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Faculty of Islamic Economics and Business  
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Phone: +62254 200323 || Fax: +62254 200022 || Website: [www.journal.islamiconomic.or.id](http://www.journal.islamiconomic.or.id)

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## **A COMPARATIVE STUDY: RETURN AND RISK MEASUREMENT GOLD VERSUS ISLAMIC MUTUAL FUND**

**Anita<sup>1\*</sup>, Srawut Aree<sup>2</sup>**

<sup>1</sup> UIN Sultan Maulana Hasanuddin Banten, Indonesia

<sup>2</sup> Institute of Asian Studies Chulalongkorn University, Bangkok, Thailand

\* Corresponding author: [anita.febi@uinbanten.ac.id](mailto:anita.febi@uinbanten.ac.id)

Information	Abstract:
<b>Article History:</b>  Received : 09.10.2022 Revised : 24.11.2022 Accepted : 06.12.2022  <b>Keywords:</b> <i>Return, Risk, Gold, Mutual Fund</i>	<i>This study aims to determine the comparison between the return and risk of metal "gold" investment with the return of Islamic mutual fund during the period 2011 to 2019. The information Using data of gold prices and Net Asset Value (NAV) for the daily period. This study exploits the purposive sampling techniques and obtained 5 Islamic mutual fund companies. This research applied an independent t-Test to Compare the return of the two investment instruments by Mann-Whitney. Test and result prove that there are differences at alpha 0,05. It was concluded that "gold" investment provides higher return than Islamic mutual fund but a non-significant difference in risk.</i>

## A. INTRODUCTION

Investment facilities are growing, from gold investments to portfolio investments in mutual fund companies. Various studies on the gold metal state that gold has been proven to be a tool for storing wealth over a long period of time. Based on the experience of investors, they believe that the resilience of the metal is "gold" in times of economic instability. As reported in the online news written by Dea Chadiza mentioned that Gold tends to be an escape from threats fluctuations in the exchange rate of the rupiah against the dollar (Dea Chadiza Syafina 2019). This happened in 2018, the rupiah depreciated against the dollar, which was followed by an increase in gold prices. Figure (1) shows that in September 2018 the gold price was very high to the level of IDR 671,000/grams, this coincided with the decline in the rupiah against the dollar.

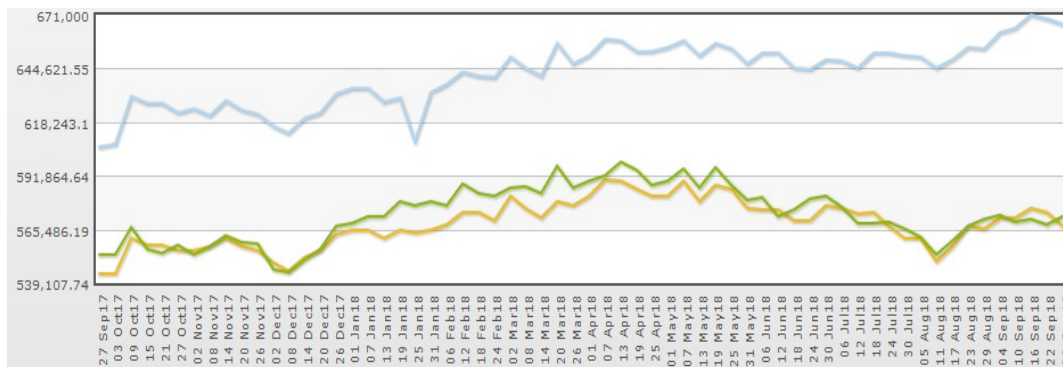


Figure 1. Gold Price Growth

The fact is that from 2000 to 2017, the price of gold and inflation continued to increase. This may be related to Indonesia's economic instability and caused the monetary crisis. Some of these previous study told that the movement of gold is proportional to the movement of inflation (Sri Pangestuti 2011)(Apriyanti. 2011)(Proctor 2012). Moreover, Mita Ningtyas' research proves that gold prices in Indonesia are more stable than world gold, because the decline in world gold prices has fallen more than Indonesia(Mita Setyo Arum Ningtyas 2014). It can be said that gold is a commodity whose value tends to increase over time. Investing in gold, asset value will be maintained, not affected by inflation (zero inflation).

