CHAPTER 1 INTRODUCTION

1.1 Object Overview

Indonesia's productive age group, encompassing individuals aged 15 to 64, is a key driver of the nation's economic development. Data from the Indonesian Bureau of Statistics (BPS) shows that this demographic constitutes 70.72% of the total population, equivalent to approximately 189.7 million people. In West Java, Indonesia's most populous province, the productive age group represents a substantial share of the population, providing significant opportunities for economic advancement (BPS, 2024).

Table 1.1 Top 7 Province with Productive Age in Indonesia 2024

Province	Total Population	Productive Age Population (15-64 years)	Percentage of Total Population
West Java	49,263,000	32,650,000	66.26%
East Java	45,794,000	29,980,000	65.50%
Jakarta	10,270,000	7,210,000	70.20%
North Sumatra	15,211,000	9,940,000	65.33%
Banten	12,903,000	8,430,000	65.36%
Bali	4,362,000	2,860,000	65.58%
South Sulawesi	9,072,000	5,930,000	65.36%

Source: Bureau of Statistics West java (2024), Processed by Author

In 2024, Indonesia's productive age population (ages 15-64) represents a significant portion of the national demographic, contributing substantially to the country's economic growth and investment activities. Across Indonesia's provinces, there are noticeable variations in the size and distribution of the productive age population, which in turn influence regional economic and financial behaviour's, particularly in investment markets. According to the Indonesian Bureau of Statistics

(BPS), provinces such as West Java, East Java, and DKI Jakarta house the largest numbers of individuals within the productive age group, offering a significant potential for economic activity, including increased participation in investment markets.

Table 1.2 Population of West Java Province by age group Age and Gender

Age	Male	Female	Total
15-19	2.089.930,0	1.961.354	4.051.284
20-24	2.092.646,0	1.977.771	4.070.417
25-29	2.088.376	1.993.207	4.081.583
30-34	2.044.600	1.974.327	4.018.927
35-39	1.969.768	1.925.028	3.894.796
40-44	1.862.479	1.814.566	3.704.045
45-49	1.724.830	1.723.946	3.448.776
50-54	1.514.939	1.514.849	3.029.788
55-59	1.278.269	1.276.712	2.554.981
60-64	1.008.752	1.007.361	2.016.113
Total	16.665.559	15.989.631	32.655.190

Source: Bureau of Statistics West java (2024), Processed by Author

West Java, as one of Indonesia's most populous provinces according to figure 1.2 table, showcases considerable demographic potential, particularly within the productive age group. Based on the data in Table 1.2, the productive age population in West Java reached approximately 32.65 million individuals in 2024, representing about 66.26% of the total provincial population. This large proportion of the population presents opportunities for both economic growth and increased investment activity. The presence of such a large segment of the productive age population creates considerable opportunities for driving economic growth and enhancing the quality of life for its residents. Based on research by (Humaidi et al., 2020), productive age refers to the age at which a person is able to produce goods and services. The majority of people in this productive age category already have

their own income from various sources, such as work, business, or other services. So, it can be said that the majority of the productive age population is financially mature.

In addition to driving national economic growth, the productive age population in West Java heavily influences consumer behavior, particularly within the financial market. As Table 1.1 illustrates, the productive age group (15-64 years) dominates the total population in West Java. Notably, the 25-29 age group is the most significant contributor to this demographic, providing ample opportunities for both economic expansion and investment. The substantial number of investors within this age group further highlights West Java's potential for market development.

