Analyzing the Ability of Investment Managers in Equity Mutual Funds during the Covid-19 Pandemic in Indonesia

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ABSTRACT

Mutual fund is one of the investment instruments widely used as an investment option. There are two essential things to be considered by the Investment Manager as a mutual fund manager: the stock selection and the market timing ability. The Covid-19 pandemic has caused many investors to experience potential investment losses. Understanding stock selection and market timing will be needed for determining which Investment Managers perform well in managing equity mutual fund, especially while dealing with the Covid-19 pandemic. The objective of this study is to analyze the ability of Investment Managers to perform stock selection and market timing, the performance of equity mutual fund, and the effect of stock selection and market timing ability on the performance of equity mutual fund in Indonesia. This study applies the Fama net selectivity methods to assess stock selection ability and Treynor-Mazuy and Henriksson-Merton models to analyze market timing ability. Sharpe, Treynor, and Jensen’s alpha methods are also used for measuring mutual fund performance. The data is processed per mutual fund to recognize each mutual fund’s stock selection and market timing ability. Furthermore, the research spans two time periods: before and following the Covid-19 pandemic. A dataset of 104 equity mutual funds from 2016-2021 has been analyzed. The findings show that only 9 and 12 Investment Managers have stock selection ability prior to and following the Covid-19 pandemic, respectively. According to Treynor Mazuy model, there are only two Investment Managers with market timing ability prior to the Covid-19 pandemic, and only twelve Investment Managers have market timing ability during the Covid-19 pandemic, according to the Henriksson-Merton model. Every mutual fund with stock selection ability outperformed the benchmark. However, not all equity mutual fund with market timing ability outperformed the benchmark.

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Introduction

Investment has become a societal requirement. According to Capital Market Statistics (KSEI, 2021), the number of capital market investors has grown yearly. The variety of capital market investors is expected to reach 7,489,337 by 2021. In comparison to 2020, this figure climbed by 92.99 percent. Considering the variety of options for investment available, investors require advice in selecting the best investment instrument at a certain level of return and risk. Every investor has factors that influence the type of investment decision they make.

A mutual fund is an investment instrument that handles funds over the general public for investment in a portfolio of securities. Mutual funds are managed by Investment Managers and Custodian Banks. Because of asset diversification and professional management, investing in mutual funds provides a more appropriate choice to novice traders instead of investing straight in equities. It is also feasible with limited resources (Bir & Mayur, 2019). The total amount in investors’ mutual fund tends to expand every year, based on the results statistics by KSEI (2021), as does the mutual fund’s Net Asset Value (NAV), which has increased as well over the last five years (OJK, 2021).

As the manager of the mutual fund, the Investment Manager has to assess two key considerations. The first is the stock selection ability, and the second is the market timing ability. Both of these abilities are frequently employed to assess Investment Managers’ competence in managing mutual funds (Khan et al., 2020). According to Rao et al. (2017), an Investment Manager’s selection ability...
involves the ability to determine if a stock's valuation is too high or too low in relation to the market in general. Investment Managers are good at selecting stocks because they have the advantage of being able to diversify and have greater investment opportunities (Atta & Marzuki, 2021). Conversely, the weak stock selection ability of Investment Managers could be due to the fact that most Investment Managers carry out a buy-and-hold strategy to limit trading activity (Thobejane et al., 2017).

The market timing ability describes as the ability of Investment Manager in deciding when to enter or quit the market. Investment managers with good market timing abilities are able to predict market fluctuations and take advantage of the market premium (Rao et al., 2017). Contrariwise, Investment Managers with weak market timing ability usually occurs because they manage numerous types of mutual fund, making the management process more difficult (Atta & Marzuki, 2021). The inability of the Investment Manager to predict the market may lead mutual fund performance to fall below of the market index (Koutsokostas & Papathanasiou, 2017).

The Covid-19 pandemic, which has been ongoing since March 2020, has had an impact on the Indonesian economy. From an investment standpoint, the pandemic has prompted many investors to face probable investment losses, particularly for equity mutual fund products or those with underlying investment assets listed on the Indonesia Stock Exchange (IDX) (Murdaningsih, 2020). The drop in the NAV of equity mutual funds followed the performance of the Composite Stock Price Index (IHSG), which has been declining since early 2020. There was a discrepancy in the IHSG between December 2019 and March 2020, where the IHSG was higher before Covid-19 than within the Covid-19 pandemic. Stock prices have not increased significantly three months after the Covid-19 outbreak began (Putranto, 2021).

