Journal of Theoretical and Applied Information Technology
30th April 2025. Vol.103. No.8

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

ENHANCING STOCK MARKET INVESTMENT DECISIONS THROUGH BLOCKCHAIN TRANSACTION SECURITY: A STUDY ON INVESTOR INTENTIONS

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Abstract

This study analyzes the effect of transaction security using Blockchain technology on customers' decision to invest in the stock market. Blockchain is known as a revolutionary technology that offers high security through decentralization, transparency, and immutability. In the context of investment, this technology has the potential to reduce the risk of data manipulation, fraud, and information leakage that are often a challenge in online investment.A quantitative approach is used with the Theory of Planned Behavior (TPB) framework to measure the influence of variables such as attitude towards money, subjective norms, perceived behavioral control, and Blockchain transaction security on investment intentions. The sample consisted of 460 respondents who had experience or interest in investing in listed companies. Data was collected through a structured questionnaire and analyzed using Smart PLS to validate the research model.The results show that Blockchain-based transaction security, such as cryptographic encryption, smart contracts, and transparent transaction recording, has a significant influence on investment intention by increasing investor confidence. Psychological factors, such as attitudes toward money and subjective norms, also strengthen investment intentions, reflecting the importance of perceived security and social support. This research makes a practical contribution for companies to adopt Blockchain as a strategic move to increase investor confidence. This technology can be the basis for creating a safe and sustainable investment ecosystem. In addition, this research enriches the academic literature on the role of Blockchain in investment decisions and recommends better investment security standards for regulators.

Keywords : *Blockchain, Transaction Security, Stockmarket, Theory Of Planned Behavior (TPB), Intention To Invest, Transparency, Risk Of Fraud, Behavior Control, Subjective Norms.*

1. INTRODUCTION

Online investment in publicly listed companies has grown at an unprecedented pace in recent years, driven by advancements in information technology and the widespread adoption of digital financial platforms. Securities companies now offer seamless online trading services, enabling investors to buy and sell stocks and other capital market products with just a few clicks. This technological transformation has made investing more accessible, attracting a new wave of tech-savvy investors. However, despite the convenience, assessing a company's financial performance remains crucial for identifying growth potential and making informed decisions. The rise of online investment has brought significant opportunities but also serious challenges. Cybercrime related to fraudulent investment schemes has escalated, becoming a major concern in 2023. Fictitious investment schemes, which prey on unsuspecting job seekers and lure victims with promises of high returns, rank as the fourth most reported cybercrime category, with nearly 10,000 cases reported [1]. According to the Financial Services Authority (OJK), illegal investments caused public losses totaling IDR 114.9 trillion between 2011 and 2020, with the infamous Golden Trader Indonesia case contributing IDR 45 trillion to that figure. These cases expose vulnerabilities in the investment landscape, particularly the lack of transparency and oversight in fund [2].

One of the most alarming cases of investment fraud is the Indosurya Savings and Loan Cooperative (KSP) scandal, which defrauded 23,000 customers of a staggering IDR 106 trillion [3]. Victims were promised unrealistically high interest rates of 9-12% per

annum, only to face defaults and frozen funds. The case highlights systemic weaknesses, such as insufficient monitoring and poor transparency, which leave investors exposed to significant risks. The fallout from such cases often leads to financial ruin, psychological distress, and in extreme instances, loss of life.

Blockchain technology is emerging as a transformative solution to address these challenges, promising enhanced security, transparency, and accountability. Every transaction, including fund management activities by brokerage firms, can be permanently recorded on the blockchain, accessible to all relevant parties [4]. This eliminates opportunities for manipulation or forgery, fostering trust and accountability. Blockchain's encryption and decentralized structure provide robust security against unauthorized alterations, significantly reducing the risk of fraud and embezzlement.

Smart contracts, another innovative feature of blockchain, can automate compliance and reduce human error. These self-executing contracts operate based on predefined rules, ensuring that funds are used strictly according to agreed-upon terms. For instance, they can regulate the allocation and use of client investments, minimizing the potential for misuse. Additionally, blockchain's inherent auditability simplifies regulatory oversight and forensic investigations, enabling quick and transparent reviews of transaction records [5].

The potential of blockchain to revolutionize the stock market is further underscored by platforms like Indodax, originally known for cryptocurrency trading. Indodax is now exploring blockchain applications in digital securities and stock trading. By leveraging blockchain's transparency, efficiency, and security, platforms like Indodax can enhance customer trust and reshape the future of online investments [6].

The primary aim of this study is to delve into two crucial questions that define the dynamics of modern investment practices.

1. How do financial investor attitudes affect customer intentions to make an investment?
2. How does transaction security using Blockchain have influence the customer's intention to invest in a stock market?

2. THEORITICAL BACKGROUND

2.1. Blockchain

Blockchain is a revolutionary technology that has changed the paradigm in the way data is stored, accessed, and secured [7]. Basically, Blockchain is a decentralized information storage system, structured in the form of interconnected blocks, and secured through cryptography.

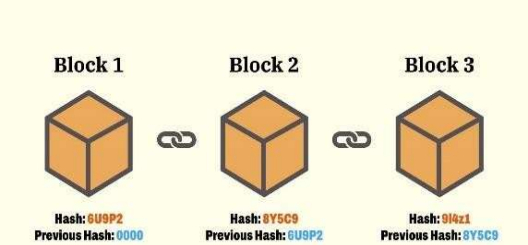

Figure 1. Blockchain System [74]

The basic concept of Blockchain is a chain of blocks consisting of blocks containing transactions or other information. Each block has its own link and also contains the hash (unique code) of the previous block, thus forming a chain that cannot be changed easily. This provides a high level of security because if one block is changed, then all the blocks after it must also be changed, which makes it very difficult to manipulate.

Blockchain also has properties that are considered to help improve security, including:

1. Decentralization

Don Tapscott in his book Blockchain Revolution explains that Blockchain is a decentralized technology that does not require a central authority [8].

2. Immutability

Andreas M. Antonopoulos in his book Mastering Bitcoin emphasizes that data on the Blockchain is immutable due to its cryptographic nature and interlocking block structure [9].

3. Transparency

Vitalik Buterin, when introducing Ethereum, emphasized that public blockchains allow for transparency as all data can be accessed by on the network [10].

4. High Security

Dr. Stuart Haber and W. Scott Stornetta introduced the foundation of Blockchain technology in their paper on digital timestamping [11], which prioritizes security through cryptographic hash mechanisms.

5. Efficiency

Satoshi Nakamoto in the Bitcoin Whitepaper

explains that Blockchain eliminates the need for intermediaries, making it more efficient for global transactions [12].

6. Distribution

Garrick Hileman in his research on Blockchain technology, explains that Blockchain works by distributing data across many nodes, avoiding the risk of a single failure [13].

7. Smart Contracts

Nick Szabo, the originator of the smart contract concept, introduced the idea that Blockchain could automate agreements through self-executing code [14].

8. Auditability

Joseph Lubin as the co-founder of Ethereum, mentioned that Blockchain facilitates the audit process because all data is recorded chronologically and permanently [15].

The development of Blockchain technology has been the concern of various experts, each with views that enrich our understanding. Bhutta et al. [16] summarize the evolution of Blockchain from the launch of Bitcoin in 2009 to the era of NFTs and institutional regulation, highlighting important phases such as the emergence of smart contracts in 2015 and the DeFi boom in 2020. Swan [17] divided the development of Blockchain into three stages: Blockchain 1.0 for cryptocurrencies, Blockchain 2.0 for smart contracts, and Blockchain 3.0 for non-financial applications.

Tapscott et al. [18] describe Blockchain as a transformational technology that brings transparency, security, and efficiency to various sectors, such as logistics and digital voting. Narayanan et al. [19] emphasized the evolution of Blockchain from Bitcoin infrastructure to the foundation for decentralized applications such as Ethereum. Buterin [10], in the Ethereum whitepaper, introduced the second generation Blockchain that supports smart contracts and the DApps ecosystem. Meanwhile, Liu et al [20] view Blockchain as a tool to revolutionize business models through trust and the elimination of intermediaries. Finally, Garay et al. [21] highlight the key challenges of modern Blockchain, including scalability, security, and interoperability, which are key for large-scale adoption. Together, these experts' views show how Blockchain is evolving from a simple innovation to a world-changing technology

2.2. Blockchain and Transaction Security

Blockchain technology has revolutionized transaction security by providing decentralization, transparency, and immutability. Prior studies, such as those by Tapscott et al. [18] and Nakamoto [12], have highlighted Blockchain's ability to enhance financial security and prevent fraud. However, gaps remain in its adoption within stock investments, particularly in emerging markets. While some studies focus on theoretical applications, empirical research on Blockchain's practical benefits for investment security is still limited. This study critiques existing frameworks, emphasizing their limitations in real-world scenarios.

2.3. Stock Market and Public Company

A stock exchange is a market where securities such as stocks, bonds, and commodities are traded [22]. Here, investors buy and sell company shares to benefit from price increases or dividend distributions. The stock market provides a way for companies to raise capital by selling their shares to the public through an initial public offering (IPO). In general, stock exchanges provide liquidity, fair pricing, and transparency for investments.

Public companies are business entities that have listed their shares on a stock exchange and have given the public access buy and sell their shares [23]. As such, they are regulated by financial authorities and must meet strict transparency and reporting standards. The shareholders of a public company are the shareholders, which can be individuals, institutions, or investment funds.

The basic mechanism of the stock market involves sellers (bidders) and buyers (bidders) meeting at a stock exchange to conduct a trade. Stock prices are determined by supply and demand, with rising and falling prices reflected in company performance, economic outlook, and other market factors. As investors, their main objective is to buy shares at a low price and sell them at a higher price to make a profit.

Investing in the stock market can be a potential way to build long-term wealth. However, it also involves risks, including market risk (changes in stock prices), business risk (company performance) and financial risk (changes in economic conditions) [24]. Therefore, it is important to do careful research and understand your risk profile before investing in the stock market.

Public companies, on the other hand,

have a responsibility to their shareholders to provide accurate and regular financial reports. These reports provide an overview of the company's performance, future projections, and management strategies. Shareholders have the right to elect the company's board of directors, who are responsible for strategic decision-making.

In addition, public companies must also comply with various regulations and standards, including those related to information disclosure, investor protection and business ethics. Through this process, public companies seek to build investor confidence and maintain their reputation in the market.

For investors, investing in public companies offers access to a wide range of investment opportunities with high liquidity [25]. Through the purchase of shares, investors can be part of the company's growth and success, as well as benefit from dividend distributions or share price appreciation.

