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THE ANALYSIS OF CHASING RETURNS STRATEGY IN EQUITY FUNDS

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Abstract

Most of the new investors, who are dominated by millennial investors, do not understand the basics of the capital market, so they have to suffer losses. Therefore, a strategy for investing in mutual funds is needed. This study aims to compare the performance of return-chasing investments with the buy-and-hold strategy in providing the best return to stock mutual fund investors. Beers (2020) states that "buy-and-hold" is a strategy in which investors buy stocks (or other types of securities, such as exchange-traded funds) and hold them for a long time regardless of market fluctuations. The data used is the net asset value of mutual funds which is then processed to obtain rank one based on annual returns. Simulations will be carried out to see the investment results of the two strategies and then the Wilcoxon signed-rank statistical test will be carried out on the profit/loss percentage to see the significance of the difference. The results of statistical tests show that there is no significant difference in investment returns between the chase return and buy and hold strategies. This result indicates the chasing return strategy provides much better investment returns than the buy-and-hold strategy for five periods on mutual fund instruments. The implication of this research for investors in using a chasing return strategy is that investors must use technical analysis, namely analyzing and finding out which mutual funds have the best prospects in that year.

Keywords: Mutual Funds, Buy, Hold, Chasing Returns, Investment, Decision-Making

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1. INTRODUCTION

Mutual fund investment products are perfect for investors who have many limitations, such as limited time, limited funds, limited information, and limited investment knowledge. In addition, this instrument is also able to reduce investment risk because it is distributed across various investment products. But that does not mean mutual funds are risk-free. For this reason, investors still need to study the various

risks of this product. It seems that the rapid development of the mutual fund industry cannot be separated from the characteristics of this product, which is unique and very suitable for investors who have many limitations. Apart from that, mutual fund products are also said to be investment products that are most in line with the adage in the investment world, namely "Do not put all eggs in one basket". The point is that to reduce risk, we need to spread out investment placements so that we avoid the risk of total loss.

The director of the World Health Organization (WHO) announced to the mass media that COVID-19 was categorized as a pandemic. At that time, there were more than 118,000 cases in 114 countries, and 4,291 people had lost their lives (WHO, 2020). In Indonesia itself, the first case of death due to COVID-19 occurred in March 2020, after which new victims emerged; both positive for COVID-19, as well as patients under surveillance and people under surveillance (Mukti, 2021). Initially, this incident did not affect the Indonesian stock market or the Jakarta Composite Index (JCI), but as more and more victims were confirmed, the stock market reacted negatively, causing the stock market price to drop drastically (Fan & Lin, 2020). More precisely, on March 24, 2020, with the announcement of the WHO and the increasing number of victims of COVID-19 in Indonesia, the JCI experienced a fairly deep decline of -36.88% year to date (YTD), bringing the JCI position back to what it was in 2013, at a position of around Rp. 3900 (Kutra et al., 2019).

This incident made the condition of the Indonesian stock market covered by many local media. Social media also took part in covering the phenomenon of the stock market decline during the pandemic. This is what introduced the Indonesian people to the capital market and its investment instruments. In 2020 alone, capital market investors experienced a 56.21% growth in the number of Single Investor Identification (SID) compared to 2019 and grew again by 57.20% in August 2021 compared to 2020, a very significant increase if we compared to previous years, in August 2021 the number of SID capital market investors in Indonesia stood at 6,100,525 people (Kustodian Sentral Efek Indonesia [KSEI], 2021). The surprising thing from this data is that as of August 2021, the number of capital market investors in Indonesia is dominated by the millennial generation, which is 58.82% of capital market investors under 30 years old, twice as many investors aged 31–40 years old, which is 21.64%, and much more than those aged between 41–50 years old which are only 10.80% (KSEI, 2021). The phenomenon of the increase in the number of millennial investors is also influenced by the emergence of figures called influencers on social media who encourage Indonesians to invest (Sudrajat, 2021). However, based on the observations of the Founder and Co-Founder of the Indonesian Accountants Association (IAI), most new investors who are dominated by millennial investors or coronavirus investors do not understand the basics of the capital market until they have to bear losses (Alphani, 2022). This loss is most likely to occur because most millennial investors only rely on social media as their source of information and do not conduct in-depth analysis related to the instrument they want to invest in, so they only choose well-known stocks and choose stocks based on certain moments (Sudrajat, 2021). Changing market conditions sometimes make investors wonder when is the right time to buy investment instruments and what strategies can be used to reduce the risk of loss. In addition, there is no standard guide on when is the right time to enter the market, so an investment strategy is needed to get optimal results (Hidajat, 2015).

