

## Stock Portfolio Optimisation

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**Client/Sponsor:** Thabo Sanders

**Purpose:**

The purpose of this project is to formulate an optimized portfolio of domestic equities that are available for investment on the Johannesburg Stock Exchange (JSE) from January 2015 to September 2021. The investment strategy selected should be in line with the needs and requirements of the investor. The portfolio should hold no less than 5 stocks and not more than 20. The portfolio optimization scheme should apply half-yearly balancing for the period before 01 September 2021 and fortnightly balancing thereafter to identify the equities to be included in the portfolio and their relative weights, with a clear justification for any, buys or sells. Assume any excess cash will be reinvested in the stock market or in the money market, in line with the allocation strategy. The initial investment in the portfolio will be R200 000.

**Scope / Major Project Activities:**

Activity	Description
Develop an investment policy statement	Create an investment policy statement (IPS) for the fund which identifies investor needs and requirements.
Benchmark selection	Identify suitable benchmark between JSE All Share Index (ALSI), JSE Top 40 Index, or any other indices on the JSE. Outline benchmark performance.
Stock selection	Select equities from the Johannesburg Stock Exchange.
Portfolio rebalancing	Rebalance half-yearly from January 2015 to July 2021, fortnightly from September 2021.
Portfolio evaluation	Calculate key metrics and conduct an attribution analysis for the portfolio.

### This project does not include:

- Implementing any solutions or recommendations
- The investment strategy must not deviate from the investment policy statement (ISP).
- Assumes zero transaction costs and commission when executing trades.
- Equities that are not on the JSE main board and whose data is not available on Yahoo Finance will not be included.

### Deliverables:

Deliverable	Description/ Details
Investment Policy Statement (IPS)	Describes the investor characteristics (including is the investor profile questionnaire), the investment style, restrictions, asset managers, benchmark performance assessment and expected turnover activity.
Performance Report	Tracks performance of the portfolio. Analyses the microeconomic, financial market and company-specific factors that affects portfolio risk and performance. Outlines a justification for trades and the relative and absolute performance of the portfolio over the investment period.

### Schedule Overview / Major Milestones:

Milestone	Expected Completion Date	Description/Details
<i>Investment Policy Statement</i>	<i>Day 1</i>	<i>Investor risk and return profile confirmed</i>
<i>Initial stocklist</i>	<i>Day 2</i>	<i>Asset allocation complete and benchmark selected.</i>
<i>Stock data cleaned</i>	<i>Day 3 - 4</i>	<i>JSE stock data processed</i>
<i>Portfolio rebalancing complete</i>	<i>Day 5 - 7</i>	<i>Portfolio composition and trading details are available.</i>
<i>Performance analysis complete</i>	<i>Day 8</i>	<i>Metrics computed.</i>
<i>Performance report complete</i>	<i>Day 10</i>	<i>Write up complete.</i>

### \*Estimated date for completion:

The project is expected to take 10 days to complete from the start date.