# Comparison of Risks, Returns and Performance Measurements of Sharia and Non-Sharia Mutual Funds in Indonesia

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### Abstract

Investment is a sacrifice to postpone current consumption by allocating a number of assets that are expected to earn benefits in the future. Islamic Sharia does not forbid Muslims to do it, even there is an indication that it is recommended. The main motivation is to be able to pay more alms in the future. One of investment instruments in Indonesia is Mutual Funds. Indonesia's predominantly Muslim population is one of the triggers for the development of sharia-based mutual funds. However, its development has not been as big as the existing potential market. One of the reasons is there is still a view in the community that sharia-based instruments provide lower returns than non-sharia. This study compares the risks and returns of mutual funds, between sharia and non-sharia based. Sampling of both used purposive sampling, where there were 6 sharia mutual funds and 8 non-sharia mutual funds. The study was conducted in 5 years. The results of the study were: (1) There was no significant difference between the risks of both; (2) There was no significant difference between the returns of both; (3) The performance of non-sharia mutual funds was more dominating than sharia mutual funds.

*Keywords:* *risk, return, performance, sharia mutual funds*

## A. Introduction

The term investment is already familiar nowadays, because on one hand the authorities have massively socialized it and on the other hand it has become a necessity for some people. The word *Invest* as the basic word of investment has the meaning of planting (Huda & Edwin, 2007). The investment in Arabic is known as *ististmar* which means fruitful property (growing) and increasing number (Gunawan, 2013). Investment is an activity carried out by an investor by placing a number of funds at this time in the hope that they will be able to benefit in the future. The definition of investment according to Tandelilin (2010) is a commitment to a number

of funds or other resources made at this time, with the aim of obtaining a number of benefits in the future. Another definition is given by Hartono (2017), who said that investment is delaying current consumption to be included in productive assets for a certain period of time

The majority of Indonesia's population is Muslim. According to the 2010 census, that 87.18% of the 237,641,326 Indonesians were Muslims (BPS, 2010). This has become a driving force for investment with sharia principles. Ryandoro & Hadi (2009) define Islamic investment as the sacrifice of resources at the present time to get definite results, with the hope of obtaining greater returns in the future, both directly and indirectly while still adhering to Islamic principles thoroughly (*kaffah*).

Various verses in the Qur'an, the Hadith and the words of the ulama are the basis for the status of investment activities in Islamic law. First in surah Al Hasyr (59) verse 18, Allah *Azza Wa Jalla* said:

> "O you who believe! Fear God, and let every soul consider what it has forwarded for the morrow, and fear God. God is Aware of what you do."

Next in surah Yoseph (12) verses 47-49, Allah *Azza Wa Jalla* enshrined the words of the Prophet Yoseph (peace be upon him) when he asked about the meaning of his dream: Prophet Yoseph said:

> "You will farm for seven consecutive years. But whatever you harvest, leave it in its spikes, except for the little that you eat. Then after that will come seven difficult ones, which will consume what you have stored for them, except for the little that you have preserved. Then after that will come a year that brings relief to the people, and during which they will press."

In the two verses above, there is an implied investment recommendation (Prasetyo, 2018). Likewise, a Hadith from Abu Hurairah, the Messenger of Allah *sallahu 'lalaihi wa salam* said;

> "When a person is in a field of earth, he suddenly hears a voice from the clouds, water the Fulan's garden, then the clouds drift away and pour water in the area of land filled with black stones. There is a flow of water that holds the water. Then the person follows where the water flows. Suddenly he saw a man standing in his garden. He pushed the water with his scope (into his garden). Then he asked, 'O servants of Allah! What's your name? 'He answered, Fulan, which is the name heard in the clouds. He asked, "O servant of Allah, why are you asking for my name?" The voice said, Water Fulan's garden! And that is your name. What exactly are you doing? "He replied," If that is what you are asking, then I am actually calculating the results obtained from this garden, then (1) I give alms with 1/3 (one third), and (2) I eat with my family 1/3 (one third) again, then (3) I return (to plant again) 1/3 (one third) ". (Narrated by Muslim).

In one hadith, a great friend, Caliph Umar bin Khatab also stressed Muslims to use their capital productively. As Ahmad al-Haritsi in his book *Fiqh Ekonomi Umar bin Khattab*, quoted by Mochammad Nadjib writes that the Caliph Umar once told the Muslims to use their capital productively: "Anyone who has money needs to invest it, and those who have land need to work on it". The statement shows that Islam places great emphasis on its people to invest (Susanto, 2009).

Investment in Islamic Sharia is one way to make assets more productive and become a form to prevent the accumulation of assets (*ikhtikar*) aimed at damaging a market (Syauqiyah & Nafik, 2018). So that in Islamic Sharia, investment is one of *muamalah* activities that is allowed and highly recommended.

Profit (return) is one of a person's motivations in investing. Even the main goal of an investor doing investment activities is making a profit. There is no difference, both for sharia-based and non-sharia-based investors; of course, they want the same thing. But often the performance of sharia-based investment instruments is seen as low compared to non-sharia investment instruments (Syafrida, Aminah, & Waluyo, 2015).

In carrying out its investment activities, investors will not be separated from the existence of an element of risk (uncertainty). This is because the level of profit obtained is lower than the expected level of profit. Knowledge and understanding of risk are important for every investor and potential investor (Amtiran, 2017).