1.2   Research Background

Investing is fundamentally the distribution of resources with the expectation of future profits. Riana & Royda, (2022) define investment as the act of investing funds in a commodity or asset with the expectation that its value would rise. Increasing your wealth over time through capital gains, dividends, interest, or rental income is the main goal of investing. From traditional investments like stocks and bonds to alternative assets like real estate, commodities, and venture capital, this process involves a broad range of financial tools and strategies. To build a portfolio that fits their risk tolerance and financial objectives, investors frequently evaluate possible investments based on risk, prospective returns, liquidity, and diversity.
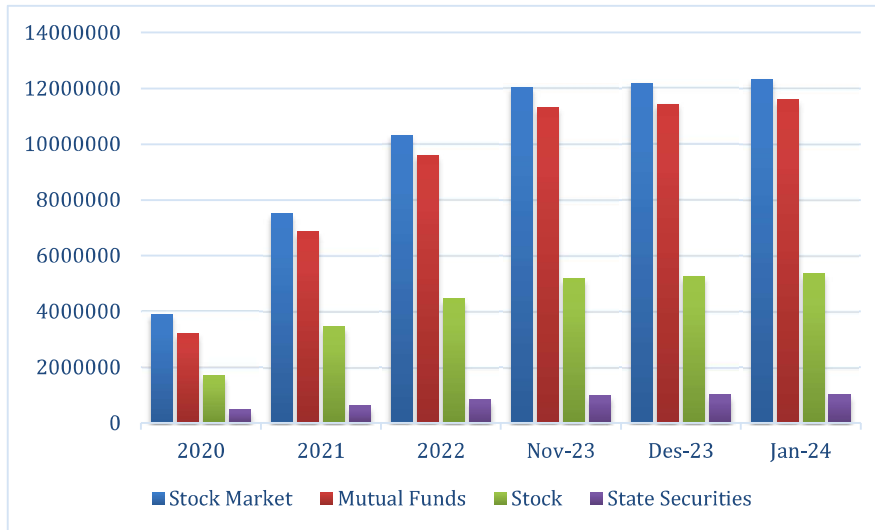
Figure 1.1 Investor Growth Indonesia

Source: PT Kustodian Sentral Efek Indonesia (KSEI) (2024)

According to information in Figure 1.1 highlights a notable rise in the number of investors in Indonesia over the last five years. This upward trajectory has been confirmed by the director of KSEI, who pointed to a steady growth in capital market investors throughout this timeframe. As reported by PT Kustodian Sentral Efek Indonesia (KSEI) in 2024, the Single Investor Identification (SID) system registered 11.72 million investors in the Indonesian capital market by Jan 2024. This reflects significant expansion over the preceding ten months, with mutual fund investors growing by 14.47% and government securities (SBN) investors increasing by 15.45%. Similarly, comparable growth patterns were observed during this period.

According to Utari et al. (2024), rational decision-making is often impeded by a range of psychological factors. One significant element influencing investment decisions is heuristic bias, which refers to the inclination of individuals to apply rules of thumb in decision-making, potentially leading to systematic errors. This study examines heuristic biases in the context of Investor decision making and Investment Performance among productive-age investors in West Java, Indonesia.

An interesting area of study is how behavioral factors affect decision-

making and investment choices among productive-age investors in West Java. Although the capital market in Indonesia, especially in West Java, has seen significant growth, many investors are still limited by psychological biases that influence their decision-making processes. Recent research indicates that heuristic biases, such as overconfidence, anchoring, and availability bias, can result in irrational investment decisions, potentially disrupting Investment performance (Abhijith & Bijulal, 2024).

Table 1.3 Demographics of Total Single Investor Identification by Province

No	Province	CP	FD	IB	ID	IS	MF	OT	PF	SC	Total
1	West Java	1.868	126	26	2.697.662	2	5	251	47	6	2.699.993
2	Jawa Timur	2.204	113	27	1.589.113	7	2	284	35	3	1.591.788
3	Jakarta	10.381	381	215	1.495.985	326	1.843	761	341	257	1.510.490
4	North Sumatera	330	34	9	558.648	-	-	65	6	-	559.092
5	South Sumatera	120	10	5	320.199	2	-	14	4	-	320.364

Source: Otoritas Jasa Keuangan (2024), Processed by Author

The Indonesian stock market, in particular in West Java, has experienced a notable growth over the recent years. According to table 1.3, West Java province is the province with the most single investors in Indonesia. According to data on each type of investment with categories such as Corporate (CP), Foundation (FD), Bank (IB), Individual (ID), Insurance (IS), Mutual Fund (MF), Others (OT), Pension Fund (PF), Securities Company (SC), that West Java has individual's investor with a total of 2,697,662 million people, exceeding any province in Indonesia. Nevertheless, numerous investors still exhibit irrational behaviors driven by heuristic biases. This is a significant concern as it can impact the investment performance of the individual investor and overall investment decision-making processes. Prior studies have indicated that, relative to their counterparts in developed countries, investors in developing economies such as Indonesia display a stronger susceptibility to heuristic biases (Wulandari et al., 2023).