Mutual fund investment instruments were chosen in this study because many millennials tend to choose to invest through mutual funds (Malik, 2021). This is also evidenced from data processed by Bareksa (2020), digital mutual fund marketplace, that the growth of mutual fund investors is dominated by the millennial segment (Malik, 2021). Another factor in the selection of instruments in this study is that if we look back at the SID growth data provided by KSEI (2021), the number of mutual fund investors showed the highest increase compared to the SID of other types of instruments, the number of SIDs of mutual fund investors increased by 71.57% in August 2021 when compared to the previous year, where for Government Securities instruments only experienced an increase of 21.36%, 57.20% for the capital market, and 59.21% for C-BEST instruments in the same period. This study focuses on the type of equity mutual funds, after all, this type of mutual fund is the most volatile mutual fund among other types of mutual funds because the majority (80%) of funds are invested in stock instruments by investment managers, so an adequate and appropriate investment strategy is needed. Of the many mutual fund investment strategies, the investment strategies that will be compared in this study are the chasing returns strategy and the buy-and-hold strategy.

The chasing returns strategy was chosen because of the general tendency of investors to pursue returns from previous winners, this strategy has also received considerable attention in the world of economics and finance (Alti et al., 2012). Grinblatt et al. (1995) stated that institutional investors also use a strategy similar to chasing returns, namely the trend-based trading strategy, where institutional investors buy the winning shares in the previous period. The buy-and-hold strategy itself was chosen because many financial experts say that the buy-and-hold strategy is the best investment strategy (Ling et al., 2014). This strategy has become synonymous with a conservative and reasonable approach to retirement savings, where investors choose their investments early and give time for these investments to grow or compound (Sanderson & Lumpkin-Sowers, 2018). The nature of the chasing returns strategy which is classified as aggressive because it always changes the composition of its investment portfolio, will be interesting when compared to the buy-and-hold strategy, this is a very passive strategy and uses a conservative approach.

This study aims to compare the performance of the chasing returns investment strategy with the buy-and-hold strategy in providing the best returns to investors in equity mutual fund investment instruments. The results of this study are expected to help millennial investors or investors in general in choosing a strategy for an investment instrument, more precisely the stock mutual fund instrument. This research is also expected to be able to

contribute to or benefit investors' decision-making, especially for those who are new to the world of capital markets, in considering the strategy of investing in equity funds.

Based on the background described above, the research questions raised in this study are:

RQ1: How does the performance of stock mutual funds use the investment strategies of chasing returns and buy-and-hold?

RQ2: Is there a significant difference in investment returns between the chasing returns strategy and the buy-and-hold strategy?

The remaining structure of this paper is as follows. Section 2 reviews the relevant literature. Section 3 analyses the methodology that has been used to conduct empirical testing. Section 4 provides the results and Section 5 presents a discussion of the research. Section 6 comprises a conclusion, as well as suggestions, and recommendations for future research.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Efficient market hypothesis

The efficient market hypothesis is a theory put forward by Malkiel and Fama (1970). According to the efficient market concept, the market is said to be efficient if the prices formed in the market are a reflection of the information that is already available so that it can be said that no one, both individual investors and institutional investors, will be able to obtain abnormal returns after adjusting for risk and by using existing trading strategies. This can happen because the prices formed in the market are a reflection of existing information or in another language, stock prices reflect all available information (Gumanti & Utami, 2002). According to Malkiel and Fama (1970), there are three forms of market efficiency levels, namely the weak-form efficient market, the semi-strong form of an efficient market, and the strong form of an efficient market. This is closely related to the extent to which information absorption can occur in the market. In this case, Haugen (2001) divides the absorption of the information into three groups, namely past stock price information, all public information, and all information including inside or private information. According to Gumanti and Utami (2002), three forms of market efficiency are defined as follows:

1. *Weak form:* In this form, the stock price is assumed to reflect all information that occurred in the past or the historical price of a stock. This means that the price formed on a stock is a direct reflection of the movement of the price of the stock in question in the past.

2. *Semi-strong form:* In addition to the absorption of historical stock price reflections, the semi-strong form also shapes stock prices from the absorption of public information in the market, including financial reports and additional (complementary) information as required by accounting regulations. Publicly available information can also be in the form of other financial regulations, such as property taxes or interest rates and/or stock betas including company ratings.

3. *Strong form:* The strong form of an efficient market states that prices that occur reflect all available information, both historical price information, public information, and private information that is only known by a few parties, such as company management, and the board of directors, directors and creditors.

2.2. Mutual funds

According to the Indonesia Stock Exchange (IDX) web page (https://www.idx.co.id/), mutual funds are an alternative investment for the investor community, especially small investors and investors who do not have much time and expertise to calculate the risk of their investment. Mutual funds are designed as a means to raise funds from people who have capital, have the desire to invest, but only have limited time and knowledge. There is another definition, which refers to the Capital Market Law No. 8 of 1995, Article 1 paragraph 27 that mutual funds are a forum used to collect funds from the investor community to be further invested in securities portfolios by investment managers. There are three things related to this definition. First, the existence of funds from the investor community. Second, the fund is invested in a portfolio of securities. Third, the fund is managed by an investment manager. Thus, the funds in the mutual fund are mutual funds of the investors, while the investment manager is the party that is trusted to manage the funds (Otoritas Jasa Keuangan [OJK], n.d.). According to Reilly and Brown (2000), mutual funds are institutions that collect money from investors and then invest it in securities, such as stocks, bonds, and other money market instruments. Meanwhile, according to Rudiyanto (2019), mutual funds are products from companies that are included in the capital market category that are supervised by the OJK so that they can carry out fund-raising activities from the public. Through mutual fund investment products, investors no longer need to worry about managing their investment portfolios, because they are already managed by investment managers.