Overall, stock markets and public companies are intertwined in forming a dynamic financial ecosystem [26]. While the stock market provides a platform for companies to raise capital and investors to invest, public companies are accountable for good performance and transparency to their shareholders. With a good understanding of stock market mechanisms and public company governance, investors can make smart and responsible investment decisions.

2.4. Online Investment & Fraud

Online investing is the practice of investing through digital platforms, such as mobile device apps or websites, that allow individuals to buy, sell or manage their investment portfolios electronically. Technological advancements have opened the door for easier and faster access to financial markets for investors from diverse backgrounds [27]. However, along with these advantages, there is also a risk of fraud that needs to be considered.

Online fraud refers to fraudulent practices that occur over the internet, encompassing a variety of schemes intended to defraud people or entities [28]. This could be identity theft, credit card fraud, phishing, or investment fraud, where fraudsters use sophisticated means to seduce victims and obtain information such as financial information or personal data.

One common form of fraud in online investing is fake investment schemes. These can be investment offers with unrealistic returns or promises of huge profits in a short period of time [29]. often use marketing strategies that clever ways to attract victims, such as the use of fake testimonials or absurd claims about their investment products or services.

Addition, there are also fraudulent practices where unauthorized parties try to obtain sensitive information from investors, such as login information or financial details [30]. This can happen through phishing emails, where fraudsters send fake emails that resemble official communications from investment platforms to steal users' personal information. In other cases, fraudsters may try to send fake links or malware that can compromise users' devices and steal their sensitive data [31].

2.5. Previous Research

Yee et al. [32] applied the Theory of Planned Behavior (TPB) to examine factors influencing investment intentions in renewable energy across Malaysia, Indonesia, and Thailand. The study found that attitudes, subjective norms, perceived behavioral control, and risk aversion significantly shaped investment decisions, with regulatory evaluation as a key control variable. Emphasizing the role of renewable energy in achieving SDGs (Goals 7, 12, and 13), the study highlighted the importance of government incentives and broader investor participation. It also recommended considering moral norms, environmental awareness, and financial literacy for more accurate investment predictions.

Lai [33] explored the impact of personality traits on stock investment intentions using TPB. The study analyzed factors such as agreeableness, extroversion, conscientiousness, openness to experience, and neuroticism, along with demographic variables like gender, age, and experience. Findings revealed that subjective norms, attitudes, and perceived behavioral control played a significant role, while trading experience was the most influential factor. The study underscored the need for government and financial institutions to foster positive investment attitudes.

Nadeem et al. [34] investigated psychological factors affecting stock market participation, focusing on money attitudes (money avoidance, money worship, money status, money vigilance), financial knowledge, and self-efficacy. Risk attitudes served as a control variable. The study confirmed that these psychological aspects strongly influence

investment decisions but acknowledged limitations in sample size and scope. Future research should expand the sample and explore socio-demographic factors, as well as mediation and moderation effects.

Pandurangan and Al Shammakhi [35] examined Gen Z's investment intentions in speculative markets using TPB. The study found that financial literacy and attitudes significantly influenced investment decisions, while subjective norms had little to no effect. Financial literacy acted as a mediator, enhancing informed investment choices. The findings emphasized the need for early financial education to shape smarter investment behaviors.

Lastly, Ayedh et al. [36] explored factors influencing Malaysian Muslim investors in Bitcoin. The study found that compatibility, awareness, and trust in financial fatwas significantly impacted investment intentions, whereas ease of use, profitability, and subjective norms had no notable effect. The research also highlighted concerns over uncertainty in cryptocurrency, which may conflict with Islamic financial principles. It recommended clearer regulations and stability measures, including linking cryptocurrencies to commodities like gold or silver, to enhance investor confidence.

Several studies have examined Blockchain's role in investment security. For instance, Bhutta et al. [16] explored its potential in mitigating fraud, while Swan [37] classified its evolution into three stages: cryptocurrency (1.0), smart contracts (2.0), and non-financial applications (3.0). However, these studies often generalize Blockchain's benefits without evaluating its practical application in stock market transactions. Our study builds on these findings by providing empirical data on investor confidence in Blockchain-based security mechanisms

2.6. Research Gap and Contribution

While previous studies have extensively explored the factors influencing investment intentions, there remains a significant gap in understanding the role of Blockchain transaction security in shaping investor confidence.

Yee et al. [32] applied the Theory of Planned Behavior (TPB) to renewable energy investments, emphasizing attitudes, subjective norms, and perceived behavioral control as critical determinants. However, their study focused primarily on sustainable energy investments and did not assess technological innovations such as Blockchain in stock market investments.

Lai [33] examined how personality traits influence stock investment decisions, showing that trading experience played a crucial role. However, the study did not investigate how financial technologies like Blockchain might shape investor confidence and decision-making. Similarly, Nadeem et al. (2020) explored the psychological aspects of stock market participation, particularly money attitudes, financial knowledge, and risk perceptions. Although their findings underscored the importance of financial literacy, they did not account for the impact of transaction security on investor behavior.

Pandurangan and Al Shammakhi [35] focused on Gen Z investors in speculative markets, revealing that financial literacy significantly mediated investment decisions, while subjective norms had minimal influence. This suggests that young investors prioritize factual knowledge over external pressures but lacks an examination of how secure transaction technologies could further enhance investment confidence.

Ayedh et al. [36] provided insights into how Malaysian Muslim investors perceive Bitcoin investments, with factors such as trust in financial fatwas and compatibility influencing investment decisions. However, their research highlighted concerns over cryptocurrency uncertainty, which points to a need for stronger regulatory measures. While relevant to digital investments, this study did not specifically address stock market investments or Blockchain's role in mitigating risk.

Our study fills these gaps by focusing on how Blockchain transaction security directly influences investor intentions in the stock market. Unlike prior research that examines psychological or demographic influences, this study uniquely integrates Blockchain's security mechanisms such as cryptographic encryption, decentralized ledgers, and smart contracts with investor decision-making. By providing empirical data on investor confidence in Blockchain-secured transactions, this research advances both theoretical understanding and practical applications of financial technology in investment security.

2.7. Theory of Planned Behavior (TPB)

Theory of Planned Behaviour is a psychological framework developed by Icek Ajzen in 1985 to understand and predict human behavior [38]. This theory seeks to explain how individuals make decisions about behavior. Based on their beliefs, attitudes, and subjective norms [39].

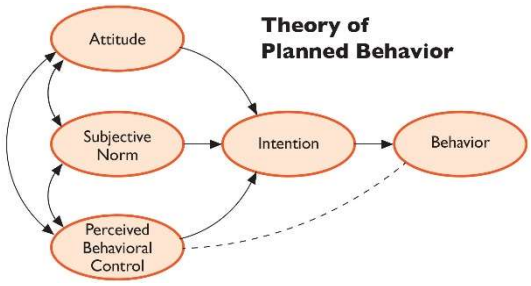

Figure 2. Theory of Planned Behavior [75]

TPB in the investment context have been used to understand investor behavior and design communication strategies or interventions aimed at increasing participation in investment [40]. For example, approaches that reinforce positive attitudes towards investing, increase social support from the environment, and provide education or resources that increase individuals' perceived control can help encourage better investment behavior.

However, as in the application of the TPB in other fields, criticisms of the TPB's tendency to focus on individual intentions without considering situational or external factors that influence behavior also apply in the investment context [41]. Nonetheless, the TPB remains a useful tool in understanding and forecasting human investment behavior [42], as well as designing strategies to improve financial literacy and participation in financial markets.

2.8. Money Attitude

Attitude towards money describes a person's financial behavior, formed from their life experiences [41]. This attitude consists of four dimensions: money avoidance, money worship, money status, and money vigilance.

1. Money Avoidance: Money is considered bad, and rich people are considered greedy.
2. Money Worship: Believing that money solves problems and brings happiness.
3. Money Status: Money is used to improve social status.
4. Money Vigilance: Money is perceived as a source of shame, causing anxiety.

Research shows that investors who are tempted by high returns often suffer losses, such as in the 2008 Asian financial crisis. Although While financial knowledge is important, many investors remain confused about investing. Sound financial decisions require accurate judgment [43], and psychological factors such as cognitive ability and attitudes towards money strongly influence market participation.

Attitudes toward money affect financial behavior and stock market participation [44]. Some of the scales used to measure money attitudes are the Money Attitude Scale (MAS), Money Beliefs and Behavior Scale (MBBS), and Money Ethic Scale (MES) [45]. Studies show that activity in the anterior insula of the brain correlates with an individual's stock trading behavior.

Financial attitudes also influence financial management and economic well-being using the Theory of Planned Behavior (TPB) and found that attitudes partially moderate the relationship between financial knowledge and investment intentions [46]. Stock market participation is increasing with new financial products and services, although many are difficult for lay investors to understand. Standard portfolio models assume rational decisions by knowledgeable investors, but investment motivations and choices are often influenced by financial attitudes formed from social interactions, education, and experience.

The existing literature provides different insights on financial attitudes, financial literacy and financial behavior. However, its application in Pakistan is still limited. This research focuses on the influence of money attitudes on investors' stock market participation decisions, as well as enhancing security applications using Blockchain aimed at developing a conceptual model to explain the psychological process of investors participating in the capital market.

2.9. Subjective Norm

Subjective Norm is a concept in behavioral theory that refers to individuals' perceptions of existing social norms and the extent to which they feel pressure to comply with these norms [47].

In the context of transaction security using Blockchain technology, Subjective Norm plays an important role as it influences an individual's decision to adopt the necessary security practices in transacting with crypto

assets. Subjective Norm consists of two main components: Normative Belief and Motivation to Comply.

First, Normative Beliefs refer to individuals' perceptions of expectations from others or groups that are important to them, related to the security behavior of transactions using Blockchain [48]. This includes individuals' beliefs about the extent to which family, friends, or other social groups consider it important to use security measures such as two-factor authentication, secure storage of private keys, or avoiding interactions with untrusted entities in Blockchain transactions. Normative Beliefs can be influenced by social influences, group norms, or cultural norms related to security and privacy in the context of digital financial technology [49].

Second, Motivation to comply is an individual's drive to comply with norms, standards, or expectations related to certain practices [50], in this case in the context of using Blockchain for investments and transactions. Motivation to comply has a significant influence on intention to invest and transaction security in the context of using Blockchain. If the social environment supports the use of Blockchain technology for transaction security, individuals will be more motivated to adopt it. Subjective norms can also increase investment intentions, especially if the social environment encourages the use of secure investment platforms such as Blockchain. This motivation encourages them to invest because they believe that complying with existing standards can minimize the risk of loss and increase the security of their investments [51].