Table 1.4 Total Investors in West Java

No	Kabupaten/Kota	Jumlah Investor Individu
1	Bandung	707.100,00
2	Bekasi	520.450,00
3	Bogor	432.230,00
4	Depok	320.800,00
5	Karawang	185.670,00
6	Garut	150.340,00
7	Tasikmalaya	120.450,00
8	Cirebon	110.760,00
9	Sukabumi	100.530,00
10	Purwakarta	49.332,00

Source: Otoritas Jasa Keuangan (2024), Processed by Author

As the province with the largest number of individual investors in Indonesia, West Java shows a significant trend of investment growth, especially in major cities such as Bandung, Bekasi, and Bogor. The city of Bandung, for example, recorded the highest number of individual investors with 707,100 investors, which reflects the high public interest in the stock market and mutual funds.

The productive age group, generally between 25 and 40 years old, is not only at the peak of their physical productivity but also financially stable. This stability allows them to engage in riskier activities like investing. Many of these individuals are now choosing to allocate their income into various investment instruments, including the stock market. According to a study by Humaidi et al. (2020), individuals in this age bracket typically possess their own income sources, and with the rise of financial technology, investing has become even more accessible. This ease of access, facilitated by camobile apps and online trading platforms, enables more people to take part in the financial markets (Humaidi et al., 2020). Furthermore, research has shown that individuals at this stage of life are also more likely to explore high-return, high-risk investments, making them dominant players in the investment landscape (Suresh G, 2024).

It is evident that within the productive age group, those between 25 and 35

years old play the most active role as investors. This is consistent with findings from Murhadi et al. (2023), which highlight those younger adults, particularly millennials, are becoming more engaged in stock market activities due to their openness to learning and understanding financial tools. In West Java, this trend is clear, as younger individuals increasingly view investment not only as a way to grow wealth but also as a crucial step toward financial independence.

On the other hand, older individuals, particularly those above the age of 50, tend to be less involved in high-risk investment activities. This is likely due to their preference for more secure financial products as they near retirement. As noted by (Jain et al., 2023), investors in this age group often focus on preserving their wealth rather than aggressively seeking growth, leading them to favor low-risk, low-return assets such as bonds or savings accounts.

Despite their financial acumen, productive-age investors often face challenges that can undermine their investment success. One of the primary challenges is a lack of financial literacy. Studies, such as the one by Ahmad & Shah (2022), have found that limited financial knowledge can lead investors to make poor decisions, particularly in volatile markets. Furthermore, biases such as overconfidence and herding behavior where individuals follow the actions of others without independent analysis can negatively impact their investment outcomes.

Heuristic biases frequently arise because investors use mental shortcuts to simplify complex financial decisions. This is particularly dangerous in an environment saturated with information, including unreliable or misleading news. As noted by Jain et al. (2023), these biases whether it's overconfidence, Anchoring, availability bias, or representativeness can cloud investors' judgment, making them prone to mistakes. In addition, the proliferation of hoaxes and fake news in financial media can exacerbate these biases, further distorting investors' perception of risk and return. Prospect Bias, derived from Prospect Theory, is particularly impactful in volatile markets, as it causes investors to weigh potential losses more heavily than gains.

Beyond heuristic biases, Prospect is also critical in understanding investor behavior. Originating from Prospect Theory, this bias highlights how investors

place disproportionate emphasis on potential losses, often allowing the fear of loss to outweigh the appeal of potential gains. This is particularly relevant in Indonesia's market, where low financial literacy and economic instability can amplify loss aversion, leading investors to either overly cautious or aggressive strategies based on recent experiences (Sari et al., 2023). For instance, in volatile conditions, investors may avoid high-potential stocks due to past losses, limiting their ability to maximize gains. Han et al. (2023) underscores this tendency, finding that emerging market investors often allow prior losses or gains to influence future investments, sometimes to their detriment.