Hartono (2017) states that returns and risks have a positive relationship, that means the greater the risk that must be borne, the greater the return that must be compensated. This turned out to be in harmony with the *ushul fiqh* rules that had been explored by the Muslim preachers hundreds of years ago, namely "*Al-ghurmu bi al gunmi*", i.e.: Benefits are inherent to risk.

In Indonesia, one of the investment instruments that offer sharia-based or non-sharia-based is Mutual Funds. The definition of mutual funds can be found in the Capital Market Law Number 8 of 1995 Article 1, paragraph (27):

*"Mutual funds are a container used to collect funds from the community of investors to subsequently be invested in a Securities portfolio by the Investment Manager."*

As for the definition of Sharia mutual funds, we can find them in the National Sharia Council Fatwa (DSN) No. 20 / DSN-MUI / IV / 2001, Islamic mutual funds (Islamic Investment Funds) are:

*"Mutual funds that operate according to Islamic sharia principles, both in the form of a contract between the investor and investment manager (representative of the investor), and between the investment manager and the investment user."*

The development of mutual funds can be obtained from reports issued by the Financial Services Authority (FSA) as of the end of July 2019 as follows:

Table 1. Comparison number and NAV of Sharia and Non Sharia Mutual Fund

| Year | | Comparison of Mutual Funds | | | | Comparison of NAV (Rp. billions) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Sharia | Non Sharia | Total | % | Sharia | Non Sharia | Total | % |
| 2010 | | 48 | 564 | 612 | 7,89 | 5.225,78 | 143.861,59 | 149.087,37 | 3,51 |
| 2011 | | 50 | 596 | 646 | 7,74 | 5.564,79 | 162.672,10 | 168.236,89 | 3,31 |
| 2012 | | 58 | 696 | 754 | 7,69 | 8.050,07 | 204.541,97 | 212.592,04 | 3,79 |
| 2013 | | 65 | 758 | 823 | 7,40 | 9.432,19 | 183.112,33 | 192.544,52 | 4,90 |
| 2014 | | 74 | 820 | 894 | 8,31 | 11.158,00 | 230.304,09 | 241.462,09 | 4,65 |
| 2015 | | 93 | 998 | 1091 | 8,52 | 11.019,43 | 260.949,57 | 271.969,00 | 4,05 |
| 2016 | | 136 | 1289 | 1425 | 9,54 | 14.914,63 | 323.835,18 | 338.749,80 | 4,40 |
| 2017 | | 182 | 1595 | 1777 | 10,24 | 28.311,77 | 429.194.80 | 457.506,57 | 6,19 |
| 2018 | | 224 | 1875 | 2099 | 10,67 | 34.491,17 | 470.899,13 | 505.390,30 | 6,82 |
| 2019 | Jan | 223 | 1871 | 2094 | 10,65 | 37.300,97 | 482.608,59 | 519.909,57 | 7,17 |
| | Feb | 233 | 1862 | 2095 | 11,12 | 36.761,47 | 484.153,50 | 520.914,97 | 7,06 |
| | Mar | 242 | 1847 | 2089 | 11,58 | 37.114,19 | 478.502,93 | 515.617,12 | 7,20 |
| | Apr | 243 | 1839 | 2082 | 11,67 | 35.378,79 | 476.220,91 | 511.599,70 | 6,92 |
| | May | 251 | 1838 | 2089 | 12,02 | 32.448,69 | 473.638,36 | 506.087,05 | 6,41 |
| | June | 256 | 1837 | 2093 | 12,23 | 33.056,75 | 479.528,56 | 512.585,31 | 6,45 |
| | July | 262 | 1885 | 2147 | 12,20 | 48.471,93 | 488.408,93 | 536.880,86 | 9,03 |

From the data above, there is a reality that sharia-based mutual funds are experiencing growth, but not proportional to the existing market potential yet, where the majority of Indonesia's populations are Muslim. In terms of the amount, only around 12% are based on sharia, it is still very little compared to non-Shariah mutual funds. Likewise, in terms of total managed funds, namely Net Asset Value (NAV), only about 9% is based on sharia from total managed funds. There is still doubt among the public, whether Islamic based mutual funds have advantages over non-Islamic based mutual funds or not.

On the other hand, the Islamic financial inclusion index in Indonesia reached 11.1%, however the literacy index is only 8.1% (OJK, 2017). The lower literacy index compared to the inclusion index means that people use Islamic financial services but are not balanced with knowledge of Islamic financial products and services. This is certainly not good, because it indicates that people only follow trends without knowing clearly sharia financial products, both in terms of risk and return. This fact is one of the driving forces behind this research, that is in order to improve the Islamic financial literacy index.

A view that sharia-based instruments have lower performance compared to non-sharia-based instruments, the low sharia financial literacy index, and various domestic studies showing different results makes it interesting to do this research. Based on the background of the problems above, the researchers determined the formulation of research problems in this study:

1. Is there any significant difference in risk on investments in Shariah and non-Shariah mutual Fund?
2. Is there any significant difference in returns on investments in Shariah and non-Sharia mutual Fund?
3. How is the performance of both sharia and non-sharia mutual funds based on return and risk measurement?