2.10. Perceived Behavior Control

Perceived Behavior Control (PBC) is a concept in psychology that refers to an individual's perception of his or her ability to control certain behaviors [52]. In the context of transaction security using Blockchain, PBC refers to the extent to which users believe that they have control or influence over the security of the transactions they perform within the Blockchain network. There are several factors that affect PBC in the context of transaction security using Blockchain:

1. Ease of Use: The use of Blockchain and its related applications should be easy for users to understand and operate. The simpler the user interface (UI) and user experience (UX), the more likely users are to feel like they have full control over their transactions [53]. If the platform is too complicated, users may feel unable to properly control their transactions.
2. Knowledge and Education: A user's level of knowledge about Blockchain and transaction security can affect their PBC. The more information and understanding users have about how Blockchain works and the security measures to be taken, the more likely they are to feel in full control of their transactions.
3. Trust in Technology: Users' trust in Blockchain technology as a whole also plays an important role in PBC. If users have high confidence that Blockchain is a secure and reliable technology, they are likely to feel more capable of properly controlling their transactions.
4. Availability of Resources: The availability of resources, such as hardware (e.g., hardware wallets) or software (e.g., wallet apps) that can help improve transaction security, also affects PBC. Users who feel they have access to these resources may feel more control of their transactions [54].
5. Trust Related Entities: Users' trust in the entities or parties associated with the Blockchain platform can also affect PBC. If users have high trust in such entities, they may feel more confident in controlling their transactions through mediating and moderating variables [55]
6. Previous Experience: A user's experience with previous Blockchain transactions can also affect their PBC. If they have had positive or negative experiences with previous transactions, this can affect their confidence level in controlling future transactions.

Thus, Individuals who have a good understanding of Blockchain technology tend to have more confidence in the transaction security it offers. The higher the perceived behavioral control, the greater their intention to invest, especially if they feel able to manage risk and use a secure platform such as Blockchain. The higher a person's perceived behavioral control, the greater their confidence in the security of transactions made and the stronger their intention to invest [56]. In other words, beliefs about the control they have over their actions influence the decision to invest more safely and trust in Blockchain technology.

2.11. Transaction Security Using Blockchain

Blockchain is a technology that has fundamentally changed the transaction security

paradigm [57]. In the context of investment, the use of Blockchain can provide high transaction security and minimize the risk of data manipulation, fraud, and information leakage [58]. Let's talk more about how the security of transactions using Blockchain can affect the intention to invest.

The application of Blockchain technology in investments can have a positive impact on investors' intention to invest, for the following reasons:

1. Trust and Transparency: Blockchain creates a transparent and secure environment for conducting transactions [59]. With open and easily verifiable transaction information, investors feel more confident in making their investments, as they can verify the legitimacy of the transactions and assets they are buying.
2. Risk Reduction: With Blockchain's security features, such as encryption, consensus, and immutability, the risk of data manipulation, fraud, and information leakage can be minimized [60]. This makes investors more comfortable in investing their capital, as they know that their assets and transactions are safe.
3. Efficiency and Low Cost: The use of Blockchain can reduce administrative costs and transaction costs as it eliminates intermediaries or third parties that are usually involved in the investment process. This can benefit investors by reducing their investment costs and increasing potential returns on investment.
4. Global Access: Blockchain enables easier and cheaper investments globally. Investors can easily access investment markets around the world without significant geographical or bureaucratic restrictions. This opens up new investment opportunities and increases the diversification of investment portfolios.

In conclusion, high transaction security through Blockchain increases investor confidence, encouraging them to invest with more confidence. With protection from the risk of fraud and manipulation, investors feel more comfortable and trust that their funds remain safe. By utilizing the unique security features of Blockchain, investors can feel more confident in making transactions, thereby promoting the overall growth of the investment market [61].

2.12. Intention to Invest

Intention to invest which is influenced by transaction security using blockchain refers to the desire or intention of individuals to make investments driven by confidence in the security of transactions obtained through the use of Blockchain technology. Transaction security using Blockchain is the key that influences individual decisions to invest, especially in the scope of online or digital investment [62].

Intention to invest as influenced by transaction security using blockchain is a topic that remains limited in the literature ([63]. However, some studies have shown that transaction security can influence intention to invest. For example, in the context of capital markets, automatic investment technology has been shown to influence the intention invest in capital markets [64]. In addition, financial knowledge and risk perception can also influence investment intentions. Although it has not been widely studied, it can be concluded that transaction security, with other factors such as financial literacy and technology, can affect investment intentions [65].

Refers to an individual's intention or desire to make an investment, which is influenced by factors such as transaction security, attitude towards money, and subjective norms. By understanding that their transactions will be secured and protected by Blockchain technology, investors are likely to feel more confident in allocating their funds into finances run through Blockchain. This can drive investor intentions higher if investors feel that the platform used is safe and trustworthy [66]. Blockchain, with its security and transparency, is a key factor in increasing investment intentions.

2.13. Indodax

Indodax, as the largest cryptocurrency trading platform in Indonesia, has a significant role in facilitating transactions of various digital assets [67]. In addition to its primary focus on cryptocurrencies, Indodax has also begun to explore the use of Blockchain technology for other digital assets, including securities and stocks. Here is a more detailed explanation of Indodax's exploration in this regard:

1. Digital Asset Diversification

Although Indodax is currently widely recognized as a cryptocurrency trading platform, they are exploring the potential of Blockchain technology to cover a wide range of other types of digital assets [68]. This includes the tokenization of more traditional assets, such as securities and shares. Tokenization is the process by which the ownership rights of an asset are converted into

digital tokens that can be traded on the Blockchain.

2. Advantages of Tokenization of Securities and Shares
   a) Transparency: By using Blockchain, every transaction can be recorded transparently and can be accessed by all authorized parties. This increases transparency in securities and stock trading.
   b) Security: Blockchain provides a high level of security through encryption technology and data distribution across different nodes. This reduces the risk of data manipulation and fraud.
   c) Efficiency: The transaction settlement process becomes faster as it reduces dependence on traditional intermediaries. Transactions can be done in minutes or even seconds.
   d) Accessibility: Blockchain enables wider access to global markets, opening up opportunities for small and medium investors to participate in securities and stock trading.
3. Implementation of Blockchain Technology in Indodax

Indodax is exploring ways to integrate Blockchain technology in their operations beyond cryptocurrency trading. Some of the steps they might take include:

1) Development of a Digital Securities Trading Platform: Indodax could develop a dedicated platform for tokenized digital securities trading, allowing users to trade stocks and other securities in the same way they trade cryptocurrencies [69].
2) Collaboration with Regulators and Financial Service Providers: Indodax may collaborate with financial authorities and other financial service providers to ensure compliance with strict regulatory and security standards in digital securities trading.
3) Education and Socialization: Indodax will likely continue to educate and socialize users on the benefits and workings of asset tokenization, as well as how Blockchain technology can be applied in securities trading [70].
4) Future Potential
   With the continued development of Blockchain technology and growing interest in asset tokenization, Indodax is well positioned to become a pioneer in digital securities trading in Indonesia [71]. If favorable regulations are put in place, Indodax can expand its services to include trading stocks and other securities, offering a more efficient, secure, and transparent solution for investors.

3. METHODOLOGY

3.1. Methods

This research uses quantitative methods with the Theory of Planned Behavior (TPB) approach to analyze the factors that influence investors' intention to invest. The quantitative method was chosen because it allows measurement of variables systematically, objectively, and can be tested statistically. This approach is used to develop and test mathematical models and hypotheses that explain the relationship between psychological factors, such as money attitude, subjective norm, and perceived behavioral control, with investment intention.

The advantage of this method lies in its ability to produce data that can be generalized to a wider population, as well as provide accurate and testable analysis results. In addition, quantitative research allows researchers to understand the patterns of relationships between variables and identify the main factors that contribute to investment decisions. Using the TPB approach, this study not only measures the direct influence of Blockchain-based transaction security on investment intentions, but also examines the role of psychological factors in shaping investor decisions.

This study employs a structured survey-based data collection method, targeting 460 investors from diverse backgrounds, including both experienced and novice investors. The data is analyzed using Smart PLS, a structural equation modeling (SEM) technique that ensures robust statistical validation and reliability. The research instrument consists of a series of Likert-scale questions designed to capture participants' perceptions of Blockchain security, psychological factors, and investment behavior.

Furthermore, this methodology ensures a comprehensive approach by incorporating control variables such as demographic factors, prior investment experience, and risk tolerance. The integration of these variables helps refine the findings and provide a more nuanced understanding of the factors influencing investment decisions. Through this rigorous methodology, the study establishes a strong

empirical foundation for evaluating how Blockchain technology can enhance investor confidence and drive investment growth in the stock market.