Equity mutual fund is prevalent among investors. According to OJK data (2021), the equity mutual fund composition reached 23.21 percent in December 2021. This figure places equity mutual fund second, after fixed-income mutual fund. Previously, equity mutual funds even took the first place. Investors are drawn to equity mutual fund because they expect higher returns than others in exchange for the risk they take in investing in equity mutual fund (Bodie et al., 2018). There are a lot of equity mutual fund in Indonesia. In 2021, there were 356 equity mutual fund (OJK, 2021).

The objectives of this study are to examine equity mutual fund Investment Managers' ability in stock selection and market timing, in addition to the performance of equity mutual funds in Indonesia. This study also analyzes the effect of Investment Manager ability on mutual fund performance. Understanding Investment Managers' stock selection and market timing ability is essential in determining whether Investment Managers do well in managing equity mutual funds, particularly during the Covid-19 pandemic. As a result, this study could assist investors choose an appropriate equity mutual fund and may provide Investment Managers with insights into stock selection and market timing for the purpose enhance mutual fund performance. Furthermore, this study will deliver readers with information regarding the mutual fund industry in Indonesia generally.

Koutsokostas & Papathanasiou (2017), Bir & Mayur (2019), and Sing & Padmakumari (2020) all applied a small sample of 40 mutual funds. In contrast, Rao et al. (2017) used a large sample of mutual funds. Previous research ran data processing on all mutual fund samples at once so that the results were general. Only Bir and Mayur's (2019) processed data per mutual fund to obtain mutual fund names. Thus, this study attempts filling the gap in previous studies by using a large sample of 104 equity mutual funds. The data is then processed per mutual fund so that the stock selection and market timing abilities of each mutual fund are recognized. Furthermore, the study involves two time periods: prior to and following the Covid-19 pandemic. This study contributes to earlier research by examining the relationship between stock selection and market timing abilities and mutual fund performance.

This study is structured as follows: after the introduction, there is a literature review that includes theoretical, framework, empirical review, and hypothesis development. The third section is all about methodology. Following that, the results will be presented and discussed. Finally, this study concludes with a conclusion containing recommendations, future research directions, and limitations.

**Literature Review**

**Investment**

Investment is a commitment to spend current cash within a specific time frame in order to achieve future returns to compensate investors for the time elapsed, the predicted inflation rate throughout the investment period, and the unpredictability of future payments. Individuals, governments, pension funds, and corporations are all possible investors. This definition of investment involves all sorts of investments, including corporate and individual investments in stocks, bonds, commodities, or assets (Reilly et al., 2012).
**Mutual Fund**

Depending to the Capital Markets Law of the Republic of Indonesia No. 8 of 1995, a mutual fund is an instrument utilized by Investment Managers to obtain funds through investors in the general public for the investment of securities portfolios. This mutual fund concept may aid industrialization by acquiring equity and debt instruments (Sekhar, 2017). The funds are generally placed in Custodian Banks, while mutual funds are managed by Investment Managers. An Investment Manager is an investment practitioner who must possess an in-depth knowledge of the capital market in order to competently manage assets. The Investment Manager is part of an asset management company who manages assets from mutual fund holders, placing them into diverse portfolios in order to minimize the risk of making investments in a single investment (Sekhar, 2017). Some of the advantages of investing in mutual fund are that professionals manage mutual fund, have several types of options, have a small minimum investment amount, have online facilities, can be disbursed within a maximum period of seven days, are not taxable objects, and there is price transparency (Rudiyanto, 2013).

**Net Asset Value (NAV)**

The mutual fund's net asset value (NAV) is obtained by subtracting its assets and liabilities. Meanwhile, NAV/unit is calculated by dividing the mutual fund portfolio's fair price after deducting operational costs by the number of shares or units owned by the investor (OJK, 2015). The price of the investment portfolio owned, such as stocks, bonds, or deposits, affects the NAV/unit (Rudiyanto, 2013). NAV is one of the criteria used to evaluate mutual fund performance. NAV is exactly related to the value of the mutual fund's securities (Panigrahi et al., 2019). The NAV points out the market value of the mutual fund, whereas the NAV/unit is the price at which investors buy or sell a specific unit of the mutual fund.

**Stock Selection Ability**

Investment managers with good stock selection ability can choose specific securities that offer better returns when the market is bearish or bullish (Caraka, 2016). Eugene Fama introduced the stock selection ability or selectivity in 1972 as a result of the development of the theory of Sharpe (1966), Treynor (1965), and Jensen (1968). According to Fama (1972), selectivity measures how well the chosen portfolio is compared to other portfolios with the same risk level. The Fama model measures returns based on the ability to choose the best stocks at a certain level of risk based on predictions from market price movements. The mutual fund's overall performance may be divided into two parts, i.e., selectivity and risk. Selectivity is further divided into net selectivity and diversification because some excess return is based on the fact that the total portfolio risk ($\sigma_p$) is not the same as the systematic risk ($\beta_p$), thus indicating that the portfolio is not well diversified.

