

Dividend Yield as a Basis for Investment Decision Making with Dollar Cost Averaging Policy as a Moderating Variable: Exchange Traded Fund (ETF) Yieldmax Period April 2024 – April 2025

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Abstract. *This study examines the investment behavior of YieldMax Exchange Traded Funds (ETFs), which are financial instruments based on a synthetic covered call strategy offering high dividend yields, while also carrying substantial risks of Net Asset Value erosion and price depreciation. The main issue addressed in this study is whether high dividend yield is actually capable of improving investment performance, and whether the Dollar Cost Averaging (DCA) policy is able to moderate such a relationship. Therefore, this study aims to analyze the effect of Dividend Yield on Investment Performance, measured by Holding Period Return (HPR), and to test the role of DCA as a moderating variable in YieldMax ETFs during the period from April 2024 to April 2025. This research employs a quantitative approach using back-testing simulation and panel data analysis. The sample consists of 14 YieldMax ETFs observed under two investment strategy scenarios, namely Lump-Sum Investing (LSI) and Dollar Cost Averaging (DCA), resulting in 364 balanced panel observations. The data were processed using EViews 12 with Moderated Regression Analysis (MRA). Panel model selection was conducted through the estimation of Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Since FEM could not be estimated stably, the final model was determined using the Lagrange Multiplier Test, which indicated that the Random Effect Model (REM) was the most appropriate model. The results show that Dividend Yield has a positive and significant effect on Investment Performance (HPR), therefore the first hypothesis is accepted. This finding indicates that, during the observation period, the magnitude of dividend cash flow in YieldMax ETFs contributed meaningfully to total investment returns. On the other hand, the interaction variable between Dividend Yield and DCA is not significant, indicating that DCA does not moderate the relationship between Dividend Yield and Investment Performance. These findings imply that Dividend Yield is the main determinant of investment performance in YieldMax ETFs within the observation period, while the choice of market entry strategy through DCA does not show a significant moderating role.*

Keywords: *Dividend Yield; Dollar Cost Averaging; Holding Period Return; Investment Performance; Data Panel; YieldMax ETF.*

1. Introduction

Over the past decade, retail investing has undergone a significant shift, driven by easy access to information and commission-free trading platforms. This phenomenon has created a strong interest in assets offering attractive returns. Passive investments, such as Exchange Traded Funds (ETFs), offer the opportunity to invest in indices, asset classes, and sectors with low maintenance costs and high transparency. Currently, Exchange Traded Funds (ETFs) dominate the global market, with nearly 50% of investments in the United States coming from them (Joshi & Dash, 2024).

There is a debate about the investment method of capital allocation, Lump-Sum Investing (LSI) versus Dollar Cost Averaging (DCA). For most people, DCA is the best investment strategy. It is almost mathematically certain that when investing the same amount of money in the same stock periodically (for example, every quarter), the average cost per share will be substantially lower than the market's highest point. This is because, over time, the market fluctuates from high to medium to low, resulting in the average cost per share being significantly below the stock's highest cost. Investors buy more shares when prices are low and fewer shares when prices are high (Rubin, 2018).

Dollar-Cost Averaging (DCA) is a popular market investing strategy, with the advantage of being able to "manage risk" or "minimize regret." Dollar-cost averaging is intuitively appealing to investors who want to avoid the potential regret of investing at market highs in retrospect. However, a lump-sum investment (upfront) yields better results in most simulations. Compared to a lump-sum investment, dollar-cost averaging has a lower expected return (even after appropriately controlling for risk) and is more sensitive to sequence-of-return risk, leading to significantly higher return uncertainty (Israelov & Lo, 2023).

The unique asset context of the YieldMax Exchange Traded Fund (ETF) presents a rare case where an asset experiences high price volatility but is accompanied by very large monthly dividend cash flows. Theoretically, dividend policy is often viewed as an instrument to reduce uncertainty for investors, in line with the Bird-in-the-Hand Theory, which states that dividends can mitigate the risk of price volatility. However, the phenomenon observed in companies in the IDX30 index for the 2019-2023 period actually indicates the opposite direction. Empirical data reveals a significant positive relationship, where each increase in Dividend Yield is followed by a 52.58% increase in stock price volatility (Hadady et al., 2023). Most DCA vs. LSI research is conducted on stock market indices or conventional mutual funds (Eriksson et al., 2021; Zein & Darma, 2023). This study will fill the gap in the literature by testing the effectiveness of DCA in moderating the relationship between Dividend Yield (DY) and Investment Performance (Holding Period Return - HPR) on this very specific and high-risk asset.

2. Research Methods

This research is a comparative quantitative study using a back-testing simulation approach. The back-testing simulation approach, based on data from April 2024 to April 2025, was used to simulate the investment performance that would have been achieved if a lump-sum investment strategy and dollar-cost averaging were applied as moderation during that time period. This research is non-experimental in nature because the researchers did not manipulate the independent variables but instead measured existing variables.

