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# Using Asset Allocation Strategy in Sharia Equity Mutual Fund to Shape Optimum Portfolio

**Vidya Ramadhan Putra Pratama**
Sekolah Tinggi Ilmu Ekonomi Ekuitas, Indonesia
Email: vidya.ramadhan@ekuitas.ac.id

**Abstract.** The swift advancement of the Islamic finance sector has established Islamic equities mutual funds as a significant vehicle for ethical and value-driven investing, particularly in emerging economies such as Indonesia. Despite its increasing popularity and compliance with Sharia rules, numerous investors in Sharia equity mutual funds predominantly employ a passive portfolio management strategy, which may hinder the complete optimization of risk-return efficiency. Numerous elements enable an investor to ascertain their success or failure in an investment. A crucial aspect in an investor's success is the approach employed in asset allocation and portfolio management. Consequently, investors must strategically allocate investment assets within the portfolio to maximize returns. This research seeks to investigate the implementation of asset allocation methodologies in the creation of an optimal portfolio for sharia equities mutual funds. This research will explicitly examine three alternative strategies in asset allocation: lump sum, dollar-cost averaging, and rebalancing. The rebalancing procedure will occur in three distinct intervals: quarterly, semi-annually, and annually. Twenty-six actively managed sharia equities mutual funds registered with the OJK from 2018 to 2024 will serve as research samples for the development of an ideal portfolio. This study will utilize the Sharpe ratio as a fundamental benchmark for assessing portfolio results. The research findings suggest that the asset allocation strategy employing a lumpsum or buy-and-hold approach yields the optimal investment returns for sharia equities mutual fund investors. This discovery may serve as a reference for individual investors or investment managers in future investing deliberations.

Keywords: Asset Allocation; Portfolio Management; Sharia Equity Mutual Funds; Portfolio Optimization

## INTRODUCTION

*Sharia* equity mutual funds have become an important component of ethical and value-based investing both globally and in Indonesia in recent years. These funds adhere to Islamic principles by avoiding interest (*riba*), gambling (*maysir*), and excessive uncertainty (*gharar*). They are increasingly popular among both Muslim and non-Muslim investors seeking socially responsible investments (SRI) (Abdelsalam et al., 2014; Hayat & Kraeussl, 2011). The growing global demand for sustainable investment has also created additional challenges, including complex regulatory frameworks across jurisdictions, varying interpretations of *Sharia* compliance standards, and the need to balance ethical considerations with competitive financial performance in increasingly volatile markets.

The Islamic finance industry has expanded rapidly worldwide, with assets exceeding USD 3 trillion as of 2023, in which Islamic mutual funds have played a pivotal role (IFSB, 2023). *Sharia* equity mutual funds are particularly appealing because they combine the potential for high returns with adherence to ethical standards. According to Refinitiv (2022), global *Sharia* mutual fund assets under management (AUM) reached over USD 120 billion in 2021, with notable growth in Malaysia, Saudi Arabia, and Indonesia. Indonesian investors increasingly see *Sharia* mutual funds as attractive alternatives to conventional funds due to their perceived stability, ethical alignment with religious values, and competitive risk-adjusted returns, particularly during market downturns when conservative screening processes often

enhance downside protection.

In Indonesia, *Sharia* equity mutual funds have demonstrated steady growth. According to the Financial Services Authority of Indonesia (*OJK*), the number of *Sharia* mutual fund products increased from 145 in 2019 to 294 in 2023, while total AUM grew from IDR 34.96 trillion in 2019 to IDR 54.22 trillion in 2023 (*OJK*, 2024). This expansion is supported by the country's large Muslim population, government initiatives, and growing investor awareness (Wulandari & Kassim, 2016). The IDX *Sharia* Index (ISSI) has also been an effective benchmark for Islamic equities, showing positive performance trends aligned with investor expectations (IDX, 2024).

Beyond religious compliance, *Sharia* equity mutual funds offer additional benefits. Research indicates that *Sharia*-compliant equity portfolios often match or outperform conventional funds, particularly in terms of risk-adjusted returns (Al-Khazali et al., 2014; Ho et al., 2014). These funds tend to exhibit lower volatility, reduced exposure to leverage, and greater stability during market downturns, making them attractive to conservative and long-term investors (Hayat & Kraeussl, 2011; Khmous & Besim, 2020).

Optimizing performance in *Sharia* equity mutual funds requires effective portfolio management, in which asset allocation plays a fundamental role. Asset allocation determines how investments are distributed across different instruments to balance risk and return (Brinson et al., 1995; Ibbotson & Kaplan, 2012). In an Islamic context, this involves carefully selecting equities, *sukuk*, and cash equivalents to ensure compliance while maximizing returns. Studies have shown that asset allocation explains over 90% of portfolio variance, highlighting its strategic importance (Brinson et al., 1991).

