



# Is Regulatory Effect Interfering Equity Mutual Fund Managers Performance? Evidence in Indonesia

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**Abstract.** The purpose of the researcher in this study is to examine whether the performance of Islamic and/or Conventional Mutual Fund managers deteriorated during the transition period of Financial Services Authority Regulation (POJK) Number 19/POJK.04/2015 Chapter X Article 49 on the aggregate performance of Sharia and Conventional Mutual Funds in Indonesia. Changes in the composition of the Sharia Securities List (DES) due to the fulfillment and non-fulfillment of Sharia provisions by several shares can affect the composition of Sharia Mutual Funds which may later affect the performance of Sharia and Conventional Mutual Fund managers in Indonesia, may improve, deteriorate, or no difference in their performance during the transition period compared to the non-transition period depends on the ability of the fund manager. By comparing the performance of fund managers in the normal period and the transition period for changes in the composition of Mutual Funds due to changes in the composition of DES, it will be seen how the fund manager's ability to manage Sharia and Conventional Mutual Funds is when facing POJK Number 19/POJK.04/2015 Chapter X Article 49. The results of this study found that in aggregate the fund managers of Islamic Mutual Funds and/or Conventional Mutual Funds can overcome the effects of POJK Number 19/POJK.04/2015 Chapter X Article 49 and have a performance value that can beat the performance of the reference market index.

**Keywords:** Skilled fund manager · regulatory effect · conventional mutual fund · sharia mutual fund

## 1 Introduction

Before the emergence of the Financial Services Authority (OJK) there was what was called the Capital Market and Financial Institutions Implementing Agency (Bapepam-LK) as a regulator and supervisor of capital markets and financial institutions in Indonesia. Initially, Bapepam-LK issued a package of Bapepam-LK regulations related to the Sharia Capital Market on November 23, 2006. In essence, these regulations regulate the Issuance of Sharia Securities and the contracts used in Issuing Sharia Securities in the Capital Market. Subsequently, on August 31, 2007, Bapepam-LK issued the Bapepam-LK Regulation regarding the criteria and Issuance of the Sharia Securities List (DES) followed by the launch of the first DES by Bapepam-LK on September 12, 2007.

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Based on the website of the Financial Services Authority (OJK) and Financial Services Authority Regulation (POJK) Number 35/POJK.04/2017 regarding the issuance of the Sharia Securities List, DES is a collection of Sharia Securities determined by OJK or issued by the issuer of the Sharia Securities List. DES is published and evaluated periodically 2 (two) times in one year. The first periodic Sharia Securities List is determined no later than 5 (five) working days before the end of May and is effective on the first of June. Then the second periodic Sharia Securities List is determined no later than 5 (five) working days before the end of November and is effective on the first of December in normal market condition.

In addition to DES, there is what is called the Indonesian Sharia Stock Index (ISSI), which is a composite index of Sharia shares which is an indicator of the performance of the Indonesian Sharia stock market, published by the Indonesia Stock Exchange. Because ISSI refers to DES, the entry and exit of shares on the list of shares in ISSI will follow the schedule of issuance and evaluation of DES so all lists of shares that exist in ISSI must be in DES.

Based on POJK Number 19/POJK.04/2015, Sharia Mutual Funds are distinguished from the prohibition of buying securities or company shares in certain sectors that are not in accordance with Sharia principles. Sharia principles in the capital market in Indonesia were made and agreed upon by the Financial Services Authority (OJK) together with the Indonesian Ulema Council (MUI). Based on the research of Ho et al. (2014) companies' compliance with conservative Sharia principles makes an impact on the performance of returns and risk management of portfolios or Sharia Mutual Funds that only contain Sharia companies to be safer or more conservative.

