# Applying Warren Buffet's Investment Strategy to Indonesia Stock Market 

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#### Abstract

In the past five years, there has been a significant surge in local Indonesian investors, predominantly comprising millennials and Gen Z, contributing to the positive growth of the stock market. However, a concerning phenomenon known as "herding bias" has been observed, highlighting the tendency of young investors to follow prevailing trends without fully understanding the intricacies and risks associated with their investments. This paper aims to address this issue by enhancing public awareness of stocks and minimizing associated risks, focusing specifically on value investing as an effective strategy. The research utilizes a ten-year period, selecting samples from companies listed in IDX30 through Warren Buffett's screening test. This test incorporates key factors such as Conservative Debt, Price-to-Earnings Ratio (P/E Ratio), Price-to-Book Ratio (P/BV Ratio), Debt to Equity Ratio (D/E Ratio), and Return on Equity (ROE). Following the sample selection, the paper calculates the intrinsic value of chosen stocks, determines the margin of safety, estimates expected returns, and evaluate the risk-adjusted performance. Additionally, qualitative factors like understanding the business, market conditions, and internal company factors are considered. The findings indicate that Warren Buffett's investment strategy can be successfully applied to Indonesian stocks. Investors are advised to select stocks based on careful consideration of financial ratios, analyzing annual reports, calculating intrinsic values, determining margins of safety, and assessing expected returns alongside associated risks. This research provides valuable insights that can serve as a practical reference for stock investment decisions, particularly for stocks with high market capitalization. By promoting a comprehensive understanding of value investing, this paper aims to empower young Indonesian investors to make informed and strategic choices, thereby mitigating the impact of herding bias in the local investment landscape.


KEYWORDS: Herding Bias; IDX30; Value Investing; Warren Buffett; Initial Screening; Intrinsic Value

## INTRODUCTION

Investing in stocks is the most popular investment in the capital market. Essentially, investing in the capital market has benefits such as dividends and capital gains. The growth of local investors in the Indonesian capital market continues to increase each year, especially during the year 2021.


Figure 1. Number of Capital Market Investor in Indonesia

PT. Kustodian Sentral Efek Indonesia (KSEI) revealed that as of 2021, the total number of investors reached 7,48 million, experiencing a surge of $92,99 \%$ compared to the end of 2020, which recorded 3.88 million investors. According to the Chief Executive Officer of the Indonesia Stock Exchange (IDX), Director of Development at IDX, Hasan Fawzi, stated that in addition to

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the increase in the number of investors in Indonesia, there is another increase, such as, the ownership of stocks, which is currently dominated by local investors, reaching $59,41 \%$ in 2022, while the rest is owned by foreign investors.

Local investors have experienced an increase in the past 5 years. While this can be seen as positive, but in the other hand there are some studies that indicate phenomenon that called "herding bias". This phenomenon explaining about young investors behavior that just tend to follow existing trends where they simply follow the actions or advice of others, without understanding the investments and risks they may face.

A survey using a questionnaire was conducted from November 20th to December 15th, 2023, this questionnaire is created to shown how the "herding bias" effect is to young investor investment performance by exploring the investment behavior of young investors and delving into their knowledge regarding the investments they have did.This is related to data showing that the young generation (millennials and Gen Z) dominates the market, with a sudden surge in 2021.Its targeted participants were Generation Z (currently between the ages of 18-35).

The survey result shows that among 97 participants, only $44 \%$ received an actual return in accordance with their expected return. The survey result also shows that on a scale from one to five, with five described as "very influential", $49 \%$ of the participants chose "4" as participants felt that they were affected by "herding bias" in their personal investment decisions. In terms of seeing how familiar their with "herding bias", $53 \%$ of participants said ""I have heard of it before and understand the meaning of that term.", " $37 \%$ of participants said "I might have heard of it, but I'm not exactly sure about the meaning of the herding bias." and $10 \%$ ""I have never heard of it.". Based on these findings, it can be asserted that $47 \%$ still possess a restricted grasp of herding bias. In contrast to the $53 \%$ who already have a comprehension, the gaps in proportion still small. Hence, one can infer that there is still a deficiency in education among people, and they haven't engaged in adequate personal research.

