MSBD5006

<u>Quantitative Analysis of Financial Time Series</u> (2025 Fall**)**

Instructor

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MSBD5006: Rm 2502, Lift 25-26 / Fri. 7:30pm-10:20pm

Textbook

Ruey S. Tsay, ***Analysis of Financial Time Series***, 2nd edition (Wiley, 2005).

References

Finanal Econometrics by Gourieroux C.and Jasiak J., ***F***, Princeton University Press, 2001.

The Econometrics of Financial Markets By Campbell, Lo and MacKinlay, Princeton University Press, 1997.

Modeliing Financial Time Series with S-plus by E. Zivot and J. Wang, 2003, Springer, New York.

SAS or R program will be used in this course.

Grading Policy: Homework 15%, Attendance 5%, Project 40% and Final Exam 40%

Syllabus and Time table

Ch. 1: Market Indexes, Financial Time Series and their Characteristics (0.5 week)

Ch. 2. Linear Time Series Analysis and Its applications (3.0 weeks)

Ch. 3. Conditional Heteroscedastic Models (2.5 weeks)

Ch. 4. Nonlinear Models and Their Applications. (2 weeks)

Ch. 5. Multivariate Time Series Analysis and Its Applications (1.5 weeks)

Ch. 6. Co-integration Time Series and Its Applications (1 weeks)

Ch. 7. Multivariate Volatility Models and Their Applications (0.5 week)

Ch. 8. Project and Other Topics (2 week)