Eduvest – Journal of Universal Studies
Volume 5 Number 12, December, 2025
p- ISSN 2775-3735- e-ISSN 2775-3727

Assessing Investment Decisions and Stock Performance Using Neurolinguistic Programming in the Indonesian Capital Market

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ABSTRACT

This study investigates the influence of Neuro-Linguistic Programming (NLP) techniques on investment decisions and stock performance in the Indonesian capital market. It highlights psychological factors in investor behavior, particularly cognitive biases leading to irrational decisions. NLP application enables better emotional management, enhanced decision-making, and improved outcomes. The quantitative study used surveys and interviews with 150 retail investors from Indonesian stock communities, trading groups, and certification institutes, selected via purposive sampling (maximum two years' experience). Partial least squares structural equation modeling (PLS-SEM) tested relationships between NLP, decisions, and performance. Findings show NLP significantly impacts both ($\boldsymbol{\beta = 0.687}$, $\boldsymbol{p < 0.001}$on decisions; $\boldsymbol{\beta = 0.591}$, $\boldsymbol{p < 0.001}$on performance). Investment decisions also influence performance ($\boldsymbol{\beta = 0.664}$, $\boldsymbol{p < 0.001}$) and partially mediate the NLP-performance link ($\boldsymbol{\beta = 0.456}$, $\boldsymbol{p < 0.001}$). This contributes to behavioral finance by integrating NLP into investment psychology. Practically, financial institutions should offer NLP training to help novice retail investors—who dominate the market—manage emotions, reduce biases, and boost portfolio performance.

KEYWORDS *Neuro-Linguistic Programming, Investment Decisions, Stock Performance, Behavioral Finance, Indonesian Capital Market*

INTRODUCTION

In the world of capital markets, a phenomenon that attracts the attention of many researchers and practitioners is the fact that investment decisions are often not based solely on rational analysis but are also influenced by psychological and emotional factors (Thaler, 2019). This phenomenon can be seen in the behavior of investors who are often trapped in cognitive biases, such as overconfidence, herd behavior, confirmation bias, and loss aversion (Kahneman & Tversky, 2020). Behaviors such as panic selling when the market drops drastically or mass euphoria when stock prices rise rapidly suggest that mental and emotional aspects play a significant role in decision-making in the capital market (Barberis & Thaler, 2021). This issue is practical and widespread, affecting both retail and institutional investors (He & Li, 2022). Although various tools, such as fundamental and technical analysis, are available, the final decision is often still influenced by the individual's mental state (Choi et al., 2020). The role of emotional and psychological factors has been widely discussed in behavioral finance, particularly in understanding market anomalies (Shiller, 2021). These behavioral patterns have important implications for how investors navigate market fluctuations and make investment decisions (Baker & Wurgler, 2020).

On the other hand, theoretically, the Neuro Linguistic Programming (NLP) approach has been widely used in various fields, such as leadership, communication, psychotherapy, and self-development (Etuka et al., 2021; Mohsin, 2024). NLP emphasizes the importance of mindsets, language structures, and subconscious programs that influence human behavior.

However, the application of NLP in the context of the capital market remains very limited, even though conceptually, NLP can help investors understand their own mindset, manage emotions, and respond to market conditions more objectively. Another interesting phenomenon is the emergence of communities and training programs that are beginning to combine NLP approaches with financial and trading education. Some investors even claim that by recognizing their internal representations (visual, auditory, kinesthetic), they can make calmer and more targeted decisions. However, this claim lacks scientific evidence and has not been academically tested, so further research is needed to determine whether NLP techniques have a significant impact on the quality of investment decisions and stock performance outcomes (Passmore & Rowson, 2019).

Theoretically, investment decision-making in the capital market is based on a rational and objective approach. The Efficient Market Hypothesis (EMH), for example, states that stock prices reflect all available information, so investors cannot consistently achieve excess profits over the market unless they assume greater risk. Similarly, fundamental and technical approaches emphasize data-driven analysis to predict price movements and stock performance (Grada, Qadoosa, & Sankurua, 2025).

Many investment decisions deviate from the principle of rationality. Behavioral finance theory addresses this gap by revealing that investors are often influenced by emotions, subjective perceptions, and cognitive biases, such as overconfidence, fear of missing out (FOMO), and mental accounting. This highlights a discrepancy between classical rational theory and the psychological reality of investors in practice. In this context, the Neuro Linguistic Programming (NLP) approach is particularly interesting to research, as it offers tools and techniques for observing, understanding, and changing human mindsets and behaviors. While NLP has been widely used in the fields of communication, therapy, and personal development, its application in the context of investment and capital markets has received little scientific study. In fact, NLP has the potential to bridge the gap between rational theory and real investor behavior by helping individuals recognize and manage internal responses to market pressures and investment risks (Peon & Antelo, 2021).

The choice of this topic was motivated by the need for a more holistic and integrative approach that does not rely solely on quantitative analysis but also deeply considers the psychological dimension of investors. Through this research, it is hoped that a new conceptual framework can be developed that combines NLP and investment behavior to improve the quality of decision-making and positively impact stock portfolio performance. Thus, this study highlights the gap between classical theoretical approaches to investment decision-making and the psychological realities of investors in practice, offering NLP as a relevant alternative approach to explore further in the world of capital markets.

In recent years, the number of investors in the capital market—especially retail investors—has increased significantly. Ease of access to technology and rising financial literacy have encouraged more individuals to engage in stock trading. However, field observations reveal that many investment decisions are not always based on mature, rational analysis but are instead influenced by emotions, intuition, and social pressures.

For example, during periods of high market volatility, many investors engage in panic selling or euphorically buy stocks simply by following social media trends or investment communities. This behavior reflects the mismatch between rational decision-making theories

and real-world practices. Such impulsive, emotionally driven decisions can lower portfolio performance and lead to long-term losses.