To help young investors identify appropriate stocks, they can be introduced to Warren Buffett's investment strategy. Overall, Warren Buffett's value investing strategy has proven to be highly successful throughout his decades-long career. Buffett believes that the stock market is often inefficient and can misprice stocks. Therefore, he looks for stocks that are priced lower than their intrinsic value, which he estimates based on factors such as potential future earnings, competitive advantages, and asset strength. Moreover, Buffett also seeks stocks with beautiful long-term growth. This means that the stocks have strong fundamentals and sustainable competitive advantages that can drive consistent profit growth over the years.

## METHOD, DATA, AND ANALYSIS

According to Sugiyono (2018), data collection methods can be categorized as field studies and literature studies. Field studies involve direct observation and interviews to gather primary data. This research utilizes both literature studies and field studies for data collection. The primary data collection involves a questionnaire to understand the impact of herding bias on young investors. The questionnaire targets individuals aged 18-35 actively involved in the stock market, aiming to explore their investment behavior and knowledge.

For secondary data collection, the IDX30 Fact Books from the Indonesia Stock Exchange website for the years 2012are analysed consideration of picking up these particular years is to compare the return on investing within ten years period (2012 to 2022). Financial data is sourced from audited reports and annual reports, ensuring reliability.The primary data analysis uses Interpretative Phenomenological Analysis (IPA) to understand young investors' experiences and behaviors. For secondary data, a screening process aligning with Warren Buffett's investment principles is applied. Initial screening involves criteria such as conservative debt, P/E ratio, P/BV ratio, D/E ratio, and ROE to identify value stocks. Further elimination criteria exclude unprofitable stocks and those lacking liquidity.

Intrinsic value assessment is performed using the Discounted Cash Flow (DCF) method, aligning with Buffett's focus on a company's long-term earning potential. Growth projections are calculated by analyzing annual growth rates, and valuation calculations determine future and present values of stocks. Finally, a Risk-Adjusted Return Analysis using the Treynor ratio measures the return and risk-adjusted return of stocks compared to the overall market return. To assess these companies, a thorough analysis will be carried out through the following steps:

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## A. Initial Screening

Warren Buffett's principles for filtering companies based on predetermined financial benchmarks, the research employs specific criteria to refine the selection of stocks:
a. Conservative Debt

Ensuring that a company's borrowed funds are conservative and can be repaid within three to four years. The rule of thumb is to have long-term debt less than three to four times current net earnings after tax.
b. P/E Ratio (Price-to-Earnings Ratio)

Selecting stocks with a P/E ratio of 5 or below. The P/E ratio compares a stock's earnings to its share price, with a lower ratio indicating potential undervaluation.

$$
\begin{equation*}
P E R=\frac{\text { Market Price per Share }}{\text { Earning Per Share }} \tag{1}
\end{equation*}
$$

c. P/BV Ratio (Price-to-Book Value Ratio)

Choosing stocks with a P/BV ratio of 1 or below. This ratio compares the market price to the book value, with a lower $\mathrm{P} / \mathrm{BV}$ suggesting relative affordability.

$$
\begin{equation*}
P / B V=\frac{\text { Market Price per Share }}{\text { Book Value per Share }} \tag{2}
\end{equation*}
$$

d. D/E Ratio (Debt to Equity Ratio)

Limiting the $\mathrm{D} / \mathrm{E}$ ratio to 2 or below. This ratio compares debt to equity, with a lower ratio indicating a higher level of funding from equity, providing a safety margin for creditors.

$$
\begin{equation*}
D E R=\frac{\text { Total Liability }}{\text { Total Shareholder's Equity }} \tag{3}
\end{equation*}
$$

e. ROE (Return on Equity)

Setting a threshold of ROE greater than $15 \%$. A high ROE indicates efficient use of shareholders' funds, suggesting a sustainable competitive advantage.

$$
\begin{equation*}
\text { ROE }=\frac{\text { Net Income }}{\text { Total Shareholder's Equity }} \times 100 \tag{4}
\end{equation*}
$$

Stocks that fulfill these criteria are labeled as value stocks and are chosen as representative samples for additional scrutiny. Following the initial screening, additional criteria for exclusion are applied.