The difference of this research with previous studies lies in several things, as a form of originality of this study, namely:

1. This study compared risks as well as returns and measured the performance of sharia and non-sharia mutual funds
2. The return measurement used was real return, not just a nominal return, but also took into account of the inflation rate
3. Mutual fund measurement of risk used (β) beta which is a systematic risk.
4. The concept of CAPM was adjusted to the rules of Islamic law by replacing the component of risk-free interest rate with Zakat according to the conceptual framework of the Shari'a Compliant of Capital Asset Pricing Model (SCCAPM)
5. Market returns used in measuring Mutual Fund performance were Mutual Funds Index (IRDSH) not the Composite Stock Price Index (CSPI)

## B. Method

In this research, the objects of research were the investment instruments in the mutual fund category of shares, both sharia-based and non-sharia-based by comparing the two elements in investment activities, namely risk and return. The risks used were systematic or Beta (β) risks. This was because non-systematic risk mutual funds could be reduced by portfolio diversification. The return used was the real return, which was the nominal return that has been adjusted to the level of inflation that occurs.

The variables used in this study were:

1. Independent Variable, which consists of sharia mutual funds and non-sharia mutual funds
2. Dependent Variable, which consists of Risk, Return (yield) and Performance

Table 2. Variable Operations

| No | Variable | Concept | Scale |
|----|----------|---------|-------|
| 1. | Systematic Risks of Mutual Funds (β) | $R_{RD} = R_f + (R_p\text{-}R_f).\beta$ | Ratio |
| 2. | Real Return of Mutual Funds | $Return\ Riel = \dfrac{(1+R)}{(1+IF)} - 1$ | Ratio |
| 3. | Mutual Funds Performances | $Tpi = \dfrac{Rpi - Rf}{\beta pi}$ | Ratio |

The main data processed and analyzed in this study came from secondary data, in the form of systematic risk and return. The data in this study used Panel data, which was a combination of time series data and cross section. Data return (yield) was taken in time series with a period of January 2014 to December 2018. The data was taken in the monthly sub-period, so there were 60 sub-periods of research data. In addition to time series, the data was also taken in cross section, in the form of samples Mutual Funds, where there were a sample of 14 mutual funds, consisting of 6 Sharia mutual funds and 8 Non-sharia mutual funds.

The several types of data and sources analyzed and processed in this study consisted of:

1. Sharia Mutual Funds and Non-Sharia Mutual Funds were the samples in this study
2. Net Asset Value (NAV) / unit at the end of the month of each Sharia mutual funds and non-sharia mutual funds that were sampled, during the study period, which is sourced from Bareksa

3. Monthly inflation rates during the study period, which are sourced from data released by the Central Bureau of Statistics (BPS)
4. Beta of Sharia mutual fund shares and Non-Sharia mutual fund shares
5. At the end of each month, the Investment Fund Index (IRDSH) sourced from PT. Bareksa.

Sampling of research was taken by non-probability sampling, where sampling did not provide equal opportunity for each member of the population to become a sample (Sugiyono, 2007). Non probability sampling technique used in this study was purposive sampling. Purposive sampling is a technique for sampling data sources with certain considerations (Sugiyono, 2007).

The criteria for Sharia Mutual Funds for the sample are: (1) Sharia Mutual Funds for shares registered with OJK, this is related to the legality of the mutual funds being the objects of research. (2) At least 10 years old at the time of research, this is based on the fact that mutual funds over the age of 10 have better experience in managing funds, both in times of crisis and not. (3) Net Asset Value (NAV) above Rp.100 Billion when the research was conducted, this is motivated as the mutual funds that we have sampled have a good investor base. Data on the number of samples based on each of these criteria can be tabulated as follows:

Table 3. Criteria of Sharia Mutual Fund sample

| Criteria | Amount |
|---|---|
| Sharia Mutual Funds registered in OJK | 58 |
| At least 10 years old | 8 |
| NAV above Rp.100 Billion | 6 |
| Total Sample | 6 x 60 (360) |

Whereas the criteria for non-sharia Mutual Funds are (1) Non-Sharia Mutual Funds registered in OJK, (2) Minimum 10 years old, (3) Net Asset Value (NAV) above Rp.100 billion, and (4) Having a Sharia Mutual Fund that is used as a sample, this is to avoid any bias in managing its investment. As for the data on the number of Non-Sharia Mutual Fund samples, based on each data criteria as follows:

Table 4. Number of Sample by criteria

| Criteria | Amount |
|---|---|
| Mutual Funds registered in OJK | 255 |
| At least 10 years old | 37 |
| NAV above Rp.100 Billion | 29 |
| Managed by an Investment Manager who has a sample of Sharia Mutual Fund products | 8 |
| Total Sample | 8 x 60 (480) |

Based on the above criteria, the sharia and non-sharia Mutual Funds which were used as analysis samples in the study period were as follows;

Table 5. Sample of Sharia and Non sharia Mutual Fund

| No | Sharia Mutual Funds | No | Non-Sharia Mutual Funds |
|---|---|---|---|
| 1. | TRIM Syariah Saham | 1. | TRIM Kapital Plus |
| 2. | Batavia Dana Saham Syariah | 2. | Batavia Dana Saham Optimal |
| 3. | CIMB-Principal Islamic Equity Growth Syariah | 3. | CIMB Principal Total Return Equity Fund |
| 4. | Mandiri Investa Atraktif Syariah | 4. | Mandiri Investa Atraktif |
| 5. | Manulife Syariah Sektoral Amanah | 5. | Manulife Saham Andalan |
| 6. | BNP Paribas Pesona Syariah | 6. | BNP Paribas Pesona |
| 7. | | 7. | TRIM Kapital |
| 8. | | 8. | Manulife Dana Saham |

