

Performance of Conventional and Sharia Mutual Funds Using Sharpe, Treynor and Jensens Methods

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Abstract

Mutual funds is an instrument investment which is the best recommendation for beginner investor or an alternative investment that more safe and efficient. Investing growth give an opportunity to economic growth and to agregat growth of a country macro economic. That things were positive impacted to many factors for harmony and prosperity. Research purpose - Indonesia is a country with the majorities moeslims citizen, to know how money market conventional and sharia mutual funds performances that can become a scient or subject to inform the investors of optional instrument investment it is does not depends to any religion. Using the portofolio method performance there are Sharpe Index, Treynor Index, and Jensen Alpha. And the variables using net asset value of money market mutual funds, risk free BI-7DRR, JKSE, and JII periode time 2017-2021. This research can show that mutual funds is a sustainable investment caused both of risk and return are the same. Research result In 2020 pandemic covid-19 hitten Indonesia and streamed untill 2022 but in the fact investment popularity doing hightly, a lot of campaign and promoting influencer to pull on teenegers become a new investor. Money market mutual fund is a suitable recommendation for investor beginner according with increased of under asset management value of money market mutual funds during pandemic. On the practice there are more options of mutual funds with two principle are conventional and sharia mutual funds.

Keywords: *Jensen Alpha, Net Asset Value, Return, Risk Premium, Risk Free, Sharpe Index, Treynor Index*



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INTRODUCTION

Investment is currently an activity that can be reached by anyone and anywhere. Technological advances greatly affect the development and ease of conducting investment transactions (Prabhu & Vechalekar, 2019). Mutual funds are one of the investment instruments that can be managed without being carried out by the investors themselves. The investment manager acts as a professional party who will manage the set of investment funds obtained from the investor community in mutual funds.

In practice, mutual funds have two choices, namely Islamic mutual funds and conventional mutual funds. Conventional mutual funds relate to all elements of mutual funds without being mixed with elements of Islamic religious law with no cleaning process in calculating the final net value . In Kholidah et al., 2019 it is explained that as an investment instrument, Islamic mutual funds have different criteria from conventional mutual funds in general. This difference lies in the selection of investment instruments and investment mechanisms that should not conflict with

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sharia principles. Another difference is the overall portfolio management process, screening, and cleansing. Asset Under Management is a mutual fund investment fund carried out by investment managers. In the OJK capital market statistics report for October 2020, it was recorded that the Net Asset Value (NAV) of Fixed Income Mutual Funds was Rp. 117 trillion, Equity Funds of Rp. 144 trillion, Mixed Mutual Funds Rp. 29 trillion, and Money Market Mutual Funds Rp. 73.33 trillion.

Money market mutual funds are short-term investment options that channel their funds into debt securities with a tenor of less than 1 year. Novice investors tend to choose low-risk investments, money market mutual funds provide that even though the returns are also low. So that the choice of this investment instrument is right for those who want to start studying investment.

The development of money market mutual funds has increased and is able to provide satisfaction to its investors. This is evidenced by the increase in total managed money market mutual funds over the last five years. At the end of 2016 the total AUM of money market mutual funds showed a total of Rp. 29.7 trillion with a total of 24.1 million investment units. In 2017, the total AUM was IDR 51.9 trillion with 40.8 million investment units. The total AUM of mutual funds in 2018 was IDR 45.6 trillion with 34.4 million investment units which experienced a decrease from the previous year. In 2019 it increased again with a total AUM of IDR 69.2 trillion with 52.7 million investment units. At the end of 2020, it increased to a total AUM value of Rp. 94.5 trillion with a total of 67.9 million units of participation. In the following year, it grew 14.26% so that the total AUM became IDR 108 trillion and the investment unit also grew 11.8% to 75.5 million in 2021. Investors' interest in money market mutual funds has increased and has made investment management companies managed by money market more confident to provide the best performance (Pástor & Vorsatz, 2020). Although money market mutual funds still rank third of the total funds under management, equity funds, mixed mutual funds, and fixed income mutual funds. However, judging by the developments in the last few years, money market mutual funds will continue to increase and follow the funds managed in other categories that are superior. The following is data on money market mutual funds managed by the largest Investment Managers in 202, Based on the introduction, it is related to the growth of money market mutual funds, the increase in the value of *assets under management*, and the increase in the total value of net assets obtained by both sharia and conventional investment managers. According to the research of (Mirza et al., 2022) during the Covid-19 pandemic mutual funds performance in Malaysia, Pakistan, Saudi Arabia, Qatar, Kuwait, and UAE that Islamic funds are outperformed than their conventional counterparts. That is the background for researchers to conduct research by analyzing the performance of conventional and sharia Indonesian mutual funds in the money market category for the period 2017 - 2021, the problem of the research How to measure the performance of conventional and Islamic money market mutual funds using the Sharpe Index, Treynor Index, and Jensen Alpha performance measurement methods for the 2017-2021 period.