1. Exclude stocks that haven't generated profits in three consecutive years.
2. Eliminate stocks lacking liquidity, assessed through bid and offer lots.
3. Emphasize understanding both the company and the industry, scrutinizing stocks based on industry comprehension.

## B. Intrinsic Value Assessment

For companies passing the initial screening, the Discounted Cash Flow (DCF) method is applied to estimate intrinsic value. This involves forecasting future cash flows, discounting them back to their present value, aligning with Buffett's focus on a company's long-term earning potential.

$$
\begin{equation*}
D C F=\frac{C F}{(1+r)^{1}}+\frac{C F}{(1+r)^{2}}+\cdots+\frac{C F}{(1+r)^{n}}+\frac{C F}{(1+r)} \tag{5}
\end{equation*}
$$

Notes:
$\mathrm{CF}=$ the expected cash flows in each period (typically years)
$r=$ the discount rate or required rate of return
$\mathrm{n}=$ the number of periods

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## C. Growth Projection

Calculate annual growth rates for each company over recent years. Project future earnings per share (EPS) based on these growth rates to gain insights into potential earnings growth.
Projected EPS = Current EPS + Average Annual Growth Rate

Notes:
Current EPS = The earnings per share for the most recent period
Average Annual Growth Rate = The average rate at which EPS has been growing annually up until the current year that.

## D. Valuation Calculations

Determine future and present values of stocks, considering projected earnings and the time value of money. This aids in assessing their potential worth and investment attractiveness. Calculate annual growth rates for each company over recent years.

$$
\begin{equation*}
P V=\frac{F V}{(1+r)^{n}} \tag{6}
\end{equation*}
$$

Notes:
PV = Present Value
FV = Future Value
$r=$ Discount rate (interest rate)
$\mathrm{n}=$ Number of periods

$$
\begin{equation*}
F V=P V x(1+r)^{n} \tag{7}
\end{equation*}
$$

Notes:
PV = Present Value
$F V=$ Future Value
$r=$ Discount rate (interest rate)
$\mathrm{n}=$ Number of periods

## E. Risk-Adjusted Return Analysis

Utilize the Treynor ratio to measure normal and risk-adjusted returns, comparing stock performance to the overall market return. This evaluates return potential relative to the level of risk carried by the stocks. The Treynor ratio focuses on compensating investors for specific risks associated with market movements, making it suitable for assessing large-cap, well-diversified portfolios.

> Treynor Ratio
> $=\frac{\text { Average Portfolio Return - Average Risk Free Return }}{\text { Beta of the Portfolio }}$

## RESULTS

## A. Initial Screening

The initial screening stage involved a thorough analysis of the financial statements of all companies listed on the IDX30 over specified period of 10 years (examining 2012 historical data). This screening utilized the parameters outlined in the financial components, ratios section, and any additional criteria. Detailed calculations for this stage are provided in the figure above. The majority of companies were excluded during this stage, resulting in the elimination of just one company across the 30 bluechipcompanies listed in IDX30 for specified period of 10-year.