Source: Bareksa, processed in 2019

The percentage of the number of Sharia and Non-sharia Mutual Funds samples compared to the existing population can be tabulated as follows:

Table 6. Percentage sample by population

| Instrument | Total Populatition | Total Sample | Percentage |
|---|---|---|---|
| Sharia Mutual Funds | 58 | 6 | 10,34 % |
| Non-sharia Mutual Funds | 255 | 8 | 3,14 % |

Source: Bareksa, processed

The method or model used in this study was an explanatory method that aimed to test hypotheses about the differences between the variables to be studied. This research was a comparative study that was intended to determine whether there were differences in risk and return (returns) on mutual funds in several research periods. So the paradigm in research was described as follows:

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                        ┌─────────────┐
                        │ Investment  │
                        └─────────────┘
                      ↙                 ↘

        ╭──────────────╮          ╭──────────────╮
        │ Sharia Mutual│          │  Non-sharia  │
        │    Funds     │          │ Mutual Funds │
        ╰──────────────╯          ╰──────────────╯
               ↓                         ↓
     ┌──────────────────┐      ┌──────────────────┐
     │ Risks and Returns│──────│ Risks and Returns│
     │                  │  ↓   │                  │
     └──────────────────┘      └──────────────────┘

               ╭──────────────────╮
               │   Independent    │
               │ Difference Test  │
               ╰──────────────────╯
                        ↓
     ╭────────────────────────────────────────╮
     │ There is a difference or not in Risks   │
     │ and Returns between Sharia and          │
     │ Non-Sharia Mutual Fund                  │
     ╰────────────────────────────────────────╯
                        ↓
                ┌──────────────┐
                │ Performance  │
                │   Analysis   │
                └──────────────┘
                        ↓
                ┌──────────────┐
                │ Performance  │
                │   Analysis   │
                └──────────────┘
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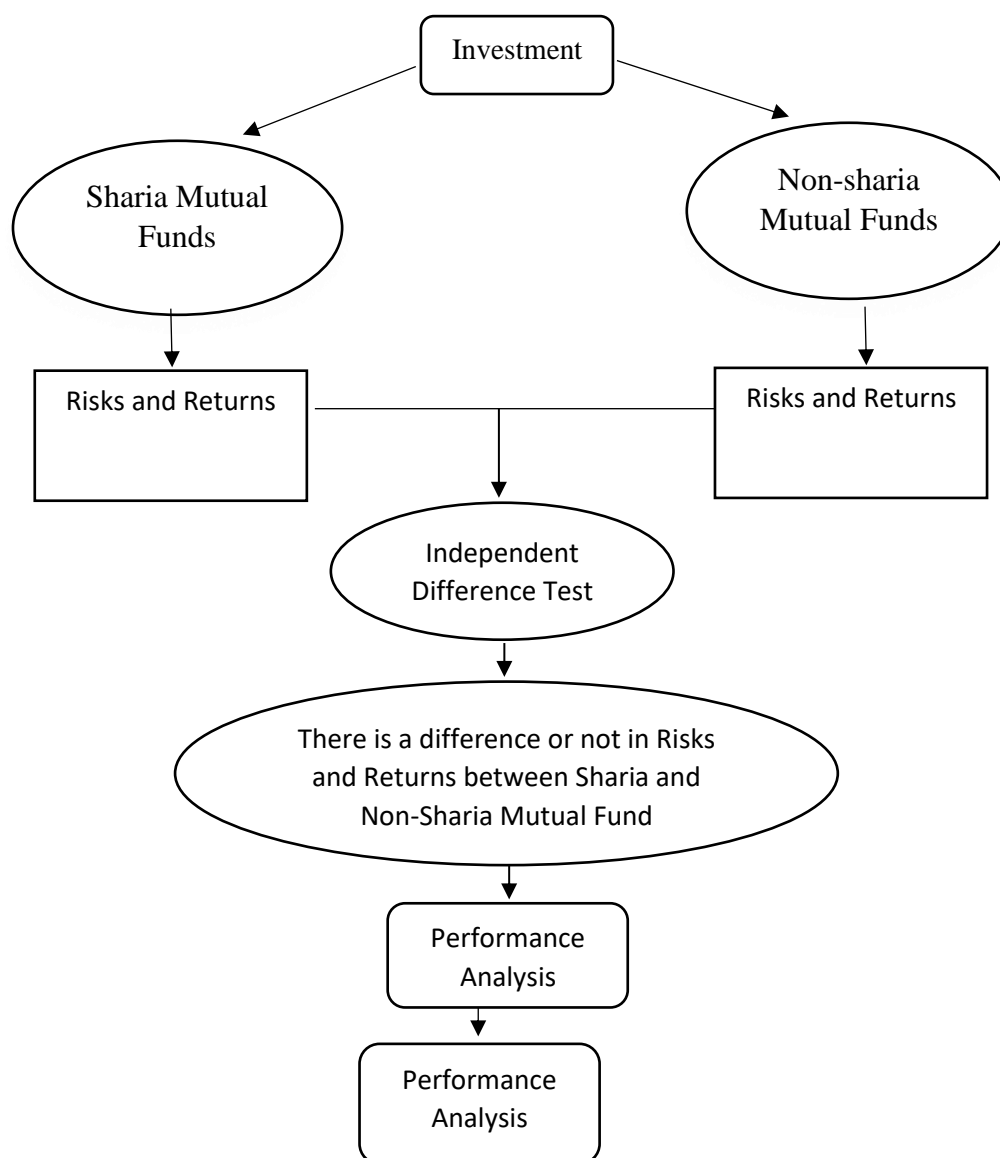
This research began with a normality test on the sample data that has been obtained. The purpose of doing a normality test was to find out whether a variable was normally distributed or not.