On the other hand, psychological approaches such as Neuro Linguistic Programming (NLP) offer techniques for understanding and managing a person's mindset, emotions, and behavior in stressful or uncertain situations—conditions closely tied to capital market activities. NLP is well-known in the fields of communication, leadership, and personal therapy but is still rarely applied systematically in the investment world. This gap indicates a need to explore alternative approaches that help investors increase self-awareness, recognize psychological biases, and manage emotions during decision-making. Unfortunately, few studies have deeply examined the relationship between NLP application and its impact on investment decisions and stock performance (Babaev & Savenko, 2018).

Against this background, it is important to conduct research examining how NLP techniques can be applied in the context of capital markets and how this approach can improve decision-making quality and investment returns.

The research discusses various investor behavior biases, such as overconfidence, representativeness, and herd behavior in financial decisions. These findings reveal a gap between rational theory and real investor behavior, opening opportunities for psychology-based approaches such as NLP (Shefrin & Statman, 2000).

Stipancic et al. found that NLP can help individuals regulate emotions and improve work performance, including in high-stress situations. Their research stated that NLP techniques such as anchoring and reframing effectively change negative mindsets and enhance decision-making focus. Although not in the capital market context, these results suggest that NLP has great potential when applied to contexts requiring quick, risky decisions, such as stock investing (Stipancic, Walter, Peter, & Renata, 2010).

Based on a literature review, psychological factors have been proven to significantly influence investment decisions. NLP has been widely used for personal development and decision-making but has not been extensively applied scientifically in capital markets. Limited research directly links NLP application to investment and stock performance, making this topic worthy of further study as an original scientific contribution.

The problem formulation in this study includes several key questions aimed at exploring the influence of Neuro Linguistic Programming (NLP) techniques on investment decision-making in the Indonesian Capital Market. First, it aims to determine whether the application of NLP significantly influences investors' investment decision-making. Furthermore, the research analyzes whether investment decisions significantly affect stock performance. In addition, it investigates whether NLP application directly impacts stock performance in the Indonesian Capital Market and whether investment decisions mediate the influence of NLP on stock performance. The purpose of this study is to provide an in-depth analysis of the relationships among NLP, investment decisions, and stock performance.

In terms of benefits, this research is expected to make a theoretical contribution to behavioral finance by introducing the NLP approach as a new variable in understanding the investment decision-making process, as well as to investment psychology through an interdisciplinary lens combining psychological theory and investment practice. The results could serve as a reference for future studies examining the relationship between NLP and individual performance in economic decision-making. Practically, this research benefits the

Indonesian Capital Market by offering strategic insights into the role of psychological aspects in shaping investor behavior and decision quality, and it provides a foundation for designing NLP-based training to enhance investment decision-making effectiveness. For investors, the study raises awareness of emotions' role in decisions and offers a new approach to managing cognitive biases. For financial practitioners and consultants, it provides a theoretical and empirical basis for developing training modules that integrate investment education with NLP techniques, along with a novel mentoring approach for beginners vulnerable to psychological distress.

METHOD

This study employed a quantitative research approach with an explanatory design, utilizing Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine causal relationships between latent constructs. The research subjects consisted of retail investors, including members of communities such as the Indonesian Stock Community, stock Telegram/WhatsApp groups, online trading classes, the Indonesian Analysts Association, and the Indonesian Capital Market Certification Institute, with participants selected based on a maximum experience of two years. The research was conducted in the Jakarta and Surabaya areas from March to June 2025.

The data used in this study consisted of primary and secondary sources. Primary data were obtained from respondents through interviews and questionnaire dissemination to active retail investors, using a Likert interval scale to measure perceptions of investment decisions, beliefs, and thinking styles based on Neuro Linguistic Programming (NLP) approaches. Secondary data were collected from various relevant sources to support the analysis of investment decisions and performance. The research variables included the independent variable (application of NLP), the mediating variable (investment decisions), and the dependent variable (stock performance), with systematic measurements via questionnaires. Data analysis was conducted using PLS-SEM, which is suitable for exploratory research with small samples and non-normally distributed data. The PLS-SEM analysis steps included measurement model tests and structural model tests, where indicators and construct reliability met required standards, along with significance testing via t-values and p-values. Through this approach, the contributions of each indicator and variable—both direct and indirect—on stock performance were identified.

RESULT AND DISCUSSION

Hypothesis Testing (Inner Model)

The next test is to look at the significance that represents the hypothesized relationship between constructs or to see the influence between variables on path coefficients using the bootstrapping procedure. Next is the bootstrapping output to see the amount of the T-Value value:

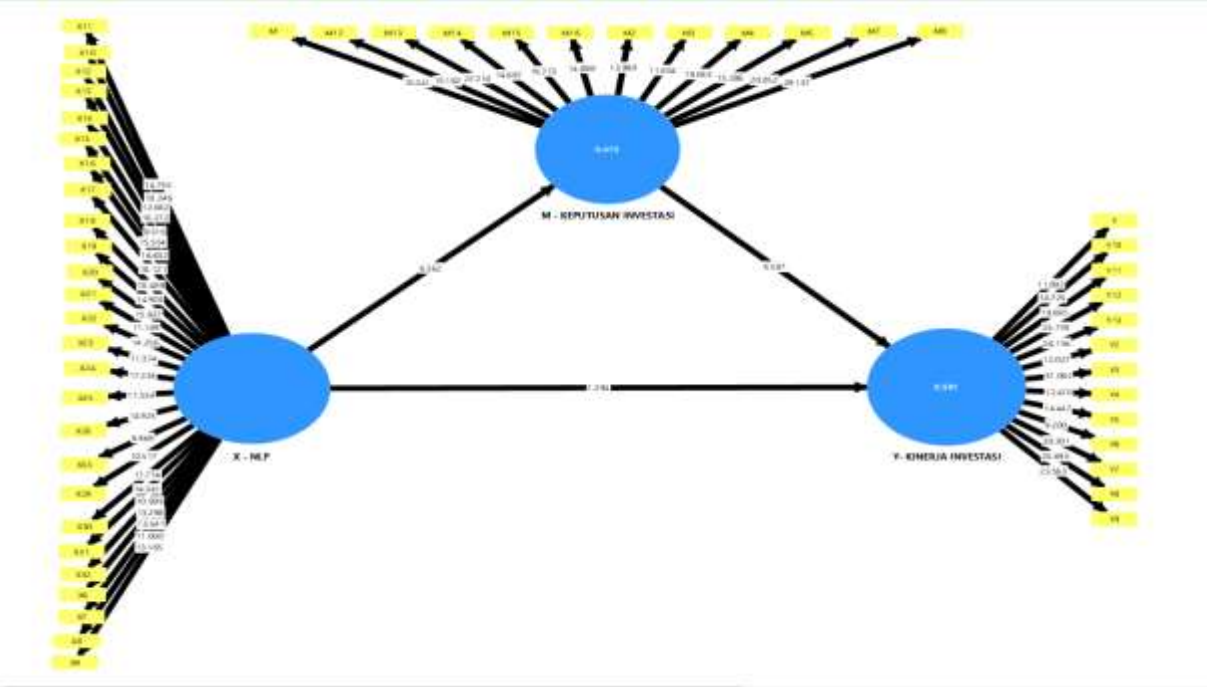

Figure 1. Research Construct Relationship Model with Bootstrapping Method

Source: SmartPLS Output 4, 2025

a) Direct Effect

Table 1. Direct Effects

Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Information
H1: M -> Y	0.664	0.633	0.101	6.587	0.000	Accepted
X - NLP -> M	0.687	0.703	0.105	6.562	0.000	Accepted
X - NLP -> Y	0.591	0.609	0.103	5.717	0.000	Accepted

Source: SmartPLS Output 4, 2025.

Remarks: X = Neuro Linguistic Programming (NLP) M = Investment Decision Y = Investment Performance

The results of the path coefficients test in the table above can be interpreted by looking at the original value of the sample to find out the relationship between variables. Meanwhile, to see the level of significance of the influence of the relationship between variables, namely by looking at T Statistics. The hypothesis test in this study 95 used a significance level of 5% (two tailed) and a confidence level of 95% so that the t-table is 2.0025, if the statistical T-value > the t-table then the results are significant (Ghozali & Latan, 2015).

Based on the results of the direct influence hypothesis tested in Table 1, it was found that:

1. The effect of Investment Decision (M) on Investment Performance (Y) has a positive path coefficient value of 0.664, with a statistical t-value of 6.587 and a p-value of 0.000, this result indicates that the better the Investment Decision, the higher the Investment Performance. Therefore, it can be concluded that the Investment Decision has a significant effect on the Investment Performance that Hypothesis 1 (H1) is accepted.

2. The effect of Neuro Linguistic Programming (X) on Investment Decisions (M) obtained a coefficient value of 0.687 with a t-statistic of 6.562 and a p-value of 0.000, this finding shows that the application of Neuro Linguistic Programming effectively contributes to improving the quality of Investment Decisions. Therefore, it can be concluded that neuro-linguistic programming has a significant effect on the investment decision of Hypothesis 2 (H2) is accepted.
3. The effect of Neuro Linguistic Programming (X) on Investment Performance (Y) has a coefficient value of 0.591, t-statistic 5.717, and p-value 0.000, this result indicates that Neuro Linguistic Programming has a positive and significant direct impact on Investment Performance. Therefore, stating that neuro linguistic programming has a significant effect on investment performance, Hypothesis 3 (H3) is accepted

Overall, the entire direct influence hypothesis in this research model is proven to be statistically significant, with a positive relationship direction in accordance with the proposed theoretical framework

b) Indirect Effect

Table 2. Indirect Influences

Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Information
H4: X -> M1 -> Y	0.456	0.438	0.060	7.624	0.000	

Source: Output Smart PLS 4, 2025.

Remarks: X = Neuro Linguistic Programming, M = Investment Decision Y = Investment Performance

Based on Table 2, the results of the bootstrapping analysis of the indirect influence of Neuro Linguistic Programming (X) on Investment Performance (Y) through Investment Decisions (M) have a coefficient value of 0.456, T Statistics: 7.624 show very high statistical significance and niali P Values: 0.000, this result identifies that Neuro Linguistic Programming (X) has a significant and positive indirect influence on Investment Performance (Y) through Investment Decisions (M). In other words, Hypothesis 4 (H4) is accepted.

Discussion

The application of Neuro Linguistic Programming (NLP) has an effect on investment decisions

Based on the hypothesis tests carried out, it is known that NLP has an effect on an investor's investment decisions, In the dynamic and often unexpected world of investment, the decisions taken by individuals have a significant impact on the performance of the portfolio, in addition to fundamental and technical factors, the psychological aspects of investors also play a crucial role. One of the approaches that is gaining attention in this context is Neuro Linguistic Programming (NLP). Richard Bandler and John Grinder in the 1970s, studied the subjective structure of human experience. NLP focuses on how individuals think, communicate (both verbally and non-verbally), and behave. At the heart of NLP is the idea that there are patterns of thinking and behavior that can be identified, learned, and replicated to achieve desired

outcomes. In NLP there are 4 Pillars that are the foundation of the solidity of NLP itself, the 4 Pillars:

1) Outcome

The first pillar of NLP is to have a clear and well-defined Outcome or goal. Without specific, measurable, achievable, relevant, and time-bound (SMART) goals, any effort will be less targeted. In NLP, "Outcome" is more than just a wish; it is a rich sensory representation of what you want to achieve, feeling, as if it has already been achieved.

2) Sensory Acuity

The second pillar, Sensory Acuity, refers to the ability to be aware of and pay attention to rich information from the world around us through the senses of sight, hearing, and feeling (as well as smell and taste, although less dominant in this context). It is the ability to observe small details in behavior, body language, facial expressions, voice intonation, and even breathing patterns. High sensory sensitivity allows NLP practitioners to capture subtle but crucial feedback from other individuals and themselves.