Stable gold investment does not make some groups consider gold as a profitable investment. Warren Buffett said that "If there is a payoff from comparing 10,000 USD in gold and 10 USD in stocks, then the return on investment in gold is nothing and is much worse than buying stocks." (Akin Oyedele 2018). In another source, He also said that the precious metal gold does not have any utility (Olivier Garret, n.d.). Thus, some people consider investing in gold as an investment that is out of date with the development of conventional or sharia-based financial investments (Desmond wira 2015).

Mutual fund is a relatively consistent financial facility, data shows that in early 2018 the net asset value (NAV) of mutual funds increased 35.06 percent to 457,51 trillion IDR. The development of mutual fund as an investment facility is partly due to the convenience factor and the collective investment of small investors. Empirical studies proven that investing in stocks is more profitable based on risk and return than investing in physical gold (Sapriyani 2012) (Sri Pangestuti 2011). Contrary to research Wirawan & Citra, (2011), Adhitya Ni Gusti (2013) who prove that gold investment is more profitable than stock investment (Wirawan ED Radianto and Ayuningtyas 2010). Based on some of the phenomena that have been described, this research is going to examine the factors that determine the differences in return and risk of investing in gold and Islamic mutual fund in Indonesia.

## **B. LITERATUR REVIEW**

Investment is the placement of a number of funds in the present with the hope of obtaining profits in the future coming (Basuki Pujoalwanto 2014). So, investment is an attempt to invest a certain amount of funds at this time with the aim of obtaining profit from the sacrifice. The forms of investment are divided into 2 types: (a) Real investment is an investment activity whose object is in the form of real assets (real), such as: land, buildings, supplies, gold metal, etc, (b) Financial investment is an investment activity whose object of investment is in the form of sheets of securities that can be obtained only at institutions financial institutions, such as: Deposits in banks, stocks and bonds, etc.

Both forms of investment have advantages and disadvantages. In general, the advantages of owning real assets include: (1) Asset prices tend to have an increasing

trend, (2) Can be used for productive activities and (3) Difficult to be stolen by other parties. As for lack of real investment, including (1) high investment costs, (2) Low liquidity and (3) High administrative costs. An investment financially facilitates several things as follows, including: (1) Easy in the acquisition and transfer of assets, (2) Easy to maintain and storage. While the disadvantages of financial assets include: (1) Fluctuating prices, (2) Vulnerable to inflation, and (3) Needed expertise in calculating profits.

### **Metal “Gold” Investment and Mutual Fund**

Metal “Gold” investment is a profitable investment vehicle because has several advantages, including: (1) Not subject to Value Added Tax (VAT), (2) Relatively higher resale value, (3) No printing costs if purchased in 1 kg units. The disadvantages of investing in metal “gold” include: (1) Exposed to high printing costs on retail units, eg 5/10 gram (2) Not a short-term investment tool. (3) Metal “gold” is relatively difficult to trade between users because of constrained size (Serfianto D. Purnomo 2013). The factors that affect the price of gold are (1) Inflation that has increased beyond predictions, (2) Financial chaos, (3) increase of oil prices significantly (4) Gold demand. (5) Political conditions in the world, (6) Changes in exchange rates (Thamrin Abdullah 2010)