Then the statistical test in testing the hypothesis in this study was the *Independent Test sample T-Test*, if the sample data is normally distributed. However, if the sample data is not normally distributed one or both of them, then another

alternative would be used, namely the non-parametric test with the *Mann Whitney test*.

The hypothesis to be tested in this study is related to the presence or absence of differences in risk and return (returns) on mutual funds, so the hypotheses formed are:

a. Ho: $\mu1 = \mu2$; There is no significant difference in the systematic risk of sharia mutual funds and non-sharia mutual funds

Ha: $\mu1 \neq \mu2$; There is a significant difference in the systematic risk of sharia mutual funds and non-sharia mutual funds

b. Ho: $\mu1 = \mu2$; There is no significant difference in real returns of sharia and non-sharia mutual funds

Ha: $\mu1 \neq \mu2$; There is a significant difference in real returns of sharia and non-sharia mutual funds

In social studies, it is known that the significance ($\alpha$) is 5% or 1%. This level of significance is merely an agreement that becomes a habit among social scientists without a clear basis (Mc Call, 1970). The smaller the level of significance ($\alpha$) indicates the more stringent rules in a study. In this study the significance level ($\alpha$) was chosen at 5% (0.05). The basis for decision making in the independent sample t test and the Mann Whitney test are as follows:

a. If the value of Sig (2-tailed)> (greater) than $\alpha$ (alpha of 0.05) then Ho is accepted

b. If the value of Sig (2-tailed) < (; smaller) or = (equal to) of $\alpha$ (alpha of 0.05) then Ho is rejected

## C.  Research Findings and Discussion

The risks to be compared in this study were the systematic risk of mutual funds ($\beta$). To find out the systematic risk ($\beta$) according to the SCCAPM standard, a regression of each type of mutual fund was performed, using the equation formula:

RRD - Rf = $\alpha1$ + (Rp - Rf) .$\beta$ + e1

Where:

RRD   : Mutual Fund Return

Rp      : Mutual Fund Market Return (IRDSH)

RF      : Zakat

B        : Mutual fund risk management

e1       : Error term

Rp-Rf : Risk Premium

With:

RRD – Rf: as the dependent variable

Rp – Rf        : as the independent variable

The regression results obtained the value of the Beta coefficient (β) as a systematic risk measure as follows:

Table 7. Beta coefficient as systematic risk of mutual Fund

| Mutual funds Category | Mutual Funds Name | Year 2014 | Year 2015 | Year 2016 | Year 2017 | Year 2018 |
|---|---|---|---|---|---|---|
| Sharia Mutual Funds | Trim Syariah Saham | 0,96990 | 0,89965 | 1,24992 | 0,35982 | 1,09301 |
| | Batavia Dana Saham Syariah | 1,00018 | 0,86037 | 1,13812 | 0,43196 | 1,10985 |
| | CIMB Principal Islamic Equity Growth | 1,00809 | 0,99703 | 1,18273 | 0,19688 | 1,03223 |
| | Mandiri Investa Atraktif Saham Syariah | 0,93171 | 0,94296 | 1,16929 | 0,31809 | 1,05932 |
| | Manulife Syariah Sektoral Amanah | 0,93456 | 1,00823 | 1,26732 | 0,24387 | 1,19196 |
| | BNP Paribas Syariah | 0,86653 | 1,00966 | 1,03190 | 0,25838 | 1,15153 |
| Non-Sharia Mutual Funds | Trim Kapital Plus | 1,13828 | 0,99809 | 0,91860 | 0,34637 | 1,11376 |
| | Trim Kapital | 1,00631 | 0,89928 | 0,81552 | 0,31018 | 1,17449 |
| | Batavia Dana Saham Optimal | 1,06697 | 0,99031 | 0,95873 | -3,63486 | 1,13618 |
| | CIMB Total Return Equity Fund | 1,07501 | 0,71990 | 0,37024 | 0,25701 | 0,89843 |

| | | | | | |
|---|---|---|---|---|---|
| Mandiri Investa Atraktif | 1,791 24 | 1,134 01 | 1,08166 | 0,53224 | 1,14500 |
| Manulife Dana Saham Andalan | 0,875 59 | 1,122 90 | 1,17133 | 0,14364 | 0,91392 |
| Manulife Dana Saham | 0,826 17 | 1,070 49 | 1,04481 | 0,38420 | 1,26119 |
| BNP Paribas Pesona | 0,822 60 | 1,019 15 | 0,95351 | 0,35234 | 0,85048 |

Before further data processing, this systemic risk sample data needs to be tested normally. The results obtained were as follows:

| | Category | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|---|
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| Risk | Sharia Mutual Funds | .231 | 30 | .000 | .822 | 30 | .000 |
| | Non-Sharia Mutual Funds | .270 | 40 | .000 | .508 | 40 | .000 |

a. Lilliefors Significance Correction

The sample data for both sharia-based and non-sharia-based mutual funds has a sample size of 30 samples and 40 samples respectively, so the Shapiro-Wilk method is used. From the results of data processing above, the shapiro-wilk significance value is (p) 0,000, both for sharia and non-sharia mutual fund risks. In accordance with the basic decision set if (p $<\alpha$), it means significant difference that there is a difference in the sample data with the normal curve. So that the sample of mutual fund risks data, both sharia-based and non-sharia-based, is not normally distributed.

