

Exercise 1D: Momentum Decile Portfolios

BUSI 722: Data-Driven Finance II

Using the momentum decile assignments from Exercise 1C, construct and evaluate momentum portfolios.

Submission

Submit a **Jupyter notebook** (.ipynb) containing all code, output, and charts. Use markdown cells for any written discussion.

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1. Using the momentum decile assignments from Exercise 1C, compute the **cumulative return** of each decile portfolio from January 2021 through January 2026. Assume equal-weighted monthly rebalancing.
 2. Plot the cumulative returns of all 10 decile portfolios on a single chart (use a log scale for the y-axis).
 3. Compute and report the **annualized Sharpe ratio** of each decile portfolio (assume a risk-free rate of zero for simplicity).
 4. What is the annualized mean return and Sharpe ratio of the **long-short** portfolio (Decile 10 minus Decile 1)?