3. Results and Discussion

3.1. The Effect of Dividend Yield on Investment Performance

The results of the study indicate that Dividend Yield has a positive and significant effect on the Investment Performance of ETF YieldMax. This finding is based on the Random Effect Model (REM) estimation results, which show that Dividend Yield has a coefficient of 2.660700 with a probability value of 0.0003. Because the probability value is less than 0.05 and the coefficient direction is positive, Dividend Yield is proven to have a positive and significant effect on Holding Period Return (HPR). Thus, Hypothesis 1 is accepted. These results indicate that during the period April 2024 to April 2025, an increase in Dividend Yield is followed by an increase in Investment Performance as measured by Holding Period Return.

These inferential findings also align with the results of the descriptive analysis. In the Lump-Sum Investing (LSI) strategy, the average Dividend Yield was recorded at 3.54%, while the average HPR was at a positive level of 4.12%. This indicates that during the study period, the dividend cash flow generated by the YieldMax ETF was still able to significantly contribute to the formation of total portfolio returns. In other words, although this instrument carries the risk of asset price depreciation, the amount of Dividend Yield received by investors remains associated with positive investment performance on average.

Theoretically, these results can be explained by the Bird-in-the-Hand Theory, which views dividends as a more certain income than capital gains, which are still dependent on market price fluctuations. Furthermore, these results align with Signaling Theory, which positions dividends as a signal of an instrument's or company's ability to generate cash flow. In the context of the YieldMax ETF, high dividend distribution appears to be a crucial factor in supporting investor total returns over the observation period, particularly since dividends are a direct component in calculating investment performance.

The results of this study support previous research by Fama & French (2001), which showed that dividend yield is a relevant factor in explaining variations in stock returns. This finding also aligns with research by Pratama & Kurnia (2023), which found that dividend yield has a positive and significant effect on investment performance or stock returns. Therefore, this

study strengthens empirical evidence that dividend yield not only serves as an indicator of passive income but is also a crucial component in shaping investor total returns.

In addition to supporting research on the effect of dividend yield on returns, this study's results also align with those of Fong (2017), Zein & Darma (2023), and Eriksson et al. (2021), which show that a lump-sum investing strategy, in many cases, produces better investment performance than gradual investing. This occurs because a lump-sum strategy invests all capital at the beginning of the period, providing investors with full exposure to potential market returns and income distribution. In the context of this study, the lump-sum investing strategy allows ETF YieldMax investors to benefit from dividend yield from the beginning of the observation period, allowing monthly dividend cash flows to more optimally contribute to holding-period returns.

However, the results of this study differ from those of Sari & Budiasih (2022), which showed that the effect of dividend yield on long-term investment performance can be moderate, particularly when excessively high dividend payouts are perceived as potentially limiting a company's expansion potential. This difference can be explained by the fact that Sari and Budiasih's research focused on the banking sector, while this study focuses on the YieldMax ETF, which is characterized primarily by high monthly dividend distributions through an option income strategy. Therefore, the dividend yield on the YieldMax ETF is understood not only as a profit distribution policy, as in conventional companies, but also as a key component of the investment instrument's return structure.

Thus, the results of this study strengthen two bodies of literature: the literature on the positive effect of dividend yield on investment performance and the literature on the advantages of the Lump-Sum Investing strategy in providing full exposure to potential returns and income distributions from the beginning of the investment period. In the YieldMax ETF, a high Dividend Yield becomes more meaningful because all capital is exposed from the outset to monthly dividend distributions. Therefore, Dividend Yield is not merely an indicator of passive income but also a return component empirically proven to contribute positively to investment performance.

The empirical contribution of this study lies in expanding the context of previous research, because the relationship between Dividend Yield, Lump-Sum Investing strategy, and Investment Performance is not only tested on conventional stocks, stock indexes, or mutual funds, but also on the YieldMax ETF which has the characteristics of high dividend yield, monthly dividend distribution, synthetic covered call strategy, high volatility, and the risk of asset depreciation. Thus, this study provides empirical evidence that in high-yield instruments such as the YieldMax ETF, Dividend Yield obtained through the Lump-Sum Investing strategy can still contribute positively to Investment Performance during the observation period.

However, these results still require careful interpretation given the relatively short research period, the highly specific instruments studied, and the imperfections of the research model in terms of normality, heteroscedasticity, and autocorrelation. Therefore, these results are best understood as contextual empirical findings for the YieldMax ETF from April 2024 to April 2025, rather than as an absolute generalization for all high-dividend investment instruments.

3.2. The Moderating Role of Dollar Cost Averaging (DCA) Policy

The results of the study indicate that Dollar Cost Averaging (DCA) does not moderate the relationship between Dividend Yield and Investment Performance. This is based on the Random Effects Model (REM) estimation results, which show an XZ interaction coefficient of 0.135203 with a probability value of 0.8916. Therefore, the second hypothesis, which assumes positive moderation, is rejected. Therefore, statistically, DCA is neither proven to strengthen nor weaken the effect of Dividend Yield on HPR in the YieldMax ETF.

These inferential results are also consistent with the research's descriptive statistics. The Dollar Cost Averaging (DCA) strategy recorded a slightly higher average Dividend Yield of 3.95%, but the average HPR was -1.43%. Conversely, the Lump-Sum Investing (LSI) strategy showed an average Dividend Yield of 3.54%, with a positive average HPR of 4.12%. This finding suggests that the slightly higher dividend yield in the DCA strategy does not automatically translate into better investment performance. This condition aligns with the initial discussion of your thesis, which showed that DCA was not proven to be an effective moderator in the relationship between Dividend Yield and HPR.