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|  |  | criteria 1 | criteria 2 | criteria 3 | criteria 4 | criteria 5 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Code Stock | P/E (5 or below) | P/BV (1 or below) | D/E (2 or below) | ROE (> 15\%) | Long Term Debt < 3 * Net Income | Notes: |
| 1 | AALI | 12,64 | 3,31 | 0,33 | 26,20\% | $453<7.362$ | criteria 1 accepted |
| 2 | ADRO | 13,83 | 1,76 | 1,23 | 12,74\% | $27.978>11.073$ | criteria 2 accepted |
| 3 | ANTM | 4,09 | 0,95 | 0,54 | 23,29\% | $1.132<8.967$ | criteria 3 accepted |
| 4 | ASII | 13,69 | 3,42 | 1,03 | 25,01\% | $38.282<67.380$ | criteria 4 accepted |
| 5 | BBCA | 18,84 | 4,32 | 7,54 | 22,93\% | $98.566>35.697$ | criteria 5 accepted |
| 6 | BBNI | 9,59 | 1,59 | 6,66 | 16,55\% | $206.360>21.609$ | criteria 1-5 not accepted |
| 7 | BBRI | 9,18 | 2,64 | 7,50 | 28,79\% | 390.674 > 56.043 | sample |
| 8 | BDMN | 13,26 | 1,88 | 4,42 | 14,21\% | $84.751>12.246$ |  |
| 9 | BJBR | 8,62 | 1,71 | 10,79 | 19,85\% | $23.811>3.579$ |  |
| 10 | BMRI | 11,62 | 2,47 | 7,31 | 21,24\% | $469.668>48.771$ |  |
| 11 | BSDE | 13,06 | 1,63 | 0,59 | 14,06\% | $1.948<4.443$ |  |
| 12 | BORN | 12,27 | 1,01 | 1,71 | 6,25\% | $5.236>1.770$ |  |
| 13 | BUMI | -1,82 | 3,22 | 17,75 | -178,11\% | $38.741>20.262$ |  |
| 14 | ELTY | -4,15 | 0,23 | 0,71 | -4,08\% | $5.377>1.269$ |  |
| 15 | ENRG | 11,71 | 0,50 | 2,00 | 4,35\% | $3.169>801$ |  |
| 16 | GGRM | 26,62 | 4,07 | 0,56 | 15,29\% | $4.216<12.207$ |  |
| 17 | INCO | 38,52 | 1,40 | 0,36 | 3,65\% | $4.081>1.821$ |  |
| 18 | INDF | 10,54 | 1,50 | 0,74 | 14,27\% | $8.353<14.616$ |  |
| 19 | INTP | 17,35 | 4,26 | 0,17 | 24,53\% | $917<14.289$ |  |
| 20 | ITMG | 8,74 | 4,46 | 0,46 | 17,44\% | $51.786>5.127$ |  |
| 21 | JSMR | 24,12 | 3,79 | 1,53 | 69,47\% | $8.318<20.400$ |  |
| 22 | KLBF | 30,29 | 7,31 | 0,28 | 24,04\% | $155>5.316$ |  |
| 23 | KRAS | -35,56 | 0,94 | 1,30 | -2,67\% | $1.952>864$ |  |
| 24 | LPKR | 9,26 | 2,01 | 1,17 | 21,65\% | $9.920>7.449$ |  |
| 25 | PGAS | 12,71 | 4,94 | 0,66 | 38,83\% | $10.806<26.304$ |  |
| 26 | PTBA | 15,33 | 4,09 | 0,50 | 26,68\% | $2.453<6.807$ |  |
| 27 | SMGR | 19,10 | 5,18 | 0,45 | 26,46\% | $3.589<14.775$ |  |
| 28 | TLKM | 6,35 | 1,74 | 0,66 | 27,45\% | $20.284<55.164$ |  |
| 29 | UNTR | 12,54 | 2,28 | 0,56 | 18,14\% | $6.673<17.580$ |  |
| 30 | UNVR | 32,89 | 40,10 | 2,02 | 121,95\% | 481 < 14.517 |  |

Figure 2. Initial Screening Result

## B. Intrinsic Value Evaluation

Upon verifying that the selected samples meet the specified criteria, the subsequent phase involves assessing the intrinsic value of the chosen stocks through the Discounted Cash Flow (DCF) method. The initial step includes determining the annual growth rate for each company in each year. Following this, the author will calculate the Earnings Per Share (EPS) for the upcoming years, facilitating the computation of both future and present values of the stocks. The analysis will conclude by evaluating normal returns and risk-adjusted returns to compare the performance of the stocks with the current market returns. Here is a detailed analysis of Aneka Tambang Persero Tbk. (ANTM) as a selected sample.

