Fama-French Five-Factor Model Replication Results

Min (Minna) Jiang

University of Toronto

February 3, 2025

All replicated results are compared with Ken French's website

→ **Univariate** sorts on Size, B/M, OP, and Inv

→ Value Weight Returns – Monthly

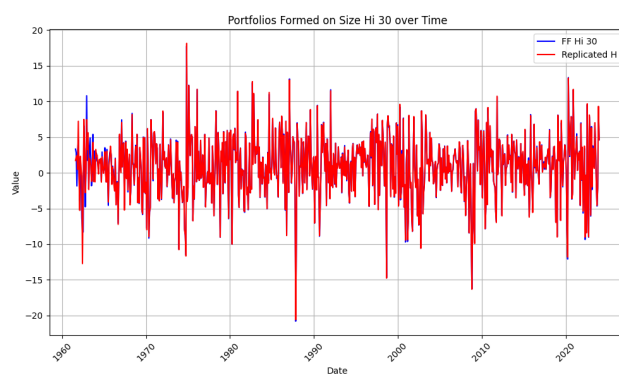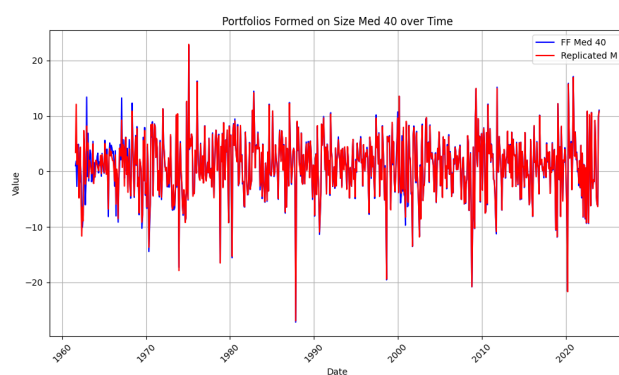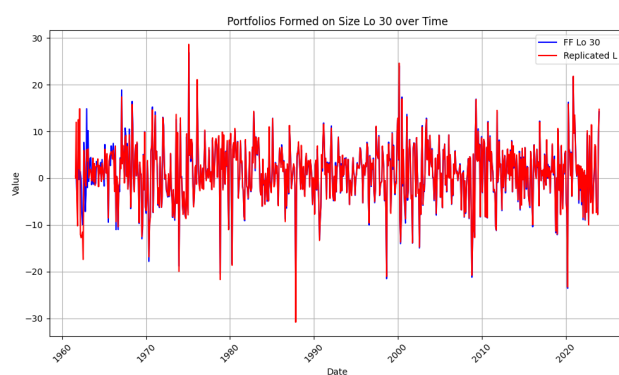(breakpoints are the 30th and 70th percentiles for NYSE stocks)

1 Size Factor

Score for Size Lo 30: 96.16118126384151

Score for Size Med 40: 97.05813168319881

Score for Size Hi 30: 99.11182502190144
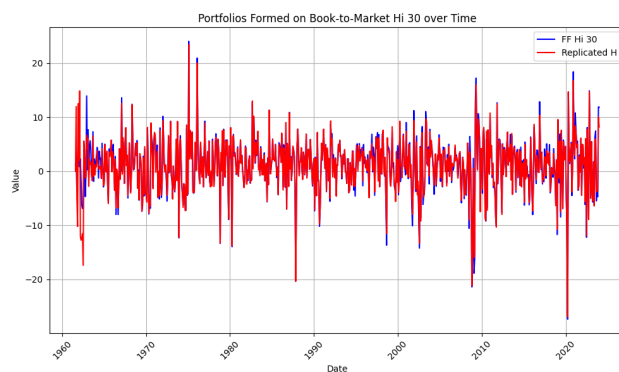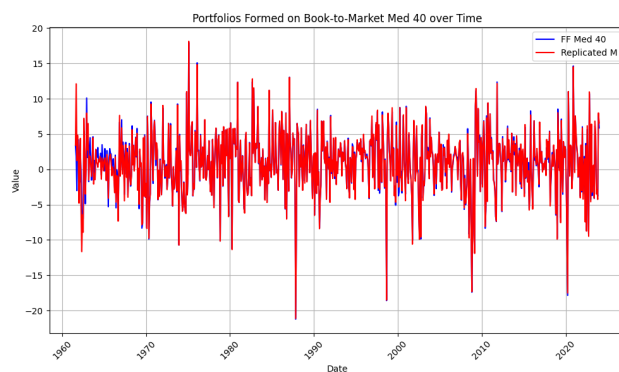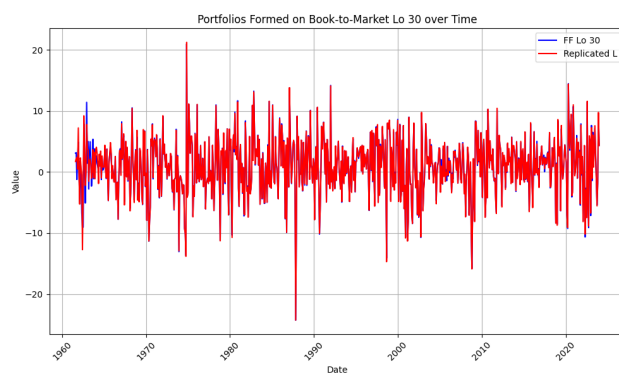
Average Score: 97.44371265631393

