisfaction. Similarly, Shim et al. (2008) argued that profitability was the main element in determining investment satisfaction. Positive returns generally enhance satisfaction by helping investors achieve the financial objectives (Pandey & Jessica, 2019). When investments generate profits, investors feel successful in reaching the financial objectives which motivates confidence in decision-making abilities. This confidence increases satisfaction as investors see tangible results from the strategies. Positive returns can also improve financial security by increasing portfolio value and income which alleviates financial anxiety. These returns contribute significantly to investor's financial well-being and purchasing power, allowing investors to enjoy a better quality of life. Furthermore, good investment returns bring investors closer to financial freedom, reducing dependence on a regular salary and improving life satisfaction. Success in investing can also enhance self-image with investors feeling more capable of managing finances, thereby increasing self-worth and overall satisfaction. Finally, profit-generating investments help reduce stress and financial concerns as financially secure investors tend to experience lower stress levels and face economic uncertainty with greater confidence.

The sixth hypothesis, "Perceived Investment Return significantly mediated the impact of Perceived Investor Sophistication on Investment Satisfaction," outlines that investors with greater financial literacy tend to have a better understanding of market conditions, risks, and returns. This knowledge can positively influence both investment returns and satisfaction. Sophisticated investors are more inclined to make informed decisions, as investors have a deeper understanding of market dynamics, risk factors, and potential returns, allowing for more strategic and rational investment choices. Additionally, these investors are better equipped to manage risks, contributing to a balanced and diversified portfolio, reducing the chances of significant losses and enhancing satisfaction. According to Lusardi and Mitchell (2008), financial literacy enables investors to make better decisions which positively affects the returns. Keswani et al. (2020) also found that returns have a significant impact on the level of satisfaction.

The seventh hypothesis, "Perceived Investment Return significantly mediated the impact of Social Media Influence on Perceived Investment Satisfaction," underscores the role of social media in providing fast and widespread access to financial information. Investors can use these platforms to obtain real-time news, analysis, and market trends, potentially leading to more informed decisions that improve returns and satisfaction. Social media can also contribute to herd behavior where investors follow popular trends. When the behavior results in successful outcomes, it may positively influence investment satisfaction. Shive (2010) asserted that social media influence can affect individual investor returns, and the information exchanged between investors can have predictive value for short-term stock returns. Hu et al. (2024) added that social media posts with a positive tone often forecast higher future returns. Research by Grosshans and Zeisberger (2018), Keswani et al. (2020), and Schwaiger et al. (2020) further supported the idea that investment returns directly impacted satisfaction.

## CONCLUSION

This study aimed to investigate the impact of perceived investor sophistication and social media influence on investment satisfaction with perceived investment returns serving as a mediator. The results confirmed that both perceived investor sophistication and investment returns significantly affected investment satisfaction, while social media influence did not have a direct effect on investment satisfaction. However, social media influence indirectly impacted investment satisfaction through perceived investment returns, which partially mediated the effect of investor sophistication on investment satisfaction.


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Perceived investor sophistication was found to significantly influence investment satisfaction by shaping decision-making, risk management, market understanding, objective correlation, adaptability, and emotional resilience. Investors, regardless of the level of sophistication could benefit from current education and stay informed to enhance investment satisfaction over time. Sophisticated investors were generally better at understanding market trends and managing risks, leading to more informed decisions and potentially better investment returns. Therefore, investor sophistication had both a direct effect and an indirect effect on satisfaction, mediated by investment return. On the other hand, social media influence did not directly affect investment satisfaction.

Perceived investment return evolved as a crucial element in increasing investment satisfaction. It served as a mediator between the effects of perceived investor sophistication and social media influence on investment satisfaction. Sophisticated investors tended to make more informed decisions, assess risks more effectively, and correlated the expectations with investment outcomes. Future research could delve deeper into investment satisfaction from a financial perspective and explore whether social media served as a mediator or moderator in the relationship between investment satisfaction factors.

In Indonesia, the proportion of investors remained lower compared to other Southeast Asian countries. Understanding factors influencing investment satisfaction is crucial, particularly among young investors (30 years and under) who represented the largest age group but held the smallest total investment value. Identifying these factors can help motivate young investors to increase investments in the Indonesian stock exchange, potentially stimulating the total value of stock and shifting the balance of local versus foreign investors. Enhancing investor sophistication through financial education and literacy programs can positively impact investment satisfaction. Financial institutions and advisors should prioritize educating investors to be empowered to make well-informed decisions.