Understanding the types of mutual funds is very important for potential investors because each type of mutual fund has different characteristics, returns, and levels of risk (Masruroh, 2014). Quoted from the website of the Financial Services Authority (in Indonesian, "*Otoritas Jasa Keuangan*"), mutual funds are divided into four categories (OJK, n.d.), namely:

1. *Money market funds:* This type of mutual fund only invests in debt securities with maturities of less than 1 year. The aim is to maintain liquidity and maintain capital.

2. *Fixed income funds:* This type of mutual fund invests at least 80% of its assets in the form of debt securities. These mutual funds carry relatively greater risk than money market mutual funds. The goal is to generate a stable rate of return.

3. *Equity funds:* Mutual funds that invest at least 80% of their assets in the form of equity securities. Because the investment is in stocks, the risk is higher than the previous two types of mutual funds but yields a high rate of return.

4. *Discretionary funds:* This type of mutual fund invests in equity securities and debt securities.

Following are the differences in implementing active and passive portfolio strategies (Handini & Astawinetu, 2020):

1. *Active portfolio strategy:* In this strategy, investors will try to get the highest return. Thus, investors will always look for ways to get more profits higher than the costs to be borne. Indirectly, needed extensive knowledge and expertise in analyzing influencing information portfolio securities performance;

2. *Passive portfolio strategy:* In this strategy, investors will not take stock trading actions that give abnormal returns. Investors tend to try to follow the market in a way that market index performance replication. The strategies used in the passive portfolio strategy include the buy-and-hold strategy and index replication strategy.

2.3. Active investment strategy

Passive investment can outperform an active investment in terms of transaction costs because passive investment does not need to make buying/selling transactions as often as investing using an active approach. Investors can choose investment assets that will then be held through the ups and downs of the market and will only be sold when their investment goals have arrived at the right time, for example, a pension fund (Lorencia & Taufiq, 2020). The chasing returns strategy referred to in this study is taken from a term coined by Rudiyanto (2019), this name was taken because investors generally pursue mutual funds (or other investment instruments) that had good returns in the previous period. The term "chasing returns" has various different names but has the same meaning, namely choosing the winner in the previous period. According to Dahl (2021), making investment decisions based on asset performance that occurred recently is called "performance chasing". Meanwhile, according to Alti et al. (2012), the strategy of buying (selling) financial assets based on the condition of assets that have high (low) returns in the previous period is called the "chasing returns strategy". The chasing returns strategy belongs to an active investment strategy where using this strategy requires a direct approach or analysis, usually by a portfolio manager or by someone called an active participant (The Investopedia Team, 2021). According to Sitohang (2017), buy and hold means buying and holding the mutual fund (or other investment instrument) for a long period of time in the hope that the price of the mutual fund will increase rapidly in a few years. Meanwhile, according to Beers (2020), buy and hold is a strategy where investors buy shares (or other types of securities such as exchange-traded funds (ETFs) and hold them for a long time regardless of market fluctuations, so an investor who uses a buy and hold strategy actively chooses investments but does not pay attention to short-term price movements and technical indicators. The buy-and-hold strategy is classified as a passive investment strategy, where the passive strategy describes portfolio decisions that avoid direct or indirect investment asset analysis (Bodie et al., 2001).

2.4. Hypotheses development

According to Diat Prasojo (2018), "Strategy are ideas and actions to understand and secure the future" (p. 3). Meanwhile, according to Filbert and Prasetya (2019), "Investment is an attempt to make our money grow" (p. 22). So an investment strategy is basically a plan to invest money in various types of investments that will help achieve financial goals within a certain amount of time. Triton (2014) states that individual companies allow all assets, profits earned, and various consequences for the existence of this business organization to be personal rights and responsibilities of the owner, so this has implications not only for profitable things, such as profits but "all company debts are also the responsibility of the owner, as are business risks" (p. 56). There are several previous studies that discuss the comparison between several investment strategies on various investment instruments.

According to CNN Indonesia (2021), ETFs are mutual funds that are traded on the stock exchange. According to Kutra et al. (2019), ETFs are mutual funds that are traded on stock exchanges like stocks. Moore (2020) compared the buy-and-hold strategy and entrance timing a[illegible]tegy to enter the market during a bull market. The purpose of this quantitative comparative study is to test whether there is a significant difference when comparing the monthly returns of the ETF SPY (S&P 500 index ETF) in the bull market between the entrance timing and buy-and-hold strategies. The results of this study indicate that the buy-and-hold strategy shows very good performance when compared to the entrance timing strategy, where the buy-and-hold strategy produces an average return of 148.63 with a standard deviation of 78, and the entrance timing strategy produces an average return of 46.67 with a standard a deviation of 24.05 for a 1% daily drop, and an average return of 65.29 with a standard deviation of 24.88 for a 3% daily drop.