Descriptive results from the systematic risk data of mutual funds, both sharia-based and non-sharia-based, during the study period, obtained the following results:

| *Sharia Mutual Funds* | | *Non-Sharia Mutual Funds* | |
|---|---|---|---|
| Mean | 0,897168802 | Mean | 0,776381766 |
| Standard Error | 0,058809006 | Standard Error | 0,124595872 |
| Median | 1,004134512 | Median | 0,9561199 |
| Mode | #N/A | Mode | #N/A |

| Standard | | Standard | |
|---|---|---|---|
| Deviation | 0,32211019 | Deviation | 0,788013482 |
| Sample | | Sample | |
| Variance | 0,103754975 | Variance | 0,620965248 |
| Kurtosis | 0,20479757 | Kurtosis | 26,2573402 |
| Skewness | -1,22241795 | Skewness | -4,682015028 |
| Range | 1,070442657 | Range | 5,426092008 |
| Minimum | 0,196882194 | Minimum | -3,634855984 |
| Maximum | 1,267324851 | Maximum | 1,791236024 |
| Sum | 26,91506405 | Sum | 31,05527065 |
| Count | 30 | Count | 40 |

Descriptive results that the average systematic risk of Islamic mutual fund shares amounted to 0.897168802 while for non-sharia funds amounted to 0.776381766. The systematic risk of sharia mutual funds is higher than non-sharia. But the systematic risk data range of Islamic mutual funds is narrower, where a minimum of 0.196882194 and a maximum of 1.267324851 with a standard deviation of 0.32211019. The range of systematic and non-sharia mutual risk data is on a minimum of -3.634855984 and a maximum of 1.791236024 with a standard deviation of 0.788013482. However, it needs to be further tested statistically, whether there are significant differences or not.

Based on the normality test that has been carried out, the systematic risks sample data of mutual funds both sharia-based and non-sharia-based were not normally distributed. So, a non-parametric alternative test was carried out, the *Mann Whitney* test. Test results obtained:

**Test Statistics[a]**

| | Risiko |
|---|---|
| Mann-Whitney U | 483.000 |
| Wilcoxon W | 948.000 |
| Z | -1.389 |
| Asymp. Sig. (2-tailed) | .165 |
| a. Grouping Variable: Category | |

Based on the Mann Whitney Test output table, it is known that the sig (2 tailed) value is 0.165 which means it is greater than the significance level in this study ($\alpha$) of 0.05, so that as the basis for making the Mann Whitney test, if the Sig (2-tailed)

value> α (0.05), Ho is accepted. Therefore, it can be concluded that there is no significant difference between the systematic risk of sharia equity funds and non-sharia mutual funds during the study period. Although descriptively the systematic risk of sharia mutual fund shares is higher than non-sharia. However, this difference is small enough that there is no statistically significant difference.

Furthermore, there will be returns test for sharia and non-sharia mutual funds. The formula used is as follows:

$$Return\ Riel = \frac{(1 + R)}{(1 + IF)} - 1$$

Where;

R     : Nominal Return / Capital gain

IF    : Inflation rate

Using the formula above, a real return was obtained for each mutual fund each year as follows:

Table 8. Real Return of mutual Fund

| Mutual Funds Category | Mutual Funds Name | Year 2014 | Year 2015 | Year 2016 | Year 2017 | Year 2018 |
|---|---|---|---|---|---|---|
| Sharia Mutual Funds | Trim Saham Syariah | 1,48111 | -1,80715 | 0,93312 | 0,19110 | -0,52203 |
| | Batavia Dana Saham Syariah | 0,84983 | -1,67508 | 0,79973 | 0,16619 | -0,80964 |
| | CIMB Principal Islamic Equity Growth | 1,47197 | -2,50358 | 0,55322 | -0,28387 | -0,72438 |
| | Mandiri Investa Atraktif Saham Syariah | 0,90887 | -1,65407 | 0,71667 | -0,19114 | -0,86683 |
| | Manulife Syariah Sektoral Amanah | 0,97982 | -1,49428 | 0,91071 | -0,18496 | -0,90078 |
| | BNP Paribas Syariah | 1,10454 | -1,69738 | 0,83457 | 0,17574 | -0,91369 |
| Non-Sharia Mutual Funds | Trim Kapital Plus | 1,64441 | -2,56742 | 0,65815 | 0,52066 | 0,24459 |
| | Trim Kapital | 1,63636 | -1,66965 | 0,36390 | 0,91541 | 0,03736 |
| | Batavia Dana Saham Optimal | 1,36029 | -1,66946 | 0,56672 | 0,92998 | -0,43642 |

| | | | | | | |
|---|---|---|---|---|---|---|
| CIMB Return Fund | Total Equity | 1,82278 | -2,24742 | 0,95652 | 1,02774 | -0,67550 |
| Mandiri Atraktif | Investa | 1,20421 | -1,38310 | 0,56907 | 0,65116 | -0,35754 |
| Manulife Saham Andalan | Dana | 1,25450 | -1,86899 | 0,87240 | 0,38353 | -0,66651 |
| Manulife Saham | Dana | 1,12794 | -1,58132 | 0,60145 | 0,89359 | -1,16114 |
| BNP Pesona | Paribas | 1,33808 | -1,15842 | 0,56569 | 0,85197 | -0,80015 |