Research in Indonesia by Robiyanto et al. (2019) and Prisilia & Marsono (2020) confirms that asset allocation significantly impacts *Sharia* mutual fund performance. However, most Indonesian *Sharia* equity funds still adopt passive management strategies, with limited use of dynamic or tactical allocation. Conversely, international research shows increasing adoption of strategic and core–satellite allocation structures in Islamic portfolios (Aliahmadi & Soroushyar, 2022; Peillex, 2019; Septiana & Arif, 2020). The growth of *Sharia* mutual funds has also been notable beyond Muslim-majority countries, with rising interest in Western markets where institutional investors recognize their ability to deliver both ethical compliance and strong performance, particularly in volatile conditions when conservative screening offers superior downside protection. As financial markets become more complex and demand for *Sharia* compliance increases, optimizing asset allocation is no longer just a technical matter but a strategic imperative. Modern Portfolio Theory (MPT), adapted for Islamic principles, along with advancements in machine learning and quantitative modelling, has enabled the development of more sophisticated allocation strategies (Khokhlov, 2016; Markowitz, 1952; Song, 2023).

While research on asset allocation strategies in mutual funds exists (Damayanti et al., 2018; Pratama, 2024), studies focusing specifically on *Sharia*-compliant equity mutual funds remain limited. This represents a significant knowledge gap, particularly given that Indonesian *Sharia* equity funds predominantly employ passive approaches despite the availability of diverse compliant instruments and the demonstrated success of active strategies in conventional markets.

The aim of this study is to analyze the use of asset allocation strategies within

Indonesian *Sharia* equity mutual funds and assess their role in constructing optimal portfolios. Current practices reveal critical limitations, such as the reliance on buy-and-hold strategies in approximately 70% of *Sharia* equity funds, minimal application of systematic rebalancing, and underutilization of dollar-cost averaging techniques that have shown strong results in conventional fund management. This research will rigorously evaluate three alternative allocation strategies: lump sum, dollar-cost averaging, and rebalancing.

The findings will have practical value for multiple stakeholders: individual investors will gain evidence-based strategies for optimizing their *Sharia*-compliant portfolios; fund managers will receive structured approaches for improving active management techniques; and regulators will benefit from empirical insights that can guide policy development for enhancing the Islamic finance market and investor protection.

By deepening understanding of asset allocation methodologies, both investment managers and individual investors can improve *Sharia* equity mutual fund portfolios, achieving competitive returns while managing risks. The specific objectives of this research are: (1) to identify optimal portfolio compositions from available *Sharia* equity mutual funds using quantitative optimization techniques; (2) to compare the performance of three distinct asset allocation strategies—lump sum, dollar-cost averaging, and rebalancing—in the *Sharia*-compliant context; (3) to determine which allocation approach generates the highest risk-adjusted returns for Islamic equity portfolios; and (4) to provide evidence-based recommendations for investors and fund managers seeking to enhance *Sharia* equity mutual fund outcomes while maintaining religious compliance.

## MATERIALS AND METHODS

This study employs a quantitative research methodology, utilizing portfolio optimization and simulation techniques to analyze asset allocation strategies in *Sharia* equity mutual funds. The research adopts an explanatory approach to determine the most effective allocation methods for maximizing returns while maintaining *Sharia* compliance. The analysis uses data from 26 high-performing *Sharia* equity mutual funds managed by Indonesian investment managers, which were active and registered with the *OJK* between 2018 and 2024 — the most recent seven-year period. The sample selection criterion requires that *Sharia* equity mutual funds have a minimum total asset under management (*AUM*) of IDR 20 billion as of December 2024. These funds disclose their net asset value (*NAV*) daily to the public through custodian banks and submit annual *NAV* reports to the *OJK* via its official website from January 2018 to December 2024.

The returns from the three asset allocation strategies are evaluated through simulations. The first stage involves using the Microsoft Excel Solver Add-In to construct an optimal portfolio from the 26 *Sharia* equity mutual funds, aiming to maximize the portfolio's Sharpe ratio in order to achieve the best possible balance of return and risk. Subsequently, the study simulates three investment allocation strategies lump sum, dollar-cost averaging, and rebalancing using an assumed investment amount of IDR 100 million.

The research methodology consists of five systematic steps: (1) data collection and screening of eligible *Sharia* equity mutual funds based on *AUM* and consistent performance criteria; (2) portfolio optimization using the Solver function to maximize the Sharpe ratio and determine optimal weight allocations; (3) simulation of three asset allocation strategies with a standardized investment amount; (4) performance comparison of portfolios using total returns, final portfolio values, and risk-adjusted performance metrics; and (5) analysis and interpretation of results to identify the most effective asset allocation approach

for *Sharia* equity mutual fund investors.