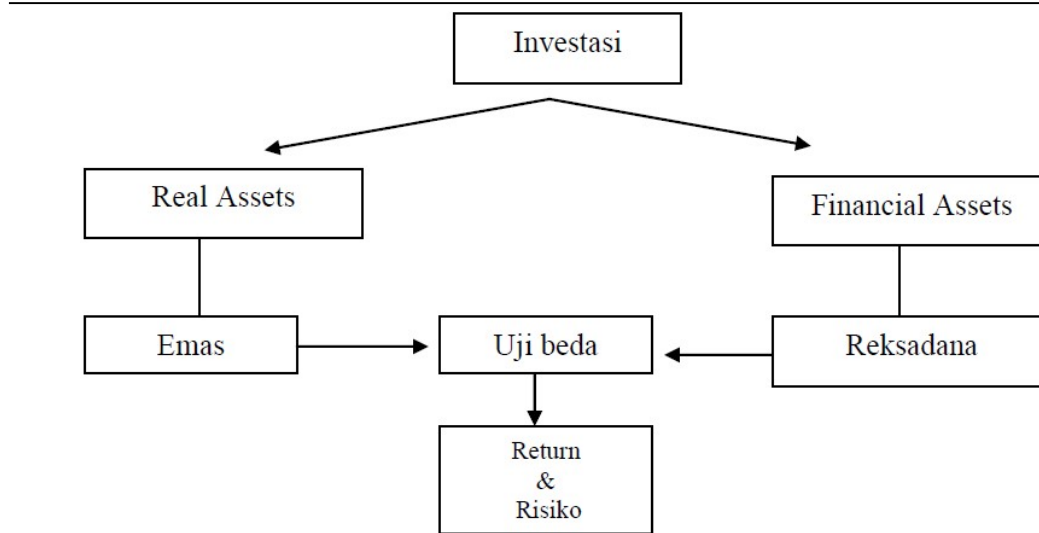
Currently, mutual fund is one of the most popular types of portfolio investment. A mutual fund is a certificate that explains that the owner entrusts the amount of funds to a mutual fund company to be used as investment capital both in the capital market and in the money market. Based on the investment portfolio, mutual funds in Indonesia are grouped into four types: money market funds, fixed income funds, equity funds, and mixed funds. Fixed-income mutual funds are an option for individual investors, especially who want to invest in bonds. Equity funds generally provide the potential for higher return as a capital gain through the growth of stock prices and dividends. Equity funds provide the potential for greater risk but also growth in investment value bigger than other types mutual fund. Money market funds are mutual fund with a high level of risk lowest, although the profit potential is also limited. Mixed funds can invest in both debt and equity securities and a more

flexible allocation portion. So, a mutual fund which is not included in fix-income funds, money market funds, equity funds will be included in the category of mixed funds type (Darmadji 2001). Benefits and conveniences for mutual fund investments, including: 1) Small investment fund, 2) Managed by experienced investment managers, 3) Mutual funds are managed professionally by investment managers who have experienced, 4) The mutual fund investment portfolio is diversified, 5) High level of mutual fund liquidity; 6) The investment procedure is very easy, 7) Low transaction fees, 8) Conservative nature of investment (Sapto Rahardjo 2004)

Several previous studies discussed the comparison of return from gold investment with other investment. There are:

- 1) Wirawan ED Radianto Citra Ayuningtyas use monthly data for the period 1997 – 2009, proves that the performance of the precious “gold” metal is better than the stocks-LQ45 index (Wirawan ED Radianto dan Citra Ayuningtyas 2010).
- 2) Nur Ayu Eva Feriyani use monthly data for the period 2008 to 2012. Proving that money market mutual funds return are higher than dinar investment return because the return of “gold” metal is higher and the risk of loss is lower than Islamic stocks (Nur Ayu Eva Feriyani 2013)
- 3) Adhitya Indra Gunawan and Ni Gusti Putu Wirawati, their research found that investing in gold is more profitable than investing in gold mining stocks (Adhitya Indra Gunawan dan Ni Gusti Putu Wirawati 2013)

Erwin, proved that “Olein commodity” futures contracts significantly have a small rate of return and large risks compared to gold commodity futures contracts which have a higher rate of return and lower risk (Erwin 2005)



**Figure 2. Thinking Framework**

### Hypotheses

Ho:  $\mu_1 = \mu_2$ , there is no significant difference between the return and risk of gold metal investment and mutual funds

H1:  $\mu_1 \neq \mu_2$ , there is a significant difference between the return and risk of gold metal investment and mutual funds

### C. METHODOLOGY

This study uses comparative testing, that comparing a variable from two or more samples. This research was conducted to compare the return and risk of “gold” metal investment with Islamic mutual fund. The test scheme is to compare between the return and risk “gold” metal and mixed mutual funds. Collect data based on *time series* period. And the data used in the form of Gold price data provided and obtained from PT. Antam, Tbk and Net Asset Value closing data from Institutions (OJK).