The ability to observe detail was at the heart of the early work of Bandler and Grinder (1976) as they modeled on accomplished therapists such as Virginia Satir, Fritz Perls (Gestalt therapy), and Milton H. Erickson (hypnotherapy). They realize that these therapists have an exceptional sensitivity to clients' non-verbal and verbal cues, which allows them to respond more effectively. Leslie Cameron-Bandler (1985), in her work on communication patterns, also emphasized the importance of calibrating non-verbal responses. Andreas, S., & Andreas, C. (1987) in Change Your Mind and Keep the Change also outlines how small changes in internal representation can be observed through external changes.

3) Flexibility

The third pillar, Flexibility, emphasizes the importance of having a diverse choice of actions or responses. If what you are doing is not working to achieve the desired outcome, a flexible person will try another approach. It's the principle of "if what you do doesn't work, do something else," and "the person with the most choices is in control.

4) Rapport (Good Relationship)

The fourth pillar, Rapport, is the foundation for effective communication. It is a state of mutual understanding and trust that allows communication to flow smoothly. Rapport is built through matching and pacing other people's behaviors, such as body language, tone of voice, or breathing patterns, then leading them in the desired direction. Rapport is not about blindly copying, but rather about creating a sense of connection and harmony.

These four pillars of NLP are interrelated and work synergistically. They form a continuous feedback cycle, you set clear goals (Outcome), carefully observe feedback from the environment (Sensory Acuity), adjust your actions based on that feedback (Flexibility), and ensure that all interactions are built on a foundation of trust and understanding (Rapport). By mastering these pillars, individuals can develop a deeper understanding of themselves and others, improve communication effectiveness, and achieve excellence in various aspects of personal and professional life. This needs to be applied in the world of investment, especially trading. An investor or trader does not have to eliminate his emotions but simply control them (Stott., 2016).

By controlling emotions, investment decisions are more controlled. When it comes to investing, the decisions made by investors are one of the most important. Investment decisions

are made after fundamental and technical analysis, but people lose patience while doing so because they are dominated by emotions. Emotionally dominated investors tend to make mistakes that result in bias in future investments. uncontrolled emotions, such as impatience, can thwart rational analysis and cause losses (Prakoso & Rosidi., 2018)

As in hypnosis and hypnotherapy, NLP also knows 3 types of minds that are very close to an investor in deciding or facing the market every day:

a) The Conscious Mind

The Conscious Mind is the part of our mind that is responsible for awareness, logical reasoning, analysis, and deliberate decision-making. This is the part we use when actively thinking, planning, and interacting with the outside world. This capacity of the conscious mind is limited; We can only focus on a few things at a time. For example, in everyday applications an investor analyzes financial reports, technical charts, economic news, or market research, he uses his conscious mind. It is a rational and data-driven process. Formulating an investment plan, setting profit goals, and determining a stop-loss limit are examples of conscious mind activities. Choosing a particular stock, determining the amount of investment, or deciding when to buy or sell based on logical analysis is a function of the conscious mind. The relationship with NLP helps the conscious mind by providing a framework and a more effective thinking model. For example, the Well-Formed Outcome technique helps the conscious mind formulate specific investment targets. The chunking up and chunking down techniques can be used to analyze market information from a broader (macro) or more detailed (micro) perspective, improving the quality of logical analysis of the conscious mind.

b) Subconscious Mind

The Subconscious Mind is an automatic storehouse of memories, habits, emotions, beliefs, and behavior patterns. It operates under the level of direct consciousness, but it can be easily accessed and influence our conscious actions. The subconscious mind is much stronger and faster than the conscious mind; It manages automatic bodily functions, innate habits, and emotional reactions.

The habit of buying or selling at a certain point, or the pattern of reaction to market news, often comes from the subconscious mind. For example, fear of missing out (FOMO) or loss aversion (Kahneman & Tversky, 1979) is often rooted here. Beliefs formed in the past about money (investments are risky, I'm not good at managing money) are in the subconscious mind and can unconsciously sabotage rational investment decisions. A pounding heartbeat when the market is falling or excessive euphoria when prices are rising are subconscious responses that can trigger impulsive decisions.

The relationship with NLP is very effective in working with the subconscious mind to change limiting patterns, habits, and beliefs. By using several techniques that are also recommended in this study such as:

a. a. Anchoring Technique: Can be used to associate the state of empowering emotions (e.g., calmness, focus) with triggers, so that investors can access them when needed in market pressure (Andreas & Andreas, 1987).
b. Reframing Techniques: Help change the negative meaning of an event (e.g., investment losses) at a subconscious level, so that emotional responses and behaviors to them also change (Cameron-Bandler, 1985). Investors can see losses as lessons, not total failures.

c. Representational Systems: The way individuals process information, whether visually, auditory, kinesthetic, olfactory, or gustatory.

c) The Unconscious Mind

The Unconscious Mind is the deepest layer of the mind, which contains information, experiences, and impulses that cannot be directly accessed by the conscious or subconscious mind. It is often associated with primal instincts, very deep memories, or archetypes. In the more pragmatic context of NLP, the unconscious mind is often thought of as an infinite resource and internal wisdom, where all profound changes and healing occur automatically. It is the place where meta-programs and very deep patterns reside, which direct how we process reality by default. Characteristics in Investment Decisions Intuition or Gut Feeling: Sometimes, investors feel a strong hunch or intuition about an investment without being able to explain the reason logically. This can come from the very fast processing of information by the unconscious mind. Patterns such as a very basic risk appetite or a strong stress response that is difficult to change may be rooted in this level. The unconscious mind can also be a source of innovative ideas or unexpected solutions to complex investment problems

The application of NLP in investment decisions works by aligning these three levels of mind. Investors not only use their conscious minds for logical analysis, but also cleanse the subconscious mind of harmful beliefs or habits, as well as harness the wisdom and resources of the unconscious mind.