Hidajat (2015) compares the lump-sum (LS) strategy with the dollar-cost averaging (DCA) strategy of the Panin Dana Maksima equity mutual fund, the data is taken from January 2011 to August 2013. To examine the differences between the LS strategy and DCA, statistical analysis was carried out, namely the Wilcoxon signed-rank test. The results of this study indicate that the LS strategy gives generally better results than the DCA strategy on the Panin Dana Maksima stock mutual fund. However, the results of statistical analysis show that there is no difference between the investment returns of LS and DCA. Cohen and Cabiri (2015) compared returns from the traditional buy-and-hold strategies with well-known technical oscillators applied to various indices leading global markets (DJI, FTSE, NK225, and TA100) over the period 2[illegible]–2012. The purpose of this study was to see whether technical oscillators can consistently achieve returns that exceed buy-and-hold strategies across various global financial market indices. The results of the study indicated that during a bear market, the Relative Strength Index (RSI) and moving average convergence divergence (MACD) technical oscillators generally generate better returns than the buy-and-

hold strategy used on global indices, whereas the opposite occurs during a bull market.

Hilliard and Hilliard (2018) compare returns from investment portfolios using a rebalancing strategy with a buy-and-hold strategy. The theoretical properties are derived using Jensen's inequality and Hölder's defect formula. The contents of the portfolio consist of the Center for Research in Security Prices (CRSP) Value Weighted Market Index and US Treasury Bills. The results of this study indicate that although rebalancing can reduce volatility, the results of this test largely support the buy-and-hold strategy because of the relatively high returns on the index when dealing directly with US Treasury Bills.

Panyagometh and Soonsap (2012) compared returns from long-term equity funds (LTF) in Thailand using the MACD technical strategy, a popular averaging strategy, namely DCA, and investment strategy lump-sum. The results of this study indicate that the MACD strategy outperforms the other two strategies when measured using dominance frequency. If investment effectiveness is measured from the mean terminal value, the LS investment strategy at the beginning of the year is found to be able to produce the highest mean terminal value, while the LS investment strategy at the end of the year will be found to generate the highest returns compared to the risk as measured by the Sharpe ratio. However, when analyzed statistically, there was no significant difference between the strategies used. From the description above, the researchers formulated the following hypotheses:

H_0 (null hypothesis): There is no statistically significant difference in stock mutual fund investment returns between chasing returns and buy-and-hold strategies.

H1 (alternative hypothesis): There is a statistically significant difference in stock mutual fund investment returns between chasing returns and buy-and-hold strategies.

3. RESEARCH METHODOLOGY

3.1. Object and data sources

This research is quantitative research using secondary data from OJK website (https://reksadana.ojk.go.id/). The data collection method used is indirect, namely in the form of data that has been collected by other parties and published to the public, this happens because the data taken in this study uses a lot of secondary data (Sujiman, 2017). The variable that will be examined in this study is the *Return of stock mutual funds*. The data used is stock mutual fund Rank I data based on returns from 2016 to 2021. Data on assets under management (AUM) and participation unit (UP) for equity mutual funds from 2016 to 2021 were obtained from the same website, which was then processed by the authors to obtain net asset value (NAV) and get Rank I based on return every year.

Table 1. Performance of equity mutual funds (2016–2021)

Year	*Period*	*Equity funds Rank I*	*Returns (%)*
2016	-	Treasure Fund Super Maxxi*	50.86
2017	1	Cipta Ovo Ekuitas**	44.79
2018	2	Shinhan Equity Growth	34.88
2019	3	Cipta Saham Unggulan	103.25
2020	4	Pool Advista Kapital Syariah	46.01
2021	5	-	-

*Note: * Rank I in 2016 based on the processed data is the Gap Value Fund Equity Fund, but it has an abnormal return, which is 567.20%. Thus, it was replaced with Treasure Fund Super Maxxi which won Rank II; ** Rank I in 2017 based on the data processed is the Pacific Shares Syariah II Mutual Fund, but it has an abnormal return, which is 392.90%. Thus, it was replaced with Cipta Ovo Ekuitas which won Rank II.*
Source: OJK (https://reksadana.ojk.go.id/), processed by the researchers.

Equity fund Rank I cannot be used as an investment choice for the same year because the information will only be used by investors in the following year. The data for 2016 is not considered as period 1 or the initial period because the information on the winner of the Rank I equity mutual fund in that year is only used to reference the selection of stock mutual funds in the next period, namely period 1 or 2017. For period 5, there is no name and Rank I stock mutual fund returns because in this period it is only used to see the final results of the equity mutual fund investment performance using chasing returns and buy-and-hold strategies which will then be compared. Alternative methods that could be suitable for conducting this research is ordinary least squares and simultaneous quantile regression models for empirical investigation.