The population in this study were all mixed type sharia mutual funds during the period January 2011 to June 2019 which amounted to 22 sharia mutual funds. The sampling method used in this study uses non-probability sampling with purposive sampling technique. The criteria for consideration of the research are: (1) Mutual fund that are sampled as mixed type Islamic mutual fund that have been active before January 2011 and are still operating until June 2019, (2) If there are mutual fund that

are active throughout the research period, but do not provide adequate data, then they are not included in the object of research. Based on these criteria, 5 sharia mutual funds were sampled, as shown in table 1:

**Table 1. Research Sample**

No	Sample	Efective Date
1	PNM SYARIAH	15/05/2000
2	MANDIRI INVESTA SYARIAH BERIMBANG	14/10/2004
3	AAA AMANAH SYARIAH FUND	17/06/2005
4	CIPTA SYARIAH BALANCE	16/04/2008
5	SCHRODER SYARIAH BALANCED FUND	22/04/2009

### **Return and Risk Measurement**

The formulas used in the measurements are shown in the below:

Return

Is the result of earned from investment (Jogiyanto 2010)

Net Asset Value (NAV) is Market value of financial investment instruments from shares, bonds, less mutual fund operating costs.

$$\text{Return (r)} = \frac{NAV_t - NAV_{t-1}}{NAV_{t-1}}$$

Gold Prices is Daily period gold price changes.

$$\frac{\text{Harga Emas}_t - \text{Harga Emas}_{t-1}}{\text{Harga Emas}_{t-1}}$$

Total Risk

uncertainty over a situation that will occur later (future) with decisions made based on various considerations at this time (Irham Fahmi 2013)

$$\sigma = \sqrt{\sigma^2} = \sqrt{\frac{\sum (R_i - \hat{R}_i)^2}{n-1}}$$

#### D. RESULT AND ANALYSIS

The following is the grouping of the average returns for 5 (five) Islamic mutual funds and Gold returns during the research range 2,095 data were obtained:

**Tabel 2. Descriptive Statistics**

		Mutual fund	Gold
N	Valid	2095	2095
	Missing	0	0
Mean		.000058617	.000220757
Std. Deviation		.0073413857	.0114796905
Skewness		-9.899	-1.085
Std. Error of Skewness		.053	.053
Kurtosis		288.392	35.801
Std. Error of Kurtosis		.107	.107
Minimum		-.1954853	-1.6994864E-1
Maximum		.1010064	.1387057

The output results of descriptive statistics show that investment in gold metal provides an average return of 0.022% and islamic mutual funds of 0.0059%, with the total risk of gold metal and islamic mutual funds being 1.15% and 0.07% respectively. From the calculation of the average return, Gold provides a higher return with a standard deviation difference of only 0.4%. So, Gold metal is higher than Islamic mutual funds. The results of the calculation of the risk of gold metal investment and sharia mutual funds are shown in the figure below:



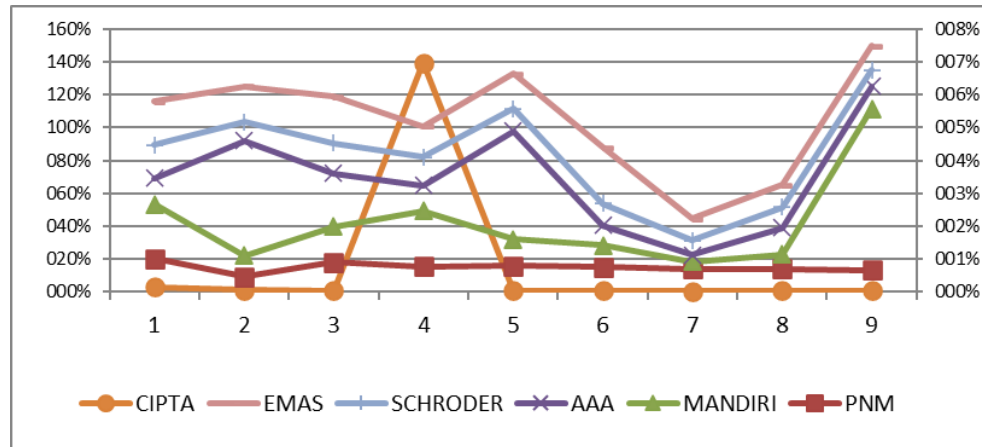


Figure 3. Gold Risk Comparison and Islamic Mutual Funds

The data normality test procedure was carried out with the help of SPSS 18 software. The Kolmogorov-Smirnov Z test results. The results of the Kolmogorov-Smirnov Z test showed the Kolmogorov-Smirnov Z value indicating that there was an abnormality of the research data during the study range.

Tabel 3. Normality Test<sup>a</sup>

		Return
Most Extreme Differences	Absolute	.694
	Positive	.218
	Negative	-.694
Kolmogorov-Smirnov Z		22.473
Asymp. Sig. (2-tailed)		.000

a. Grouping Variable: Kelompok

The data are not normally distributed, so to perform the independent sample-T test using non-parametric statistics using the Mann-Whitney technique (Table 4).