**Market Timing Ability**

Treynor & Mazuy (1966) and Henriksson & Merton (1981) introduced the measurement of market timing ability. Treynor and Mazuy added a quadratic equation of the difference between market return and risk-free, where if the coefficient of this quadratic equation is positive, the Investment Manager has good market timing ability. This model states that Investment Managers will invest more when market prices are high, and vice versa will invest less when market prices are low (Rao et al., 2017). This model also states that Investment Managers tend to switch portfolios to securities with low volatility when the market is bearish and switch to securities with high volatility when the market is bullish (Caraka, 2016). Meanwhile, Henriksson & Merton (1981) assume that Investment Managers use more qualitative approaches in implementing market timing, where Investment Managers predict whether market returns are greater or less than risk-free. Thus, in Henriksson and Merton's model, dummy variables of return market and risk-free are added.

**Mutual Fund Performance**

Mutual fund performance is an important matter. According to Bodie et al. (2018), the risk-adjusted performance evaluation method based on mean-variance criteria was developed by Jack Treynor, William Sharpe, and Michael Jensen using the Capital Asset Pricing Model (CAPM). This method is applied in three forms. The following is an explanation.

1. **Sharpe ratio**
   This ratio divides the average excess return portfolio by the standard deviation for a certain period. This ratio is more directed to the portfolio as a whole compared to small components of the portfolio. An actively managed portfolio must have a Sharpe ratio higher than the market index to be the investor's choice of optimal risk portfolio.

2. **Treynor's measure**
   Treynor's measurement divides the excess return portfolio per unit of risk with systematic risk. This method is referred to as the reward-to-risk ratio because it considers the potential components of the optimal risk portfolio.

3. **Jensen's alpha**
   Jensen's alpha measures mutual fund performance by calculating the average portfolio return using the CAPM method by considering beta and average market return. A good-performance mutual fund must have a positive alpha value because it is only possible for its performance to exceed the market index if it is expected to have a positive alpha.

Because every form of performance measurement offers advantages, it is necessary to choose the most appropriate method. The selection is determined by the investor's risk tolerance. In general, the Sharpe method is applied by investors who believe that the market affects just a small portion of their portfolio results. Meanwhile, the Treynor method is employed when investors believe their
portfolio is sufficiently diversified. When investors would like to discover the difference between the actual rate of return and the expected rate of return in the market, they apply Jensen's alpha method (Nurhayati et al., 2021).

**Covid-19 Pandemic**

The World Health Organization (WHO, 2021) defines coronavirus as a group of viruses that can cause sickness in both animals and humans. Several coronaviruses cause respiratory infections in humans, including common colds to more serious conditions like Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). Covid-19 is caused by a new form of coronavirus. Before the outbreak in Wuhan, China, in December 2019, the unusual virus and disease were unidentified. The most prevalent Covid-19 symptoms are fever, dry cough, and fatigue. Aches and pains, nasal congestion, headache, conjunctivitis, sore throat, diarrhea, loss of taste or smell, skin rash, or discolored fingers or toes are some of the less common symptoms that may affect some people. On March 9, 2020, WHO marked the coronavirus (Covid-19) a pandemic, indicating that the coronavirus has spread extensively over the world.

**Framework**

The conceptual framework in this study comes from risk-adjusted performance theory, that is, Sharpe's ratio (1966), Treynor's measure (1965), Jensen's alpha (1968), Fama's net selectivity theory (1972) to measure stock selection ability and market timing theory of Treynor and Mazuy (1966) and Henriksson and Merton (1981). This study adopts a method from a previous study owned by Bir and Mayur (2019) with modifications to the location and time of research where the location of this research is mutual fund in Indonesia, while the research time is divided into two periods, before the Covid-19 pandemic and during the Covid-19 pandemic. This study wants to determine the performance of Investment Managers through stock selection and market timing ability, as well as the performance of mutual fund. After that, this study looks at the effect of the Investment Manager's performance on the performance of mutual fund.