Case in point, an investor may consciously make a solid trading plan. However, if his subconscious mind has a strong belief in fear of loss, he may panic and sell too quickly when the market is volatile. With NLP, he can use reframing to change those subconscious beliefs, so that his conscious mind can execute plans without emotional restraint. The subconscious mind may even provide timely intuition based on internalized experiences.

Thus, NLP not only becomes a tool for rational analysis, but also for managing the internal landscape of investors' minds, ensuring that their entire cognitive and emotional potential supports smarter, disciplined, and profitable investment decisions.

In this study, especially in the NLP variable, there is a shortcoming, namely the importance of us compiling questions or questionnaires with a coefficient of >0.07 because in this study several indicators must be adjusted to get optimal results.

Investment Decisions Have a Significant Effect on Performance investment

The better the Investment Decision, the higher the Hypothetical Investment Performance is proven, investment decisions are more than just rationality. Traditionally, investment decisions are often assumed to be a completely rational process, based on the analysis of financial data and information. However, the field of Behavioral Finance has extensively shown that investor psychology, including cognitive and emotional biases, profoundly influences the decision-making process and often leads to deviations from rationality. Bias such as overconfidence, herding instinct, loss aversion, and framing effect can significantly affect the investment choices made (Kahneman & Tversky, 1979; Shiller, 2003). If our rationality is disturbed, it will affect decision-making and will have an impact on the investor's investment performance.

Age, experience are one of the important factors in decision-making from the Indonesian Securities Center Depository The growth of investors increased significantly during

the pandemic, in 2021, the number of investors reached 7.4 million. This figure shows that the COVID-19 pandemic in 2019 did not reduce the number of investors in Indonesia. Very significant investor growth occurred in September 2024 by reaching 13.9 million as seen in figure 2 Investor Growth.

SID	Pertumbuhan Investor					
	2021	2022	2023	Jul-24*	Agt-24	Sep-24
Pasar Modal	92,99%	37,68%	18,81%	2,05%	2,35%	2,09%
Reksa Dana	115,41%	40,41%	10,87%	2,14%	2,44%	2,12%
Saham dan Surat Berharga Lainnya*	103,60%	28,64%	18,37%	1,13%	1,34%	1,31%
SBN	32,75%	36,05%	20,60%	1,59%	1,18%	1,20%

Figure 2. Investor Growth
Source: Indonesian Securities Depository Association, 2025

The surge in the number of capital market investors was mainly supported by an increase in the number of mutual fund investors, which in 2021 reached an increase of 115.41%. Investors of stocks and other securities achieved a gain of 103.60% see Figure 1.1 Investor growth. KSEI data from a total of 13.90 million investors are retail investors, followed by corporate or institutional investors 24,260 investors, mutual funds 9,051 investors, pension funds 1,657 investors, financial institutions 1,522 investors, foundations 1136 investors to insurance 564 investors and securities companies 493 investors. See figure 3 Composition of Individual Investors and Institutions.

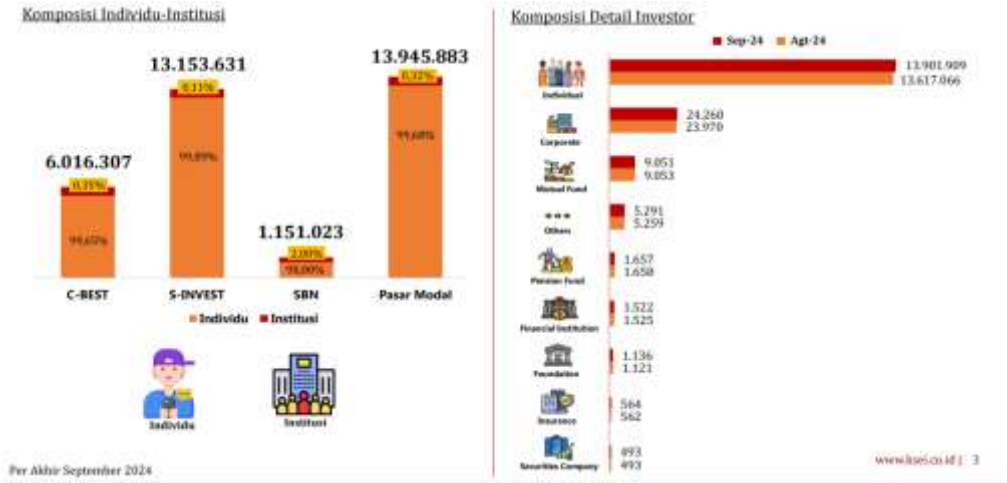

Figure 3. Composition of Individual Investors and Institutions
Source: Indonesian Securities Depository Association, 2025

Based on age data as of January 2024, the number of investors under the age of 30 or generation Z dominates reaching 56.29%, then investors aged 31-40 years or commonly classified as the millennial generation reach 23.66% and investors aged 41-50 years reach 11.59%, see figure 1.4 Demographics of Individual Investors (2/2). However, in terms of the number of assets, the largest was recorded by investors over 60 years old with the value of investment asset ownership in stocks based on C-Best data in January 2024 reaching IDR 889.99 trillion and assets in mutual funds (S-Invest) reaching IDR 57.41 trillion. Then followed by investors aged 51-60 years with a value of stock asset ownership of IDR 221.57 trillion and mutual funds of IDR 38.42 trillion as of January 2024.

