This zip file contains the necessary data files and matlab codes to replicate figures 1 to 8 and tables 2 to 4 in the main body of the paper "Kan, R. & Lassance, N. Optimal Portfolio Choice with Fat Tails and Parameter Uncertainty. *Journal of Financial and Quantitative Analysis* (2024), forthcoming."

Data files

There are six .txt files that contain monthly excess returns on the six datasets we use in our analysis. These files are of size T x 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.

- *Dataset10MOM.txt* contains the dataset of 10 portfolios formed on momentum spanning January 1927 to July 2023.
- *Dataset16ANOM.txt* contains the long and short legs of eight low-turnover anomalies in Novy-Marx and Velikov (2016) spanning July 1963 to December 2013.
- *Dataset25SBETA.txt* contains the dataset of 25 portfolios formed on size and market beta spanning July 1963 to July 2023.
- *Dataset25SBTM.txt* contains the dataset of 25 portfolios formed on size and book-to-market spanning July 1926 to July 2023.
- *Dataset25OPINV.txt* contains the dataset of 25 portfolios formed on operating profitability and investment spanning July 1963 to July 2023.
- *Dataset30IND.txt* contains the dataset of 30 industry portfolios spanning July 1926 to July 2023.

The file *Dataset16ANOM.txt* is obtained from Robert Novy-Marx's website (https://mysimon.rochester.edu/novy-marx/data_lib/index.html) and the remaining files from Kenneth French's website (http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html). In addition to these six data files, *DataFigure8.txt* contains the necessary data to construct Figure 8 in the paper, which depicts the net-of-cost annualized out-of-sample utility of the two-fund and three-fund rules calibrated to the multivariate normal, t, and elliptical distributions.

Matlab codes

There are 19 matlab codes in this zip file:

- Eight of them are the main codes that replicate figures 1 to 8 in the main body of the paper; they are called *ReplicateFigureX.m*, where *X* goes from 1 to 8.
- 10 of them are the main codes that replicate tables 2 to 4 in the main text of the paper; they are called *ReplicateTable2PanelX.m*, where *X* goes from A to C, *ReplicateTable3PanelX.m*, where *X* goes from A to F, and *ReplicateTable4.m.*
- The last code is *mlstudent.m*, which we use to compute the maximum-likelihood estimator of the number of degrees of freedom in the multivariate *t*-distribution.

Note: several of these matlab codes use a variable "nobs", which is the number of simulations either for the Monte Carlo analysis or for computing the parameters (k1,k2,k3). We have reduced the value of nobs so that the codes run faster, but we indicate in comments the value of nobs we have used to produce the figures and tables in the paper.