3.2. Investment simulation

For the chasing returns strategy, the initial capital to be invested is Rp. 10,000,000 at the beginning of the investment period or in period 1, more precisely, in 2017. The stock mutual funds that will be selected in period 1 are stock mutual funds that are ranked I based on returns in the previous year or 2016, the stock mutual fund is the Treasure Fund Super Maxxi stock mutual fund, which has a return of 50.86% in 2016. In the next period, or period 2, (in 2018), the stock mutual fund that will be selected in the chasing returns strategy are equity mutual funds that are ranked I based on returns in 2017, namely the Cipta Ovo Ekuitas stock mutual fund with a return of 44.79%. Therefore, the mutual fund that has been selected in period 1, namely Treasure Fund Super Maxxi will be sold and replaced by

the Cipta Ovo Ekuitas equity fund. Likewise, for the next period up to period 5 in 2021, the stock mutual funds that will be selected are the winning stock mutual funds in the previous year based on returns. Overall, the stock mutual funds selected for each investment period in the chasing returns strategy are as follows:

- period 1 = Treasure Fund Super Maxxi;
- period 2 = Cipta Ovo Ekuitas;
- period 3 = Shinhan Equity Growth;
- period 4 = Cipta Saham Unggulan;
- period 5 = Pool Advista Kapital Syariah.

For the buy-and-hold strategy, the initial capital to be invested is Rp. 10,000,000 at the beginning of the investment period, or period 1, to be precise, in 2017. Unlike the chasing returns strategy which always changes its investment portfolio, the buy-and-hold strategy only needs to do an investment analysis once. namely at the beginning of the period, or in 2017, so that there is only one equity mutual fund that will be purchased in this strategy, namely the winner of the previous year or 2016 stock mutual fund. The stock mutual fund chosen in this strategy is the Treasure Fund Super Maxxi stock mutual fund which produced a return of 50.86% in 2016. Overall, the stock mutual funds selected for each investment period in the buy-and-hold strategy are as follows:

- period 1 = Treasure Fund Super Maxxi;
- period 2 = Treasure Fund Super Maxxi;
- period 3 = Treasure Fund Super Maxxi;
- period 4 = Treasure Fund Super Maxxi;
- period 5 = Treasure Fund Super Maxxi.

The two strategies above only get capital once at the beginning of the investment period, which is Rp. 10,000,000, there will be no top-up or further purchases in the next period by the two stock mutual funds chasing returns and buy-and-hold investment strategies. In this study, it is assumed that all the selected equity mutual funds will not distribute dividends. Every purchase (subscription) or sale (redemption) transaction made will be subject to a subscription fee and a selling fee (redemption fee). The amount of the buying fee and selling fee for this study is 1% of the transaction value, so the total investment value when buying or selling mutual funds will be obtained from the following formula:

$$Investment\ value = Buying\ or\ selling\ value \times (1 - 0{,}01) \quad (1)$$

3.3. Statistic test

In addition to investment simulations, another thing that can be done to test the difference in the investment performance of equity funds between the chasing returns and the buy-and-hold strategies is to carry out statistical tests such as that carried out by Hidajat (2015) using the Wilcoxon signed-rank test on the percentage gain/loss. Because the sample size is small (lower than 30) and the type of population distribution is unknown, a non-parametric test method is used to compare the differences in the characteristics of interest of two paired populations (Panyagometh & Soonsap, 2012).

4. RESULTS

4.1. Investment results

4.1.1. Chasing returns strategy

The following is the performance of selected stocks for the chasing returns strategy selected based on the previous year's winners:

Table 2. Performance of preferred equity mutual funds for chasing returns strategy (2017–2021)

Year	*Period*	*Equity funds Rank I*	*Return (%)*
2017	1	Treasure Fund Super Maxxi	6.64
2018	2	Cipta Ovo Ekuitas	1.22
2019	3	Shinhan Equity Growth	2.34
2020	4	Cipta Saham Unggulan	21.46
2021	5	Pool Advista Kapital Syariah	-11.29

Source: OJK (https://reksadana.ojk.go.id/), processed by the researchers.

The investment returns from the chasing returns strategy in stock mutual funds for the periods 1–5 gave positive results overall. From periods 1–4, the mutual funds selected based on the winners in the previous year consistently produced positive returns. Meanwhile, during the five observation periods, there was only one that gave a negative return, namely period 5 (in 2021). Overall, the chasing returns strategy incurs buying fees five times in five periods to buy five different equity mutual funds and issues selling fees four times in four periods to replace old stock mutual funds with previously winning stock mutual funds.

Table 3. Investment results for chasing returns strategy

Period	*Investment beginning value period*	*Investment value — Selling fee (1%)*	*Investment value — Buying fee (1%)*	*Returns*	*Returns cumulative*
1	Rp. 10.000.000	-	Rp. 9.900.000	Rp. 657.046	Rp. 10.557.046
2	Rp. 10.557.046	Rp. 10.451.475	Rp. 10.346.961	Rp. 126.737	Rp. 10.473.697
3	Rp. 10.473.697	Rp. 10.368.960	Rp. 10.265.271	Rp. 240.290	Rp. 10.505.561
4	Rp. 10.505.561	Rp. 10.400.505	Rp. 10.296.500	Rp. 2.209.298	Rp. 12.505.798
5	Rp. 12.505.798	Rp. 12.380.740	Rp. 12.256.932	-Rp. 1.384.279	Rp. 10.872.654

4.1.2. Buy-and-hold strategy

The following is the performance of selected stocks for the buy-and-hold strategy which was chosen based on the winners of the stock mutual funds before period 1 (in 2016) (Table 4).

