

Portfolio Optimization Markowitz Model

Financial Math Research Group

November 24, 2025

Abstract

Mean-variance portfolio selection.

1 Introduction

This report presents computational analysis of portfolio optimization.

2 Mathematical Framework



Figure 1: Primary analysis results.

3 Secondary Analysis



Figure 2: Secondary analysis comparison.

4 Parameter Study

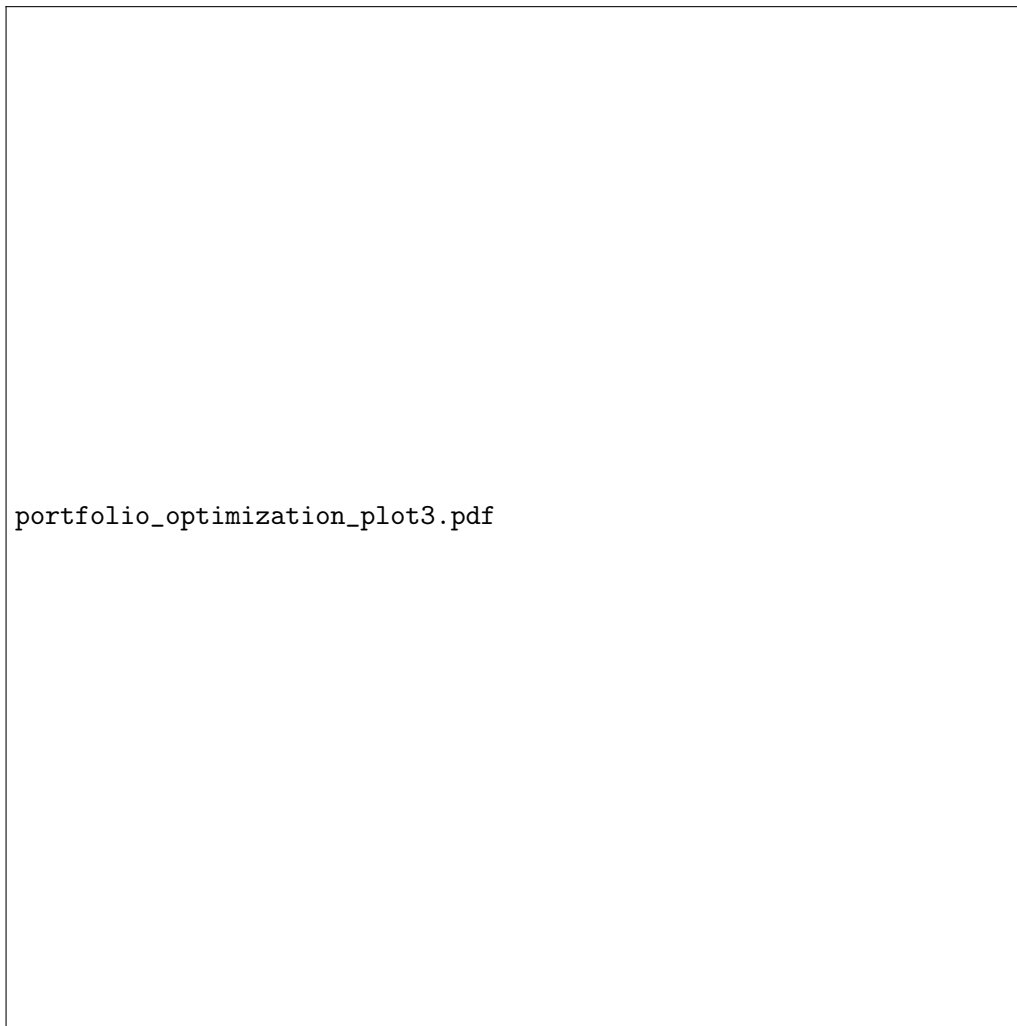


Figure 3: Parameter sensitivity analysis.