LITERATURE REVIEW

According to Law Number 8 of 1995 concerning the Capital Market, what is meant by mutual funds or mutual funds is a place used as a means of collecting funds from the investor community with the aim of investing them in securities portfolios by investment managers. Investment Manager is regulated in POJK Number 10/POJK.04/2018 concerning the Implementation of Investment Manager Governance implemented in the implementation and application so that the

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activities of investment managers meet good governance standards . (Ramayanti & Purnamasari, 2018)explained that investment managers manage mutual funds professionally using careful research and their expertise. Fama (1972) suggests that the forecasting ability of managers can be divided into two parts, namely the ability to select selectivity abilities and the ability to determine market timing abilities . Selectivity ability also known as micro forecasting, it involves identifying the types of investments that are considered undervalued or overvalued . Market timing ability is referred to as macro forecasting, which involves forecasting future market returns (Nicolescu et al., 2020).

Mutual funds are one of the derivative instruments. According to the Capital Market Law No. 8 of 1995, Article 1 paragraph 27 defines Mutual Funds as a forum used to raise funds from people who have capital to be invested in securities portfolios by investment managers. Mutual funds are ownership of types of stocks and various types of bonds and other securities, which are owned by a group of investors and managed by a professional investment company because it will reduce the risk they face. Mutual funds are alternative investments or diversified investments for investors who want to invest with limited capital. Mutual funds have small risks and good returns, so that mutual fund investments have many advantages for investors. Mutual fund investments are managed by investment managers, therefore investors do not need to monitor trading activities on the stock exchange every day. This certainly makes it easier for investors who don't have time to always check their investments (Adhi et al., 2021).

Net Asset Value (NAV) or Net Asset Value (NAV) as a benchmark for mutual fund performance. Net asset value is obtained from the value of the respective mutual fund portfolio . NAV is the fair market value of securities and other assets of a mutual fund less liabilities (debt). NAV is one of the benchmarks in monitoring the results of a mutual fund. Net asset value per unit of participation is the fair price of a mutual fund portfolio after deducting operational costs then divided by the number of shares/units of participation that have been outstanding (owned by investors) at that time. (Hikmatul Fisa Yasinta, 2019).

METHODOLOGY

The data collection technique in this study uses historical data on Net Asset Value found on the www.ojk.go.id website . The risk free data uses BI-7DRR interest rate data available on the www.bi.go.id website . For market return data, conventional mutual funds use JKSE monthly data, and for sharia mutual funds use JII monthly data, both are available on the www.yahoo-finance.com website .

The type of data is the type of data in research conducted with a comparative approach which is included in the type of quantitative research . Based on the objectives of quantitative research, there are aspects of quantity or statistical rankings that can be calculated and descriptions of objects that can be expressed in the form of numbers, quantities, and quantities. In (Huda et al., 2018) Sugiyono (2019) stated that data analysis techniques are a step in systematically searching and compiling the data obtained from interviews, field notes, and documentation results by organizing data into

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categories, describing in compiling into patterns, choosing which data to use. that are considered important and the data to be studied, and conclusions are made so that they are easily understood by themselves and others .The population is a generalization zone consisting of subjects who have certain qualities and characteristics that are determined by researchers to be studied and then conclusions are drawn (Sugiyono, 2018) in (Yazir & Suhardi, 2019) The population in this study there are 27 conventional mutual fund investment managers and 20 active registered sharia mutual fund investment manager during the 2017-2021 research period.