Figure 4. Demographics of Individual Investors (1/2)
Source : Indonesian Securities Depository Association, 2025

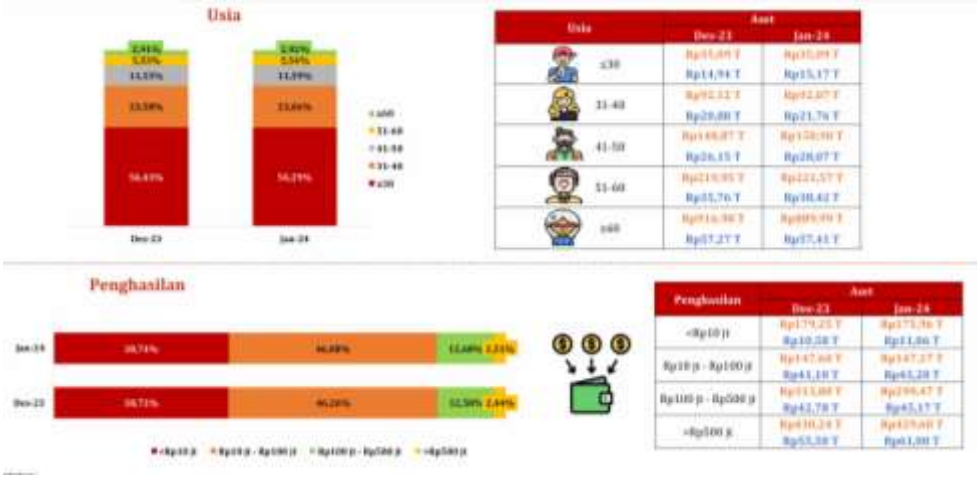

Figure 5. Demographics of Individual Investors (2/2)
Source: Indonesian Securities Depository Association, 2025

Generation Z investors recorded stock assets of IDR 35.09 trillion and mutual funds of IDR 16.17 trillion. Millennial investors or those aged 31-40 years have stock assets of IDR 92.07 trillion and mutual funds of IDR 21.76 trillion, and investors aged 41-50 years have stock assets of IDR 150.90 trillion and mutual funds of IDR 28.07 trillion. These differences in assets psychologically affect the maturity of an investor in managing his finances.

The growth of investors dominated by young investors will become a new problem in Behavior Finance in this case psychological trading, because here the presence of NLP can be one of the application solutions to maximize investment decisions to maximize investment performance in this case increasing the portfolio of the relationship between the quality of investment decisions and investment performance is one of the fundamental principles in the financial sector. Intuitively, decisions taken carefully and rationally are expected to result in better returns and managed risk. Various economic, financial, and behavioral theories have consistently supported this proposition, reinforced by empirical evidence from diverse studies. The Efficient Market Hypothesis (EMH) by Fama (1970) argues that the price of an asset fully reflects all available information. Although this implies that it is difficult to consistently beat the market through superior decisions, the theory still asserts that rational investment decisions, which are based on available information, are a prerequisite for obtaining returns commensurate with the risks taken. This means that a good decision will at least result in a performance that is on par with the market, avoiding underperformance due to bad decisions.

The Modern Portfolio Theory (MPT) developed by Markowitz (1952) shows how investors can build portfolios that optimize returns for a specific level of risk. Prudent investment decisions in diversification and asset allocation based on investors' risk preferences are at the heart of MPT, and it is these decisions that directly aim to improve the performance of risk-adjusted portfolios. MPT emphasizes that planned decisions in choosing asset combinations can result in more stable and efficient performance.

A large number of empirical studies have proven the existence of a positive correlation between the quality of investment decisions and the performance produced, both at the individual and institutional levels. A study by Pompian and Wood (2009) in their book Behavioral Finance and Wealth Management implicitly shows that investment decisions that are not refracted by emotions or irrational cognition tend to result in better performance. They explain how behavioral biases such as overconfidence or herding often lead to sub-optimal decisions that are detrimental to performance. Therefore, more rational decisions, obtained from bias management, will improve performance. Research conducted by Baker and Nofsinger (2010) in Behavioral Finance: Investors, Corporations, and Markets underscore how investor behavior, including their decision-making processes, has a significant impact on investment outcomes. They present a variety of case studies in which decisions driven by emotions or lack of discipline result in substantial losses, reinforcing the argument that disciplined and informed decisions will positively correlate with performance.

Factors such as financial literacy and investment experience have also been shown to influence the quality of investment decisions, which in turn impacts performance. A study by Lusardi and Mitchell (2014) in The Economic Importance of Financial Literacy: Theory and Evidence shows that individuals with higher financial literacy tend to make better financial decisions, including investment decisions, which leads to greater wealth accumulation or better investment performance. In the context of risk management, wise investment decisions regarding risk budgeting and asset allocation are essential for long-term performance. Fabozzi, Focardi, and Jonas (2010) in Risk Management in Finance: Six Sigma and Other Next-Generation Techniques emphasize that structured decisions in managing and diversifying risk are key to achieving consistent returns and protecting capital, thereby directly improving risk-adjusted performance. High-quality investment decisions — one that is well-informed,

rational, free from excessive emotional bias, and consistent with long-term goals—is a key driver of superior investment performance. It's not just about choosing the "right" asset at the "right" time, but more about a disciplined and structured decision-making process. Therefore, efforts to improve investment performance must start from improving the quality of investment decisions themselves. This includes the development of emotional intelligence to control bias (Prakoso & Rosidi, 2018)

The application of NLP has a direct effect on investment performance

The proof of this hypothesis provides information that the application of NLP can be used on all fronts, not only in the social industry, but also in the trade, technology, politics, and economic industries, especially the capital market. The relationship between an individual's internal psychological factors and investment outcomes is often a topic of debate in financial literature. Although many focus on fundamental and technical analysis, some studies and views are beginning to link the application of Neuro Linguistic Programming (NLP) to investment performance directly. This argument is based on the premise that NLP equips individuals with cognitive and emotional skills that increase their capacity to act more effectively in the market, ultimately influencing the return on investment. The application of NLP equips individuals with a set of skills that can directly impact on the way they interact with the market and investment data. It's not just about better data analysis, but about improving internal capabilities that enable more optimal decision-making and execution. Improved Focus and Discipline Skills: NLP offers techniques to improve focus and concentration (Dilts, 1998). In investing, the ability to stay focused on the plan, not distracted by market noise or momentary emotions, is essential for the disciplined execution of a strategy. Discipline is key to avoiding impulsive decisions that often harm investment performance (Dalio, 2017).