However, with the criteria for Sharia Securities, there are companies that can end up leaving and entering the ISSI stock list after a periodic DES evaluation due to the company's compliance and non-compliance with Sharia principles. With the issuance of shares from DES or ISSI, the shares are no longer Sharia shares, which means that if a Sharia Mutual Fund already owns the shares, it must sell or remove the shares from its Mutual Fund portfolio as regulated in POJK Number 19/POJK.04/2015 Chapter X Article 49 regarding this matter.

Starting from December 31, 2012, the duties and functions of Bapepam-LK shifted to the Financial Services Authority (OJK). After the emergence of OJK, the Financial Services Authority Regulation (POJK) emerged to regulate the issuance and requirements of Sharia Mutual Funds, i.e., POJK Number 19/POJK.04/2015. In POJK Number 19/POJK.04/2015 Chapter X article 49 it is stated that if a Sharia Mutual Fund has Securities and/or money market instruments other than Securities and/or Sharia money market instruments which are not caused by the actions of the Investment Manager and Custodian Bank, the Manager Investments are required to sell or issue such securities from the Mutual Fund product no later than 10 (ten) working days after the shares are no longer effectively listed in the Sharia Securities List. POJK Number 19/POJK.04/2015 Chapter X Article 49 apart from being able to change the composition Mutual Funds, it can also cause selling pressure, as in Fan et al. (2020), because institutional investors who are represented by their Mutual Funds are required to sell shares that are not classified as Sharia anymore from Sharia Mutual Funds so that it may affect the performance of Sharia and Conventional Mutual Funds which is determined by the ability of the

fund manager. In this study, the ability of fund managers in dealing with the POJK will be seen, where this should also be a factor of consideration for retail and institutional investors in investing in Mutual Funds in order to know when is the right time to put funds in both Sharia and Conventional Mutual Funds so that they can maximize the return earned.

There has been a study on law enforcement that reduces selling pressure due to less hoarding of bad news and consequently reduce stock price crash risk as well by Zhang et al. (2021). Zhang et al. (2021) analyzed the effect of the implementation of the New Environmental Inspector Program (NEIP) to enforce environmental regulations on stock price crash risk in China. NEIP is not adding a new rule against cities and companies, but rather a new approach to encourage enforcement of existing environmental regulations at the city level. Through Zhang et al. (2021), it is evident that with the existence of NEIP environmental regulations can be more enforced which makes companies located in cities that implement NEIP not hoard bad news, so they have a lower stock price crash risk compared to companies located in cities that do not implement NEIP. Not only the enforcement of regulations can influence the movement of stock prices in the capital market, but also institutional investors can also have an influence on the movement of stock prices in the capital market. In the study of Fan et al. (2020) found that there was a strengthening of selling pressure due to the sale of shares by institutions when responding to bad news represented by their Mutual Fund products and also competition between institutions to maximize profit trading, thereby increasing the risk of falling stock prices. These things also guide the considerations that become the initial hypothesis to be proven, namely if there is an obligation to sell securities in the form of shares, especially if it is carried out by institutions represented by their Sharia Mutual Funds, which has been regulated by POJK Number 19/POJK.04/2015 Chapter X article 49 should be able to be a selling pressure that can make stock prices fall so that the Net Asset Value (NAV) of Islamic Mutual Funds will also fall or may also affect the fall of the NAV of Conventional Mutual Funds, if Conventional Mutual Funds also have shares that are out of DES, or Conventional Mutual Fund managers can buy shares that have good fundamentals at low prices from Sharia Mutual Funds because Sharia Mutual Funds have to sell shares that do not meet Sharia principles anymore. This may be resolved by conducting a share sale transaction in the negotiated market using a certain price or a price on the regular secondary market that is appropriate so as not to harm the seller of shares or in this case Sharia Mutual Funds, as well as Conventional Mutual Funds that have shares that are required to leave the Sharia Mutual Fund. Subsequently the buyers can be institutions, individuals, or conventional Mutual Funds that are tolerant to owning shares that do not meet Sharia principles. However, there are still obstacles in implementing it because the prices in the regular secondary market are actually not fixed, can change at any time which is determined by supply and demand, and also require a buyer partner who is willing to buy at the price that the seller wants. According to Alfred Marshall in his book entitled Principles of economics published in 1890, demand and supply simultaneously determine the price where there will be less buying demand for a certain product if the price increases, while from the supply side the more goods to be sold the lower the price. The supply and demand process will continue until they meet at a certain equilibrium price point. Based on this principle, it is certainly not easy to find partners for transactions