The investment returns from the buy-and-hold strategy in stock mutual funds for periods 1–5 gave an overall negative result. Periods 2 and 3 produced negative returns, whereas for period 3 the losses experienced quite deep, up to more than 50%. For period 5, the Treasure Fund Super Maxxi stock mutual fund experienced a significant increase of 73.79%, but even though it produced a high return in period 5, it still could not reverse the loss position experienced in periods 2 and 3.

Table 4. Performance of preferred equity mutual funds for the buy-and-hold strategy (2017–2021)

Year	*Period*	*Equity funds Rank I*	*Return (%)*
2017	1	Treasure Fund Super Maxxi	6.64
2018	2	Treasure Fund Super Maxxi	-2.36
2019	3	Treasure Fund Super Maxxi	-68.44
2020	4	Treasure Fund Super Maxxi	6.91
2021	5	Treasure Fund Super Maxxi	73.79

Source: OJK (https://reksadana.ojk.go.id/), processed by the researchers.

Overall, the buy-and-hold strategy issues a purchase fee only one time for five periods, this purchase fee is used to buy one stock mutual fund at the beginning of the period. The buy-and-hold strategy does not issue a selling fee at all for five periods.

Table 5. Investment results for buy-and-hold strategy

Period	*Investment beginning value period*	*Investment value — Buying fee (1%)*	*Returns*	*Returns cumulative*
1	Rp. 10.000.000	Rp. 9.900.000	Rp. 657.046	Rp. 10.557.046
2	Rp. 10.557.046	-	-Rp. 249.554	Rp. 10.307.492
3	Rp. 10.307.492	-	-Rp. 7.054.129	Rp. 3.253.364
4	Rp. 3.253.364	-	Rp. 224.683	Rp. 3.478.046
5	Rp. 3.478.046	-	Rp. 2.566.411	Rp. 6.044.458

4.2. Comparison of investment strategy performance on chasing returns and buy-and-hold

The results of investing in equity funds using both chasing returns and buy-and-hold strategies produce many different returns, here is a comparison of investment returns, gains/losses, and the percentage of returns:

Table 6. Comparison of investment return, gain/loss, and percentage of gain/loss chasing returns and buy-and-hold

Period	*Investment result*		*Gain/Loss*		*Percentage gain/Loss*	
	Chasing returns	*Buy-and-hold*	*Chasing returns*	*Buy-and-hold*	*Chasing returns*	*Buy-and-hold*
1	Rp. 10.557.046	Rp. 10.557.046	Rp. 657.046	Rp. 657.046	5.57%	5.57%
2	Rp. 10.473.697	Rp. 10.307.492	Rp. 126.737	-Rp. 249.554	-0.79%	-2.36%
3	Rp. 10.505.561	Rp. 3.253.364	Rp. 240.290	-Rp. 7.054.129	0.30%	-68.44%
4	Rp. 12.505.798	Rp. 3.478.046	Rp. 2.209.298	Rp. 224.683	19.04%	6.91%
5	Rp. 10.872.654	Rp. 6.044.458	-Rp. 1.384.279	Rp. 2.566.411	-13.06%	73.79%