**Empirical Review and Hypothesis Development**

Selectivity refers to the identification of profitable securities within an asset class. Meanwhile, selection ability means the Investment Manager's ability to determine whether a stock's valuation is too high or too low in relation to the market in general (Rao et al., 2017). The results of study on stock selection ability from previous researchers show that Investment Managers have good stock selection ability (Koutsokostas & Papathanasiou, 2017; Bir & Mayur, 2019). Investment Managers in Islamic mutual fund even has good stock selection ability at a significance level of ten percent (Khan et al., 2020), also mutual fund of multinational companies, judging by their positive alpha values (Singh & Padmakumari, 2020). Investment Managers have good stock selection ability because they can diversify assets and have more excellent investment opportunities (Atta & Marzuki, 2021). However, some Investment Managers needed better stock selection ability based on Fama's net selectivity calculations. Most Investment Managers must be more successful in choosing the right stocks for their portfolios because the net selectivity is negative (Sharma & Verma, 2018; Sarkar & Ghosh, 2019). The weak ability of Investment Managers could be because most Investment Managers carry out a buy-and-hold strategy to limit trading activity (Thobejane et al., 2017).

H1: Investment Managers have stock selection ability in Indonesian equity mutual funds.

According to Bodie et al. (2018), measuring mutual fund performance can be complicated when the Investment Manager changes the composition of the portfolio in the middle of calculating performance, so it is important to draw attention to changes in the portfolio risk characteristics through market timing ability. If investors are able to predict market prices, they are more likely to shift their portfolios to those that will provide higher returns.

Previous research on market timing ability found that Investment Managers of equity funds in China have successful market timing ability, as calculated by the Treynor Mazuy model (Rao et al., 2017). Nevertheless, Investment Managers of equity mutual funds in Greece need market timing ability (Koutsokostas & Papathanasiou, 2017), the same as Investment Managers in India (Bir & Mayur, 2019). Investment managers in Pakistan, both for conventional and Islamic mutual funds, require more market timing ability because they have a negative gamma value (Khan et al., 2020). After the Treynor Mazuy and Henriksson Merton calculation, only five mutual funds have positive gamma values, indicating that only a few Investment Managers have good market timing abilities (Sarkar & Ghosh, 2019). Investment Managers have weak market timing ability because they usually manage many mutual funds of different types, which makes the mutual fund management process more difficult (Atta & Marzuki, 2021).

H2: Investment Managers have market timing ability in Indonesian equity mutual funds.

The portfolio performance evaluation measures the risk and return of the mutual fund portfolio (Rudiyanto, 2013). Every investor expects low risk but high returns. Mutual fund risk is the uncertainty about the investment return at the end of a specific period. Risk arises when the expected rate of return differs from the actual rate of return (Lestari, 2019).

Previous researchers' findings on mutual fund performance show that all mutual funds attained positive values based on Sharpe's and Treynor's risk-adjusted return calculations (Bir & Mayur, 2019). Based on Sharpe method, only 18.5% of mutual fund outperformed the market, and using the Treynor method showed that 35.87% outperformed the market (Darmayanti et al., 2018). Meanwhile, using the Jensen method, there were 12 mutual funds with positive alpha values from 2015-2019 (Andreas & Basana, 2021). Mostly, the obtained alpha value is negative, showing that mutual funds in Greece perform worse than the market Koutsokostas dan Papathanasiou (2017).
Most mutual fund have higher returns than the market, but 24 out of 25 mutual funds have a beta value below one, indicating that high performance is not caused by systematic risk but by other factors. During 2018-2019, mutual fund in Indonesia with good performance tended to be few; if measured using percentages, it was still less than 40%. In 2020, mutual fund that performed above the benchmark reached 98% from Sharpe and Treynor method and 95% using Jensen's alpha (Rebiman & Waspada, 2022). According to Mumtazah and Permady (2022), equity fund performance in Indonesia was poor during the Covid-19 pandemic, which lasted from March 2020 to July 2021.

H3: Equity mutual fund in Indonesia have good performance

The ability of the Investment Manager to select stocks determines the performance of equity funds (Yolanda et al., 2019; Sabila et al., 2019). All Investment Managers of equity funds have stock selection ability to create good mutual fund performance. Investment Managers manage the five best performing mutual fund with better stock selection ability than other managers (Bir & Mayur, 2019). In contrast, a lack of stock selection ability causes Investment Managers who need the ability to manage mutual fund properly (Ilo et al., 2017). Investment Managers do not have stock selection ability in conventional mutual fund. In addition, Investment Managers, both for conventional and sharia mutual fund, and as a whole, also need to gain market timing ability. Thus, the Investment Manager cannot outperform the market (Khan et al., 2020). The ability foreseeing market movements has a major effect on the success within Islamic equity mutual fund (Sabila et al., 2019). Nevertheless, the poor performance of mutual fund in Greece was due to the need for market timing ability on equity fund Investment Managers (Koutsokostas & Papathanasiou, 2017). Based on these conditions, the hypothesis proposed is as follows.