## DATA AVAILABILITY STATEMENT

Data available on request due to privacy/ethical restrictions. Data can be accessed through this link.

## AUTHOR CONTRIBUTIONS

Conceptualization: Dezie Leonarda Warganegara.
Data curation: Fredella Colline.
Formal analysis: Toto Rusmanto, Yanthi R. I. Hutagaol.
Investigation: Yanthi R. I. Hutagaol.
Methodology: Yanthi R. I. Hutagaol, Toto Rusmanto.
Project administration: Fredella Colline.
Supervision: Toto Rusmanto, Dezie Leonarda Warganegara.
Validation: Dezie Leonarda Warganegara.
Visualization: Fredella Colline.
Writing – original draft: Fredella Colline, Dezie Leonarda Warganegara.
Writing – review & editing: Fredella Colline, Toto Rusmanto, Yanthi R. I. Hutagaol.

## REFERENCES

1. Ahmad, M., & Wu, Q. (2022). Does herding behavior matter in investment management and perceived market efficiency? Evidence from an emerging market. *Management Decision, 60*(8), 2148-2173. https://doi.org/10.1108/MD-07-2020-0867
2. Aisyahrani, A. I. B., Handayani, L., Dewi, M. K., & Muhtar, M. (2020). A concept of materialism and well-being. *International Journal*

*of Evaluation and Research in Education, 9*(1), 62-68. https://doi.org/10.11591/ijere.v9i1.20424

3. Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211. https://doi.org/10.1016/0749-5978(91)90020-T

4. Akhtar, F., & Das, N. (2020). Investor personality and investment performance: from the perspective of psychological traits. *Qualitative Research in Financial Markets, 12*(3), 333-352. https://doi.org/10.1108/QRFM-11-2018-0116

5. Akhtar, F., Thyagaraj, K. S., & Das, N. (2018). Perceived Investment Performance of Individual Investors is Related to the Big-Five and the General Factor of Personality (GPF). *Global Business Review, 19*(2), 342-356. https://doi.org/10.1177/0972150917713527

6. Ammer, M. A., & Aldhyani, T. H. H. (2022). An Investigation into the Determinants of Investment Awareness: Evidence from the Young Saudi Generation. *Sustainability (Switzerland), 14*(20), 1-25. https://doi.org/10.3390/su142013454

7. Argan, M., Sevil, G., & Yalama, A. (2014). The Effect of Word-of-Mouth Communication on Stock Holdings and Trades: Empirical Evidence from an Emerging Market. *Journal of Behavioral Finance, 15*(2), 89-98. https://doi.org/10.1080/15427560.2014.914029

8. Arnold, W. E., McCroskey, J. C., & Prichard, S. V. O. (1967). The Likert-type scale. *Today's Speech, 15*(2), 31-33. https://doi.org/10.1080/01463376709368825

9. Aronson, E., Wilson, T., & Sommers, S. (2019). *Social Psychology* (10th ed.).

10. Attakora-Amaniampong, E., Miller, A. W., & Aziabah, S. A. (2021). Determinants of investor satisfaction with e-commerce platforms and traded products in student housing development in Ghana. *Electronic Journal of Information Systems in Developing Countries, 87*(3), 1-17. https://doi.org/10.1002/isd2.12162

11. Balasubramanian, S., Konana, P., & Menon, N. M. (2003). Customer satisfaction in virtual environments: A study of online investing. *Management Science, 49*(7), 871-889. https://doi.org/10.1287/mnsc.49.7.871.16385

12. Barber, B. M., & Odean, T. (2000). Trading is hazardous to your wealth: The common stock investment performance of individual investors. *Journal of Finance, 55*(2), 773-806. https://doi.org/10.1111/0022-1082.00226

13. Barber, B. M., & Odean, T. (2001). Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment. *The Quarterly Journal of Economics, 116*(1), 261-292. http://dx.doi.org/10.2139/ssrn.139415

14. Barber, B. M., & Odean, T. (2005). Boys will be Boys: Gender, Overconfidence, and Common Stock Investment. *SSRN Electronic Journal, September 1998*. https://doi.org/10.2139/ssrn.139415

15. Bellofatto, A., D'Hondt, C., & De Winne, R. (2018). Subjective financial literacy and retail investors' behavior. *Journal of Banking and Finance, 92,* 168-181. https://doi.org/10.1016/j.jbankfin.2018.05.004