Figure 1. Comparison of investment chasing returns and buy-and-hold

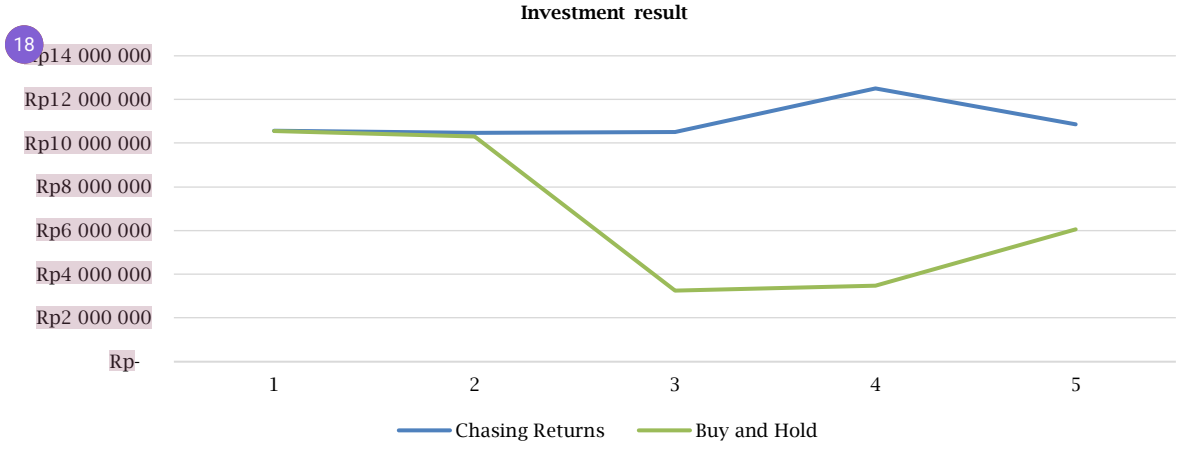
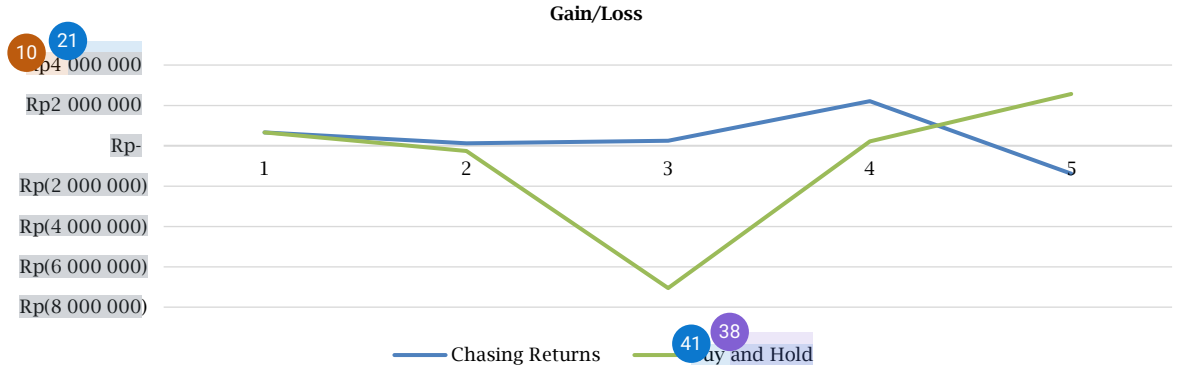


Figure 2. Comparison of gain/loss, chasing returns, and buy-and-hold

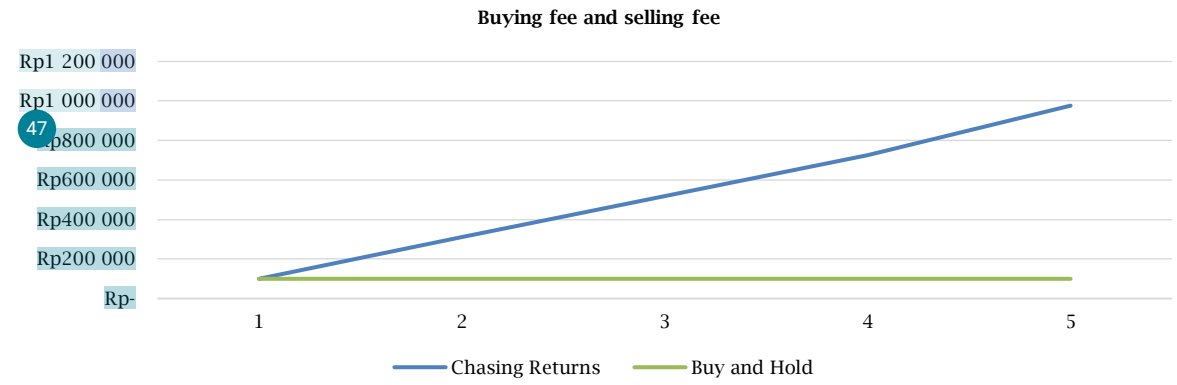


The results of the analysis above show that the chasing returns strategy produces better returns than the buy-and-hold strategy. The final investment yield generated by the chasing returns strategy is Rp. 10,872,654, while for the buy-and-hold strategy it is Rp. 6,044,458. The buy-and-hold strategy suffered a fairly large loss in period 3, the loss was –Rp. 7,054,129, while the biggest loss for the chasing returns strategy was only –Rp. 1,384,279, a very small amount when compared to the loss in the buy-and-hold strategy. However, when viewed from the highest profit, the buy-and-hold strategy has the highest profit of Rp. 2,566,411, higher than the chasing returns strategy which is only Rp. 2,209,298. Apart from being seen from the final investment results, gain/loss, and percentage gain/loss, other things that can be compared are the total buying fee and selling fee of the two stock mutual fund strategies, chasing returns and buy-and-hold, because this is one of the aspects that play a role important to the return of stock mutual funds. The following is a comparison of the total purchase fee and selling fee of the two stock mutual fund strategies: chasing returns and buy-and-hold.

Table 7. Comparison of total buying fee and selling fee

Period	*Chasing returns*			*Buy-and-hold*		
	Selling fee	*Buying fee*	*Cumulative*	*Selling fee*	*Buying fee*	*Cumulative*
1	-	Rp. 100.000	Rp. 100.000	-	Rp. 100.000	Rp. 100.000
2	Rp. 105.570	Rp. 104.515	Rp. 310.085	-	-	Rp. 100.000
3	Rp. 104.737	Rp. 103.690	Rp. 518.512	-	-	Rp. 100.000
4	Rp. 105.056	Rp. 104.005	Rp. 727.572	-	-	Rp. 100.000
5	Rp. 125.058	Rp. 123.807	Rp. 976.438	-	-	Rp. 100.000

Figure 3. Comparison of total buying fee and selling fee



The chasing returns strategy spends a very large amount only for fees (selling and buying), which is Rp. 976,438, this amount is even greater than the total profit obtained from the investment returns of chasing returns, which is Rp. 872,654 (Rp. 10,872,654 – Rp. 10,000.000). Meanwhile, the buy-and-hold fee only issues a one-time fee for five periods, this fee is used to buy stock mutual funds at the beginning of the period, the nominal amount is much smaller when compared to the chasing returns fee, which is Rp. 100,000.