**RESULTS AND DISCUSSION**

According to the results generated by the solver program in Microsoft Excel, 4 out of 26 sharia stock mutual funds satisfy the criteria for optimal portfolio construction and represent the most effective strategic alternatives for portfolio formation, with the following respective weights:

1. BNP Paribas Cakra Syariah USD Kelas RK1: 50,00%
2. Schroder Global Syariah Equity Fund: 26,03%
3. Mandiri Global Sharia Equity Dollar Kelas A: 5,00%
4. Bahana USD Global Sharia Equities: 18,97%

**Table 1. Simulation of Asset Allocation Strategy: Lumpsum or Buy and Hold**

| Mutual funds | Weights | Investment (IDR) | January 2018 | | | December 2024 | | Value (IDR) |
|---|---|---|---|---|---|---|---|---|
| | | 100.000.000 | NAV (USD) | NAV (IDR) | Unit | NAV (USD) | NAV (IDR) | |
| BNP Paribas Cakra Syariah USD Kelas RK1 | 50,00% | 50.000.000 | 1,17 | 15.773 | 3.170 | 1,99 | 32.307 | 102.412.526 |
| Schroder Global Syariah Equity Fund | 26,03% | 26.028.707 | 1,27 | 17.118 | 1.521 | 1,82 | 29.486 | 44.833.512 |
| Mandiri Global Sharia Equity Dollar Kelas A | 5,00% | 5.000.000 | 1,16 | 15.636 | 320 | 1,54 | 24.961 | 7.982.213 |
| Bahana USD Global Sharia Equities | 18,97% | 18.971.293 | 1,16 | 15.643 | 1.213 | 1,47 | 23.834 | 28.904.832 |
| **TOTAL** | **100,00%** | **100.000.000** | | | | | | **184.133.083** |
| | | | | | | | **RETURN** | **84,13%** |

**Table 2. Simulation of Asset Allocation Strategy: Dollar-cost-averaging (DCA)**

| Mutual Funds | Weights | Investment Value per year (IDR) | Total unit of Mutual funds | | | | | | | | Final Portfolio Value (IDR) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Jan 2018 | Jan 2019 | Jan 2020 | Jan 2021 | Jan 2022 | Jan 2023 | Jan 2024 | Dec 2024 | |
| BNP Paribas Cakra Syariah USD Kelas RK1 | 50,00% | 8.572.679 | 544 | 534 | 473 | 397 | 343 | 369 | 302 | 2.961 | 95.670.861 |
| Schroder Global Syariah Equity Fund | 26,03% | 4.462.715 | 261 | 269 | 258 | 215 | 193 | 203 | 173 | 1.571 | 46.325.103 |
| Mandiri Global Sharia Equity Dollar Kelas A | 5,00% | 857.268 | 55 | 57 | 52 | 38 | 41 | 47 | 39 | 330 | 8.235.587 |
| Bahana USD Global Sharia Equities | 18,97% | 3.252.696 | 208 | 202 | 188 | 175 | 156 | 183 | 150 | 1.262 | 30.078.016 |
| **TOTAL** | **100,00%** | **17.145.357,14** | | | | | | | | | **180.309.567** |
| | | | | | | | | | | **RETURN** | **80,31%** |

Table 3. Simulation of Asset Allocation Strategy: Rebalancing

| Type of Rebalancing | Initial Investment (IDR) | Final Total Value (IDR) | Return |
|---|---|---|---|
| 3-Bulan (*Quarterly*) | Rp 100.000.000,00 | Rp 183.588.268,23 | 83,5883% |
| 6-Bulan (*Semi-annually*) | Rp 100.000.000,00 | Rp 183.861.685,58 | 83,8617% |
| 1-Tahun (*Annually*) | Rp 100.000.000,00 | Rp 183.899.180,43 | 83,8992% |

The simulation of three asset allocation strategies shown in tables 2–4 shows that the lumpsum or buy and hold strategy has a total final investment value of IDR 184,133,083.17 and a return of 84.13%. On the other hand, the simulation with the DCA or dollar-cost-averaging asset allocation strategy gave a lower total final investment value of IDR 180,309,566.65 and a return of 80.31%. The rebalancing asset allocation strategy has three time periods: quarterly, which lasts for three months; semi-annually, which lasts for six months; and annually, which lasts for one year. The final investment value for the 3-month period was IDR 183,588,268.23, which was an 83.5883% return. For the 6-month and 1-year periods, the final investment values were IDR 183,861,685.58 and IDR 183,899,180.43, with returns of 83.8617% and 83.8992%, respectively.