Before further data processing, the real return data sample above is carried out to test the normality of the data first. The test results are as follows:

**Tests of Normality**

| | | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|---|
| | Category | Statistic | df | Sig. | Statistic | df | Sig. |
| Return | Sharia Mutual Funds | .146 | 30 | .100 | .939 | 30 | .088 |
| | Non-Sharia Mutual Funds | .188 | 40 | .001 | .914 | 40 | .005 |

a. Lilliefors Significance Correction

For the real return of the Shariah mutual fund, a significance level (p) of 0.88 is obtained, which is greater than 0.05. In accordance with the basis of the decision set if (p> α), it means that there is no difference between the sample data and the normal curve. This shows that the sample data is normally distributed. As for Non-Sharia Mutual Funds at 0.005, which means it is smaller than the level of significance of researchers, which is equal to 0.05. In accordance with the basic decision set if (p <α), it means that there is a significant difference in the sample data with the normal curve. So the sample data for non-sharia mutual funds is not normally distributed.

Descriptive results of mutual fund return data, both sharia-based and non-sharia-based, during the study period, were obtained the following results:

| *Sharia Mutual Funds* | | *Non-Sharia Mutual Funds* | |
|---|---|---|---|
| Mean | -0,0014 | Mean | 0,001189 |
| Standard Error | 0,00202 | Standard Error | 0,001869 |
| Median | -9E-05 | Median | 0,005662 |
| Mode | #N/A | Mode | #N/A |

| | | | | |
|---|---|---|---|---|
| Standard Deviation | 0,01109 | Standard Deviation | 0,011822 |
| Sample Variance | 0,00012 | Sample Variance | 0,00014 |
| Kurtosis | -0,946 | Kurtosis | -0,625169 |
| Skewness | -0,382 | Skewness | -0,694562 |
| Range | 0,03985 | Range | 0,043902 |
| Minimum | -0,025 | Minimum | -0,025674 |
| Maximum | 0,01481 | Maximum | 0,018228 |
| Sum | -0,0415 | Sum | 0,047554 |
| Count | 30 | Count | 40 |

Descriptive results that the average return (yield) of Islamic mutual fund experienced a loss of 0.0014 while for non-sharia mutual funds, it has profits of .0.001189. But the range of data return (yield) of Sharia mutual funds is narrower, where a minimum of -0.025 and a maximum of 0.01481 with a standard deviation of 0.01109. The range of non-sharia mutual funds returns data were in a minimum of -0.025674 and a maximum of 0.018228 with a standard deviation of 0.011822. However, it needs to be further tested statistically, whether different significantly or not.

Based on the normality test that has been done, the sample return data (yield) of sharia mutual funds is normally distributed, but non-sharia mutual funds are not normally distributed. Because there is one variable to be tested that is not normally distributed, a non-parametric alternative test is used, the Mann Whitney test. Test results obtained:

| Test Statistics[a] | |
|---|---|
| | Return |
| Mann-Whitney U | 514.000 |
| Wilcoxon W | 979.000 |
| Z | -1.021 |
| Asymp. Sig. (2-tailed) | .307 |
| a. Grouping Variable: Category | |

Based on the out put of Test Statistics in the Mann-Whitney Test above, it is known that the Asymp Sig (2-tailed) value is 0.307. This figure is greater than the level of significance in this study ($\alpha$) of 0.05, so that as the basis for the Mann

Whitney test decision making, if the Sig (2-tailed) value> α (0.05) then Ho is accepted. Therefore, it can be concluded that there is no significant difference between the average return on investment in sharia-based or non-sharia mutual funds during the study period. Although the descriptive results state that the average return on Sharia mutual fund shares suffers losses, even though it is relatively small and non-sharia mutual funds score relatively small profits.

From the results of the Mann Whitney test different processing, both the systematic risk and the real return can be tabulated as follows:

Table 9. Result of different Test by Return and risk

|  | Return | | Risk | |
| --- | --- | --- | --- | --- |
|  | Average | Test Result | Average | Test Result |
| Syariah | -0,138 | Not different | 0,505 | Not different |
| Non Syariah | 0,098 | | 0,776 | |

From the above results, it can be seen that there is no difference in systematic risk and return (yield) of sharia mutual funds and non-sharia mutual funds in the study period. The results of this study are in line with (Aprilia & Azhari, 2015) which compared the performance of Sharia and conventional mutual funds with the Sharpe, Treynor and Jensen methods. With these three methods, the performance of conventional and sharia mutual funds has no significant difference. Similarly, research (Syafrida et al., 2015) which states there is no significant difference between the performance of sharia and conventional instruments. The research was also carried out by (Yudanto, 2016) which revealed that there was no difference in the performance of sharia and conventional mutual funds in 2008. Research was also conducted (Hilman, 2017) which said there were no significant differences between sharia and non-sharia mutual funds.