The sample is part of the number and characteristics of the population (Sugiyono, 2018) in (Yazir & Suhardi, 2019) . The sampling technique in this study used the purposive sampling method . Purposive sampling is a sampling technique with certain considerations (Sugiyono, 2018) in (Suryanto & Asri, 2020) . Taking 5 samples of conventional mutual funds and 5 samples of Islamic mutual funds with the criteria that the data has been registered and active during the research period. In this study using the following samples:

3.2 Analysis Techniques

Money Market Mutual Fund Return

The profit obtained from the value of investment in mutual funds based on the results obtained at the end of each month is the return that is generated. The rate of return is calculated using NAV data for conventional and sharia money market mutual funds registered with the OJK. (Firdaus, 2019)

$$(3.1) R=(NABt-NABts)/NABts$$

Description:

R= Mutual Return fund

NAV = Net Asset Value Period t

NABt s = Net Asset Value Period before t

Return Market

Market Return is a measure of the ability of market performance as a comparison (Correia-d et al., 2022), in showing a performance that has been achieved within a certain period which is calculated from the value of JKSE for conventional mutual funds and JII for sharia mutual funds. (Damayanti et al., 2021)

$$(3.2) Rm=(JKSEt-JKSEts)/JKSEts$$

$$(3.3) Rm=(JIIt-JIIts)/JIIts$$

Where:

Rm = Market return or market profit

JKSE/JII = benchmark value in the current period

JKSEts/JIIts = benchmark value in the previous period

Risk Free

Return benchmark (BI-7 Day Repo) using monthly data on Indonesian Interest Rate BI7DRR (Gumilang & Subiyantoro, 2008) with the following formula:

$$(3.4) SBI=(SBI t-SBI ts)/SBI ts$$

Information:

SBI = Interest Rate

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SBI_t = Interest rate of the previous period

Sharpe Index

Sharpe ratio is measured based on the risk premium, which is the difference between the average return on mutual fund investment and the average risk-free investment return and compared with the standard deviation . (Zubir 2011:252) in (Priyanti et al., 2021)

$$(3.5) \text{ SP } ((R_t - R_f)) / O_i$$

Information:

S_i = Sharpe Ratio

R_i = average return of mutual fund i during the observation period

R_f = average risk-free investment return rate during the observation period

O_i = standard deviation of mutual fund return i during the observation period

Treynor Index

Systematically, the Treynor ratio calculation does not show a difference with the Sharpe ratio , the difference is only in the divisor which is declared as beta systematic risk . (Putri & Wijaya, 2022)

$$(3.6) \text{ Tr } ((R_t - R_f)) / \beta$$

Information:

Tr = Treyno Ratio

R_t = average return of mutual fund I during the observation period

R_f = average risk-free investment return during the observation period

β = beta investment portfolio

Jensen Alpha

Mutual fund value that can exceed market performance is the best mutual fund performance. based on the acquired systematic risk. The higher the Jensen value, the better the performance . (Karina Dianti, 2020)

$$(3.7)$$

$$J\alpha = r_p - [r_f + p (r_m - r_f)]$$

Information:

Jα = Jensen Alpha

r_p = return (return) portfolio

p = portfolio systematic risk

r_m = return market return

r_f = risk free

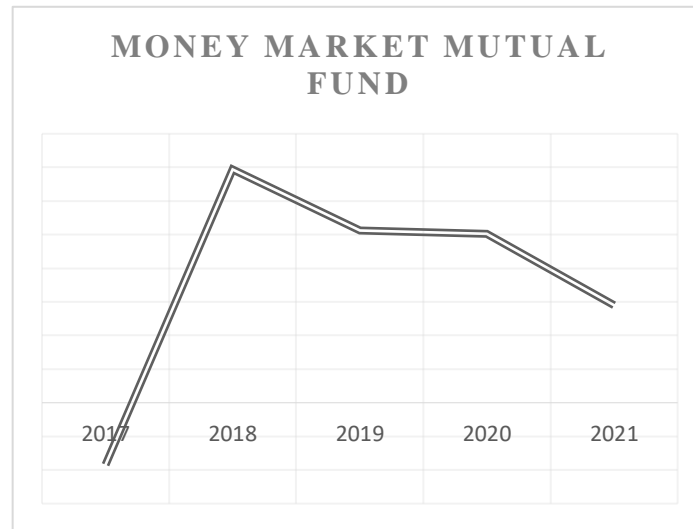
FINDINGS AND DISCUSSION

4.1 Finding

4.1.1 Return of Conventional and Islamic Money Market Mutual Funds

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Figure 1 Mutual Fund Return Graph 2017-2021



Source: Processed Data

The graph shows the *return* on conventional and sharia mutual funds during the study period. Shows the take value of the results obtained from money market mutual funds decreased at the end of the research period. In 2017 the total *return* was 0.1843, in 2018 the *return* for conventional and Islamic mutual funds was 0.6939, in 2019 the total *return* was 0.5119. In 2020 it gives a *return* of 0.5017, and in 2021 it produces a *return* of 0.2904. this happened due to the increase in interest rates on the BI-7DRR and inflation (Suryanto & Asri, 2020) due to Indonesia being hit by a pandemic since entering 2019 to 2021.