4.3. Statistical test

Statistical testing of the difference between the chasing returns and buy-and-hold strategies using the Wilcoxon signed-rank test was conducted on the gain/loss percentage of the two strategies. This test is similar to the parametric paired sample t-test, which uses the assumption that the data distribution is normal or close to normal, while the Wilcoxon test is used when the assumption of

normality is not met (Hidajat, 2015). Statistical test results using the Wilcoxon signed-rank test can be seen in Table 8.

Table 8. Wilcoxon signed-rank test

Sign	*Obs.*	*Sum of ranks*	*Expected*
Positive	3	9	7
Negative	1	5	7
Zero	1	1	1
All	5	15	15

Unadjusted variances	13.75
Adjustment for ties	0.00
Adjustment for zeroes	-0.25
Adjusted variance	13.50
H_0: Chasing returns = Buy-and-hold	
Z = 0.544	
Prob. > |z| = 0.5862	

By using a level of significance of 0.05 and a two-tailed test, the z-values are -1.96 and +1.96. From the calculation results, it is obtained that the calculated z-value is 0.544, which means it is in the H_0 acceptance area. Thus, it can be concluded that there is no significant difference between the chasing returns strategy and the buy-and-hold strategy statistically on equity mutual fund investment instruments.

5. DISCUSSION

If we look at the results of statistical tests alone, investors can choose between the chasing returns strategy or the buy-and-hold strategy and will get returns that are more or less the same or not much different. This is in line with the efficient market hypothesis, the weak-form theory proposed by Malkiel and Fama (1970), which states that no one, both individual investors and institutional investors, will be able to obtain abnormal returns which in weak form, the historical price of an investment instrument has been reflected in the current price (priced-in). The results of statistical tests in this study are also in line with the findings of Hidajat (2015), which shows that indeed the results of the statistical analysis do not show any difference between the investment returns between the lump-sum strategy and the DCA. Panyagometh and Soonsap (2012) also stated that among the three strategies analyzed (lump-sum, DCA, and value averaging), the statistical test results show that there is no significant difference between the three investment strategies.

However, when viewed from investment returns, gain/loss, and percentage gain/loss, the chasing returns strategy is superior. The chasing returns strategy can even generate positive returns, which is Rp. 872,654 or 8.73%, whereas the buy-and-hold strategy produces negative returns, which is -Rp. 3,955,542 or -39.56%. There is a huge difference between the two strategies. From the results based on this investment simulation, it can be concluded that the strategy that is superior to the equity mutual fund investment instrument is the chasing returns strategy. The results based on this simulation indicate that the capital market is still not efficient, because investors can still get returns from a strategy that analyzes the historical price of an investment instrument. The absorption of information based on historical prices is the foundation of the efficient market hypothesis to say that the market is weakly efficient (weak form). The results of this simulation contradict the research conducted by Moore (2020) stating that the buy-and-hold strategy shows very good performance when compared to the strategy that uses timing, namely entrance timing. Apart from investment returns, another aspect that needs to be considered in comparing the two chasing returns and buy-and-hold strategies is the fee aspect. Although the chasing returns strategy produces a much better performance than the buy-and-hold strategy, the chasing returns strategy must cost a very large fee, even greater than the returns generated by this strategy itself, which is Rp. 976,438.

6. CONCLUSION

The results of this study indicate that the chasing returns strategy provides much better investment returns than the buy-and-hold strategy for five periods on equity mutual fund investment instruments. Although the chasing returns strategy gives generally better results than the buy-and-hold strategy, the statistical test results show that there is no significant difference in investment returns between the chasing returns and buy-and-hold strategies. Future researchers can measure the performance of equity funds using other methods with a longer research year. Apart from that, further researchers can also compare the performance of mutual funds that have similar underlying such as Sharia mutual funds and fixed income mutual funds, and so on. This study shows that statistically, there is no significant difference in investment returns between the chasing returns and buy-and-hold investment strategies, but if you look at the simulation results, the chasing returns strategy is superior. This, of course, can be used as a new consideration and input for investors in determining a strategy to invest in equity mutual funds. The results of this study still contain some weaknesses and limitations so further research needs to be carried out by taking into account:

1. Added investment strategy testing for several other types of mutual funds.
2. An increase in the observation period. The observation period needs to be reduced again to several semesters or quarters, this needs to be done so that the results obtained can better reflect the actual situation.
3. The observation period should be divided into when the stock market is bullish, bearish, and sideways. This needs to be done so that the conclusions obtained can be more accurate.

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