The investment market is often volatile and full of emotional stress. NLP teaches how to manage internal circumstances, turning fear into calm or doubt into confidence (Andreas & Andreas, 1987). Investors who are able to manage their emotions will not easily panic when the market falls or excessive euphoria when the market rises, so they can stick to a pre-planned strategy and reduce mistakes caused by impulsive reactions (Kahneman & Tversky, 1979). The market is constantly changing, and strategies that worked yesterday may not work today. NLP encourages behavioral flexibility and the ability to reframing situations, allowing investors to adapt to new market conditions without getting stuck in a rigid mindset (Grinder & Bandler, 1979). This adaptability can directly affect an investor's ability to take advantage of new opportunities or avoid evolving risks, leading to better performance.

Although difficult to measure, NLP can help investors tap into their unconscious mind, which can process information more quickly and deeply, sometimes resulting in an accurate intuition or "hunch" about the market (Dilts, 1990). It's not about magic, but about the unconscious mind's ability to recognize complex patterns of large data that conscious analysis might miss. Timely intuitive decision-making, especially in fast-moving market conditions, can directly contribute to better performance. Although direct research quantitatively measuring the influence of NLP on individual investment performance is still developing and may require more empirical studies, few views and studies provide strong indications. Several NLP practitioners and researchers have documented cases where individuals who apply NLP principles report improvements in their trading discipline, risk management, and, as a result,

their financial performance. Although these are often in the form of case studies or qualitative observations, they provide anecdotal evidence of their positive impact (O'Connor & Seymour, 1993). The literature on trading psychology often emphasizes the role of mindset and mental states in success. Authors such as Mark Douglas (2000) in Trading in the Zone argue that consistency in trading comes from developing the right mindset, not just market analysis. NLP provides the tools to form this mindset, which is directly related to trading behavior and the end result. The addition of new companies in the Indonesian capital market industry through Initial Public Offering (IPO) requires us as investors to keep our emotions and mindset, according to data from the Central Statistics Agency (BPS) as of December 2018 the number of companies that have been listed on the Indonesia Stock Exchange is 619 companies.

Table 3. Total Company Listing & Transaction Data 2018

Jakarta Stock Exchange	2018											
	January	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Number of Listed Companies	567	568	569	573	581	585	594	598	600	609	615	619
Volume (Billion Shares)	257.196	282.210	238.661	188.754	184.974	133.077	203.306	190.500	178.049	226.767	206.276	246.509
Change (%)	-	-	-	-	-	-	-	-	-	-	-	-
Value (Billion Rupiah)	198.902	172.056	221.371	146.631	182.237	122.029	157.852	184.115	133.958	155.988	185.235	179.713
Composite Stock Price Index	6,605.63	6,597.22	6,188.99	5,994.6	5,983.59	5,799.24	5,936.44	6,018.46	5,976.55	5,831.65	6,056.12	6,194.5

Source : Central Statistics Agency

The increasing growth of investors and companies listed on the capital market encourages investors to have knowledge and understanding of how to analyze a stock? Which later becomes a factor for an investor to buy shares. Although stock price movements tend to be highly volatile and turbulent like what happened in 2008, stock prices will continue to rise in the long term, especially for stocks with good fundamentals (Alexander Thian, 2022). Each stock has an intrinsic value, which is the actual value that is based on the company's financial performance, business prospects, and other fundamental factors. Investors who use fundamental analysis seek to determine whether the price of a stock in the market is undervalued (lower than its intrinsic value) or overvalued (higher than its intrinsic value). If undervalued, investors will buy the stock in the hope that the price will rise in the future (Benjamin Graham, 1934).

The use of charts in analyzing stock movements is one of the important factors, because through these charts it reflects the condition of the company. According to Charles Henry Dow (Late 19th Century) states that market prices reflect all available information and move in trends. although there was no formal publication of Dow himself, his ideas were later developed and popularized by William Hamilton and S.A. Nelson through the publication of The Wall Street Journal. Technical factors are the most often used factors by investors, more than 90% of investors give higher weight to the use of technical factors than fundamental factors in buying stocks (Aller, 1992). This approach essentially makes stock charts reviewed

from the movement of stock prices and their transaction volume to get clues to future changes (Malkiel, 1996). The use of charts is also sometimes a new problem, where when a person whose emotions are not controlled or can be said to be a newbie in the capital market when he looks at the chart continues to result in emotions going up and down and can even make instant decisions without thinking because of loss of patience. This of course requires NLP as a variable that can support controlling an investor's emotions, mindset, and actions in order to maximize the performance of his portfolio. However, NLP cannot stand alone, a person's understanding of fundamental and technical analysis is very important before one will make a decision to buy a stock or invest in the capital market. Paying attention to the stocks or assets that are invested in is very important in improving investment performance such as for example choosing blue chip stocks, sourced from the idx.co.id web page The following are examples of companies that are on the trading board of the Indonesia Stock Exchange:

