

This zip file contains the data files and matlab codes required to replicate figures 1 to 3 and tables 2 to 5 in the paper “Maximizing the out-of-sample Sharpe ratio” by Nathan Lassance, accepted in 2026 for publication in *Operations Research*.

Data files

There are five .txt files that contain the four datasets of monthly returns we use in our analysis as well as the monthly risk-free rate. These files are of size $T \times N$, where T (the number of rows) is the total number of months in each dataset and N (the number of columns) is the number of assets. The data spans the period from July 1963 to May 2025. The files were obtained on Kenneth French’s data library: https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html.

- *Data10MOMJuly1963May2025.txt* contains the dataset of 10 portfolios sorted on momentum.
- *Data25SBMJuly1963May2025.txt* contains the dataset of 25 portfolios formed on size and book-to-market.
- *Data25OPINJuly1963May2025.txt* contains the dataset of 25 portfolios formed on size and operating profitability.
- *Data30INDJuly1963May2025.txt* contains the dataset of 30 industry portfolios.
- *DataRFJuly1963May2025.txt* contains the risk-free rate.

Matlab codes

There are 32 matlab codes in this zip file:

- Three of them are the main codes that replicate figures 1 to 3 in the paper; they are called *ReplicateFigureX.m*, where X goes from 1 to 3.
- Four of them are the main codes that replicate tables 2 to 5 in the paper; they are called *ReplicateTableX.m*, where X goes from 2 to 5.
- 21 of them are the codes that implement the Sharpe ratio hypothesis test of Ledoit and Wolf (2008), “Robust performance hypothesis testing with the Sharpe ratio”, *Journal of Empirical Finance*, 15:850-859. These codes were downloaded on Michael Wolf’s website: <https://www.econ.uzh.ch/en/people/faculty/wolf/publications.html> and they are used in *ReplicateTable4.m* and *ReplicateTable5.m*.
- Three of them are the codes that implement the MAXSER portfolio strategy: *MAXSERsharpe.m* is the main code and it calls *L1RegressionMAXSERsharpe.m* and *L1ConstMAXSERsharpe.m*. These codes are used in *ReplicateTable4.m* and *ReplicateTable5.m*.
- *analytical_shrinkage.m* is the code that implements the nonlinear shrinkage estimator of the covariance matrix by Ledoit and Wolf (2020), “Analytical nonlinear shrinkage of large-dimensional covariance matrices”, *Annals of Statistics*, 48:3043-3065. This code is used in *ReplicateFigure3.m* and all *ReplicateTableX.m*.

Note: Some of the matlab programs take time to complete. In the code, we indicate some shortcuts to speed up the computation.