Syllabus – Financial Modelling and Data Analysis (Part II)

Instructor: CHEUNG Ying Lun

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Class Venue: 博学楼 520 室

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Time: Thursday 09:55 – 12:20

Prerequisites: Students are expected to have basic knowledge in probability theory, statistics and linear algebra. Basic computer programming skills (R in particular) are needed. Some background in financial econometrics would also be useful.

Course Description: This course introduces some basic modeling skills for analyzing financial data like equity returns. It will provide a foundation of basic theory and methodology as well as applied examples with essential statistical and computational techniques to analyzing financial data.

Textbook: David Ruppert and David S. Matteson, "*Statistics and Data Analysis for Financial Engineering with R Examples*," Springer, 2nd edition, 2015.

Grading:

Attendance:	5%	
Assignments:	10%	
Final Exam:	35%	
Total of the second part:	*50%*	

Topics:

1. Equity returns and the random walk model
2. Portfolio theory: Risky returns and efficient portfolios
3. The Capital Asset Pricing Model
4. Factor models
5. Risk management: *VaR* and *Expected Shortfall*