Quoting from Kompas, (2024), the Chairman of the OJK Pasti Task Force Secretariat, Hudiyanto, stated that losses due to illegal investments in Indonesia reached Rp 139.67 trillion from 2017 to 2023. Public reports on fraudulent investments continue to be received by the OJK PASTI Task Force every day, with 1,218 fraudulent investment entities having been blocked until early 2024. One of the major challenges is the limited knowledge of the public about finance, especially Indonesian Migrant Workers (PMI) who are often targeted because of their lack of understanding of financial products.

Another example of news that occurs in Indonesia, based on data from other news in Kompas, (2024), Fraudulent investment scams are increasingly rampant through instant messaging application groups such as WhatsApp and Telegram. The Financial Services Authority (OJK) warns the public to be wary of investment offers that promise fantastic profits but do not have official permits. This mode takes advantage of technological developments to reach more victims with the lure of big profits. To avoid this trap, OJK recommends that the public check the legality and logic (2L) aspects of the investment offers received so as not to be deceived by dangerous illegal investments. This is called as market bias and its further influences investment decisions, particularly in Indonesia's digital trading environment, where rapid information access can lead to speculative reactions to market trends and news events.

Market Bias is another factor impacting Indonesian investors, especially in a digital landscape where real-time data and media coverage strongly influence

decision-making. Market Bias leads investors to react to broader market sentiment like stock trends or political news over intrinsic asset values, prioritizing external factors over objective analysis. This bias is particularly influential in Indonesia, were rapid information access prompts reactive strategies. Rahman & Setiawan (2021) highlight how market sentiment can drive speculative behavior, leading investors to overreact to temporary economic or political shifts, which can undermine long-term investment performance.

Investment fraud in Indonesia continues to increase, with increasingly varied modus operandi, especially through digital platforms such as instant messaging application groups. According to data from the OJK, many people are trapped in fraudulent investments due to a lack of understanding of financial literacy, even though they are often promised high returns with low risks. This situation is exacerbated by technological developments that allow fraudsters to more easily reach victims through digital platforms.
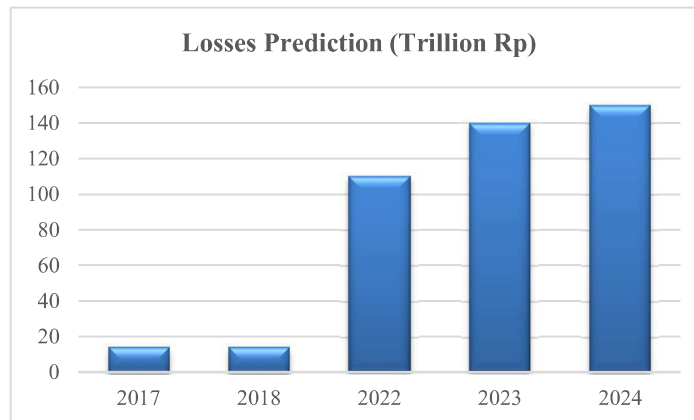

Figure 1.2 Losses prediction cause of fraud investment

Source: Processed by Author

The chart from figure 1.2 shows the trend of investment fraud losses in Indonesia from 2017 to 2024. The data demonstrates a steady increase in losses, with a particularly sharp rise from Rp 14 trillion in 2017 and 2018 to over Rp 110 trillion in 2022, and Rp 139.67 trillion in 2023. For 2024, we estimate further

increases, potentially reaching Rp 150 trillion.

This data illustrates the critical impact of psychological factors like heuristic biases on investor decision-making. Many investors, influenced by overconfidence, availability bias, and the promises of high returns, fall victim to fraudulent schemes. These biases impair rational decision-making, making individuals more susceptible to investment fraud, especially in an environment with low financial literacy, as is evident in Indonesia. The significant increase in fraud cases, particularly through digital platforms and influencer-led schemes, reinforces the urgency for stronger financial literacy programs and regulatory measures to protect investors.

