UNIVERSITY TECHNOLOGY MARA

TECHNICAL REPORT

OPTIMIZING PORTFOLIO SELECTION USING LINEAR PROGRAMMING MODEL
(P7M22)

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ABSTRACT

Based on data provided by a particular business under consideration, optimization techniques were employed in this research to generate an optimal investment in a specified portfolio that provides maximum returns with minimal inputs. A sensitivity analysis are performed to test the robustness of the resultant model to changes in input parameters. The linear programming optimization are used to find the best investment portfolio with the budget of RM5,000 and investments in 7 different areas. The purpose of the model is to maximize the return on the portfolio. The maximum rate of return slightly decreases by 22.05% when the total investment for each area decreased by 10% and the maximum rate of return slightly increase by 20.61% when the total investment for each area increased by 10%. Meanwhile the maximum rate of return shows a modest increase by 5% when the dividend rate increased by 5%.