H4: The ability of stock selection and market timing affects the performance of equity mutual fund in Indonesia.

**Methodology**

This research uses secondary data from the Indonesia Stock Exchange (IDX), the Financial Services Authority (OJK), and Bank Indonesia (BI). The type of data is time series. The data used is Net Asset Value per unit holder (NAV/Unit) from equity mutual fund monthly that meet the criteria, the monthly Jakarta Composite Index (IHSG), and the BI 7 Days Repo Rate during the 2016-2021 period. NAV per unit holder was collected through the OJK website. Meanwhile, IHSG data was collected from the Indonesia Stock Exchange (IDX) website, and BI 7 Days Repo Rate data was obtained from Bank Indonesia's website.

The research period used in this study is divided into two: during the time before the Covid-19 pandemic occurred in January 2016 to February 2020 and during the Covid-19 pandemic from March 2020 to December 2021. Thus, the research time used is five years. The decision of the sample is from the following criteria.

1. The conventional equity mutual fund registered with the Financial Services Authority (OJK) during 2016-2021.
2. The NAV of equity mutual fund must be published monthly during 2016-2021.
3. The mutual fund must be Rupiah-denominated.

From 356 equity mutual fund listed on the OJK website as of December 2021, only 104 equity funds met the sampling criteria mentioned above. Therefore, this study uses 104 samples of equity funds.

The empirical method used in the current study is the net selectivity model of Fama (1972) to assess stock selection ability and the Treynor and Mazuy (1966) and Henriksson and Merton (1981) models to analyze market timing ability. In addition, the Sharpe (1966), Treynor (1965), and Jensen (1968) models are also used to measure the performance of equity mutual fund. Data were processed using Microsoft Excel and Eviews. This study used quantitative analysis with the Sharpe (1966), Treynor (1965), and Jensen (1968) models, along with multiple regression analysis of the Treynor and Mazuy (1966) and Henriksson and Merton (1981) models.

**Measuring Stock Selection Ability**

This research uses Fama's selectivity model (1972) to measure the stock selection ability of equity mutual fund. This model compares the mutual fund portfolio with its returns and risks, where the difference between the two is known as selectivity. Positive selectivity means that the Investment Manager generates additional returns for the risks taken (Bir & Mayur, 2019). Fama's selectivity model is as follows.

Net Selectivity = (Rf – Rm) - σf / σm (Rm – Rf)

Information

Rf = Portfolio return
Rm = Risk-free return
σf = Portfolio Standar deviation
σm = Market Standar deviation
Measuring Market Timing Ability

This study uses the model of Treynor and Mazuy (1966) and Henriksson and Merton (1981). Treynor Mazuy (1966) added a quadratic variable of excess return to determine whether the curve becomes more vertical when market conditions are bullish. The model offered by Henriksson and Merton (1981) tends to be simpler by adding a dummy variable with a value of one if the market return is greater than risk free and will have a value of 0 otherwise. A positive gamma value indicates that the Investment Manager has market timing skills. The equations of the Treynor and Mazuy models are as follows.

\[ R_p - R_f = \alpha + \beta_p (R_m - R_f) + \gamma (R_m - R_f)^2 + \varepsilon_t \]

While the model equation from Henriksson and Merton (1981) is appears as below.

\[ R_p - R_f = \alpha + \beta_p (R_m - R_f) + \gamma D (R_m - R_f) + \varepsilon_t \]

Information
- \( S_p \) = Portfolio return
- \( R_f \) = Risk free return
- \( R_m \) = Market return
- \( \beta_p \) = Systematic risk of portfolio
- \( \alpha \) = The ability of stock selection
- \( \gamma \) = The ability of Market timing
- \( D \) = Dummy variable (1 if \( R_m > R_f \) and 0 if \( R_m < R_f \))
- \( \varepsilon_t \) = error

Measuring Equity Mutual Fund Performance

This study uses the Sharpe (1966), Treynor (1965), and Jensen (1968) methods. All of these methods are among the most reliable to generate helpful information, especially for Investment Managers in the investment management process (Nurhayati et al., 2021). According to Mumtazah & Permadhy (2022), measuring the performance of equity funds using the Sharpe, Treynor, and Jensen methods tends to be consistent. While using these three methods, the results will remain the same.

The Sharpe ratio method is also known as the reward to variability ratio. This method is calculated by dividing the excess return by the standard deviation. The Treynor ratio method is called the reward to volatility ratio because it divides excess return by beta. Jensen’s Alpha compares mutual fund performance to the return that should be obtained based on the alpha value. This method helps to evaluate the additional portfolio returns generated and the expected returns considering the level of volatility (Bir & Mayur 2019). The formula of the method is as follows.

