

COMPARISON OF PERFORMANCE BETWEEN MARKOWITZ MODEL AND ENHANCED INDEX TRACKING MODEL

(Perbandingan Prestasi antara Model Markowitz dengan Model Penjejakan Indeks Dipertingkat)

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ABSTRACT

The rapid growth of exchange-traded fund (ETF) in Malaysia and recommendation of investment professionals raise doubt on whether a portfolio which tracks the performance of an index will perform better than a carefully built portfolio, such as the one built by using the classical Markowitz Model. Thus, the composition of an optimal portfolio built based on the Markowitz model and enhanced index tracking model using the data of finance, plantation and industrial indices of the Malaysian stock market from 2012-2017 will be investigated. Comparisons are made on their risk-adjusted performance using expected return, the Sharpe ratio and information ratio. The study found that the Markowitz portfolio includes only 31.43% to 33.33% of the respective index components inside the portfolio built. Overall, the Markowitz model outperforms the enhanced index tracking model in constructing an optimal portfolio with a higher expected return, Sharpe ratio and information ratio in finance and industrial sectors.

Keywords: Optimal portfolio; Sharpe ratio; Information ratio

ABSTRAK

Pertumbuhan pesat dalam Dana Dagangan Bursa (ETF) di Malaysia dan saranan pakar pelaburan telah menimbulkan keraguan sama ada portfolio yang menjejaki indeks akan mempunyai prestasi yang lebih baik daripada portfolio yang dibina secara teliti dengan menggunakan model Markowitz. Oleh itu, komposisi portfolio optimum yang dibina berdasarkan model Markowitz dan model penjejakan indeks dipertingkat menggunakan data indeks kewangan, perladangan dan perindustrian pasaran saham Malaysia dari tahun 2012-2017 akan dikaji. Perbandingan dibuat berdasarkan prestasi kedua-dua model yang disesuaikan dengan risiko menggunakan pulangan jangkaan, nisbah Sharpe dan nisbah informasi. Kajian ini mendapati bahawa portfolio Markowitz hanya merangkumi 31.43% hingga 33.33% dari komponen indeks masing-masing dalam portfolio yang dibina. Secara keseluruhannya, prestasi model Markowitz mengatasi model penjejakan indeks dipertingkat dalam pembinaan suatu portfolio optimum dengan pulangan jangkaan, nisbah Sharpe dan nisbah Informasi yang lebih tinggi dalam sektor kewangan dan perindustrian.

Kata kunci: Portfolio optimum; nisbah Sharpe; nisbah Informasi

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