4.1.2 Sharpe Index

Table 5. Sharpe Index RDPU Performance Data

No	Investment Manager		2017	2018	2019	2020	2021
1	Successinvest	conventional	0.0605	2.0427	0.0874	10.7740	13.3563
2	Syeilendra	conventional	0.0508	1.5758	0.0409	12.126	6.2988
3	Bahana	Sharia	5.0972	1.1999	2.2152	7.5013	-1.4472
4	Maybank	Sharia	3.2758	1.0127	6.7229	2.7267	0.0011
5	MNC	conventional	4.3242	-2.7097	-3.7156	-1.4977	4.9550
6	Bahana	conventional	1.7987	-1.0545	0.0200	-0.9927	0.9186
7	Sharia MNC	Sharia	4.3242	-2.7097	-3.7156	-1.4977	4.9550
8	PNM Investama	Sharia	-0.0266	-2.8695	0.0110	0.8302	-0.0148
9	Mega Capital	Sharia	-1.0366	0.9570	-7.2571	-0.6559	-1.7690
10	Paribas	conventional	-0.0654	-8.2640	-0.0768	-4.8502	-
							30.4759

Source: Processed Data

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No	Investment Manager		2017	2018	2019	2020	2021	
1	Paribas	conventional	0.1737	-2.8352	0.0600	1.8558	6.1400	The best
2	PNM Investama	Sharia	0.0274	0.8464	0.0059	0.9402	0.0074	
3	MNC	conventional	-0.1364	-0.2525	0.0380	1.4988	-1.3752	
4	Bahana	Sharia	-1.1739	0.3059	0.5596	-6.4696	0.4794	
5	Sheilendra	conventional	-0.1752	1.6421	-0.0319	-6.7182	-0.9376	
6	Bahana	conventional	-0.4741	-0.2290	-0.0158	-0.3836	-0.2295	
7	Mega Capital	Sharia	-0.4545	1.5214	-2.3413	-0.7875	-2.1638	
8	Maybank	Sharia	-0.6237	0.1999	-17.8385	-2.6127	-0.0009	
9	Successinvest	conventional	-0.2390	0.5319	-0.0668	-6.9463	-5.7834	
10	Sharia MNC	Sharia	-4.9495	-7.1416	-1.2071	-1.4183	-1.5625	

investment manager was obtained by Succorinvest from Conventional RDPU with a value of (0.0605, 2.0427, 0.0874, 10.7740, 13.3563). Both Syeilendra from the Conventional RDPU with scores (0.0508, 1.5758, 0.0409, 12.1260, 6.2988). The three Materials from the Sharia money market mutual funds with a value of (5.0972, 1.1999, 2.2152, 7.5013, -1.4472). The four Maybanks from Sharia money market mutual funds with a value of (3.2758, 1.0127, 6.7229, 2.7267, 0.0011).

4.1.3 *Treynor Index*

Table 6. Treynor Index RDPU Performance Data

Source: Processed Data

The best investment manager was obtained by Paribas from Conventional money market mutual funds with a value of (0.1737, -2.8352, 0.0600, 1.8558, 6.1400). The second is PNM Investama from money market mutual funds Syariah with a value (0.0274, 0.8464, 0.0059, 0.9402, 0.0074). The three MNCs from Conventional money market mutual funds with a value (-0.1364, -0.2525, 0.0380, 1.4988, -1.3752).

