Financial Econometrics and Empirical Finance I
Academic Year 2022/23

LESSON.		TOPICS*	BIBLIOGRAPHY
1		Introduction to the course.	Handouts Ch.1.
2		Different definitions of returns.	Handouts Ch.1.
3		More on returns (some empirical facts)	Handouts Ch.1.
4		The LRW model. Critiques to the LRW model. Volatility and standard deviation. Volatility and time.The discussion concerning time diversification.	Handouts Ch.2,3.
5		The LRW model. Critiques to the LRW model. Volatility and standard deviation. Volatility and time.The discussion concerning time diversification.	Handouts Ch.2,3.
6		Volatility estimation methods. Exponential smoothing, implied volatility.	Handouts Ch. 3.
7		Why return variance is easier to estimate than return expected value.	Handouts Ch. 4.
8		Critiques to the lognormal model. Heavy tails. Possible alternatives.	Handouts Ch. 4.
9		Definition of VaR and its parametric estimate	Handouts Ch. 5.
10		VaR: Non parametric estimate.	Handouts Ch. 5.
11		VaR: Semi-parametric estimate.	Handouts Ch. 5.
12		Summary of matrix calculus.	Handouts Ch. 6,7.
13		Matrix Calculus and Statistics.	Handouts Ch. 6,7,8.
14		Markovitz DeFinetti model. Regression function	Handouts Ch. 6,7,8.
15		The general linear model.	Handouts Ch. 9.
16		The general linear model.	Handouts Ch. 9.
17		The general linear model.	Handouts Ch. 9.
18		The general linear model.	Handouts Ch. 9.
19		How to read the results of a linear model	Handouts Ch. 9.
20		An application of the linear model to finance: style analysis and performance evaluation.	Sharpe (1992) Asset allocation: management style and performance measurement. Handouts Ch. 10.
21		Linear factor models and efficient representation of the Variance Covariance matrix of returns.	Handouts Ch. 11.
22		Factor Identification. Explicit factors (linear regression) hidden factors (principal components). Intro to Principal Components.	Handouts Ch. 11.
23		Hidden factor analysis using Principal Components.	Handouts Ch. 11.
24		Hidden factor analysis using Principal Components.	Handouts Ch. 11.

* The topics schedule is indicative, slight deviations from the schedule are possible

Exercise classes

In parallel with the course we shall hold six exercise classes centered on exercises from past exams

Availability of Course Materials

Syllaboi, handouts, past exams and other material of interest are available in BBoard

Exam

Closed books multiple choice exam. No midterms.

Required study materials for the exam

Handouts/slides of the course

Past exams