16. Bhutto, M. Y., Khan, M. A., Sun, C., Hashim, S., & Khan, H. T. (2023). Factors affecting repurchase intention of organic food among generation Z (Evidence from developing economy). *PLoS ONE, 18*(3 March), 1-14. https://doi.org/10.1371/journal.pone.0281527

17. Bizzi, L., & Labban, A. (2019). The double-edged impact of social media on online trading: Opportunities, threats, and recommendations for organizations. *Business Horizons, 62*(4), 509-519. https://doi.org/10.1016/j.bushor.2019.03.003

18. Chang, J. F., & Shi, P. (2011). Using investment satisfaction capability index based particle swarm optimization to construct a stock portfolio. *Information Sciences, 181*(14), 2989-2999. https://doi.org/10.1016/j.ins.2010.05.008

19. Chen, H., De, P., Hu, Y., & Hwang, B. H. (2014). Wisdom of crowds: The value of stock opinions transmitted through social media. *Review of Financial Studies, 27*(5), 1367-1403. https://doi.org/10.1093/rfs/hhu001

20. Chin W, M. G. (1998). The Partial Least Squares Approach to Structural Formula Modeling. *Advances in Hospitality and Leisure, 8*(2), 5. Retrieved from https://books.google.com/books?hl=en&lr=&id=EDZ5AgAAQBAJ&oi=fnd&pg=PA295&dq=The+partial+least+squares+approach+to+structural+equation+modeling&ots=49uH6qt2lk&sig=Fwg2GGFWp3LUMMjx-Mu9h4jbOXnA

21. Chong, L. L., Ong, H. B., & Tan, S. H. (2021). Acceptability of mobile stock trading application: A study of young investors in Malaysia. *Technology in Society, 64*(September 2020), 101497. https://doi.org/10.1016/j.techsoc.2020.101497

22. Choong, L. H. (1988). The theory of reasoned action applied to brand loyalty. *Journal of Product & Brand Management, 7*(1), 51-61. Retrieved from https://www.deepdyve.com/lp/emerald-publishing/the-theory-of-reasoned-action-applied-to-brand-loyalty-WPHl8T-3dEF

23. CNBC Indonesia. (2022). *Only 1.5% of Indonesian Citizens Become Stock Investors, Losing to Neighbors.* Retrieved from https://www.cnbcindonesia.com/market/20220830171026-17-367833/baru-15-warga-ri-jadi-investor-saham-kalah-sama-tetanggaa

24. Desokey, E. N., Badr, A., Hegazy, A. F., & Arab, I. T. (2016). An Intelligent Framework using Hybrid Social Media and Market Data, for Stock Prediction Analysis. *International Journal of Computer and Information Technology, 5*(3), 317-325. Retrieved from https://www.ijcit.com/archives/volume5/issue3/Paper050305.pdf

25. Dimson, E., Marsh, P., & Staunton, M. (2002). *Triumph of the Optimists: 101 Years of Global Investing.* Princeton University Press.

26. Fu, J., Sawang, S., & Sun, Y. (2019). Enterprise social media adoption:



http://dx.doi.org/10.21511/imfi.21(4).2024.19

Its impact on social capital in work and job satisfaction. *Sustainability (Switzerland), 11*(16), 1-17. https://doi.org/10.3390/su11164453

27. Gambacorta, L., Gambacorta, R., & Mihet, R. (2023). FinTech, investor sophistication and financial portfolio choices. *BIS Working Papers, 1091*. Retrieved from https://www.bis.org/publ/work1091.htm

28. Grinblatt, M., & Keloharju, M. (2001). How distance, language, and culture influence stockholdings and trades. *Journal of Finance, 56*(3), 1053-1073. https://doi.org/10.1111/0022-1082.00355

29. Grosshans, D., & Zeisberger, S. (2018). All's well that ends well? On the importance of how returns are achieved. *Journal of Banking and Finance, 87,* 397-410. https://doi.org/10.1016/j.jbankfin.2017.09.021

30. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM).* Thousand Oaks: Sage.

31. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). Partial Least Squares Structural Equation Modeling (Pls-Sem) (3rd ed.). *Angewandte Chemie International Edition, 6*(11), 951-952. Retrieved from https://www.researchgate.net/publication/354331182_A_Primer_on_Partial_Least_Squares_Structural_Equation_Modeling_PLS-SEM

32. Hasuike, T., & Katagiri, H. (2013). Robust-based interactive portfolio selection problems with an uncertainty set of returns. *Fuzzy Optimization and Decision Making, 12*(3), 263-288. https://doi.org/10.1007/s10700-013-9157-x

33. Helm, S. (2007). The Role of Corporate Reputation in Determining Investor Satisfaction and Loyalty. *Corporate Reputation Review, 10*(1), 22-37. https://doi.org/10.1057/palgrave.crr.1550036

34. Hendra, E., & Utama, C. A. (2024). Corporate Diversification and Crash Risk: Evidence in East Asian Firms. *Journal of Eastern European and Central Asian Research, 11*(2), 303-319. https://doi.org/10.15549/jeecar.v11i2.1603

35. Hoang, S. D., Tučková, Z., Pham, N. T., Tran, T. H., & Nguyen, D. T. N. (2024). Moderating Effect of Social Media in Shaping Ecotourism Loyalty: A Two-Stage-Cross-Sectional Study. *SAGE Open, 14*(2), 1-18. https://doi.org/10.1177/21582440241247699

36. Hornuf, L., & Neuenkirch, M. (2017). Pricing shares in equity crowdfunding. *Small Business Economics, 48*(4), 795-811. https://doi.org/10.1007/s11187-016-9807-9

37. Hu, D., Jones, C. M., Li, S., Zhang, V., & Zhang, X. (2024). *The Rise of Reddit: How Social Media Affects Belief Formation and Price Discovery.* Retrieved from https://abfer.org/media/abfer-events-2024/annual-conference/papers-investment/AC24P3076-The-Rise-of-Reddit-How-Social-Media-Affects-Belief-Formation-and-Price-Discovery.pdf

38. Hussein A. H. A.-T. A. A. B. K. (2009). Financial literacy and investment decisions of UAE investors. *The Journal of Risk Finance, 10*(5), 500-516. https://doi.org/10.1108/15265940911001402

39. IDX. (2022). *Optimization of Statistical Publication.* Retrieved from https://www.idx.co.id/media/20221278/laporan-final-ld-feb-ui-optimalisasi-publikasi-statistik-bei_1011.pdf

40. Jagannathan, R., & Kocherlakota, N. R. (1996). Why should older people invest less in stocks than younger people? *Federal Reserve Bank of Minneapolis Quarterly Review, 20,* 11-23. Retrieved from https://core.ac.uk/download/pdf/6608962.pdf

41. Joo, S. H., & Grable, J. E. (2004). An exploratory framework of the determinants of financial satisfaction. *Journal of Family and Economic Issues, 25*(1), 25-50. https://doi.org/10.1023/B:JEEI.0000016722.37994.9f

42. Kahneman, D., & Tversky, A. (1979). Prospect Theory: an Analysis of Decision Under Risk. *Econometrica, 47*(2), 263-291. https://doi.org/10.2307/1914185

43. Kannadhasan, M. (2015). Retail investors' financial risk tolerance and their risk-taking behaviour: The role of demographics as differentiating and classifying factors. *IIMB Management Review, 27*(3), 175-184. https://doi.org/10.1016/j.iimb.2015.06.004

44. Keswani, S., Gangwani, K., & Dhingra, V. (2020). Impact of performance measures of mutual fund on investors' satisfaction level in India – An empirical analysis. *International Journal of Advanced Science and Technology, 29*(8 Special Issue), 370-381. Retrieved from http://sersc.org/journals/index.php/IJAST/article/view/10517

45. KSEI. (2024). *Indonesian Capital Market Statistics.* (In Indonesian). Retrieved from https://www.ksei.co.id/files/Statistik_Publik_Juni_2024_v4.pdf

46. Liao, K., Zhang, Y., Lei, H., Peng, G., & Kong, W. (2022). A Comparative Analysis of the Effects of Objective and Self-Assessed Financial Literacy on Stock Investment Return. *Frontiers in Psychology, 13*(April), 1-13. https://doi.org/10.3389/fpsyg.2022.842277

47. Luong, L. P., & Ha, D. T. T. (2011). *Behavioral Factors Influencing Individual Investor's Decision-Making and Performance*. Retrieved from https://www.researchgate.net/publication/328277613_Behavioral_factors_influencing_individual_investors_decision-making_and_performance_A_survey_at_the_Ho_Chi_Minh_Stock_Exchange