according to the price desired by the seller or at least according to the average cost of the shares owned, so the seller or Sharia Mutual Fund must also be ready if required to sell at a loss on the shares owned.

Not only that, which may affect the value of shares that can have an impact on the NAV of the Mutual Fund, the value of stock valuations can also be influenced by investors' perceptions of the company's compliance with Sharia principles. This is supported by the research of Jaballah et al. (2018) which finds that investors in Islamic countries have a positive perception of companies that comply with Sharia principles so that it has a positive impact on the valuation of the shares of companies that are included in the Sharia stock index and vice versa, has a negative impact on the valuation of the shares of companies that are excluded from Sharia stock index.

However, the most decisive for how risky, the rate of return, and the attractiveness of Sharia and Conventional Mutual Funds is the asset manager (fund manager) who manages Sharia and Conventional Mutual Funds in facing various limitations from existing regulations and various economic turmoil. In this study, we will examine how the performance of Islamic and conventional stock mutual fund managers in Indonesia in dealing with POJK Number 19 /POJK.04/2015 Chapter X Article 49, which may change the composition of the Mutual Fund and may provide selling pressure so as to increase the risk of falling stock prices or affect the performance of the Mutual Funds.

There have been many previous studies examining the performance of a Mutual Fund which is determined by the ability of the fund manager who manages it, as previously mentioned, namely Fama and French (2010) found that fund managers of active Mutual Funds in the US do not have skilled abilities, then there is Bialkowski et al. (2013) which found that the performance of fund managers was better in the Ramadan period. However, there has been no research that focuses on analyzing the effect of a regulation, POJK Number 19 /POJK.04/2015 Chapter X Article 49, on the performance of Mutual Funds which is determined by the ability of fund managers to manage their Mutual Funds in Indonesia. The effect from the regulation, POJK Number 19 /POJK.04/2015 Chapter X Article 49, is important to be analyzed because it concerns the welfare of investors who invest in Conventional and Sharia Mutual Funds. Thus, this study will fill the gap in previous research on this matter, namely by focusing on examining the effects of the POJK Number 19 /POJK.04/2015 Chapter X Article 49 on the performance of Mutual Funds which is determined by the ability of fund managers in Indonesia. The remainder of the paper is organized as follows. Section 2 is theoretical basis. Section 3 outlines the methodological approaches used in the study. We present our empirical results and their interpretation in Sect. 4. The paper ends with concluding remarks and reflections in Sect. 5.

## **2 Theoretical Basis**

### **2.1 Regulatory Effect**

In this study the regulatory effect referred to the effect of the enactment of POJK Number 19/POJK.04/2015 Chapter X Article 49 i.e. if a Sharia Mutual Fund owns Securities and/or money market instruments other than Sharia Securities and/or money market instruments that are not caused by the actions of the Investment Manager and Custodian

Bank, the Investment Manager is required to sell or remove the securities from the Mutual Fund product no later than 10 (ten) working days since the shares are no longer effectively listed in the Sharia Securities List (DES). Thus, if the Sharia Mutual Fund portfolio has shares that are not included in the Sharia Securities List (DES) or Indonesian Sharia Stock Index (ISSI) after a periodic DES evaluation, the fund manager has a minimum transition period of 15 working days starting from 5 days before the new DES effective time to 10 days after the new DES effective to transfer or sell shares from the Sharia Mutual Fund portfolio that is no longer included in the DES or ISSI. The POJK is expected as a source of selling pressure because it requires fund managers to sell or extract shares that are not eligible of sharia shares from sharia mutual funds. There have been previous studies about selling pressure, such as Fan et al. (2020) it has been proven that institutional ownership of shares, represented by Mutual Funds, can strengthen the selling pressure of shares because they respond to bad news for the company, thereby causing a more severe risk of falling share prices in the capital market in China.