a. Main Board - Blue Chip
    1. PT Bank Central Asia Tb – BBCA
    2. PT Bank Rakyat Indonesia Tbk – BBRI
    3. PT Telkom Indonesia Tbk – TLKM
    4. PT Unilever Indonesa Tbk – UNVR
    5. PT Astra International Tbk – ASII
    6. PT Bank Mandiri (Persero) Tbk – BMRI
    7. PT Indofood CBP Sukses Makmur Tbk – ICBP
    8. PT Aneka Tambang Tbk – ANTM
    9. PT Indofood Sukses Makmur Tbk – INDF
    10. PT Kalbe Farma Tbk – KLB
b. Developer Board - Secondary Stock
    1. PT Adi Sarana Armada Tbk – ASSA
    2. PT Saranacentral Bajatama Tbk – BAJA
    3. PT Sepeda Bersama Indonesia Tbk – BIKE
    4. PT Garuda Metalindo Tbk – BOLT
    5. PT AirAsia Indonesia Tbk – CMPP
    6. PT Digital Mediatama Maxima Tbk – DMMX
    7. PT Fast Food Indonesia Tbk – FAST
    8. PT PAM Mineral Tbk – NICL
    9. PT Wilton Makmur Indonesia Tbk – SQMI
    10. PT Bakrie Sumatra Plantations Tbk – UNSP
c. Acceleration Board - Third Line
    1. PT Idea Indonesia Akademi Tbk – IDEA
    2. PT Nanotech Indonesia Global Tbk – NANO
    3. PT Trimegah Karya Pratama Tbk – UVCR
    4. PT Cashlez Worldwide Indonesia Tbk – CASH
    5. PT Fimperkasa Utama Tbk – FIMP
    6. PT Indo Boga Sukses Tbk – IBOS
    7. PT Era Graharealty Tbk – IPAC
    8. PT Panca Anugrah Wisesa Tbk – MGLV
    9. PT Prima Globalindo Logistik Tbk – PPGL

10. PT Global Sukses Solusi Tbk – RUNS

According to Eugene Fama (1970), in the hypothesis of efficient market theory in the capital market, market efficiency is classified into three forms, namely weak form, semi-strong form, and strong form. Implementation on the trading board on the Indonesia Stock Exchange will only apply in 2 forms, namely the weak form reflecting the companies on the acceleration board and the semi strong form reflecting the companies on the main board and developers. Stocks on the Accelerator Board often trade at a lower price than stocks on the main board. Investors think they can buy shares of potential companies at a low price (Benjamin Graham, David., Dood, 1934). investors can use Acceleration Board shares to diversify their portfolios. Despite being high risk, a small percentage of successful acceleration stocks can provide large profits, which can compensate for losses from other stocks (Harry Markowitz, 1952). According to Louis Bachelier (1900) in The Theory of Speculation Some investors purely speculate, hoping that the stock price will rise sharply in a short period of time, without paying much attention to the company's fundamentals. They seek quick profits from price fluctuations. This speculation theory reflects accelerated stocks and developers that are often traded and triggers many problems in trading psychology and decreases portfolio performance.

Investment decisions mediate the influence of NLP on performance investment

Based on the latter hypothesis, the indirect influence of Neuro Linguistic Programming on Investment Performance through investment decisions or moderation, the relationship between psychological factors, such as Neuro Linguistic Programming (NLP), and investment results is often indirect. Conversely, the influence of NLP on investment performance is most likely mediated by the quality of investment decisions made by an individual. This means that NLP does not magically improve investment performance, but rather empowers investors to make smarter and more disciplined decisions, which in turn results in better returns. This concept of mediation is crucial in understanding the mechanisms underlying the impact of NLP in a financial context. The application of NLP equips individuals with cognitive and emotional skills that fundamentally improve the way they make decisions. NLP teaches techniques for identifying and managing emotions such as fear, greed, or panic (Bandler & Grinder, 1975). Investors who are able to control their emotions tend to make more rational, non-rushed, and disciplined decisions, avoiding common behavioral biases such as loss aversion or herding (Kahneman & Tversky, 1979). A study by Prakoso and Rosidi (2018) found that the application of NLP can improve the quality of investor decision-making, as it helps individuals manage the emotions that dominate when investing. NLP techniques help investors clarify well-formed outcomes and focus on relevant information, reducing noise and confusion in the decision-making process (O'Connor & Seymour, 1993). This clarity leads to the formulation of more targeted investment strategies and more consistent decisions. NLP encourages the ability to see situations from different perspectives (reframing) and adapt to changing conditions (Grinder & Bandler, 1979). This flexibility allows investors to adjust strategies and make informed decisions in response to market changes, rather than fixating on one approach that may no longer be relevant. Widjaja and Suryana (2016), for example, discuss how NLP can be used to overcome behavioral biases in investment decision-making by improving adaptability and reframing. Once investment decisions are improved in quality by NLP, these better decisions will directly contribute to superior investment performance.

Rational and informed investment decisions will lead to more optimal asset allocation, effective diversification, and the selection of instruments that suit the investor's risk profile (Markowitz, 1952). These kinds of decisions are directly correlated with better returns and managed risk. Decisions made with a clear mind and free of bias will be easier to execute in a disciplined manner, including adhering to entry and exit plans or stop-loss limits. This discipline is the key to avoiding large losses and maximizing profits (Douglas, 2000). Good investment decisions include careful identification and management of risks. Investors who make high-quality decisions tend to implement effective risk management strategies, which in turn protect capital and improve risk-adjusted performance (Fabozzi, Focardi, & Jonas, 2010).

CONCLUSION

This research yielded key conclusions from PLS-SEM analysis: investment decisions positively influenced investment performance ($\beta = 0.664$, $t = 6.587$, $p = 0.000$), supporting H1; Neuro Linguistic Programming (NLP) significantly enhanced investment decisions ($\beta = 0.687$, $t = 6.562$, $p = 0.000$), supporting H2; NLP directly improved investment performance ($\beta = 0.591$, $t = 5.717$, $p = 0.000$), supporting H3; and NLP indirectly affected performance through investment decisions ($\beta = 0.456$, $t = 7.624$, $p = 0.000$), supporting H4. Careful selection of questionnaire indicators (with loadings >0.70 for optimal AVE) and methodologies was emphasized to ensure robust SEM-PLS results. Representational systems, reframing, and anchoring emerged as core NLP techniques for addressing behavioral finance issues, suitable for self-application or therapy. For future research, longitudinal studies could test these NLP methods' long-term efficacy among diverse investor groups in emerging markets, incorporating experimental designs to establish causality beyond cross-sectional data.

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