4.1.4 *Jensen Alpha*

Table 7. Jensen Alpha RDPU Performance Data

No	Investment Manager		2017	2018	2019	2020	2021
1	Mega Capital	Sharia	-0.2242	0.0893	0.0038	0.0267	0.0366
2	Successinvest	conventional	0.3473	0.0137	-0.0811	0.0222	0.0196
3	Syeilendra	conventional	0.3453	0.0052	-0.0781	0.0161	0.0095
4	PNM Investama	Sharia	0.2352	-0.0455	0.0766	0.0853	-1.4405
5	MNC	conventional	0.2983	0.0017	-0.0762	0.0079	0.0154
6	Bahana	Sharia	0.0016	0.0047	0.0010	-0.0003	-0.0050
7	Sharia MNC	Sharia	0.0006	0.0005	0.0011	0.0014	-0.0048
8	Maybank	Sharia	0.0035	0.0074	0.0000	-0.0006	-3.6663

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9	Bahana	conventional	0.0346	0.0033	-0.0680	-0.0152	0.0061
10	Paribas	conventional	0.2189	-0.0132	-0.0618	-0.0131	-0.0178

Source: Processed Data

The best investment manager was obtained by Mega Capital from money market mutual funds Syariah with a value (-0.2242, 0.0893, 0.0038, 0.0267, 0.0366). The second is Succorinvest from Conventional money market mutual funds with a value of (0.3473, 0.0137, -0.0811, 0.0222, 0.0196). Furthermore, the three Syeindra from Conventional money market mutual funds with a value (0.3453, 0.0052, -0.0781, 0.0161, 0.0095). The four PNM Investama from money market mutual funds Syariah with a value of (0.2352, -0.0455, 0.0766, 0.0853, -1.4405). The five MNCs from conventional money market mutual funds with a value of (0.2983, 0.0017, -0.0762, 0.0079, 0.0154).

4.2 Discussion

From the total sample, 5 conventional money market mutual funds and 5 Islamic money market mutual funds showed fluctuating results. This research is processed from the published data on the net asset value of conventional and sharia money market mutual funds in the Financial Services Authority's monthly report of 2017-2021 mutual funds.

Measuring mutual fund performance using historical performance is a tool used in the Sharp Index , Treynor Index, and Jensen Alpha methods (Hertina et al., 2021) . By using standard deviation as a unit risk measurement of mutual funds for Sharpe Index performance , it will help show mutual fund performance which is not only seen from its always high *returns* . The Sharpe value that is able to provide the best performance can be seen from the highest results (Priyanti et al., 2021).

Similar to the Sharp Index method , the Treynor Index also has the same components in its calculations. But what makes it different is that it is accompanied by *beta* as a calculation of the total risk for investing in mutual funds (Nasution & Prasetya, 2016).Jensen's alpha is calculated to determine the level of mutual fund performance gain, and *capibility* Investment managers so that they can get returns above their capabilities. By calculating beta as its inclusion , it is stated that the higher the performance value of Jensen Alpha , the better the performance of the mutual fund. Hartono (2010:655) in (Santosa & Sjam, 2012)

CONCLUSION

From this study, it can be concluded that the return from each Investment Manager has a value that exceeds the market rate of return as for those in the market below the market rate of return. The returns generated by conventional and Islamic money market mutual funds are in a balanced position it was same with the research of (Robiyanto et al., 2019). There are 3 conventional mutual funds that generate return out performance and 3 mutual funds that generate returns performance. And returns that are under the performance of each conventional and sharia mutual fund, there are 2 Investment Managers with negative values. The value of this calculation describes the performance given by investment managers to improve mutual fund performance (Zamzany & Setiawan, 2018).

Using the three performance models of the Sharpe Index, Treynor Index, and Jensen Alpha in the top five positions, there are 3 Investment Managers from conventional money market mutual

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funds and 2 Investment Managers from high value Islamic money market mutual funds. In the fifth lowest position, there are 3 sharia mutual funds and 2 conventional mutual funds which are in the lowest position. Mutual fund products that achieved the lowest five positions were also negative, this indicates that the mutual fund has not been able to exceed market performance (Huda et al., 2018).

The growth in the total Under Asset Management (AUM) of money market mutual funds also shows that the return generated is relatively stable (Hartono, 2010:13-15) in (Santosa & Sjam, 2012). Meanwhile, according to research conducted by (Indriani & Budyastuti, 2021), it is known that there is no difference in the analysis of the performance of conventional mutual funds and Islamic mutual funds with the AUM (Asset Under Management) growth method due to the limited number of samples used, which affects the results of the research. Money market is a sustainable finance are strongly correlated periods of crisis, there is increased of prices and portfolio return depends on free rate (Pisani & Russo, 2021).

further researchers, they can add samples from other conventional and sharia mutual funds or they can also do a comparison between the two. Further researchers can also analyze the performance measurement of mutual funds from other categories to add information to investors, potential investors, and investment managers so that they can evaluate their performance from the research conducted.

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