

Structure of Research Notebook

1. Introduction

- What is the goal of your trading strategy?
- What hypothesis are you testing?
- Mention the financial logic: e.g., trend-following, mean-reversion, momentum.

2. Choice of Trading Signal

- Which signal did you use? (e.g., Moving Average Crossover, RSI, Momentum)
- Why? What's the intuition?
- Is there any theoretical or empirical basis?

3. Asset / Stock Selection

- Which stock(s) or index did you choose?
- Why? Volatility, trading volume, sector logic?
- In-sample vs. out-of-sample logic

4. Parameter Calibration

- What parameters are involved? (e.g., window size, thresholds)
- How did you choose them? Any optimization?
- Why are these choices economically reasonable?

Example: "We chose a 50-day SMA and 200-day SMA to capture medium- vs. long-term trends, based on academic literature and industry practice."

5. Empirical Results

- Key charts (cumulative return, drawdown, PnL, signal vs. price, etc.)
- Key metrics: Sharpe ratio, win rate, volatility, max drawdown
- Interpretation: When does it work? When does it fail?

6. Discussion

- Economic interpretation of results
- Comparison to a benchmark (buy & hold)
- Robustness: how sensitive is the strategy to parameter changes?

7. Conclusion

- Summary of what works and what doesn't
- Would an investor use this strategy? Under what conditions?

- Any ideas for improvement or future work?