**Sharpe Ratio**

\[ S_p = \frac{(R_P - R_f)}{\sigma_p} \]

**Treynor Ratio**

\[ T_p = \frac{(R_P - R_f)}{\beta_p} \]

**Jensen’s Alpha**

\[ \alpha_P = R_P - [ R_f + \beta_p (R_m - R_f)] \]

Information
- \( S_p \) = Sharpe ratio
- \( T_p \) = Treynor ratio
- \( \alpha_P \) = Jensen’s alpha
- \( R_P \) = Portfolio return
- \( R_f \) = Risk-free return
- \( R_m \) = Market return
- \( \sigma_p \) = Portfolio standard deviation
- \( \beta_p \) = Systematic risk of portfolio
Results and Discussion

Stock Selection Ability Analysis Using Net Selectivity Fama

Eleven mutual funds have positive Fama net selectivity prior to the Covid-19 pandemic. Hence, 9 Investment Managers have stock selection ability in Indonesia. The two best Investment Managers are Sucorinvest Asset Management and Mandiri Investment Management. Meanwhile, 17 mutual funds have a positive Fama net selectivity value during the pandemic period. As a result, 12 Investment Managers have stock selection ability in Indonesia while the Covid-19 pandemic happened. Manulife Asset Manajemen Indonesia and Pacific Capital Investment are the finest Investment Managers.

There are four Investment Managers who managed five equity mutual fund with the best stock selection ability prior to and during the Covid-19 pandemic, namely Sucorinvest Asset Management which manages the Sucorinvest Maxi Fund and Sucorinvest Equity Fund Mutual fund, then Shinhan Asset Management Indonesia which manages the Shinhan Equity Growth Mutual Fund, Panin Asset Management which manages the Panin Dana Teladan Mutual Fund, and Pinnacle Persada Investama which manages the Pinnacle Strategic Equity Fund Mutual Fund.

According to the findings, prior to and during the Covid-19 outbreak, there are a lot of equity mutual fund with a negative net selectivity Fama rather than a positive one. Only 10.58% and 16.35% of equity mutual funds with a positive Fama net selectivity value, or 23.68% and 31.58% of Investment Managers, have stock selection ability prior to and while the Covid-19 pandemic, respectively. Overall, the results of the study utilizing the Fama net selectivity model reveal that Investment Managers from Indonesian equity mutual funds need better stock selection ability. This study's results follow the research of Sharma & Verma (2018) and Sarkar & Ghosh (2019). However, this research differs from Bir & Mayur (2019) and Khan et al. (2020).

Market Timing Ability Analysis Using the Treynor Mazuy Model

Prior to the Covid-19 pandemic, out of 104 mutual funds, 69 mutual funds have positive gamma coefficients, whereas 35 mutual funds have negative gamma coefficients. However, only two of the 69 mutual funds have a positive and significant effect at the 10% significance level, or in percent, there is only 1.92% of mutual fund. The two mutual funds are the Avrist Equity Cross Sectoral Mutual Fund which has a gamma coefficient value of 3.7421, and the Syailendra Dana Equity Plus Mutual Fund, which has a gamma coefficient value of 2.7352. Thus, Investment Managers who have market timing ability in Indonesia before the Covid-19 pandemic are Avrist Asset Management and Syailendra Capital.

During the Covid-19 pandemic, there are 24 mutual funds with positive and 80 mutual funds with negative gamma coefficients. However, none of the 24 mutual funds have a positive and significant effect at the 5% or 10% significance level. Thus, no Investment Managers have market timing ability in Indonesia at the Covid-19 pandemic. Overall, the Treynor Mazuy model analysis shows that Investment Managers from equity funds in Indonesia need better market timing ability. The results of this study following research by Putri (2012), Mardiasih (2012), Koutsokostas & Papathanasiou (2017), Bir & Mayur (2019), Sarkar & Ghosh (2019) and Khan et al. (2020) while Rao et al. (2017) state differently.

Market Timing Ability Analysis Using the Henriksson-Merton Model

In a time prior the Covid-19 pandemic, out of 104 mutual funds sampled in the study, 35 mutual funds have positive gamma coefficients, and 69 mutual funds have negative gamma coefficients. However, out of the 35 mutual funds, no mutual fund have a positive and significant effect. Thus, there are no Investment Managers who have market timing ability in Indonesia prior to the Covid-19 pandemic.

