FIN 3080 Investment Analysis and Portfolio Management

Spring 2023 | CUHK (SZ)

Assignment III

Due: 17:59, April 7, 2023

Tips

- Please reserve at least one hour for submission. Late submission without justification is not acceptable.
- A complete submission shall be a compressed package named with "YourID_YourName" containing (i) one readable PDF file (1.5-spaced, 11pt, no greater than 5 pages) with your, if any, arguments, tables and figures, and (ii) one or many code files that generate the empirical results.
- This homework is on individual basis and each student shall submit her or his own solution. You may discuss with your fellows but plagiarism and fabrication are strictly prohibited.
- **From this homework onwards, you may not use Excel for data analysis and you may not plot figures by hand.**

Problems

1. Please access the CSMAR database and download monthly *closing prices* and *stock returns* for all stocks in the mainboard (including SME) of China's A share market over Jan. 2012 to Dec. 2022 from *China Stock Market Series - Individual Stock Trading*. Sort firms based on their last-month *return* and divide firms into ten groups. By holding all stocks within each group with equal weights and rebalancing positions every month, we can likewise construct ten portfolios. Please plot a bar chart for average monthly portfolios and ten time-series for cumulative portfolio returns from Jan. 2012 to Dec. 2022. Discuss your findings.
2. Additionally download quarterly records for *return on equity (ROE)* over 2012Q1 to 2022Q4 from *China Listed Firms Research Series - Financial Indicators*. Sort firms based on their last-quarter *ROE* and divide firms into ten groups. Again, by holding all stocks within each group with equal weights and rebalancing positions every quarter, we can construct ten portfolios. Replicate you analysis as in the first problem and discuss your findings.