48. Lusardi, A., & Mitchel, O. S. (2014). The Economic Importance of Financial Literacy: Theory and Evidence. *Journal of Economic Literature, 52*(1), 5-44. Retrieved from https://www.fincap.org.uk/en/reviews/the-economic-importance-of-financial-literacy-theory-and-evidence

49. Lusardi, A., & Mitchell, O. S. (2008). Planning and financial literacy: How do women fare? *NBER Working Paper, 13750,* 413-417. Retrieved from http://www.nber.org/papers/w13750

50. Madhumitha, T., & Lekshmi, R. S. (2022). The Influence of Social Media on the adoption and con-

tinuous use of health fitness mobile apps during the COVID-19 pandemic. *Ethiopian Journal of Health Development, 36*(1). https://doi.org/10.20372/ejhd.v36i1.5061

51. Mosenhauer, M., Newall, P. W. S., & Walasek, L. (2022). The stock market as a casino: Associations between stock market trading frequency and problem gambling. *Journal of Behavioral Addictions*. https://doi.org/10.1556/2006.2021.00058

52. Oliver, R. L. (2010). *Satisfaction: A Behavioral Perspective on the Consumer* (Vol. 2). Routledge. Retrieved from https://www.researchgate.net/publication/269107473_What_is_governance/link/548173090cf22525dcb61443/download%0Ahttp://www.econ.upf.edu/~reynal/Civilwars_12December2010.pdf%0Ahttps://think-asia.org/handle/11540/8282%0Ahttps://www.jstor.org/stable/41857625

53. Otoritas Jasa Keuangan. (2022). *National Survey on Financial Literacy and Inclusion 2022.* Retrieved from https://www.ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Pages/Survei-Nasional-Literasi-dan-Inklusi-Keuangan-Tahun-2022.aspx#:~:text=Hasil%20SNLIK%202022%20menunjukkan%20indeks%20literasi%20keuangan%20masyarakat,SNLIK%20sebelumnya%20di%20tahun%202019%20yaitu%2076%2C19%20persen

54. Pandey, R., & Jessica, V. M. (2019). Sub-optimal behavioural biases and decision theory in real estate: The role of investment satisfaction and evolutionary psychology. *International Journal of Housing Markets and Analysis, 12*(2), 330-348. https://doi.org/10.1108/IJHMA-10-2018-0075

55. Reilly, F. K., & Brown, K. C. (2012). *Investments Analysis and Portfolio Management. South-Western, Cengage Learning.* Retrieved from https://www.cengage.co.in/category/higher-education/business-economics/finance/investment/analysis-of-investments-and-management-of-portfolios-pn

56. Ribeiro-Navarrete, S., Palacios-Marqués, D., Lassala, C., & Ulrich, K. (2021). Key factors of information management for crowdfunding investor satisfaction. *International Journal of Information Management, 59*(April). https://doi.org/10.1016/j.ijinfomgt.2021.102354

57. Sahi, S. K. (2017). Psychological biases of individual investors and financial satisfaction. *Journal of Consumer Behaviour, 16*(6), 511-535. https://doi.org/10.1002/cb.1644

58. Saurabh, K., & Nandan, T. (2018). Role of financial risk attitude and financial behavior as mediators in financial satisfaction: Empirical evidence from India. *South Asian Journal of Business Studies, 7*(2), 207-224. https://doi.org/10.1108/SAJBS-07-2017-0088

59. Schraeder, S. (2016). Information processing and non-Bayesian learning in financial markets. *Review of Finance, 20*(2), 823-853. https://doi.org/10.1093/rof/rfv002

60. Schwaiger, R., Kirchler, M., Lindner, F., & Weitzel, U. (2020). Determinants of investor expectations and satisfaction. A study with financial professionals. *Journal of Economic Dynamics and Control,* 110. https://doi.org/10.1016/j.jedc.2019.03.002

61. Shefrin, H. (2002). *Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing.* Oxford University Press.

62. Shim, G.-Y., Lee, S.-H., & Kim, Y.-M. (2008). How investor behavioral factors influence investment satisfaction, trust in investment company, and reinvestment intention. *Journal of Business Research, 61*(1), 47-55. https://doi.org/10.1016/j.jbusres.2006.05.008

63. Shive, S. (2010). An epidemic model of investor behavior. *Journal of Financial and Quantitative Analysis, 45*(1), 169-198. https://doi.org/10.1017/S0022109009990470

