

FIN3210 Fintech Theory and Practice  
Assignment for Week three

Data confidential requirements:

- Do not share datasets with others
- Do not post datasets on the Web site
- Datasets can only be used to work on assignments of FIN3210, CUHK-Shenzhen.

Datasets:

- FIN3210 Week 3 Stock returns.xlsx
- FIN3210 Week 3 Online sales.xlsx

Questions:

- 1) Using the data set of stock returns, sort stocks into quintiles by size every quarter, hold stocks over the quarter, and calculate monthly portfolio returns
- 2) Using the data set of stock returns, sort stocks into quintiles by institutional ownership every quarter, hold stocks over the quarter, and calculate monthly portfolio returns
- 3) Using the data set of stock returns, perform panel regression, and regress stock returns on firm characteristics such as size, book-to-market ratio, return<sub>12</sub>, roa, leverage, ppe, intang, number of analysts, institutional ownership, controlling for or not for firm and year-month fixed effects. Cluster standard errors by firm and year-month (double clustering)
- 4) Using the data set of Online sales, aggregate monthly online sales over quarters, download reported quarterly total sales from CSMAR, and plot figures including both online sales and reported quarterly sales.

Format:

- 1) Font size: 12
- 2) Font type: Times New Roman
- 3) Pages:  $\leq 2$  pages

Deadline: two weeks