Substantively, these conditions indicate that in YieldMax ETFs, a gradual purchase strategy through DCA has not been able to provide additional advantages in the relationship between yield and return. Although theoretically, DCA is often seen as being able to reduce market timing risk and lower average purchase prices, these benefits are not statistically robust in this research model. In the context of YieldMax ETFs that pay high monthly dividends, the accumulation of holdings since the beginning of the period appears to provide investors with greater opportunity to capture the benefits of dividend distributions compared to a gradual purchase strategy.

These findings support research by Israelov & Lo (2023), which states that compared to lump-sum investing, the Dollar Cost Averaging strategy tends to have lower expected returns and is more sensitive to the sequence of returns. This research also aligns with Fong (2017), Eriksson et al. (2021), and Zein & Darma (2023), which show that a lump-sum strategy can, in many cases, produce better investment performance than phased investing because all capital is more quickly exposed to potential market returns and income distribution.

On the other hand, the results of this study contradict those of Brennan et al. (2005), Reyhan et al. (2021), and S. Wang (2022), which stated that DCA can help reduce investment risk, is

suitable for novice investors, and is effective for volatile assets like crypto. These differences in results can be explained by the characteristics of the research object. ETF YieldMax is affected not only by price volatility but also by the size of monthly dividend distributions. Therefore, while DCA can help investors achieve a more stable average purchase price, this strategy also results in capital not being fully exposed from the beginning of the period. As a result, investors potentially miss out on some of the dividend distribution benefits that could have been obtained if all capital had been invested from the start through a Lump-Sum Investing strategy.

However, these results do not imply that DCA is inherently bad or useless. What was not proven in this study was its moderating effect on the relationship between dividend yield and investment performance, not the full benefits of DCA as a behavioral strategy, investment discipline, or tool to reduce investor psychological stress. Therefore, DCA can still have practical value in different contexts, but for the YieldMax ETF during this study period, DCA did not prove to be an effective moderating variable.

The empirical contribution of these findings is that they provide evidence that the effectiveness of DCA cannot be generalized to all volatile assets. In high-yield instruments like the YieldMax ETF, price volatility is not the sole determinant of investment performance, as the timing of dividend receipts and the amount of capital previously exposed are also important factors. Therefore, this study extends empirical studies on DCA by showing that for assets characterized by high dividend yields, monthly distributions, synthetic covered calls, and NAV erosion risk, DCA does not always function as an effective moderating variable. This finding also fills a research gap because previous research has primarily discussed DCA on stock indices, mutual funds, or crypto assets, whereas this study examines DCA on the YieldMax ETF, which has different risk characteristics and return structures.

4. Conclusion

First, based on the Random Effect Model (REM) estimation results, the Dividend Yield variable was identified as having a positive and significant effect on Investment Performance (Holding Period Return/HPR). This is indicated by the Dividend Yield coefficient of 2.660700 with a probability value of 0.0003. Thus, Hypothesis 1 is accepted. Descriptively, this finding is also reflected in the Lump-Sum Investing (LSI) strategy which shows an average Dividend Yield of 3.54% and an average HPR of 4.12%, so that during the study period, dividend cash flow is still associated with the formation of positive investment performance. Second, the Dollar Cost Averaging (DCA) variable is not proven to moderate the relationship between Dividend Yield and Investment Performance. This is indicated by the interaction coefficient of 0.135203 with a probability value of 0.8916, so Hypothesis 2 is rejected. Descriptively, the DCA strategy does show a slightly higher average Dividend Yield, at 3.95%, but the average HPR is actually negative at -1.43%. Thus, a higher Dividend Yield in the DCA strategy does not automatically result in better Investment Performance. Third, based on the results of the Lagrange

Multiplier Test, the most appropriate model used in this study is the Random Effects Model (REM). These results indicate that the characteristics between cross-section units in the research data cannot be ignored, so the pooled/common effects model is not sufficiently representative to explain the variation in the research data. Fourth, the results of the diagnostic test indicate that the research model does not fully meet classical assumptions, particularly in aspects of residual normality, cross-section heteroscedasticity, and autocorrelation, although no serious multicollinearity problems were found. Therefore, the results of this study are more appropriately understood as contextual empirical findings on ETF YieldMax during the observation period and should be interpreted with caution. Overall, the results of this study indicate that Dividend Yield is a more dominant factor in explaining the investment performance of YieldMax ETFs compared to differences in capital allocation strategies through DCA. This finding provides empirical evidence that in high-yield instruments based on synthetic covered calls, the amount of monthly dividend distribution and the duration of capital exposure since the beginning of the period are important factors in determining Holding Period Return. Therefore, this study expands the empirical evidence on the relationship between Dividend Yield, Lump-Sum Investing strategies, and investment performance in YieldMax ETFs, which have characteristics that differ from conventional stocks, stock indices, mutual funds, and crypto assets.

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