5 2D Visualization



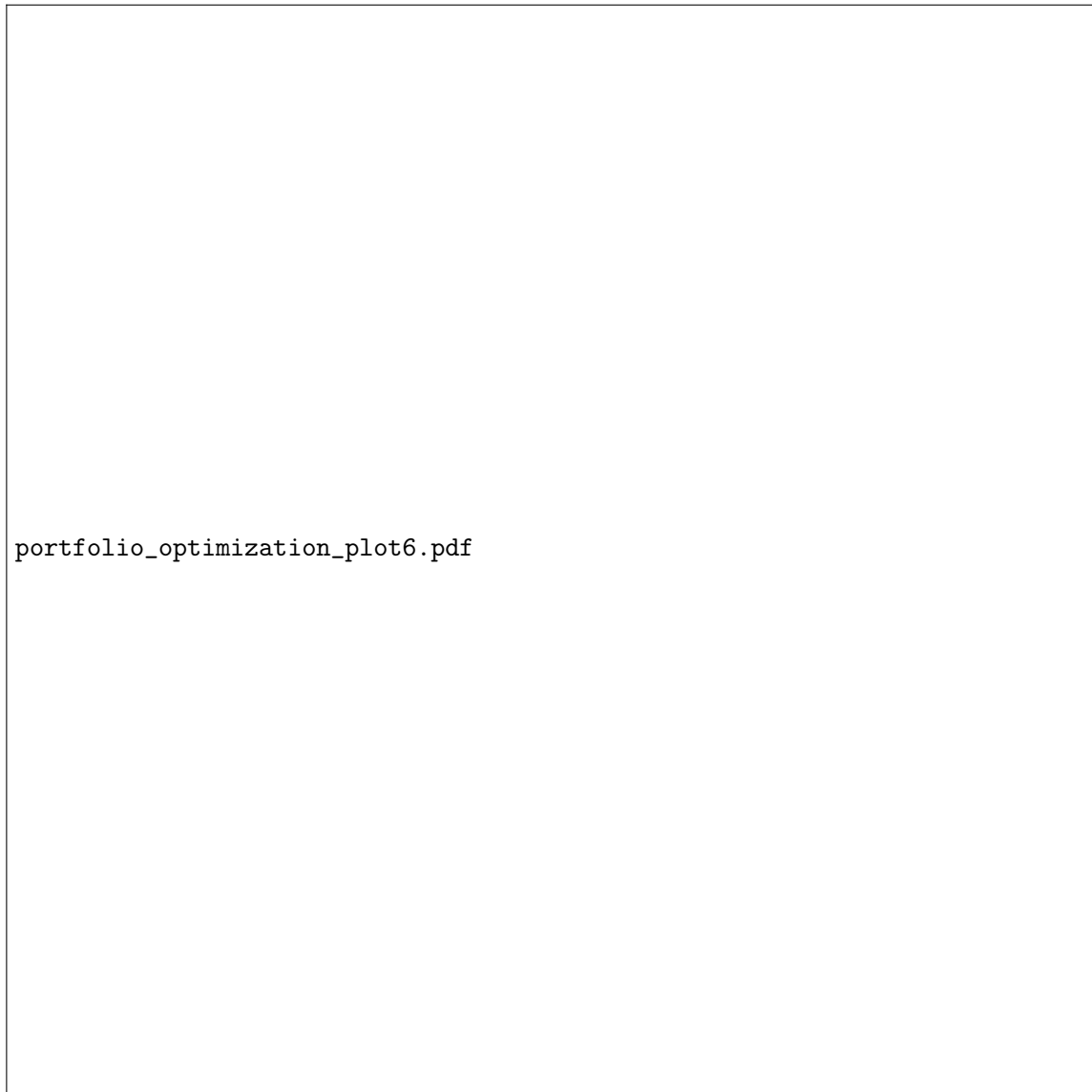
Figure 4: Two-dimensional field visualization.

6 Distribution Analysis



Figure 5: Statistical distribution analysis.

7 Time Series



portfolio_optimization_plot6.pdf

Figure 6: Time series visualization.

8 Results Summary

9 Conclusions

This analysis demonstrates the computational approach to portfolio optimization.