3.2. Research Model & Hypothesis

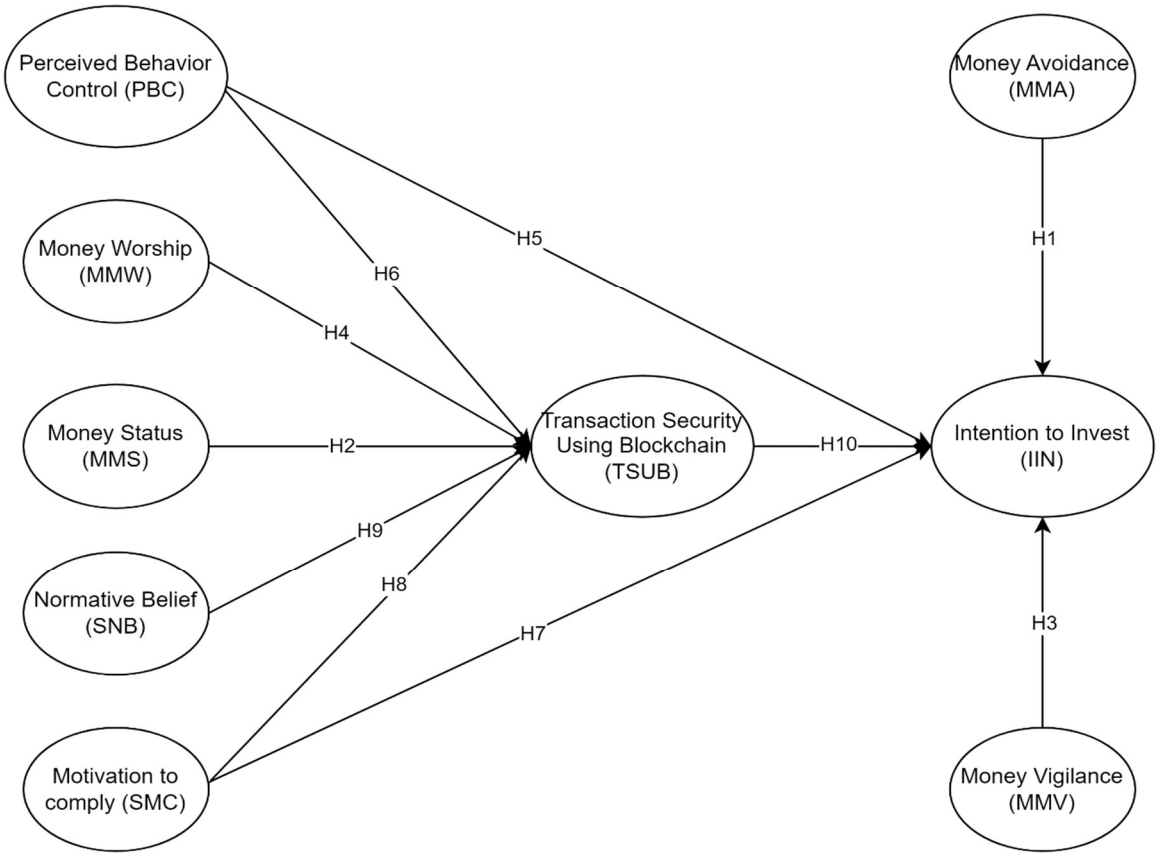

Figure 3. Research Model

H1 : Money Attitude - Money Avoidance has a significant influence on Intention to Invest

Money avoidance has a significant influence on investment intentions, shaped by an individual's negative perceptions of money and its impact on financial decision-making. Those with money avoidance tendencies often associate money with stress, unfairness, or ethical concerns, leading to discomfort or reluctance in handling financial matters. This mindset can create barriers to investing, as investments are commonly perceived as risky, profit-driven, and requiring active money management—elements that may feel overwhelming or undesirable to individuals who prefer to distance themselves from financial complexities.However, money avoidance does not always lead to a complete rejection of investment opportunities. In some cases, individuals may still be inclined to invest if they view it as a means to achieve financial security or long-term stability, helping to alleviate their anxiety about money. stress directly.

H2 : Money Attitude - Money Status has a significant influence on Transaction Security Using Blockchain

Money Attitude - Money Status has a significant influence on Transaction Security Using Blockchain departs from the view that individuals who view money as a status symbol tend to seek systems that provide a sense of security and prestige in their financial transactions. The attitude of money status makes a person more concerned about reputation, trust, and advanced technology that can support their image as a financially successful individual. Blockchain, with its advantages of transparency, high security, and cutting-edge technology, can attract individuals who have a money status

orientation, as this technology not only provides protection in transactions but also enhances their image as users of modern financial solutions. This suggests a significant relationship between attitude towards money as status and preference for Blockchain-based transaction security.

H3 : Money Attitude - Money Vigilance has a significant influence on Intention to Invest

Money Attitude - Money Vigilance has a significant influence on Intention to Invest based on the nature of financial prudence and vigilance possessed by individuals with this attitude. Money vigilance reflects behaviors that tend to be careful, vigilant, and responsible in managing money, including in making investment decisions. Individuals with this attitude are usually more motivated to invest because they are realize the importance of long-term financial planning and the need carefully protect or increase their assets. They tend to choose safe and well-considered investments, so money vigilance can significantly boost investment intentions, especially if these investments offer transparency and manageable risk.

H4 : Money Attitude - Money Worship has a significant influence on Transaction Security Using Blockchain

Money Attitude - Money Worship has a significant influence on Transaction Security Using Blockchain stemming from the belief that individuals who view money as a source of happiness, power, or the solution to all problems will be more likely to value technologies that provide high security in their financial transactions. The money worship attitude often makes individuals very concerned about asset protection and trust in the systems used to manage money. Blockchain, with its superior security features such as encryption and transparency in transaction recording, becomes an attractive solution for them. The security that Blockchain offers ensures that their money remains safe, thus conforming to their view that money is a valuable asset that should be protected to the maximum. Therefore, there is a significant relationship between money worship attitude and preference for transaction security using Blockchain.\

H5 : Perceived Behavioural Control has a significant influence on Intention to Invest.

Perceived Behavioural Control has a significant influence on Intention to Invest based on the concept that an individual's belief in his ability to control investment behavior affects his intention to invest. Perceived Behavioural Control includes a person's perception of the ease or difficulty of making an investment, such as financial capability, investment knowledge, access to information, and resources.
available. The greater the self-confidence and perceived control, the higher the likelihood of individuals having the intention to invest, as they feel able to overcome challenges or risks that may arise. Thus, this factor plays a significant role in building one's intention to make an investment decision.

H6 : Perceived Behavioural Control has a significant influence on Transaction Security Using Blockchain.

Perceived Behavioural Control has a significant influence on Transaction Security Using Blockchain is based on the belief that an individual's perception of his ease and ability to use Blockchain technology affects his trust in transaction security. Blockchain, with complex features such as encryption and decentralized systems, may seem difficult to understand for some individuals. However, when an individual feels they have enough control, such as an understanding of how Blockchain works, access to a user-friendly platform, and confidence in managing the technology, they are more likely to believe in the security it offers. Therefore, high perceived behavioral control can encourage acceptance and belief in Blockchain as a transaction security system.

H7 : Subjective Norm - Motivation to Comply has a significant influence on Intention to invest.

Subjective Norm - Motivation to Comply has a significant influence on Intention to Invest is based on the idea that a person's decision to invest is influenced by social norms and motivation to meet the expectations of others. Subjective norm reflects social pressure from the environment, such as family, friends, or influential figures, which encourages individuals to invest. When a person has a high motivation to comply with or gain approval from those around them, they tend to be more motivated to invest as a form of compliance or to fulfill the expectations of others.
to meet those expectations. Thus, the combination of social norms and motivation to comply plays an important role in shaping an individual's intention to invest.

H8 : Subjective Norm - Motivation to Comply has a significant influence on Transaction Security Using Blockchain.

Subjective Norm - Motivation to Comply has a significant influence on Transaction Security Using Blockchain is based on the view that social pressure and motivation to comply with group norms influence individual acceptance of transaction security technologies such as Blockchain. When individuals are in an environment where those around them, such as friends, family, or the professional community, encourage the use of Blockchain because it is considered safe and trusted, their motivation to comply with this norm will increase. This makes them more likely to trust and use Blockchain for their transactions. Thus, the combination of social norms and the motivation to adhere to them can influence the trust and adoption of Blockchain-based transaction security technologies.

H9 : Subjective Norm - Normative Belief has a significant influence on Transaction Security Using Blockchain

Subjective Norm - Normative Belief has a significant influence on Transaction Security Using Blockchain is based on the concept that social norms and individual beliefs about expectations from the social environment influence their decision to use Blockchain as a means of secure transactions. Normative beliefs reflect a person's beliefs about how important the norms that exist in their social environment, such as family, friends, or professional groups, view the use of Blockchain as an effective security solution. If individuals have a positive belief that these norms support the use of Blockchain for secure transactions, they are likely to be more confident in using it. , the relationship between normative belief and transaction security using Blockchain is significant in encouraging the adoption of Blockchain as a means of secure and trusted transactions.

H10 : Transaction security Using Blockchain has a significant influence on Intention to invest.

Transaction Security Using Blockchain has a significant influence on Intention to Invest based on Blockchain's superiority in providing security, transparency, and trust in every transaction. Blockchain technology offers protection against the risk of data leakage, fraud, and transaction manipulation, which can increase the confidence of individuals in carrying out investment activities. When individuals feel safe and confident that their transactions are protected through Blockchain technology, their intention to invest will be higher. Thus, transaction security using Blockchain plays an important role in building trust and encouraging individuals' intention to invest.

Table 1. Indicator Variables

Variables	Indicator	Source
Money Attitude - Money Avoidance (MMA)	1. I feel it is not right if I have a lot of money while others have less. 2. I don't feel worthy of excessive money. 3. I feel that the less wealth a person has, the better the quality of life. 4. I feel money can have a negative impact on people 5. It is not possible to be rich and still believe in other people's motives for you	[41]
Money Attitude - Money Worship (MMW)	1. I feel it is not right if I have a lot of money while others have less. 2. I don't feel worthy of excessive money. 3. I feel that the less wealth a person has, the better the quality of life. 4. I feel money can have a negative impact on people 5. It is impossible to be rich and still be confident about others' motives towards you.	[41]

Money Attitude - Money Status (MMS)	1. I feel that individuals with financial limitations are often considered unworthy of wealth. 2. We have to choose between having happiness or wealth, not both. 3. One's success is only judged by the amount of money earned 4. If someone asked me about my income, I would probably give misleading information about the amount of my income. 5. Rich people should not have reason not to be happy.	[41]
Money Attitude - Money Vigilance (MMV)	1. Asking for information about the amount of someone's money is not a good idea.Appropriate. 2. Planning to save for emergencies is important 3. Communities should be financially independent and not always rely on aid 4. It's best not to buy something if you can't pay for it in cash 5. I would feel uncomfortable to provide information about my income to others.	[41]
Subjective Norm - Normative Belief (SNB)	1. My family is of the opinion that investing in speculative markets is not safe. 2. My friends argue that participating in the stock market is not a safe decision. 3. According to my family members, I am modeling inappropriate behavior to my siblings by engaging in the stock market. 4. I trust influencers to put my shares in the places they suggest. 5. I will be regarded as a person who wise or successful for engaging in the stock market	[72]
Subjective Norm - Motivation to Comply (SMC)	1. I consider inputs from my family members before making investment decisions 2. I value my friends' opinions about the stock market 3. I want to be seen as a person who is cautious in making investment decisions. 4. Social media groups provide educational information and encourage participation in the stock market 5. I'm afraid of falling behind with investments that is happening in my environment / *Fear of Missing Out* (*FOMO*)	[72]
Perceived Behavior Control (PBC)	1. I have sufficient skills to invest in stocks 2. I have enough time to invest in stocks 3. I have enough knowledge to invest in stocks 4. I have a plan to invest in the stock market 5. I will invite others to investing in the stock market.	[52]

Transaction Security Using Blockchain (TSUB)	1. I believe in security that has a system that does not rely on a central authority or single entity to manage transactions. 2. I believe in security that is openly accessible to all parties connected to the network. 3. I trust with its security possible implementation smart contract, which is computer code that runs automatically when set conditions are met 4. I believe in the security that once the data is entered into the Blockchain, it is difficult to change it or delete it so that it can be ensured that every transaction or record stored in the Blockchain has high integrity and cannot be manipulated. 5. I believe in distributed security across many nodes, so tend to be more resilient towards system attack or failure	[73]
Intention to Invest (IIN)	1. A comprehensive understanding of investment tools will provide encouragement and make me interested in engaging in investments. 2. It is recommended to invest if the risk is low and in line with my understanding of the stock market. 3. I realize that investing in the stock market involves controllable risks, so it is important to raise awareness about them. 4. I will continue to invest in stock market 5. I am able to overcome discomfort that may arise as a result of investing in shares	[40]

3.3. Research Time Horizon

In this study I will use the Cross-Sectional time horizon because in determining the time horizon, it is important for me to consider the research question, research objectives, and the availability of relevant data. In choosing the right time to conduct cross-sectional research, so that I can identify the relationship between Transaction Security on Customer Decisions to Invest in Stock Market at that time and provide useful understanding in a specific context. The time I will use is May 18, 2024 - December 31, 2024.