Portfolios Formed on Size Lo 30 over Time

Portfolios Formed on Size Med 40 over Time

Portfolios Formed on Size Hi 30 over Time

2 Value factor

Score for Book-to-Market Lo 30: 99.23669316550038

Score for Book-to-Market Med 40: 96.95092584773919

Score for Book-to-Market Hi 30: 93.66173468643326

Average Score: 96.61645123322427
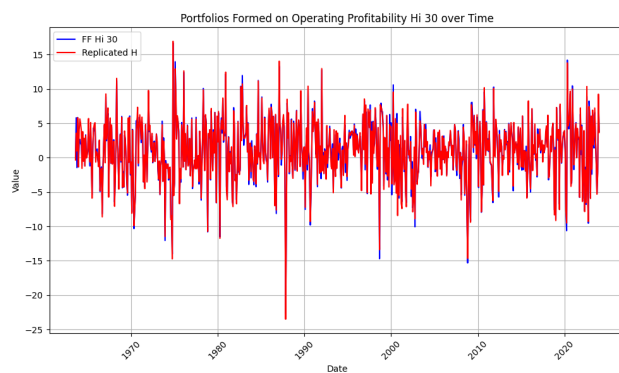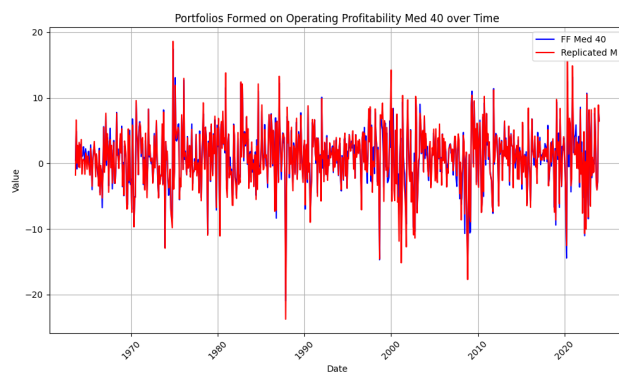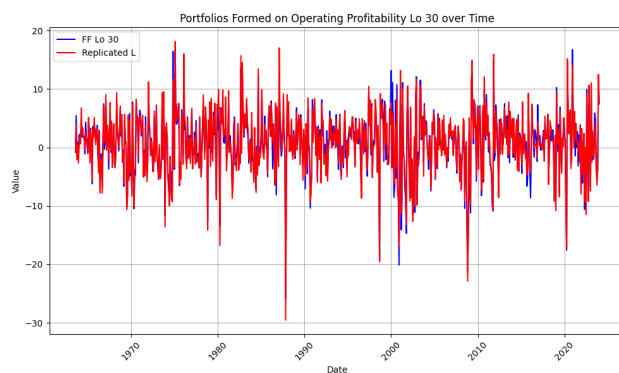
3 Profitability factor

Score for Operating Profitability Lo 30: 94.02574270410904

Score for Operating Profitability Med 40: 89.46519074376725

Score for Operating Profitability Hi 30: 97.68210563734533

Average Score: 93.72434636174053

The replication score for Med 40 is relatively low. Since people often use RMW while ignoring Med 40, it's possible that DFA manipulates this component, making it difficult for us to detect.

4 Investment factor

Score for Investment Lo 30: 98.47409837389128

Score for Investment Med 40: 99.27273242224933

Score for Investment Hi 30: 98.0993453953047

Average Score: 98.6153920638151

Portfolios Formed on Investment Lo 30 over Time

Portfolios Formed on Investment Med 40 over Time

Portfolios Formed on Investment Hi 30 over Time