## **2.2 Total Performance Measures of Fund Managers**

To examine the performance of mutual funds' managers, Białkowski et al. (2013) argue that they can measure fund manager performance by the combination of their timing and selection strategy with a special period effect like Ramadhan period. They develop the combined model with the dummy variable to differentiate the effect. By replacing the dummy variable for Ramadhan effect with dummy variable for regulatory effect, the total performance measures (TPM) then should explain the ability of the fund manager in adjusting timing and selection strategy between the transition and non-transition period in this research. The value of TPM will be positive and significant when the fund manager is able to adjust their strategy for the exposure. The negative value of TPM implies both the lack of ability of the fund manager to manage their portfolio and ability to cover their active portfolio cost.

## **3 Data and Methodology**

### **3.1 Independent Variables**

The data to be processed by the researcher is secondary data. In terms of Mutual Funds return proxy, it will be processed from daily Net Asset Value (NAV) obtained through the Thomson Reuters Eikon Datastream, the Financial Services Authority, and Bloomberg. For market return proxies we use daily data from the Indonesian Stock Exchange Composite Index (IHSG). Then for the risk free asset proxy, we will use the overnight JIBOR (Jakarta Interbank Offered Rate) data. Then the independent variables from Fama and French (1993), i.e. the size factor (SMB), the book-to-market factor (HML). Then also the factor from Carhart (1997), which is one-year price momentum factor (PR1YR). We use all active and non-active Indonesian stocks traded on the Indonesian Stock Exchange.

### 3.2 Dependent Variable

In order to capture a stronger regulatory effect, the sample used is daily data from Sharia Equity Mutual Funds and Conventional Equity Mutual Funds in Indonesia, where according to the rules, the composition of the Equity Mutual Fund portfolio is required to invest at least 80% in shares.

The total sample consists of 159 Conventional Mutual Funds and 37 Sharia Mutual Funds. Starting period from early 2016 to the end of 2019 from the beginning of the available NAV until it is no longer available in order to determine the effect after the implementation of POJK Number 19/POJK.04/2015 Chapter X article 49.

At least data for daily NAV of Sharia and conventional mutual funds has undergone a period of changing the composition of the DES to be effective and efficient and the sample NAV of Sharia and Conventional Mutual Funds. NAV data will be processed into daily return of mutual fund data, the calculation is as follows:

$$R_{it} = \frac{NAV_t - NAV_{t-1}}{NAV_{t-1}} \quad (1)$$

In order to get the daily return of Conventional Mutual Funds in aggregate or holistically, each individual Conventional Mutual Fund will be weighted the same in the Conventional Mutual Fund portfolio as a whole as in the study of Białkowski et al. (2013). Likewise, the daily return of Sharia Mutual Funds in aggregate or the overall calculation is the same as that of Conventional Mutual Funds in aggregate, weighted the same for each individual Mutual Fund.

### 3.3 Methodology

#### 3.3.1 Regression Model

In determining the regulatory effect, we applied model from Białkowski et al. (2013) which is expected to be able to capture the effects of POJK Number 19 /POJK.04/2015 Chapter X Article 49 in the transition period due to changes in DES, namely from the initial announcement of the composition of the new DES until ten working days after the effectiveness of the new DES. Methodology in previous studies regarding regulatory effects, such as Chen et al. (2018) and Lara et al. (2021), only distinguishes the period before application of the regulation and after the regulation, while in this study we want to capture the effect of the regulation in each transition period due to changes in DES on Mutual Funds by using daily data. After testing the data, so that we use the model from Białkowski et al. (2013) which uses the GARCH(1,1) approach. Here's the equation model:

$$\begin{aligned} R_{it} - R_{ft} = & \alpha_1 + \alpha_2 REG_t + \beta_1 MARKET_t + \beta_2 SMB_t + \beta_3 HML_t + \beta_4 PRIYR_t \\ & + \beta_5 REG \cdot MARKET + \beta_6 REG SMB_t + \beta_7 RE \in GHML_t + \beta_8 REG PRIYR_t \\ & + \gamma_1 MARKET_t^2 + \gamma_2 REG MARKET_t^2 + \epsilon_t \end{aligned} \quad (2)$$

The dependent variable  $R_t - r_t$  is the mutual fund portfolio's daily excess return over the overnight interbank rate.  $REG_t$  is a dummy variable to identify the regulatory period.

It equals to 1 for day period because of the Regulatory effect and 0 for other periods.  $MARKET_t$  is market excess return over the overnight interbank rate.  $SMB_t$  is the return difference between stocks with small market capitalization and stocks with high market capitalization.  $HML_t$  is the return difference between stocks with high book-to-market equity and stock with low book-to-market equity.  $PRIYA_t$  captures the return spread between a portfolio of past winner stocks and a portfolio of past loser stocks within one year.  $MARKET_t^2$  is squared market excess return of Treynor and Mazuy's timing models proposed by Białkowski et al. (2013).

Then,  $REG \cdot MARKET_t$ ,  $REG \cdot SMB_t$ ,  $REG \cdot HML_t$ ,  $REG \cdot MARKET_t^2$ , are regulatory dummy variables multiplied by other variables respectively.  $\alpha_{1-2}$  measures the selection ability of the fund manager to obtain excess over the benchmark for the non-regulatory period and during the regulatory period, respectively.  $\beta_{1-4}$  measures the sensitivity of the parameters of market excess return, size premium, value premium, and momentum.  $B_{5-8}$  measures the difference between exposure of the portfolio during regulatory period.  $\gamma_{1-2}$  measures the ability of the fund manager to predict the market returns during the non-regulatory and the regulatory periods, respectively.

### 3.3.2 Total Performance Measures

Białkowski et al. (2013) argue that they can measure fund manager performance by the combination of their timing and selection strategy with a special period effect like Ramadhan. In this study we implemented the model from Bialkowski et al. (2013), but for the special period is regulatory period, the transition period because the FSA's regulation. The total performance measures (TPM) model then should explain the ability of the fund manager in adjusting timing and selection strategy between the Ramadhan and non-Ramadhan period:

$$TPM_p = \alpha_{1p} + \alpha_{2p}REG_t + (\gamma_{1p} + \gamma_{2p}REG_t) \left[ \frac{1}{T} \sum_{t=1}^T MARKET_t^2 \right] \quad (3)$$

Then the model to measure the overall performance of the fund managers without any regulatory effect by removing the dummy regulation variable (REG) as in Bialkowski et al. (2013) is as follows:

$$TPM_p = \alpha_{1p} + (\gamma_{1p}) \left[ \frac{1}{T} \sum_{t=1}^T MARKET_t^2 \right] \quad (4)$$

## 4 Empirical Results

Table 1 shows descriptive statistics of Islamic Mutual Funds excess returns and Conventional Mutual Funds excess returns. It can be seen in the table that the mean excess return of Islamic Mutual Funds is smaller than the mean excess return of Conventional Mutual Funds. This is in line with the standard deviation of excess return of Conventional Mutual Funds which is greater than the standard deviation of excess return of Sharia Mutual Funds.