Beyond fake news, several other factors contribute to the emergence of Behavioral factor. For instance, exposure to past experiences, particularly negative ones, can lead investors to make decisions based on incomplete information or skewed perceptions. Additionally, social pressure or herd behavior where individuals mimic the actions of others can lead to irrational investment choices (Ahmad & Shah, 2022; Suresh G, 2024). This often occurs when investors, seeing others benefit from certain assets, jump into investments without conducting proper research or risk assessment.

Investors in the productive age group are typically characterized by their aggressiveness in pursuing high returns, this habit can make a irrational decision (Fitrizal Salim et al., 2022). According to Ahmad (2024), these individuals tend to exhibit a high tolerance for risk, which is often reinforced by a sense of overconfidence in their decision-making abilities. This confidence, while beneficial in some cases, can also lead to poor decisions when combined with heuristic biases like representativeness and overconfidence.

Several studies support the idea that biases such as overconfidence, representativeness, and herd mentality can significantly influence investment performance. For example, Jain et al. (2023) found that these biases directly affect individual investors' decision-making processes, leading to less optimal outcomes. However, there is also evidence suggesting that financial literacy can mitigate these effects. Shah & Butt (2024) argue that investors who possess a higher degree of financial knowledge are better equipped to avoid the pitfalls of heuristic biases and

make more rational investment choices.

This research is particularly relevant in light of the growing number of investors from the productive age group who are vulnerable to behavioral biases. Understanding how these biases influence investment decisions, and how financial literacy can play a moderating role, is crucial for improving overall investment performance. By addressing these issues, this study aims to contribute to the development of financial literacy programs that can help investors make more informed, rational decisions, ultimately leading to better outcomes in Indonesia's evolving financial landscape.

However, recent studies have shown that investment decisions made by the productive age group are often influenced by *heuristic biases*, prospect, herding, market variable which are mental shortcuts used in decision-making that can lead to systematic errors. Heuristic Biases play a significant role in shaping perceptions of Investment Performance, often interfering with rational investment decisions (Ahmad & Shah, 2022). It is essential to understand these biases, as research indicates that risk perception mediates the relationship between Behavioral factors and investment choices (Jain et al., 2023). By comprehending these behavioral patterns, efforts to improve market performance and investor education can be more effectively targeted.

1.3   Problem Formulation

In the world of investment, rational decision-making is often influenced by psychological factors called Behavioral factor. These factor, which include Heuristic, Prospect, Market, and Herding, can lead individuals to make systematic mistakes in investment decision-making and investment performance. This interferes with Investment Performance that should be created through an ideal market mechanism (Kasoga, 2021).

Among productive age investors in West Java, which is the focus of this study, this phenomenon of Behavioral factor bias raises important questions related to how the influence of behavioral bias on the perception of Investors decision-making for Investment Performance. Although the Indonesian capital market,

especially in West Java, shows significant growth, many investors still show irrational behavior. Their investment decisions are influenced by various heuristic biases, which can ultimately disrupt Investment Performance and hinder the rational decision-making process.

This study seeks to identify and answer problems related to the extent to which heuristic bias affects the perception of Investment Performance in productive-age investors in West Java. This problem is relevant because investors of productive age, who dominate the demographics in West Java, have a significant role in driving the region's economy and investment. Therefore, the formulation of the problem in this study is as follows:

1. How does Heuristic biases affect Investment Decision-Making in productive age investors in West Java?

2. How does Prospect behavior affect Investment Decision-Making in productive age investors in West Java?

3. How does Market behavior affect Investment Decision-Making in productive age investors in West Java?

4. How does Herding behavior affect Investment Decision-Making in productive age investors in West Java?

5. How does Heuristic biases affect Investment Performance in productive age investors in West Java?

6. How does Prospect behavior affect Investment Performance in productive age investors in West Java?

7. How does Market behavior affect Investment Performance in productive age investors in West Java?

8. How does Herding behavior affect Investment Performance in productive age investors in West Java?

9. How does Heuristic bias, Prospect behaviour, Market behaviour, and Herding behaviour simultaneously affect Investment Decision-Making?