3.4. Population of The Study

The population of the research I used was 460 customers who had invested and wanted to invest which could show how much influence the security of transactions had on customer decisions to invest in the company.

3.5. Sampling technique

I will use a purposive sampling technique because I will select 460 populations that I consider to have characteristics or information with the research I am doing.

3.6. Unit of Analysis

This research will be conducted on several customers who have invested and want to invest so that the unit of analysis that we will use is in the form of individuals. By focusing on individual units of analysis, I can gain a deeper understanding of the influence of Blockchain on investors' decisions to invest in stock market.

3.7. Research data and Tools

In research on Transaction Security on Customer Decisions to Invest in Stock Market, here are some data and tools that can be used by the author:

1. Research Data:
   - Demographic data: Information on the age, residential domicile, and monthly income of the individual making the investment.
   - Self-assessment data: Data collected through self-assessment or self-

evaluation by the individual making the investment regarding changes in their attitudes, knowledge, or skills.

2. Research Tools:
   - Questionnaires: Questionnaires can be used to collect data from individuals who make investments and who want to make investments. Questions include their perceptions of Transaction security on Customers' Decision to Invest in a Listed Company.
   - Rating scale: A valid and reliable rating scale can be used to measure the variables related to Transaction Security on Customers' Decision to Invest in Stock Market.

3.8. Research Data Analysis

Data analysis of Transaction Security on Customer Decisions to Invest in Stock Market involves the process of collecting, compiling, and analyzing data obtained from respondents or research subjects. The following are some steps that can be taken in analyzing data in this context:

1. Data Preparation:
   - Verify and validate data: Check the data to ensure the completeness and accuracy of the information collected.
   - Data coding: If there is data that needs to be coded, coding is done to facilitate analysis.
   - Organize the dataset: Organize the data into a suitable format, such as a spreadsheet or database, to facilitate further analysis.
2. Data Description:
   - Descriptive statistics: Calculate descriptive statistics such as mean, median, and standard deviation to describe the characteristics of the data obtained. For example, the analysis may include statistics on respondents' age, income in a month, or investor satisfaction scores.
   - Data visualization: Use graphs or charts such as histograms, bar charts, or scatter plots to clearly visualize the data. This helps in better understanding of emerging patterns and trends.
3. Hypothesis testing: Using Smart PLS
   1) Smart PLS is suitable for complex structural model analysis and can cope with non-normally distributed data.
   2) Smart PLS allows simultaneous analysis of multiple variables and mediation/moderation relationships.
   3) The tool also allows for a good validation of the research model through reliability and validity tests.

4. RESULT

The data collection period lasted from May 18, 2024 to December 31, 2024, with the questionnaire distribution process conducted online through survey platforms such as Google Forms. A total of 460 respondents who have experience or interest in investing in publicly listed companies were targeted for this survey. The data obtained was sourced from various investment and crypto communities, and supported by one of the trusted platforms, namely "Kudata", which is known as a source of current and accurate information about the world of investment. By combining insights from these communities and platforms, this research is expected to provide a comprehensive picture of investment trends and behavior among respondents.

4.1. Respondent Demographic

Table 2. Respondent Demographic Result

	Items	Frequency & Percentage
Age	<17 Years	19 (6,3%)
	18 - 25 Years	282 (61,3%)
	26 -35 Years	119 (25,9%)
	36 - 45 Years	36 (7,8%)
	46 - 55 Years	4 (0,9%)
	>55 Years	0 (0%)
Domicile	Jakarta	109 (23,7%)
	Bogor	69 (15%)
	Depok	53 (11,5%)
	Bekasi	63 (13,7%)
	Tanggerang	25 (5,4%)
	Others	141 (30,7%)
Monthly Income	< IDR 5,000,000	252 (54,8%)
	IDR 6,000,000 - IDR 20.000.000	80 (17,4%)
	Rp 21.000.000 - IDR 40,000,000	73 (15,9%)
	Rp 41.000.000 -	35 (7,6%)

	IDR 60,000,000	
	Rp 61.000.000 - IDR 80,000,000	12 (2,6%)
	Rp 81.000.000 - IDR 100,000,000	5 (1,1%)
	>Rp 100,000,000	3 (0,7%)

The survey involved respondents from an interesting range of demographic backgrounds. In terms of age, the majority of respondents were 18-25 years old (282 people), followed by the 26-35 years group (119 people), while there were 19 people under 17 years old. The rest of the respondents are spread across 36-45 years old (36 people) and 46-55 years old (4 people). In terms of domicile, Jakarta dominates with 109 respondents, followed by Bogor (69 people), Depok (53 people), Bekasi (63 people), Tangerang (25 people), and other regions (141). In terms of income, most respondents (252 people) earn below Rp 5,000,000 per month. Meanwhile, 80 people have an income between Rp 6,000,000 - Rp 20,000,000, and 73 people are in the range of Rp 21,000,000 - Rp 40,000,000. The higher income group of Rp 41,000,000 - Rp 60,000,000 consists of 35 people, while 12 people earn Rp 61,000,000 - Rp 80,000,000, 5 people are in the range of Rp 81,000,000 - Rp 100,000,000, and 3 people have an income of more than Rp 100,000,000 per month. This data provides a comprehensive picture of the diversity of respondents in the survey, both in terms of age, location, and income level.

4.2. Descriptive Analysis

Table 3. Descriptive Analysis Result

Name	*Mean*	*Median*	*Minimum*	*Maximum*	*Standard deviation*	*Excess kurtosis*	*Skewness*
MMA1	3.450	4.000	1.000	5.000	1.200	-0.720	-0.397
MMA2	3.743	4.000	1.000	5.000	1.247	-0.344	-0.799
MMA3	3.635	4.000	1.000	5.000	1.193	-0.520	-0.553
MMA4	3.565	4.000	1.000	5.000	1.158	-0.251	-0.698
MMA5	3.278	3.000	1.000	5.000	1.376	-1.149	-0.284
MMW1	4.187	4.000	1.000	5.000	0.897	1.073	-1.102
MMW2	4.096	4.000	1.000	5.000	0.944	0.575	-0.939
MMW3	4.080	4.000	1.000	5.000	1.013	0.484	-1.005
MMW4	3.989	4.000	1.000	5.000	1.008	0.166	-0.835
MMW5	4.135	4.000	1.000	5.000	0.941	0.651	-1.009
MMS1	3.463	4.000	1.000	5.000	1.289	-0.793	-0.508
MMS2	3.235	3.000	1.000	5.000	1.365	-1.115	-0.260
MMS3	3.398	4.000	1.000	5.000	1.343	-0.940	-0.456
MMS4	3.435	4.000	1.000	5.000	1.290	-0.817	-0.447
MMS5	3.500	4.000	1.000	5.000	1.276	-0.926	-0.394
MMV1	3.993	4.000	1.000	5.000	1.054	0.389	-0.948
MMV2	4.274	5.000	1.000	5.000	0.948	0.930	-1.216
MMV3	4.093	4.000	1.000	5.000	0.943	0.618	-0.952
MMV4	3.976	4.000	1.000	5.000	1.068	0.057	-0.855
MMV5	4.085	4.000	1.000	5.000	0.997	0.536	-0.988
SNB1	3.583	4.000	1.000	5.000	1.113	-0.404	-0.479
SNB2	3.424	3.000	1.000	5.000	1.158	-0.744	-0.261
SNB3	3.296	3.000	1.000	5.000	1.304	-1.038	-0.230
SNB4	3.587	4.000	1.000	5.000	1.113	-0.359	-0.491
SNB5	3.620	4.000	1.000	5.000	1.088	-0.371	-0.482
SMC1	3.965	4.000	1.000	5.000	0.957	-0.074	-0.676
SMC2	4.115	4.000	1.000	5.000	0.819	-0.025	-0.620
SMC3	4.180	4.000	1.000	5.000	0.794	-0.398	-0.569
SMC4	4.063	4.000	1.000	5.000	0.859	0.225	-0.680
SMC5	3.459	4.000	1.000	5.000	1.287	-0.966	-0.368
PBC1	3.752	4.000	1.000	5.000	1.057	-0.136	-0.601

PBC2	3.896	4.000	1.000	5.000	0.927	-0.050	-0.564
PBC3	3.726	4.000	1.000	5.000	1.061	-0.166	-0.609
PBC4	4.067	4.000	1.000	5.000	0.905	0.437	-0.821
PBC5	3.874	4.000	1.000	5.000	0.974	-0.008	-0.594
TSUB1	3.807	4.000	1.000	5.000	1.002	-0.148	-0.554
TSUB2	3.887	4.000	1.000	5.000	0.980	-0.124	-0.619
TSUB3	3.972	4.000	1.000	5.000	0.873	-0.744	-0.338
TSUB4	4.030	4.000	1.000	5.000	0.857	-0.001	-0.558
TSUB5	4.002	4.000	1.000	5.000	0.905	-0.171	-0.551
IIN1	4.061	4.000	1.000	5.000	0.842	0.245	-0.641
IIN2	4.054	4.000	1.000	5.000	0.911	0.979	-0.956
IIN3	4.178	4.000	1.000	5.000	0.820	0.612	-0.815
IIN4	3.935	4.000	1.000	5.000	0.923	-0.113	-0.502
IIN5	3.993	4.000	1.000	5.000	0.900	-0.106	-0.597

Descriptive analysis aims to understand the characteristics of the data through various statistical measures, such as mean, median, minimum, maximum, standard deviation, excess kurtosis and skewness. The results of the analysis show that the mean value is within the range of 3,278 to 4,496, with the median generally remaining at 4,000. This indicates that most respondents gave ratings that were close to the middle of the measurement scale. Range of values The consistent minimum and maximum, from 1,000 to 5,000, reflects the even distribution of data across the scale.