There are 103 mutual funds with positive gamma coefficients and one mutual fund with negative gamma coefficients within the Covid-19 pandemic period. However, only 5 of the 103 mutual funds have a positive and significant effect at the 5% level of significance, and 11 mutual funds have a positive and significant effect at the 10% level of significance. The sixteen mutual funds are managed by twelve Investment Managers. There are four Investment Managers that manage two equity funds: Architas Asset Management Indonesia, Danareksa Investment Management, Mandiri Investment Management, and Principal Asset Management. Thus, during the Covid-19 pandemic, 12 Investment Managers have market timing ability in Indonesia. As a percentage, only 15.38% of mutual funds have a positive and significant influence at the 5% and 10% significance levels. In other words, only 31.58% of Investment Managers have market timing ability while on the Covid-19 pandemic. Overall, the Henriksson-Merton model analysis shows that Investment Managers from Indonesian equity funds do not have good market timing ability. The findings of the study are consistent with the findings of Putri (2012), Mardiasih (2012), Koutsokostas and Papathanasiou (2017), Bir & Mayur (2019), and Sarkar & Ghosh (2019). However, this study differs from that of Rao et al. (2017).
Mutual Fund Performance Analysis

Table 1: Summary of The Top Three Best Performing Mutual Fund

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<tr>
<td>Reksta Dana Sucorinvest Equity Fund</td>
<td>0.0083</td>
<td>Reksta Dana Pacific Equity Optimum Fund</td>
<td>0.0165</td>
</tr>
<tr>
<td>Reksta Dana Mandiri Investa Equity Movement</td>
<td>0.0044</td>
<td>Reksta Dana Manulife Saham Andalan</td>
<td>0.0135</td>
</tr>
</tbody>
</table>

Source: Processed Data (2022)

Table 1 summarizes the best equity mutual fund performance prior to and following Covid-19. The Sucorinvest Maxi Fund Mutual Fund and the Sucorinvest Equity Fund continuously placed first and second in the best mutual fund performance according to the three methods prior to Covid-19. Meanwhile, the Mandiri Investa Equity Movement Mutual Fund achieved third place twice, especially for Treynor and Jensen's alpha methods. Furthermore, throughout the Covid-19 pandemic, the Manulife Institutional Equity Fund Mutual Fund and the Manulife Saham Andalan Mutual Fund constantly ranked first and third, according to the results of a three-method analysis. Meanwhile, using Sharpe and Jensen's alpha methodology, the Pacific Equity Optimum Fund Mutual Fund came in second place twice.

The superior Sharpe ratio indicates that mutual fund outperform because their excess return value exceeds the level of risk. Likewise, the greater Treynor's ratio indicates that mutual fund have a better excess return value than their systematic risk level. Meanwhile, a high Jensen's alpha value indicates that mutual funds outperform because they provide higher returns than risk-free returns and expected returns by investors. Based on the Sharpe methods, only 10.58% and 16.35% of all equity mutual funds outperformed the benchmark prior to and following the Covid-19 pandemic, respectively. Similarly, the Treynor analysis reveals that only 10.58% and 25% of equity funds outperformed the benchmark before and after the Covid-19 pandemic, respectively. Meanwhile, according to Jensen's alpha method, only 10.58% and 24.04% of all equity mutual funds have positive alpha values prior to and throughout the Covid-19 pandemic, as well. So overall, equity mutual fund in Indonesia perform below the benchmark, or if based on an analysis of Jensen's alpha method, it shows that the performance of stock mutual fund in Indonesia has not been able to beat the market. The findings of this study correspond with Ilo et al. (2017), Darmayanti et al. (2018), Koutsokostas & Papathanasiou (2017), and Khan et al. (2020). However, this study's results differ from the research of Singh & Padmakumari (2020).

Analysis of the Influence of Stock Selection and Market Timing Ability on the Performance of Equity Mutual Fund

There are 11 equity mutual funds with stock selection ability in Indonesia prior to the Covid-19 pandemic, and 19 mutual funds during the Covid-19 pandemic. In terms of mutual fund performance, prior to the Covid-19 pandemic, all mutual funds with stock selection ability outperformed the benchmark. Meanwhile, two mutual funds underperformed the benchmark using the Treynor method during the Covid-19 pandemic: the Pacific Equity Optimum Fund and the Pacific Equity Flexi Fund. However, mutual funds with a stock selection ability outperformed the benchmark in the years prior to and following the Covid-19 pandemic. These findings support the research results of Bir and Mayur (2019), which showed that all equity mutual fund Investment Managers with the ability of stock selection are capable of enhanced mutual fund performance.

