

## **ABSTRACT**

This study explores the construction of an optimal portfolio using the single index model and the Harry Markowitz model with 100 cryptocurrencies to maximize returns and minimize risk. The results indicate that the Harry Markowitz model outperforms the single index model in forming a portfolio. The portfolio consists of cryptocurrencies with varying type of cryptocurrency, excluding stable coins, and considering factors such as the average interest rate and expected market return. The Sharpe index is utilized to evaluate portfolio performance, with specific cryptocurrencies identified as optimal within the constructed portfolios. Validity and hypothesis tests confirm the effectiveness of the Harry Markowitz model in forming optimal portfolios. The study contributes to the understanding of portfolio optimization in the cryptocurrency market, highlighting the importance of utilizing advanced models like the Harry Markowitz model for enhanced risk-return trade-offs. By analysing the performance of cryptocurrencies using these models, investors can make informed decisions to maximize returns while managing risk effectively. The findings suggest that the Harry Markowitz model is a valuable tool for constructing optimal portfolios in the dynamic and volatile cryptocurrency market, offering insights for investors seeking to navigate this asset class efficiently.

**Keywords:** Cryptocurrency, Investment, Optimal Portfolio, Portfolio Management, Financial Technology