The relatively small standard deviation (0.794 to 1.376) indicates that respondents' answers tend to be homogeneous and do not vary too much. The excess kurtosis value ranging from -1.115 to 1.075 indicates that most of the data has a distribution that tends to be more even than the normal distribution. Meanwhile, the skewness in the range of -1.038 to -0.230 reveals that the data distribution tends to be skewed to the left, indicating that the majority of respondents gave high scores.

Overall, this descriptive analysis illustrates a relatively symmetrical and stable data distribution pattern, with fairly consistent respondent answers. These findings provide a solid foundation for further exploration of the inter-variable relationships and testing of the previously formulated hypotheses.

4.3. Indicator Reliability

Table 4. Indicator Reliability Results

Construct	Measurement Item	Outer Loading
Money Attitude - Money Avoidance (MMA)	MMA1	0.632
	MMA2	0.859
	MMA3	0.889
Money Attitude - Money Worship (MMW)	MMW1	0.815
	MMW2	0.776
	MMW3	0.701
	MMW4	0.788
	MMW5	0.846
Money Attitude - Money Status (MMS)	MMS1	0.728
	MMS2	0.809
	MMS3	0.807
	MMS4	0.736
	MMS5	0.779
Money Attitude - Money Vigilance (MMV)	MMV1	0.715
	MMV2	0.718
	MMV3	0.741
	MMV4	0.702
	MMV5	0.686
Subjective Norm – Normative Belief (SNB)	SNB1	0.737
	SNB2	0.754
	SNB3	0.808
	SNB4	0.781
	SNB5	0.767
Subjective Norm – Motivation to Comply (SMC)	SMC1	0.705
	SMC2	0.809
	SMC3	0.728
	SMC4	0.778
Perceived Behavior Control (PBC)	PBC1	0.779
	PBC2	0.834
	PBC3	0.804
	PBC4	0.763
	PBC5	0.809
Transaction Security Using Blockchain (TSUB)	TSUB1	0.770
	TSUB2	0.766
	TSUB3	0.846
	TSUB4	0.786
	TSUB5	0.831

Intention to Invest (IIN)	IIN1	0.758
	IIN2	0.715
	IIN3	0.756
	IIN4	0.823
	IIN5	0.773

4.3.1 removal of invalid indicators

After conducting validity and reliability tests, the indicators of Money Attitude 4, Money Attitude 5, and Subjective Norm - Motivation to Comply 5 are considered invalid because they conflict with other indicators.

1. Money Attitude 4 (I feel money can have a negative impact on people) tends to indicate a pessimistic view of money, which contradicts other indicators that emphasize a positive attitude towards money as a tool to achieve social goals and a better life.
2. Money Attitude 5 (It is impossible to become rich and remain convinced of others' motives towards you) reflects a fatalistic view towards wealth, which is not in line with the other indicators that focus more positive or neutral feelings towards money and its use to achieve well-being.
3. Subjective Norm - Motivation to Comply 5 (I am afraid of being left behind with the investments that are happening in my neighborhood / Fear of Missing Out (FOMO)) describes more motivation driven by personal anxiety or fear, which is less relevant to the influence of social norms or motivation to comply with social expectations reflected in other indicators.

4.3.2 indicators used

Based on the results of the above analysis, adjustments are made to the two variables as follows:

1. Money Attitude only uses three valid and relevant indicators:
   - Money Attitude 1: I don't feel right if I have a lot of money while others have less.
   - Money Attitude 2: I don't feel worthy of excessive money.
   - Money Attitude 3: I feel that the less wealth a person has, the better the quality of life.
2. Subjective Norm - Motivation to Comply only uses four valid and relevant indicators:
   - Subjective Norm - Motivation to Comply 1: I consider input from my family members before making investment decisions.
   - Subjective Norm - Motivation to Comply 2: I value my friends' opinions about the stock market.
   - Subjective Norm - Motivation to Comply 3: I want to be seen as a person who is careful in making investment decisions.
   - Subjective Norm - Motivation to Comply 4: Social media groups provide educational information and encourage participation in the stock market.

The deletion of Money Attitude 4 and Money Attitude 5 indicators is done to ensure that the Money Attitude variable is more consistent and relevant to the objectives of this study, as well as to avoid contradictions in the measurement of attitudes towards money. Thus, the research results will be more accurate and reliable. Likewise, the deletion of Subjective Norm - Motivation to Comply 5, which aims to make the measurement of motivation to comply with social norms more focused and consistent with the social concepts to be examined in this study. These adjustments ensure that the research results will better illustrate the influence of social norms on investment decision-making in a more precise and relevant way.

4.3.3 indicator result

The following are the results of the indicator reliability analysis based on the outer loading value of each variable:

- MMA has 3 indicators with outer loading values of 0.632, 0.859, and 0.889, respectively.
- MMW has 5 indicators with outer loading values of 0.815, 0.776, 0.701, 0.788, and 0.846, respectively.
- MMS has 5 indicators with outer loading values of 0.728, 0.809, 0.807, 0.736, and 0.779, respectively.
- MMV has 5 indicators with outer loading values of 0.715, 0.718, 0.741, 0.702, and 0.686, respectively.
- SNB has 5 indicators with outer loading values 0.737, 0.754, 0.808, 0.781, and 0.767 respectively.
- SMC has 4 indicators with outer loading values 0.705, 0.809, 0.728, and 0.778, respectively.
- PBC has 5 indicators with outer loading values 0.779, 0.834, 0.804, 0.763, and 0.809, respectively.

- TSUB has 5 indicators with outer loading values of 0.809, 0.770, 0.766, 0.846, and 0.831, respectively.
- IIN has 5 indicators with outer loading values 0.758, 0.715, 0.756, 0.823, and 0.773 respectively.

The data shows that most indicators have fairly high outer loading values, reflecting good indicator reliability for each variable. However, some indicators may require more attention to ensure overall consistency and validity.

4.4. Construct Reliability and Validity

4.4.1. internal consistency reliability

Table 5. Internal Consistency Reliability Assessment

Construct	Composite reliability (rho a)	Composite reliability (rho c)
Money Attitude - Money Avoidance (MMA)	0.831	0.841
Money Attitude - Money Worship (MMW)	0.850	0.890
Money Attitude - Money Status (MMS)	0.834	0.881
Money Attitude - Money Vigilance (MMV)	0.759	0.838
Subjective Norm – Normative Belief (SNB)	0.843	0.879
Subjective Norm – Motivation to Comply (SMC)	0.758	0.842
Perceived Behavior Control (PBC)	0.863	0.900
Transaction Security Using Blockchain (TSUB)	0.861	0.899
Intention to Invest (IIN)	0.828	0.876

The following are the results of the internal consistency reliability analysis based on the composite reliability (rho A), composite reliability (rho C), and Cronbach's Alpha values for each variable:

- MMA: rho A= 0.831, rho C= 0.841, Cronbach's Alpha= 0.751.
- MMW: rho A= 0.850, rho C= 0.890, Cronbach's Alpha= 0.845.
- MMS: rho A= 0.834, rho C= 0.881, Cronbach's Alpha= 0.831.
- MMV: rho A= 0.759, rho C= 0.838, Cronbach's Alpha= 0.759.
- SNB: rho A= 0.843, rho C= 0.879, Cronbach's Alpha= 0.843.
- SMC: rho A= 0.758, rho C= 0.842, Cronbach's Alpha= 0.758.
- PBC: rho A= 0.863, rho C= 0.900, Cronbach's Alpha= 0.863.
- TSUB: rho A= 0.861, rho C= 0.899, Cronbach's Alpha= 0.861.
- IIN: rho A= 0.828, rho C= 0.876, Cronbach's Alpha= 0.824.

These results show that most variables have an excellent level of internal consistency, with composite reliability and Cronbach's Alpha values above the recommended threshold (≥ 0.7). This data indicates the high reliability of each variable for further measurement.

4.4.2. convergent validity

Table 6. Convergent Validity Assessment

Construct	Average
Money Attitude - Money Avoidance (MMA)	0.643
Money Attitude - Money Worship (MMW)	0.619
Money Attitude - Money Status (MMS)	0.597
Money Attitude - Money Vigilance (MMV)	0.508
Subjective Norm - Normative Belief (SNB)	0.593
Subjective Norm - Motivation to Comply (SMC)	0.571
Perceived Behavior	0.643

Control (PBC)	
Transaction Security Using Blockchain (TSUB)	0.641
Intention to Invest (IIN)	0.587

Based on the table above, the following are the results of the convergent validity assessment (Average Variance Extracted / AVE) for each variable:

- MMA: 0.643
- MMW: 0.619
- MMS: 0.597
- MMV: 0.508
- SNB: 0.593
- SMC: 0.571
- PBC: 0.643
- TSUB: 0.641
- IIN: 0.587

These results indicate that most variables have a fairly good convergent validity value, with AVE values approaching or exceeding the recommended minimum threshold of 0.5. This convergent validity indicates that the indicators in each variable are able to reflect the construct being measured quite strongly.

4.4.3. discriminant validity

Table 7. Discriminant Validity Assessment

	IIN	MMA	MMS	MMV	MMW	PBC	SMC	SNB	TSUB
IIN									
MMA	0.104								
MMS	0.517	0.309							
MMV	0.644	0.112	0.438						
MMW	0.644	0.120	0.525	0.770					
PBC	0.946	0.094	0.593	0.517	0.500				
SMC	0.899	0.115	0.488	0.731	0.668	0.750			
SNB	0.566	0.298	0.907	0.419	0.433	0.679	0.546		
TSUB	0.936	0.077	0.584	0.565	0.548	0.905	0.769	0.624	

Notes: MMA = Money Attitude - Money Avoidance, MMS = Money Attitude - Money Status, MMV= Money Attitude - Money Vigilance, MMW= Money Attitude - Money Worship, PBC= Perceived Behavior Control, SMC= Subjective Norm - Motivation to Comply, SNB = Subjective Norm - Normative Belief, TSUB = Transaction Security Using Blockchain, IIN = Intention to Invest

There are limits to the HTMT (Heterotrait-Monotrait Ratio) value used in the literature to assess discriminant validity:

1. HTMT ≤ 0.85 indicates that the compared constructs have good discriminant validity (Hair & Alamer, 2022a).
2. HTMT ≤ 0.90 is also often used as a cutoff in some other literature (Hair & Alamer, 2022b) If the HTMT value between two constructs is higher than this cutoff, it means that the two constructs may be too similar, indicating that they do not have sufficient discriminant validity.