64. Silva, N. (2021). Life-cycle asset allocation and the peso problem: does ambiguity aversion matter? *Review of Behavioral Finance, May*. https://doi.org/10.1108/RBF-11-2020-0297

65. Soepriyanto, G., & Limijaya, A. (2022). Jouska: a lesson on financial (il)literacy of Indonesian millennials? *Emerald Emerging Markets Case Studies, 12*(2), 1-21. https://doi.org/10.1108/EEMCS-09-2021-0319

66. Statman, M. (2017). *Finance for Normal People: How Investors and Markets Behave*. Oxford University Press. https://doi.org/10.1016/b978-0-240-81763-7.00024-8

67. Tan, W. K., & Tan, Y. J. (2012). An exploratory investigation of the investment information search behavior of individual domestic investors. *Telematics and Informatics, 29*(2), 187-203. https://doi.org/10.1016/j.tele.2011.09.002

68. tSurvey. (2023). *Survey Platform*. Retrieved from https://tsurvey.id/survey-platform

69. Von Gaudecker, H. M. (2015). How Does Household Portfolio Diversification Vary with Financial Literacy and Financial Advice? *Journal of Finance, 70*(2), 489-507. https://doi.org/10.1111/jofi.12231

70. Wang, S., Zhang, Y., Wang, G., & Chen, Z. (2020). Who can realize the "spot value" of corporate social responsibility? Evidence from Chinese investors' profiles. *Sustainability Accounting, Management and Policy Journal, 11*(4), 717-743. https://doi.org/10.1108/SAMPJ-02-2019-0031

71. Wang, X. L., Shi, K., & Fan, H. X. (2006). Psychological mechanisms of investors in Chinese Stock Markets. *Journal of Economic Psychology, 27*(6), 762-780. https://doi.org/10.1016/j.joep.2006.06.007

72. Xiao, J. J., & Porto, N. (2017). Financial education and financial satisfaction: Financial literacy, behavior, and capability as mediators. *International Journal of Bank Marketing, 35*(5), 805-817. https://doi.org/10.1108/IJBM-01-2016-0009

73. Xu, W., Zuo, Y., Gao, X., & Yao, M. (2019). The influencing factors of satisfaction and lending intention in online lending investment: an empirical study based on the Chi-



http://dx.doi.org/10.21511/imfi.21(4).2024.19

nese market. *Accounting and Finance, 59*(S2), 2045-2071. https://doi.org/10.1111/acfi.12551

74. Yadav, A., Yadav, D., & Hazarika, I. K. (2022). A New Conceptualization of Investor Sophistication and its Impact on Herding and Overconfidence Bias. *Investment Management and Financial Innovations, 19*(2). https://doi.org/10.21511/imfi.19(2).2022.06

75. YahooFinance. (2024). *IDX COMPOSITE (^JKSE) Stock Price, News, Quote & History – Yahoo Finance.* Retrieved from https://finance.yahoo.com/quote/%5EJKSE/

76. Yang, M., Mamun, A. Al, Mohiuddin, M., Al-shami, S. S. A., & Zainol, N. R. (2021). Predicting Stock Market Investment Intention and Behavior among Malaysian Working Adults Using Partial Least Squares Structural Equation Modeling. *Mathematics*. Retrieved from https://www.mdpi.com/2227-7390/9/8/873

77. Yang, S. Y., Yin, S., & Mo, K. (2018). *Social Media and News Sentiment Analysis for Advanced Investment Strategies (Issue February 2016).* Retrieved from https://www.researchgate.net/publication/299498422_Social_Media_and_News_Sentiment_Analysis_for_Advanced_Investment_Strategies

78. Yulianto, A., & Wijaya, A. P. (2023). Disposition Effect: Does Investor Confidence Matter? Examining Service from Securities Brokerages. *International Journal of Professional Business Review,* 1-12. https://doi.org/10.26668/businessreview/2023.v8i2.1384

79. Zhang, Y., Lu, X., & Xiao, J. J. (2023). Does financial education help to improve the return on stock investment? Evidence from China. *Pacific Basin Finance Journal, 78*(December 2021), 101940. https://doi.org/10.1016/j.pacfin.2023.101940

80. Zheng, J., Hu, L., Li, L., Shen, Q., & Wang, L. (2021). Confidence Modulates the Conformity Behavior of the Investors and Neural Responses of Social Influence in Crowdfunding. *Frontiers in Human Neuroscience, 15*(November), 1-13. https://doi.org/10.3389/fnhum.2021.766908