Multi-Period Portfolio Optimization Model
for the New NISA Scheme and Human Capital

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Abstract

This study proposes a multi-period portfolio optimization model that incorporates human capital, consumption behavior, and the tax-exempt structure of Japan's new NISA scheme. The model uses Conditional Value at Risk (CVaR) to manage downside risk, while accounting for transaction costs and rebalancing limits. Investment decisions are optimized over time under uncertainty in asset prices and interest rates. Numerical experiments simulate 35 years of investment with realistic income patterns and NISA constraints. The results demonstrate stable consumption, conservative risk control, and effective tax-exempt investment utilization under practical scenarios.