From the table above, it can be seen that some HTMT values in red indicate discriminant validity issues. For example, the relationship between PBC and IIN shows an HTMT value of 0.946, which exceeds the recommended limit of 0.85. The same can be seen for the PBC and TSUB construct pair, which has a value of 0.905. These values indicate overlap between the constructs of PBC and IIN and PBC and TSUB, which means the two constructs may not be sufficiently distinct from each other.

However, not all relationships between constructs are problematic. HTMT values that are colored green indicate good discriminant validity. For example, the relationship between the MMA and IIN constructs shows an HTMT value of 0.104, which indicates a clear distinction between these two constructs. This indicates that the constructs have met the discriminant validity criteria well.

4.5. R Square

Table 8. R Square Results

	R-Square	R-Square adjusted
IIN	0.771	0.768
TSUB	0.655	0.651

- R-square for IIN (0.771)

The R-square value of 0.771 indicates that 77.1% of the variation in the IIN variable can be

explained by the independent variables in the model used. So it can be said that the model used has the ability
which is very good at explaining the factors that influence IIN. The remaining 22.9% is explained by other factors outside the model.

- R-square for TSUB (0.655)

The R-Square value of 0.655 indicates that 65.5% of the variation in the TSUB variable can be explained by the independent variables in the model. So the model is also quite good at explaining the factors that influence TSUB, although there is 34.5% variation that is influenced by other factors outside the model.

- Adjusted R-square

The adjusted R-Square value (0.768 for IIN and 0.651 for TSUB) is an adjusted version of the R-square, which considers the number of independent variables in the model. This is important to prevent bias towards the number of independent variables. The difference between the R-square and adjusted R-square values is small, which indicates that the model is not overfitting and the relevance of the independent variables is good

4.6. Hypothesis Result

Table 9. Hypothesis Results

Hypothesis	Description	Path Coefficient	T-Value	P values	Significant	Result
H1	MMA-> IIN	0.078	2.361	0.018	Significant	Supported
H2	MMS-> TSUB	0.075	1.360	0.174	Not Significant	Not Supported
H3	MMV-> IIN	0.066	1.958	0.050	Significant	Supported
H4	MMW-> TSUB	0.077	1.305	0.192	Not Significant	Not Supported
H5	PBC->IIN	0.398	6.847	0.000	Significant	Supported
H6	PBC-> TSUB	0.574	10.920	0.000	Significant	Supported
H7	SMC->IIN	0.232	4.865	0.000	Significant	Supported
H8	SMC-> TSUB	0.185	2.995	0.003	Significant	Supported
H9	SNB -> TSUB	0.035	0.602	0.547	Not Significant	Not Supported
H10	TSUB -> IIN	0.310	5.019	0.000	Significant	Supported

Notes : MMA = Money Attitude – Money Avoidance, MMS = Money Attitude – Money Status, MMV = Money Attitude – Money Vigilance, MMW = Money Attitude – Money Worship, PBC = Perceived Behavior

Control, SMC = Subjective Norm – Motivation to Comply, SNB = Subjective Norm – Normative Belief, TSUB = Transaction Security Using Blockchain, IIN = Intention to Invest

4.6.1. significant and supported hypothesis

• H1 : MMA -> IIN

The analysis shows that MMA has a direct effect on IIN with a coefficient of 0.078. After a bootstrap sampling process, this result remains consistent. The T-statistic of 2.361 and P-value of 0.018 confirm that this effect is statistically significant. This means that an increase in MMA directly leads to a significant increase in IIN.

• H3: MMV -> IIN

The analysis indicates that MMV has a direct effect on IIN with a coefficient of 0.066. The result remains stable through bootstrap sampling. The T-statistic of 1.958 and P-value of 0.050 suggest that this effect is statistically significant at the threshold level. This implies that MMV has a marginal but significant influence on IIN.

• H5: PBC -> IIN

The results demonstrate that PBC significantly affects IIN with a coefficient of 0.398. After a bootstrap resampling process, the results remain consistent. The T-statistic of 6.847 and a P-value of 0.000 strongly confirm statistical significance. This suggests that a higher level of PBC leads to a substantial increase in IIN.

• H6: PBC -> TSUB

The analysis confirms that PBC has a strong direct effect on TSUB with a coefficient of 0.574. The result remains stable through bootstrap sampling. The T-statistic of 10.920 and a P-value of 0.000 indicate a highly significant effect. This means that an increase in PBC directly contributes to a significant rise in TSUB.

• H7: SMC -> IIN

The study reveals that SMC positively influences IIN with a coefficient of 0.232. The consistency of this result is confirmed through bootstrap sampling. A T-statistic of 4.865 and a P-value of 0.000 demonstrate strong statistical significance. This indicates that a higher SMC leads to a significant increase in IIN.

• H8: SMC -> TSUB

The findings show that SMC has a direct effect on TSUB with a coefficient of 0.185. The results remain consistent through bootstrap resampling. The T-statistic of 2.995 and a P-value of 0.003 confirm statistical significance. This implies that an increase in SMC leads to a significant increase in TSUB.

• H10: TSUB -> IIN

The results indicate that TSUB significantly impacts IIN with a coefficient of 0.310. The bootstrap resampling process confirms the stability of this result. With a T-statistic of 5.019 and a P-value of 0.000, the effect is highly significant. This means that an increase in TSUB leads to a strong and significant increase in IIN.

4.6.2. not significant and not supported hypothesis

• H2: MMS -> TSUB

The analysis suggests that MMS has a weak effect on TSUB with a coefficient of 0.075. After bootstrap sampling, the results remain unchanged. However, a T-statistic of 1.360 and a P-value of 0.174 indicate that this effect is not statistically significant. This implies that MMS does not have a meaningful impact on TSUB.

• H4: MMW -> TSUB

The findings indicate that MMW has a minimal effect on TSUB with a coefficient of 0.077. The result is stable through bootstrap resampling. However, with a T-statistic of 1.305 and a P-value of 0.192, the effect is not statistically significant. This means that MMW does not significantly influence TSUB.

• H9: SNB -> TSUB

The results show that SNB has a weak impact on TSUB with a coefficient of 0.035. The bootstrap resampling confirms the stability of the results. However, a T-statistic of 0.602 and a P-value of 0.547 indicate that this effect is not statistically significant. This suggests that SNB does not have a meaningful influence on TSUB.

4.7. Direct and Indirect Effect

4.7.1. direct effect

Table 10. Direct Effect Result

Description	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics (Io/STDEVI)	P Values
MMA->IIN	0.078	0.074	0.033	2.361	0.018
MMS-> TSUB	0.075	0.076	0.055	1.360	0.174
MMV->IIN	0.066	0.069	0.034	1.958	0.050
MMW-> TSUB	0.077	0.080	0.059	1.305	0.192
PBC->IIN	0.398	0.394	0.058	6.847	0.000
PBC-> TSUB	0.574	0.572	0.053	10.920	0.000
SMC->IIN	0.232	0.233	0.048	4.865	0.000
SMC-> TSUB	0.185	0.184	0.062	2.995	0.003
SNB -> TSUB	0.035	0.037	0.058	0.602	0.547
TSUB -> IIN	0.310	0.309	0.062	5.019	0.000

Notes : MMA = Money Attitude – Money Avoidance, MMS = Money Attitude – Money Status, MMV = Money Attitude – Money Vigilance, MMW = Money Attitude – Money Worship, PBC = Perceived Behavior Control, SMC = Subjective Norm – Motivation to Comply, SNB = Subjective Norm – Normative Belief, TSUB = Transaction Security Using Blockchain, IIN = Intention to Invest

- MMA -> IIN

The analysis shows that MMA has a direct effect on IIN with a coefficient of 0.078. After a bootstrap sampling process, this result remains consistent (SM= 0.074). The T-statistic of 2.361 and P-value of 0.018 confirm that this effect is statistically significant. This means that an increase in MMA directly leads to a significant increase in IIN.

- MMS -> TSUB

The analysis revealed that MMS does not have a significant direct effect on TSUB. Its coefficient of influence was recorded at 0.075, with a T-statistic of 1.360 and a P-value of 0.174. This suggests that changes at MMS do not have a significant impact directly on TSUB.

- MMV -> IIN

MMV has a direct effect on IIN, but with a marginal level of significance. With a coefficient of 0.066, a T-statistic of 1.958, and a P-value of 0.050, this result shows that an increase in MMV has a tendency to increase IIN, although the impact is not very strong.

- MMW -> TSUB

MMW does not show a significant direct effect on TSUB. With a coefficient of 0.077, T-statistic of 1.305, and P-value of 0.192, this relationship is considered insignificant. This means that changes in MMW have not been able to have a real direct impact on TSUB.

- PBC -> IIN

An interesting finding emerges from the relationship between PBC and IIN. With a coefficient of 0.398, a high T-statistic of 6.847, and a P-value of 0.000, this relationship is highly significant. This means that an increase in PBC will directly give a big boost to IIN.

- PBC -> TSUB

PBC also shows a very strong influence on TSUB. A coefficient of 0.574 and a T-statistic of 10.920, with a very small P-value (0.000), corroborate that this relationship is significant. This means that an increase in PBC has a large direct impact on TSUB.

- SMC -> IIN

The direct relationship between SMC and IIN is also significant. With a coefficient of 0.232, a T-statistic of 4.865, and a P-value of 0.000, these results are
shows that the higher the SMC, the greater the direct effect on increasing IIN.

- SMC -> TSUB

SMC has a significant direct effect on TSUB. Its coefficient of influence is recorded at 0.185, with a T-statistic of 2.995 and a P-value of 0.003. This confirms that an increase in SMC can directly increase TSUB quite strongly.

- SNB -> TSUB

SNB does not have a significant direct effect on TSUB. With a coefficient of 0.035, T-statistic of 0.602, and P-value of 0.547, this relationship is considered insignificant. This means that changes in SNB have no direct impact on TSUB.