Tabel 4 Ranks

Kelompok	N	Mean Rank	Sum of Ranks
Return 1 Gold	2095	2493.23	5223307.00
2 MF	2072	1670.23	3460721.00
Total	4167		

The table above shows the average between groups (Mean Rank). Gold shows the average value of its rating is 2493.23, which is higher than the average rating of the Islamic mutual fund return of 1670.23. Furthermore, the difference will be tested statistically by converting to statistical standard numbers (Z)

The next step is to perform inferential statistical calculations to answer the following hypotheses:

H1,1: There is a difference in return between gold investment and Islamic mutual fund

**Tabel 5. Test Statistics<sup>a</sup>**

	<i>Return</i>
Mann-Whitney U	1.313E6
Wilcoxon W	3.461E6
Z	-22.079
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: Group

The table above shows the Mann-Whitney value of  $1.31 \times 10^6$  and the Wilcoxon value of  $3.46 \times 10^6$ . When converted to a Z value, the value is -22,079. Sig value or P Value of  $0.000 < 0.05$ . If the p value < the critical limit of 0.05, then there is a significant difference between the return on investment of Gold and Islamic mutual fund investment, which means that H1 is accepted.

H1,2: There is a difference in risk between gold investment and Islamic mutual fund

**Tabel 7. Test Statistics<sup>b</sup>**

	<i>Risiko</i>
Mann-Whitney U	34.000
Wilcoxon W	79.000
Z	-.574
Asymp. Sig. (2-tailed)	.566

Exact Sig. [2*(1-tailed Sig.)]	.605 <sup>a</sup>
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a. Not corrected for ties.

b. Grouping Variable: group

Statistical testing with SPSS resulted in the Mann-Whitney and Wilcoxon values of 34 and 79 respectively, which when converted to a Z value would be -0.574. Sig value or P Value is 0.605 > 0.05. So the result is that there is no significant difference between the risk of Gold investment and islamic mutual funds

## **Discussion**

This study discusses the comparison of the returns and risks of gold investment with Islamic mutual funds in the period January 2011-June 2019, the results of hypothesis testing are that there are differences in the returns of the two investment instruments, where the return obtained by gold gives higher returns than the return of Islamic mutual funds, with insignificant difference in risk. So, gold is considered a more efficient investment. Although the increase in return is only 0.24 percent per day.

The results of this study are in line with the research that has been tested by Wirawan (2010) and Sisca (2014), but contradicts the results of Nur Ayu's research (2013), this is possible due to differences in the database used by Nur Ayu, which uses the dinar price as an indicator gold metal price. Although the gold dinar is an investment tool and the demand for the gold dinar is still lacking, because the gold dinar has a relatively expensive manufacturing cost, so the demand for the gold dinar is less than that of gold bullion.

The increase in gold prices consistently indicates that many investors are buying gold metal, this is an effort to secure asset values from the threat of inflation in addition to take profits when gold prices at highest levels in mid-2012 and 2019. Wahyu as Central Capital Futures Analyst stated that gold investment has a tendency to continue to increase in 2019, this is related to global economic policies that are experiencing a decline. recession and lower interest rate (Hafiyyan Hafiyyan 2019)

In principle, investing in gold metal does not gain absolute benefits from rising gold prices, but the characteristics of gold as a type of investment are zero inflation, so that the owner can still maintain the value of the asset. Finally, this research recommendation is investing in gold metal with a short-term orientation is not recommended and can suffer losses because the growth of gold yields is far below the inflation rate. Thus, investing in gold metal in the short or medium term as an inflation hedge is not able to provide benefits. This research is able to apply investment theory even though there are weaknesses from the research including: a) During the research period, economic turmoil occurred, b) Research does not prove that investments are made in the short or medium term, c) Gold metal investment is only compared to mixed mutual funds.

#### **E. CONCLUSION**

This study examines the differences in return and risk of gold investment with Islamic mutual funds, the results of hypothesis testing prove that gold investment is more profitable than islamic mutual fund investment. The performance ratings of mixed islamic mutual funds that are sampled sequentially are Cipta Syariah Fund; AAA Syariah; Schroder Syariah and PNM Syariah. From the results of this study it is recommended gold investment cannot be recommended as an alternative to short-term investments.

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