## 1. Brief Company Overview

Aneka Tambang (Persero) Tbk., a mining company with a significant history, was established on July 5, 1968, under State Decree No. 112/M/1968 by the President of Indonesia. Originally named P.T. Tambang Timah Indonesia, it commenced operations focusing on tin mining. The company underwent evolution, leading to a name change in 1974 to P.T. Aneka Tambang (Persero) Tbk. Its journey started with nickel mining in Pomalaa, Sulawesi Tenggara, and expanded into gold, bauxite, and manganese, establishing vertically integrated operations covering exploration, mining, processing, refining, and marketing.

Subsidiaries like Feni Haltim and CibaliungSumberdaya were established, contributing to its growth and market dominance in Indonesia's nickel, gold, and bauxite sectors. Listed on the Indonesia Stock Exchange in 1980, Aneka Tambang has been recognized for its commitment to sustainable practices and social responsibility. Today, it remains a key player in Indonesia's mining industry, actively pursuing exploration, embracing technological advancements, and prioritizing responsible mining practices. Key milestones, such as the inauguration of the Pomalaa Nickel Smelter in 1990 and a strategic long-term nickel supply agreement with Tesla in 2022, underline its continuous commitment to shaping the future of Indonesia's mining landscape.

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## 2. Historical Stock Performance

Examining the graph below, over the past decade, ANTM's stock price has demonstrated an overall upward trajectory, starting at approximately Rp1.280 in 2012 and reaching a peak of Rp2.380 in 2021, representing a noteworthy increase of over $85 \%$. However, this journey has not been devoid of volatility. Significant declines occurred in 2015, dropping from around Rp1.065 to Rp314. In July 2015, a global nickel price plunge of over $20 \%$ resulted from oversupply in Indonesia and the Philippines, coupled with weakened demand from China. Simultaneously, ANTM's president director resigned unexpectedly in September 2015, amplifying volatility and eroding investor confidence.

The dual challenges of a struggling nickel market and leadership uncertainties likely contributed to ANTM's sharp stock decline during this period. In 2020, ANTM again experienced a drop from approximately Rp2.270 to Rp1.090. The global outbreak of COVID-19 in early 2020 significantly impacted economies and industries worldwide The pandemic-induced lockdowns and economic slowdown led to a decrease in demand for metals, including nickel and ferronickel, which are key products for ANTM. Notably, the stock price rebounded in 2021 to Rp2.380 and has since maintained relative stability, indicating a renewed sense of investor confidence in the company's outlook.


Figure 3. ANTM Historical Prices

## 3. Analysis of Financial Components and Ratios

As indicated in the table below, in 2019, the company's stock price began the year at approximately Rp492 and maintained stability, closing the year at around Rp500. In the subsequent year, 2020, there was a notable surge in the stock value, reaching a peak of Rp2,270 in August.
a. Conservative Debt

ANTM's long-term debt of 1,132 is notably lower than 3 to 4 times its net income of 8,967 , reflecting a prudent approach to managing long-term debt obligations in relation to earnings. This suggests ANTM employs a cautious strategy in handling its long-term debt. In contrast, the average long-term debt for companies listed on IDX30 is $51,004.33$, significantly higher than 3 to 4 times their net income of $17,283.6$. This indicates a higher level of debt exposure for the average IDX30 company, potentially posing increased financial risk.
b. Price-to-Earnings Ratio (P/E Ratio)

ANTM's P/E ratio is 4.09 , below the threshold of 5 . This lower P/E ratio for ANTM suggests that the market values its earnings more favorably compared to the average IDX30 company with a P/E ratio of 12.51 . Investors may interpret this as ANTM potentially being undervalued or demonstrating stronger earnings performance.