- TSUB -> IIN

The relationship between TSUB and IIN is interesting. With a coefficient 0.310, a T-statistic of 5.019, and a P-value of 0.000, these results indicate a significant direct effect. An increase in TSUB has an obvious direct impact on an increase in IIN.

4.7.2. indirect effect

Table 11. Indirect Effect Results

Description	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (Io/STDEVI)	P Values
MMS-> IIN	0.023	0.023	0.017	1.332	0.183
MMW-> IIN	0.024	0.027	0.021	1.117	0.264
PBC-> IIN	0.178	0.177	0.041	4.326	0.000
SMC-> IIN	0.057	0.055	0.017	3.312	0.001
SNB-> IIN	0.011	0.012	0.018	0.584	0.559
PBC-> TSUB	0.574	0.572	0.053	10.920	0.000

Notes : MMA = Money Attitude – Money Avoidance, MMS = Money Attitude – Money Status, MMV = Money Attitude – Money Vigilance, MMW = Money Attitude – Money Worship, PBC = Perceived Behavior Control, SMC = Subjective Norm – Motivation to Comply, SNB = Subjective Norm – Normative Belief, TSUB = Transaction Security Using Blockchain, IIN = Intention to Invest

- MMS -> IIN

The relationship between MMS and IIN shows inconclusive results. With a coefficient of 0.023, T-statistic of 1.332, and P-value of 0.183, this result indicates that the indirect effect of MMS on IIN is not significant. This means that an increase in MMS does not necessarily contribute significantly to an increase in IIN.

- MMW -> IIN

Interestingly, the relationship between MMW and IIN has also not shown a strong impact. With a coefficient of 0.024, T-statistic of 1.117, and P-value of 0.264, this indirect effect is not significant enough. This suggests that an increase in MMW has not provided a meaningful boost to the increase in IIN.

- PBC -> IIN

In contrast, PBC has a very strong influence on IIN. With a coefficient of 0.178, T-statistic of 4.326, and P-value of 0.000, this

result shows a highly significant relationship. This means that the higher the PBC, the greater increase in IIN indirectly, making it an important factor in this process.

- SMC -> IIN

Similar to PBC, SMC also has a significant influence on IIN. With a coefficient of 0.057, a T-statistic of 3.312, and a P-value of 0.001, this relationship shows that an increase in SMC can significantly drive an increase in IIN. This proves that SMC plays an important role in supporting IIN.

- SNB -> IIN

Meanwhile, the relationship between SNB and IIN has yet to have a meaningful impact. With a coefficient of 0.011, a T-statistic of 0.584, and a P-value of 0.559, these results indicate that the indirect effect of SNB on IIN is not significant. In other words, an increase in SNB does not necessarily contribute to an increase in IIN.

The direct and indirect effect analysis in this study highlights the key role of PBC and SMC in the model. PBC has strong direct and indirect effects on IIN and TSUB, confirming its position as a key factor. SMC also contributes significantly to IIN, both directly and through mediators. In contrast, variables such as MMS, MMW, and SNB showed insignificant impact on IIN, warranting further study. These findings confirm the importance of PBC and SMC in driving research outcomes and provide strategic insights in the development of more effective models.

4.8. Findings in Comparison with Previous Research

The results of this study reinforce the importance of Blockchain technology in increasing investor confidence by ensuring transaction security. Statistical analysis shows that Blockchain's security features such as cryptographic encryption, decentralized ledgers, and smart contractshave a direct and positive impact on investors' intention to invest in stock markets. Compared to traditional financial systems, Blockchain offers a more transparent and fraud-resistant environment, which aligns with previous studies emphasizing its role in mitigating risks.

When compared with prior research, this study provides empirical evidence that strengthens theoretical discussions on Blockchain's impact on investor behavior. Unlike Yee et al [32], which focused on renewable energy investments, this study highlights the significance of Blockchain security in traditional financial markets. Similarly, while Lai [33] emphasized personality traits in investment decisions, this research underscores the pivotal role of secure transaction mechanisms in shaping investor trust. Furthermore, Nadeem et al [34] explored money attitudes and financial knowledge but did not account for how Blockchain enhances confidence in financial transactions. Our findings complement and expand upon these prior studies by presenting a more comprehensive perspective on technological security in investment behavior.

4.9. Limitations and Threats to Validity

Despite its valuable contributions, this study has certain limitations. First, the sample is limited to Indonesian investors, which may affect the generalizability of the findings to other markets. Future research should incorporate a more diverse sample to explore cross-country variations in Blockchain adoption and investor confidence. Additionally, Blockchain technology is rapidly evolving, meaning that new security risks may emerge over time. Ongoing research is necessary to assess the long-term sustainability and potential vulnerabilities of Blockchain-based financial systems.

5. CONCLUSION

5.1. Key Conclusion

Blockchain has revolutionized the investment world by bringing transparency, security, and efficiency that can increase investor confidence. As a decentralized, transparent, and immutable technology, Blockchain provides a revolutionary solution to the security challenges that have been a barrier to online investment. By providing a track record of transactions that can be verified by all interested parties, this technology not only enhances security, but also builds deep trust among investors.

This research highlights how the security of Blockchain-based transactions has a significant impact on customers' intention to invest in publicly listed companies. Investors' trust is influenced by their perception of the security of this technology, which indirectly increases their comfort in investing. Using the Theory of Planned Behavior (TPB) model, this study also reveals that psychological factors such as money attitude,

subjective norm, and perceived behavioral control play an important role in investment decisions. Blockchain amplifies the positive impact of these factors by creating a more secure, efficient, and less risky investment system.

In the context of investment, Blockchain replaces traditional systems that are prone to misuse of data and funds. The smart contracts feature enables automatic execution of transactions without third-party intervention, speeding up the settlement of transactions and reducing the potential for human error. In addition, these systems improve auditability, allowing regulators and auditors to review transactions more transparently and accurately. Investment firms can also utilize this technology to reduce operational costs and improve efficiency, as Indodax is currently exploring in stock trading and digital securities.

Blockchain's enhanced transaction security contributes to the rapid growth of digital investments. By providing strong protection against fraud and manipulation, it fosters greater confidence among investors, reduces geographical barriers, and increases market liquidity making it an ideal solution for the future of the financial industry.

Improved transaction security through Blockchain is also contributing to the growth of digital investments. Investors feel more confident in making decisions because they know that this technology provides strong protection against the threat of fraud and manipulation. In addition, Blockchain opens up wider access to investment, reduces geographical barriers, and increases market liquidity, making it an ideal solution for the future of the financial industry.

Overall, this research not only has academic impact but also direct implications in the world of business and finance. With great potential in the digital transformation of the investment sector, Blockchain serves as a key pillar in creating a more inclusive, secure, and sustainable investment ecosystem. With these various advantages, Blockchain is not just a technological innovation, but the foundation of a more transparent, efficient, and reliable future of the investment industry.

5.2. Limitation

Despite the significant findings, this study has some limitations:

1. Sample Limitations: This study focused on respondents who have invested or plan to invest in listed companies, which may not fully represent the overall population of investors in Indonesia.
2. Geographical Scope: Most of the respondents were from urban areas, which may not reflect the perceptions of people in other areas who may have different investment mindsets.
3. Blockchain Focus: Research has emphasized on Blockchain security as one aspect, without addressing how the integration of this technology affects the overall cost or efficiency of transactions.
4. External Aspects Not Discussed: External factors such as government regulations, macroeconomic conditions, and market volatility have not been analyzed in depth, even though these factors can influence investment decisions.
5. Government Regulation and Macroeconomic Conditions: This study has not discussed in depth how government regulations and macroeconomic conditions affect investment decisions. This can be the subject of further research.

5.3. Future Work & Recommendation

To build upon these findings, future research should aim to conduct a more extensive cross-country analysis to evaluate how Blockchain's security features impact investor confidence in different regulatory and financial environments. Such comparative studies would provide valuable insights into how various regions adopt and regulate Blockchain technology in stock investments. Additionally, further investigations should explore the intersection of Blockchain and artificial intelligence, particularly how AI-driven security measures can enhance Blockchain's effectiveness in safeguarding transactions. By integrating AI-based fraud detection algorithms and predictive analytics, Blockchain could potentially offer an even more robust security framework, reducing risks associated with cyber threats and enhancing the overall integrity of digital investments.

To maximize the impact of this research, the following recommendations are proposed:

1. Advanced Research

Future research is recommended to involve a broader and more diverse sample, including investors from different geographic and demographic backgrounds. This aims to gain more representative insights into the factors that influence Blockchain adoption in investment.

2. Effect of Regulation

A more in-depth analysis of the impact of government regulations on the adoption of Blockchain technology will provide a more holistic picture. This understanding is important for investors and industry players in navigating the evolving policies.

3. Blockchain Education and Literacy

Companies and financial institutions should increase education to potential investors regarding the benefits and risks of using Blockchain technology. With better literacy, investors can make more informed and confident investment decisions.

4. Blockchain Innovation Development

The development of Blockchain features that not only enhance security, but also transaction efficiency and convenience, is indispensable. The implementation of more flexible smart contracts can be of the innovative solutions to improve investor experience.

5. Multisectoral Collaboration

Investment firms need to work together with regulators, technology developers, and academics to build a more integrated, transparent, and trustworthy Blockchain-based investment ecosystem.

6. Collaboration with Regulators

Companies that have implemented Blockchain should establish partnerships with regulators to ensure compliance with existing policies and encourage the development of regulations that support the Blockchain-based investment ecosystem.

Taking these recommendations into account, it is hoped that Blockchain technology can be optimized to increase investor confidence and convenience, driving more inclusive and sustainable investment growth in the future.

Data Sharing: The dataset has been uploaded to Mendeley Data, and can be accessed at the following link: (https://data.mendeley.com/datasets/d7s4djs6km/1).

Statement of author's contribution to manuscript:

1. Raymond Haryadi (Primary Author): Responsible for conceptualizing the research framework, developing the theoretical model, designing the methodology, collecting and analyzing data, and drafting the manuscript. Additionally, he played a key role in interpreting the results and discussing their implications for blockchain technology in stock market investments.
2. Elfindah Princess (Supervisor): Provided expert guidance throughout the research process, refining the study's objectives, ensuring methodological rigor, and offering critical insights for improving the research design. She also reviewed and provided feedback on the manuscript to enhance its clarity, coherence, and contribution to the field of financial technology and investment behavior.

Both authors acknowledge the valuable feedback from peer reviewers and colleagues who contributed to strengthening the study's findings and discussions.

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