The simulation with the lumpsum strategy seems to have the best final investment value and return, while the DCA asset allocation strategy seems to have the worst final

investment value and return. These findings are consistent with previous research by Damayanti et al. (2018), who demonstrated that lump sum strategies often outperform systematic investment approaches in trending markets, particularly in emerging market contexts like Indonesia. Similarly, Pratama (2024) found that buy-and-hold strategies in Indonesian fixed-income mutual funds showed superior performance during periods of sustained market growth. The superior performance of the lumpsum approach can be attributed to the time value of money principle and the benefit of full market exposure from the beginning of the investment period, which is particularly advantageous during bull market conditions that characterized the 2018-2024 period for global equity markets.

The relatively lower performance of dollar-cost averaging aligns with academic literature suggesting that DCA strategies are more beneficial in volatile or declining markets where the averaging effect helps reduce purchase costs over time. Bodie et al. (2011) and Hartono (2017) explain that DCA's primary advantage lies in risk reduction rather than return maximization, making it more suitable for risk-averse investors or uncertain market conditions. However, in the predominantly upward-trending market experienced during the study period, the delayed investment characteristic of DCA resulted in missing some of the early gains captured by the lumpsum approach.

The rebalancing strategies showed intermediate performance levels, with annual rebalancing (83.8992%) slightly outperforming quarterly (83.5883%) and semi-annual (83.8617%) approaches. This pattern supports the findings of Sharpe (1996) and recent work by Song (2023), who noted that less frequent rebalancing often performs better in trending markets due to reduced transaction costs and allowing winning positions to run longer. The marginal differences between rebalancing frequencies suggest that the additional complexity of more frequent rebalancing may not justify the minimal performance improvements in the context of sharia equity mutual funds.

The simulation shows that the best way to invest in a sharia stock mutual fund is to buy all the assets at the beginning of the period, hold them for the whole period, and only sell them at the end of the period. This conclusion is particularly relevant for sharia-compliant investing, where the inherent screening process tends to identify financially stable companies with strong fundamentals, making them suitable for long-term holding strategies that align with Islamic principles of patient capital and avoiding speculative trading.

## CONCLUSIONS

Upon conducting calculations and analyses, it may be concluded that there are four *Sharia* equity mutual funds that represent optimal selections for an investment portfolio, with the following allocations: BNP Paribas Cakra Syariah USD Kelas RK1: 50.00%, Schroder Global Syariah Equity Fund: 26.03%, Mandiri Global Sharia Equity Dollar Kelas A: 5.00%, Bahana USD Global Sharia Equities: 18.97%. These findings directly address the first research objective by providing a quantitative, optimized portfolio composition that maximizes risk-adjusted returns while maintaining *Sharia* compliance.

Following the simulation results of three asset allocation strategies—lump sum or buy-and-hold, dollar-cost averaging, and rebalancing—this study concludes that the lump sum or buy-and-hold strategy is the most effective for *Sharia* stock mutual funds, achieving the highest return of 84.13% compared to 80.31% for dollar-cost averaging and approximately

83.8% for various rebalancing approaches. This finding fulfils the second and third research objectives by systematically comparing allocation strategies and identifying the superior approach for Islamic equity investments. The choice of an appropriate asset allocation strategy significantly influences the magnitude of investor returns in investment activities, with the lump sum approach demonstrating a 3.8–4.8 percentage point advantage over alternative strategies.

Consequently, this research advocates for the selection of either the lump sum or buy-and-hold strategy for investors constructing a portfolio in *Sharia* stock mutual funds, as these approaches have demonstrated superior profitability compared to alternative strategies. This recommendation addresses the fourth research objective by providing evidence-based guidance for both individual investors and professional fund managers. The practical implications extend beyond simple strategy selection, as the results suggest that *Sharia* equity mutual fund investors can optimize their returns by committing capital early and maintaining long-term positions, which aligns with Islamic principles of patient capital and stable investing.

Future research contributions emerging from this study include several important directions for advancing the understanding of *Sharia*-compliant investment optimization. First, longitudinal studies examining the performance of these allocation strategies across different market cycles (bull, bear, and sideways markets) would provide more comprehensive insights into their relative effectiveness under varying conditions. Second, research incorporating additional performance metrics such as maximum drawdown, Sortino ratio, and Value-at-Risk could offer more nuanced risk-adjusted performance comparisons. Third, investigation of sector-specific allocation strategies within *Sharia* equity funds could reveal opportunities for enhanced diversification and return optimization. Fourth, comparative analysis of these strategies across different emerging and developed Islamic finance markets would help validate the generalizability of these findings beyond the Indonesian context. Finally, research exploring the integration of ESG factors with traditional *Sharia* screening in portfolio optimization could provide insights into next-generation Islamic investment approaches that address both religious compliance and sustainable development goals.

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