This has became the attention of Muslim investors to choose sharia mutual funds compared to non-sharia. Because in general, beside halal investment, the returns are the same as not inferior to non-Islamic mutual funds. The thing that must be considered by every Muslim in managing their assets, besides not violating Islamic law, is the management of these assets including investments that are legal according to positive laws and regulations. In this case permitted and supervised by the Financial Services Authority, (OJK) and does not violate the rules of investment. With the attention of both of the above, asset management is safe from fraud and gets halal results (Prasetyo, 2016)

This condition is expected to make the managed funds of Islamic mutual funds will be able to match or even exceed non-Islamic funds, given that the majority of Indonesia's population is Muslim. Large market potential and still wide open to be worked on, by starting to socialize that Sharia mutual funds are no less return than

non-Islamic stock mutual funds. There needs to be a massive effort in the midst of society about this.

Furthermore, as the final step of this research, measuring mutual fund performance uses the Treynor Ratio (reward to volatility ratio). That is a performance measure that compares the excess return (the difference between the average return of mutual funds with zakat) in a certain period with systematic risk. The Treynor Ratio is modified by replacing the risk free interest rate with zakat.

This is based on a hadith, the Prophet Muhammad sallalla'alaihi wa salam said,
*"Know, who looks after the orphans, while the orphans have wealth, so he should invest it (do business), let him not let the property be idle, so that property continues to decrease due to zakat".*

In this hadith, there are some recommendations for investment activities so that it continues to grow and not decrease nominally because of paying zakat payments (Prasetyo, 2018). Zakat dominates investment motivation in Islam, namely the implementation of the mechanism of zakat, then the productive assets owned by someone at a certain amount (Nishab) will always be subject to zakat, so this will encourage their owners to manage through investment. So it is formulated as follows:

$$\text{Tpi} = \frac{Rpi - Rf}{\beta pi}$$

Where:

Tpi : Treynor Ratio on Mutual Funds i

Rpi : Mutual Fund Return (i)

Rf : Zakat rate

$\beta pi$ : Systematic risk of mutual funds i

Rpi-Rf: Mutual Fund risk premium (excess return-zakat) i

By using the Treynor ratio formula above, the results of the performance of Sharia mutual fund shares and non-sharia mutual funds during the study period were as follows:

Table 10. Treynor Ratio of Mutual Fund

| Mutual Name | Funds | Return Average | Zakat | Excess Return | β | Treynor Ratio | Rangk |
|---|---|---|---|---|---|---|---|
| TRIM Saham | Syariah | 0,05523 | 0,20833 | -0,00153103 | 0,9144606 | -0,001674242 | |
| Batavia Dana Saham Syariah | Dana | -0,13379 | 0,20833 | -0,00342125 | 0,9080968 | -0,003767498 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| CIMB Principal Islamic Equity Growth Syariah | -0,29733 | 0,20833 | -0,00505659 | 0,8833933 | -0,005724058 | |
| Mandiri Investa Atraktif Saham Syariah | -0,21730 | 0,20833 | -0,00425634 | 0,884273 | -0,004813377 | |
| Manulife Syariah Sektoral Amanah | -0,13790 | 0,20833 | -0,0034623 | 0,9291874 | -0,003726164 | |
| BNP Paribas Pesona Syariah | -0,09924 | 0,20833 | -0,00307577 | 0,8636017 | -0,003561556 | |
| TRIM Kapital Plus | 0,10008 | 0,20833 | -0,00108254 | 0,9030219 | -0,001198794 | |
| TRIM Kapital | 0,25668 | 0,20833 | 0,000483432 | 0,8411548 | 0,000574720 | 1 |
| Batavia Dana Saham Optimal | 0,15022 | 0,20833 | -0,00058114 | 0,1034676 | -0,005616623 | |
| CIMB Total Return equity Fund | 0,17682 | 0,20833 | -0,00031509 | 0,6641176 | -0,000474449 | 2 |
| Mandiri Investa Atraktif | 0,13676 | 0,20833 | -0,00071573 | 1,136828 | -0,000629583 | 4 |
| Manulife Dana Saham Andalan | -0,00501 | 0,20833 | -0,00213347 | 0,8454769 | -0,002523390 | |
| Manulife Dana Saham | -0,02390 | 0,20833 | -0,00232229 | 0,9173702 | -0,002531469 | |
| BNP Paribas Pesona | 0,15943 | 0,20833 | -0,000489 | 0,7996172 | -0,000611544 | 3 |

The results of the measurement of the performance of mutual funds in the study period showed that the 5 best ratings based on the Treynor ratio were all non-sharia based equity funds. This illustrates that although there is no statistically significant

difference in systematic risk and return between sharia-based and non-sharia mutual funds, on average the performance of non-sharia-based mutual funds is superior.

## D. Conclusion

In this study, after processing data and various tests, it can be stored according to the formulation of the problem as follows: Systematic Risk of Sharia Mutual Funds and non-sharia mutual funds, there is no significant difference in the study period Likewise returns (returns) of sharia mutual fund and non-sharia, there were no significant differences in the study period. However, the results of the measurement of the performance of mutual funds in the study period showed that the 5 best ratings based on Treynor ratios are all non-sharia based mutual funds.

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