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## c. Price-to-Book Value Ratio (P/BV Ratio)

ANTM's P/BV ratio of 0.95 is significantly lower than the average IDX30 P/BV ratio of 3.96 . This implies that ANTM is trading at a lower multiple of its book value, indicating a potential value for investors. Conversely, the average IDX30 company is trading at a higher premium relative to its book value.
d. Debt to Equity Ratio (D/E Ratio)

ANTM's D/E ratio of 0.54 is substantially lower than the average IDX30 D/E ratio of 2.72 . A lower D/E ratio for ANTM signifies a more conservative capital structure, indicating lesser reliance on debt financing. In contrast, the average IDX30 company exhibits a higher reliance on debt financing, suggesting potentially higher financial leverage.
e. Return on Equity (ROE)

ANTM's ROE is $23.29 \%$, exceeding the threshold of $15 \%$. When compared to the average IDX30 ROE of $16.68 \%$, ANTM demonstrates higher efficiency in utilizing shareholders' equity to generate returns, indicating effective management and strong profitability.

| Code | ANTM |  |
| :--- | :--- | :--- |
| Stock Name | Aneka Tambang (Persero) Tbk. | Average of Companies Listed on IDX30 |
| P/E (5 or below) | 4,09 | 12,51 |
| P/BV (1 or below) | 0,95 | 3,96 |
| D/E (2 or below) | 0,54 | 2,72 |
| ROE (> 15\%) | $23,29 \%$ | $16,68 \%$ |
| Long Term Debt | $1132<8967$ | $51004,33>17283,6$ |

Figure 4. ANTM Financial Components and Ratio

Based on the analysis of financial components and screening criteria, Aneka Tambang Persero Tbk. (ANTM) emerges as a financially robust and appealing investment option in comparison to the average of companies listed on IDX30. ANTM showcases a conservative debt structure, lower valuation ratios ( $\mathrm{P} / \mathrm{E}$ and $\mathrm{P} / \mathrm{BV}$ ), a healthier $\mathrm{D} / \mathrm{E}$ ratio, and a higher ROE. These factors collectively suggest that ANTM is well-positioned for potential growth and may offer investors a more favorable risk-return profile compared to the average IDX30 company.

## 4. Growth Projection

To ascertain the valuation of ANTM's stock, the author intends to evaluate the estimated earnings per share (EPS) for the years 2010, 2011, and 2012. The first step includes determining the annual growth rate derived from historical EPS. According to the provided data, the EPS figures for 2010, 2011, and 2012 were Rp177, Rp202, and Rp314, respectively. The author has calculated the average annual growth rate of EPS until 2011, yielding approximately 21.15\%.

| Year | EPS |
| :---: | :---: |
| 2010 | 176,49 |
| 2011 | 202,12 |
| 2012 | 313,79 |
| Average of 3 years EPS | $21,15 \%$ |

Figure 5.3-Years ANTM Average Annual Growth Rate of EPS

Following that, the author moved forward to project the future EPS for the subsequent ten years. Here is the computation of the EPS for the next 10 years:

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| Year | EPS Projection |
| :---: | :---: |
| 2013 | 380,14 |
| 2014 | 460,52 |
| 2015 | 557,90 |
| 2016 | 675,87 |
| 2017 | 818,79 |
| 2018 | 991,92 |
| 2019 | 1201,67 |
| 2020 | 1455,76 |
| 2021 | 1763,58 |
| 2022 | 2136,50 |

Figure 6.10-Years EPS Projection

## 5. Valuation Calculation

According to the aforementioned computation, the intrinsic value of the stock is approximately $\mathrm{Rp} 3,124$. Subsequently, following the intrinsic value calculation, the fair value of the stock will be determined using the formula explain it before.

| Future Value | Book Value 2022 + EPS Projection |
| :---: | :--- |
|  | $986,74+2.136,50$ |
|  | 3123,24 |
| Fair Value |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Figure 7. Future Value and Fair Value Calculation

The free rate risk used for the calculation in 2012 is average of Indonesia 10-Year Bond Yield from JanuaryDecember 2012, below is the calculation:

| Month | Yield |
| :---: | :---: |
| January | $6,92 \%$ |
| February | $6,84 \%$ |
| March | $6,76 \%$ |
| April | $6,68 \%$ |
| May | $6,60 \%$ |
| June | $6,52 \%$ |
| July | $6,44 \%$ |
| August | $6,36 \%$ |
| September | $6,28 \%$ |
| October | $6,20 \%$ |
| November | $6,12 \%$ |
| December | $6,24 \%$ |
| Average of Indonesia 10-Year Bond Yield | $6,50 \%$ |