As time preceding the Covid-19 pandemic, there are two equity mutual funds with market timing ability in Indonesia, whereas there are 16 mutual funds during the Covid-19 pandemic. In relation to mutual fund performance, not all funds with market timing ability either prior to or during the Covid-19 pandemic outperformed the benchmark. Before of the Covid-19 pandemic, only the Syailendra Dana Ekuitas Plus Mutual Fund outperformed the benchmark among the two equity funds with market timing ability, that is the Avrist Equity Cross Sectoral Mutual Fund and the Syailendra Dana Ekuitas Plus Mutual Fund. Likewise, during the Covid-19 pandemic era, only two mutual funds out of 16 outperformed the benchmark: the Architas Saham Dinamis Mutual Fund and the Pinnacle Strategic Equity Fund Mutual Fund. These findings differ from the research of Koutsokostas & Papathanasiou (2017), which state that Investment Managers cause the leak performance of mutual fund because they have no market timing ability.
Discussion

Understanding Investment Managers' stock selection and market timing abilities is required for identifying which Investment Managers perform well in managing equity mutual funds. Regarding the results and discussion, Investment Managers from equity mutual fund in Indonesia need better stock selection and market timing ability. This study implies that Investment Managers need to be more attentive to the type of stock and the period of purchase. As previously explained, the stock selection ability influences the mutual fund performance. Because all mutual fund with stock selection ability outperform the benchmark, Investment Managers must improve their stock selection ability Likewise, Investment Managers may benefit from the skill of market timing to increase the NAV. When the Investment Manager performs well, investors are more likely to subscribe to certain mutual fund, causing mutual fund unit holders to increase in the future.

The study's findings have implications for investors as well as the Financial Services Authority (OJK). This study may assist investors select the most suitable equity mutual fund. Investors should consider investing the mutual fund suggested in this study, particularly during the Covid-19 pandemic, when market conditions declined. During the Covid-19 pandemic period, Investment managers who have good stock selection and market timing abilities have shown their ability to select the most suitable stocks at the right time. This study will also be useful to the OJK as a regulator when conducting supervisory actions to oversee capital market activities. OJK can focus on overseeing these Investment Managers that do not yet have good stock selection and market timing ability. Thus, OJK can play a role in identifying possible risks and intervening early to avert serious violations.

Prior to and following the Covid-19 outbreak, equity mutual fund in Indonesia underperformed the benchmark using Sharpe, Treynor, and Jensen's alpha methods. Investment Managers, as managers of mutual fund, have to implement strategies to improve mutual fund performance, particularly to achieve above-market performance. Investment Managers need to pay attention to the performance flow of managed mutual funds in every conditions in order to provide the best response if unexpected conditions occur, such as the Covid-19 pandemic. From an investor perspective, investors may use the study results regarding the performance of mutual fund before to and during Covid-19 as a consideration in choosing the right equity fund. Investors need to look not only from the return but also from the risk perspective. As the regulator, OJK can conduct additional oversight on mutual fund that still need to perform well, particularly in terms of portfolio composition.

Conclusion

Investment Managers from equity mutual fund in Indonesia lack stock selection and market timing ability before and during the Covid-19 pandemic based on the results of an analysis using the net selectivity model of Fama, Treynor-Mazuy, and Henriksson-Merton. According to an analysis using Sharpe, Treynor, and Jensen's alpha methods prior to and following the Covid-19 outbreak, most equity mutual fund in Indonesia performed below the benchmark. All mutual funds with stock selecting ability outperformed the benchmark. However, not all equity mutual fund in Indonesia with market timing ability performed above the benchmark before or following the Covid-19 pandemic. This study may provide insights for Investment Managers and investors. In order to achieve successful mutual fund performance, Investment Managers must be able to assess their own performance. Furthermore, Investment Managers are expected to be more conscious of stock selection and market timing ability because they may improve the performance of their managed mutual fund. Next, before investing in a mutual fund, investors should analyze the performance of the mutual fund as well as the performance of the Investment Managers as a reference for selecting a suitable mutual fund. The scope of this analysis is limited to equity funds registered with the Financial Services Authority (OJK), active as well denominated of Rupiah in Indonesia during the study period. Although the focus of this study is on Investment Managers' abilities, specifically stock selection and market timing, as well as the mutual fund performance. This study also analyzes the relationship between the ability of the Investment Manager and the performance of managed mutual funds. For future research, researchers may use methodologies other than the method used in this study to analyze Investment Managers' ability, as well as mutual fund performance. They may also use fixed-income mutual funds as examples because the majority of the mutual fund's portfolio comprises of stocks.

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References


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