10. How does Heuristic bias, Prospect behaviour, Market behaviour, and Herding behaviour simultaneously affect Investment Performance?

1.4   Research Objective

The objective of this research is to analyse the impact of heuristic biases, such as overconfidence, anchoring, availability, and representativeness, on the investment performance of individuals in the productive age group in West Java. More specifically, this research aims to:

1. To analyse the Impact of Heuristic bias on investment decision making on individual stock investors in West Java
2. To analyse the Impact of Prospect behaviour on investment decision making on individual stock investors in West Java
3. To analyse the Impact of Market behaviour on investment decision making on individual stock investors in West Java
4. To analyse the Impact of Herding Bias on investment decision making on individual stock investors in West Java
5. To analyse the Impact of Heuristic Bias on investment Performance stock investors in West Java
6. To analyse the Impact of Prospect Behaviour on investment Performance on individual stock investors in West Java
7. To analyse the Impact of Market Behaviour on investment Performance on individual stock investors in West Java
8. To analyse the Impact of Herding Behaviour on investment Performance on individual stock investors in West Java
9. To analyse the Impact of Heuristic bias, Prospect behaviour, Market behaviour, and Herding behaviour on Investment Decision Making
10. To analyse the Impact of Heuristic bias, Prospect behaviour, Market behaviour, and Herding behaviour on Investment Performance

1.5   Research Benefit

1. Theoretical Benefit

This study enriches the literature on behavioral finance, particularly by exploring how heuristic biases, such as Behavioral Factors on Individual Investors, affect investment performance and decision-making among productive-age

investors in West Java. The findings help to bridge gaps in existing research regarding how these biases influence decision-making processes in emerging markets, thereby contributing to a more nuanced understanding of behavioral finance within the Indonesian context. Furthermore, this research advances the theoretical framework of heuristic-driven biases by providing empirical data on their impact in the context of financial markets in developing economies.

2.   Practical Benefit

On a practical level, this research offers valuable insights for individual investors, financial advisors, and policymakers. By identifying the specific biases that affect investment decisions, the study provides a basis for creating more effective investor education programs, focusing on mitigating these biases to improve decision-making and enhance overall investment performance. Financial advisors can use these findings to better guide their clients in recognizing and avoiding common decision-making pitfalls. Additionally, policymakers can utilize the results to develop targeted financial literacy programs, particularly aimed at the productive-age population, to foster more rational investment behaviors and improve the overall efficiency of financial markets in West Java.

1.6   Writing Systematic
a)   Chapter I Introduction

This study investigates the impact of heuristic biases on investment decisions and performance among productive-age investors in West Java, addressing research gaps in behavioral finance within emerging markets and offering empirical insights into developing economies.

b)   Chapter II Literature Review

This chapter presents theories ranging from general to specific, incorporates relevant previous studies, and concludes with a research framework, including hypotheses where applicable.

c)   Chapter III Research Methodology

This chapter outlines the approaches, methodologies, and techniques employed for data collection and analysis to address the research questions. It encompasses detailed explanations of the research design, variable operationalization, population and sampling methods (for quantitative studies) or social settings (for qualitative studies), data collection procedures, validity and reliability assessments, and data analysis techniques.

d)   Chapter IV Result and Discussion

The results of the research and discussion are described systematically in accordance with the formulation of the problem and research objectives and are presented in a separate subheading. This chapter contains two parts: the first part presents the results of the research and the second part presents the discussion or analysis of the research results. Each aspect of the discussion should start from the results of data analysis, then interpret and then followed by drawing conclusions. In the discussion, it should be compared with previous studies or relevant theoretical foundations.

e)   Chapter V Conclusion and Suggestion

The conclusion is the answer to the research question, then becomes a suggestion related to the benefits of the research.