Figure 8.Average of Indonesia 10-Year Bond Yield

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As per the provided table above, the risk-free rate utilized for computing the fair value of the stock is $6.50 \%$. The rationale for opting for the average Indonesia 10-Year Bond Yield is its representation as a more accurate measure of the risk-free rate compared to the coupon rate of a security. The Indonesia 10-Year Bond Yield serves as an average of yields from Indonesian government bonds maturing in 10 years. Using the coupon rate as the risk-free rate for fair value calculations may lack precision, as the coupon rate reflects the anticipated return from that security, which might not always align with the risk-free rate.

| Margin of Safety | $=\mathbf{1}-($ Fair Value Stock/ Intrinsic Value) |
| :--- | :--- |
|  | $=1-(1663,83 / 3123,24)$ |
|  | $=46,73 \%$ |

Figure 9. ANTM Margin of Safety

The margin of safety for ANTM, calculated at $46.73 \%$, reflects a promising outlook for the company's stock in accordance with Warren Buffett's value investing principles. This resonates with Buffett's preference for significant margins, serving as a protective barrier against risks and indicating potential undervaluation. With the fair value of the stock estimated at approximately Rp1,664.

## 6. Risk-Adjusted Return Analysis

In this section, we will compute the net return of the stock, as proposed by Fama (1972), who suggests various methods for measuring investment performance, with the total return formula being a fundamental metric for comparing returns across different investment strategies. Considering the stock price of ANTM in 2012 at Rp1,280 and the fair value at Rp1,663.83, the expected return from investing in ANTM in 2012 is computed:


Figure 10. ANTM Expected and Actual Return

The provided table illustrates the return on an investment, showing an expected return of $29.99 \%$ and an actual return of $55.08 \%$. This implies that the investment exceeded expectations, delivering a higher return than initially predicted. This outcome aligns with Warren Buffett's value investing strategy, emphasizing the identification of undervalued companies with robust growth potential. Buffett's approach involves acquiring such companies and holding them for the long term, irrespective of short-term market fluctuations. Following the completion of these stages, we can proceed to calculate the Treynor Ratio, offering a more comprehensive and measurable analysis of the portfolio's returns and risk. The Treynor Ratio is computed as follows:

| Treynor Ratio | $=\frac{\text { Average Portfolio Return - Average Risk Free Return }}{\text { Beta of Portfolio }}$ |
| ---: | :--- |
|  | $=(138,17 \%-6,5 \%) / 9,23 \%$ |
|  | $=14,27$ |

Figure 11.Treynor Ratio of ANTM

According to the presented table above, the Treynor ratio of 14.27 suggests that the portfolio is generating a $14.27 \%$ excess return for each additional $1 \%$ of risk it assumes compared to the risk-free rate. This relatively high Treynor ratio indicates that the portfolio is performing favorably relative to its risk level. This aligns with Warren Buffett's investment strategy, which centers on undervalued stocks with robust long-term potential.

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## DISCUSSION



Figure 12. ANTM Return Comparison with IHSG

In the period spanning from 2013 to 2022, the performance of PT Aneka Tambang Tbk (ANTM) and the Indonesia Stock Exchange Composite Index (IHSG) exhibited notable fluctuations. In 2013, ANTM demonstrated a remarkable outperformance over IHSG, recording a return of $55.08 \%$ compared to IHSG's $20.30 \%$. This trend continued in 2014 , as ANTM maintained a robust return of $82.11 \%$, while IHSG suffered a negative return of $-12.50 \%$. The positive trajectory persisted in 2015, with both ANTM and IHSG posting gains, ANTM at $86.38 \%$ and IHSG at $14.70 \%$. The year 2016 witnessed an extraordinary surge in ANTM's return, reaching an impressive $532.17 \%$, while IHSG sustained its positive momentum with a return of $19.20 \%$.

