

Exercise 1C: Momentum and Lagged Return

BUSI 722: Data-Driven Finance II

Using the monthly dataset built in Exercise 1A (with `momentum`, `return`, and `MA Ratio` computed), analyze the relationship between momentum, lagged return, and future returns.

Submission

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

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1. For each month, sort stocks into momentum **deciles** (10 equal groups). Compute the equal-weighted average return of each decile. Report the mean monthly return across all months for each decile.
 2. In a markdown cell, discuss whether there is a monotone relationship between momentum decile and future return.
 3. Compute the cross-sectional correlation between `momentum` and `MA Ratio` each month. Report the time-series average. In a markdown cell, discuss whether these two technical indicators are measuring the same thing.