Continuing on regression result, our hypothesis wants to prove that the performance of Islamic and/or Conventional Mutual Funds fund managers deteriorated in the transition period for POJK Number 19 /POJK.04/2015 Chapter X Article 49. The regression results for Sharia Mutual Funds can be seen in Table 2 for the significant coefficient is the *MARKET* coefficient is significantly positive, then the *HML* coefficient is significant negative which means that the returns from high-book-to-market companies are lower than returns from low-book-to-market companies, so there is no identification of premium value. *PRIYR* coefficient has a significant negative value, which means that Islamic Mutual Funds fund managers in aggregate carry out a contrarian strategy, and the *MARKET*<sup>2</sup> coefficient has a significant positive value, which means that Islamic Mutual Fund managers have a good ability to predict market returns. The Total Performance Measure (*TPM*) can be seen in Table 3, the *TPM* value which does not include regulatory effects due to POJK Number 19 /POJK.04/2015 Chapter X Article 49 of the Sharia Mutual Fund manager has a positive value, i.e. 0.000174, and the *TPM* with include regulatory effects because POJK Number 19 /POJK.04/2015 Chapter X Article 49 also has the same value, which is 0.000174. This can be interpreted that in the non-transition period and during the transition due to the mentioned POJK, there is no difference of the overall performance of Islamic Mutual Fund managers in aggregate because they have the same value and have good performance because the *TPM* is positive, means that Sharia Mutual Funds fund managers can make Sharia Mutual Fund returns above the market benchmark.

Furthermore, the performance of Conventional Mutual Fund managers can be seen in the conventional Mutual Funds regression results in Table 2. The significant coefficient from the regression results is the alpha coefficient and has a positive value, which means that Conventional Mutual Fund managers have good stock picking abilities. Then the *MARKET* coefficient has a positive value, the *SMB* coefficient is also significant positive which indicates that the portfolio of Conventional Mutual Funds is composed of many small capitalization stocks, then coefficient for *HML* and *PRIYR* have significant negative value which means that the returns from high-book-to-market companies are lower than returns from low-book-to-market companies so there is no identification of value premium and conventional mutual fund managers do a lot of contrarian strategies. Furthermore, from the regression results, it can continue to the *TPM* assessment to determine the aggregate performance of Conventional Mutual Fund managers. It can be seen in Table 3, the *TPM* value of Conventional Mutual Fund managers both during the non-transition period and the transition period because POJK Number 19 /POJK.04/2015 Chapter X Article 49 has the same value, namely 0.000504, which is higher than the *TPM* the fund manager for Sharia Mutual Funds. From this, it can be interpreted that there is no significant difference from the overall aggregate performance of Conventional Mutual Fund managers during the non-transition period and during the transition period due to the POJK as previously mentioned because they have the same value and have good performance because the *TPM* is positive, which means that conventional mutual fund managers can make conventional mutual fund returns above the market benchmark.

It can be concluded that hypothesis is not proven, which means that in aggregate the fund managers of Islamic Mutual Funds and/or Conventional Mutual Funds can overcome the effects of POJK Number 19 /POJK.04/2015 Chapter X Article 49.



**Table 1.** Total Performance Measures

Type of Fund	During Transition Period due to the Regulation	During Non-Transition Period due to the Regulation	Deviation
Conventional Equity Funds	0.000504	0.000504	0
Sharia Equity Funds	0.000174	0.000174	0

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**Authors' Contributions.** In this study authors have showed that aggregately equity mutual fund managers in Indonesia can overcome the regulatory effect from POJK Number 19 /POJK.04/2015 Chapter X Article 49 which has never been the focus in previous research. Even though it can be said that mutual fund managers in Indonesia can overcome the regulatory effect, investors of equity mutual fund must be observant in studying each individual equity mutual fund because every equity mutual fund in individual will have different nature and performance. For further research, it is expected to be able to examine a longer period of time with the hope that in the future more data samples will be available for both Sharia and Conventional Mutual Funds or it can not only focus on Conventional Mutual Funds and Sharia Mutual Funds in aggregate, which is the focus on this research.

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