In 2017, ANTM's return moderated to $121.79 \%$, still significantly surpassing IHSG's $12.70 \%$. The trend continued into 2018, with ANTM maintaining its lead at $217.60 \%$, while IHSG posted a return of $19.50 \%$. However, 2019 saw a reversal, as IHSG entered negative territory with a return of $-13.10 \%$, contrasting ANTM's positive performance at $159.48 \%$. Both indices returned to positive territory in 2020 , with ANTM at $136.31 \%$ and IHSG at $12.60 \%$. Nevertheless, 2021 marked a shift, as ANTM's return dipped to $2.58 \%$, while IHSG experienced a negative return of $-5.10 \%$. The trend continued in 2022, with ANTM underperforming IHSG, recording a return of $-11.78 \%$ compared to IHSG's $53.10 \%$. These annual variations highlight the dynamic nature. The comparison of annual returns between PT Aneka Tambang Tbk (ANTM) and the Indonesia Stock Exchange Composite Index (IHSG) from 2013 to 2022 reveals a dynamic financial landscape. In 2013, ANTM demonstrated a notable outperformance over IHSG, setting the stage for a trend that persisted over the subsequent years. Despite a negative turn for IHSG in 2014, ANTM maintained a robust return, marking the beginning of a consistent pattern of ANTM's strong performance. The year 2016 witnessed an extraordinary surge in ANTM's return, reaching an impressive $532.17 \%$, while IHSG sustained its positive momentum.

While ANTM's return moderated in 2017 and 2018, it remained significantly ahead of IHSG. The reversal in 2019, where IHSG entered negative territory and ANTM remained positive, showcased the resilience of ANTM amid market fluctuations. The synchronized return to positive territory in 2020 highlighted the recovery of both indices. However, the following year saw a shift in dynamics, with ANTM's return dipping while IHSG experienced a negative return. The underperformance of ANTM continued into 2022, emphasizing the volatility inherent in financial markets.

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The accumulated returns over the entire period underscore ANTM's remarkable outperformance, totalling $1381.72 \%$ compared to IHSG's $121.40 \%$. This signifies that an investment in ANTM in 2013 would have grown more than 11 times its original value by 2022, whereas an investment in IHSG would have only experienced a modest growth of about $25 \%$. While these historical trends indicate ANTM's strong performance, it is essential to approach investment decisions with caution, considering the inherent uncertainties in financial markets and the potential for future changes in market dynamics of the financial markets and the contrasting performances of ANTM and IHSG over the specified period.

## CONCLUSION, LIMITATIONS, AND SUGGESTIONS

## A. Conclusion

a. The basic principles of Warren Buffett's value investing strategy are universal and can be applied in any stock market, including Indonesia. The fundamental principle is to buy stocks of companies that are undervalued or priced below their intrinsic value.
b. The Indonesian stock market has experienced rapid growth in recent years. The Jakarta Composite Index (IHSG), the main stock market index in Indonesia, has grown approximately $15 \%$ per year over the last five years. This indicates that the Indonesian stock market has significant growth potential.
c. Aneka Tambang (Persero) Tbk. is a company that offers high growth potential with relatively low risk and also has the opportunity for continued growth, making it suitable for long-term investment.

## B. Limitations

The selection of companies is solely focused on those listed in the IDX30, considering that companies within this index are characterized by high market capitalization. Therefore, it is recommended for future researchers to broaden the population under study to ensure that the obtained samples are more accurate. If the population is too limited, there is a possibility of bias. However, this research is intended to enhance the capabilities of young investors in making investment decisions. Consequently, the focus is directed towards examining companies with strong corporate performance to mitigate investment risks. Stocks exhibiting low Price-to-Earnings ( $\mathrm{P} / \mathrm{E}$ ) and Price-to-Book Value ratios are typically categorized as value stocks, and the calculations reveal that such stocks have yielded substantial returns in subsequent years.

## C. Suggestions

a. This approach to value investing could serve as a viable solution for Indonesian investors wary of potential losses in the stock market. Investors employing value screening techniques can effectively manage stock-related risks.
b. While predicting when stock prices will rise in the future is uncertain, investors can mitigate risks by calculating the margin of safety for stock prices. This involves purchasing stocks at lower prices, although various factors, including public demand, contribute to the eventual increase in stock prices.

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