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安特卫普管理学院

硕士预科

**金融、投资和金融统计入门介绍**

Start date: Nov., 2017

End date: Jan., 2018

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| **Topic & Professor** | **Description** |
| Time Value of Money货币的时间价值Prof. Dr. M. De Ceuster | This session explores the basics of time value of money calculations. After reviewing the day count conventions, we introduce compounding and discounting at various frequencies including continuous compounding. We also explore various annuities.货币时间价值的基本计算方法：内容涉及天数计算约定、不同频率下的复利和贴现计算，多种年金的计算。 |
| Valuing Bonds and Stocks债券和股票定价Prof. Dr. M. De Ceuster | In this session we apply annuity formulas to the valuation of stocks and bonds. We introduce basic concepts of bond pricing.利用年金公式来对债券和股票定价，并介绍关于债券定价的基本概念。 |
| Computing returns & return indices 收益和指数计算Prof. Dr. M. De Ceuster | This session introduces the calculation of simple returns and continuous returns. We discuss the calculation of average returns (time weighted and dollar weighted returns)简单收益和连续复利收益计算，并讨论平均收益的计算（时间加权和美元加权） |
| Descriptive stats & frequency distributions描述性统计和频率分布Prof. Dr J. Annaert | * Random variables随机变量
* Probabilities概率
* Probability distribution function概率分布函数
* Empirical distribution function; histograms经验分布函数；柱状图
* Quantiles and moments分位点和动差
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| Theoretical distributions & hypothesis testing理论性分布和假设检验Prof. Dr J. Annaert | * Discrete distributions (uniform, Bernoulli, binomial) 离散分布（均匀分布、伯努利分布、二项分布）
* Continuous distributions (uniform, normal, lognormal, Student’s-t)连续分布（均匀分布、正态分布、对数正态分布、学生t分布）
* Law of large numbers大数定理
* Central limit theorem中央极限定理
* Hypothesis tests and confidence intervals: the mean假设检验和置信区间：平均数
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| Portfolio return & risk; covariance & correlation投资组合风险与收益；协方差及关联Prof. Dr. J. Annaert | * Sum of random variables随机变量求和
* Covariance and correlation协方差及关联
* Portfolio returns and risk投资组合风险与收益
 |
| Portfolio selection投资组合Prof. Dr. J. Annaert | * Risk aversion风险规避
* Utility functions效用函数
* Mean-variance utility & indifference curves均值方差效用函数及无差异曲线
* MV Capital allocation均值方差资产配置
* Capital Allocation Line资本配置线
* Sharpe ratio夏普比率
* The risk-free asset无风险资产
* MV portfolio selection均值方差资产组合
* Tangency portfolio切线资产组合
* Two-fund separation两基金分离定理
 |
| Univariate Regression一元回归Prof. Dr. M. De Ceuster | The basic principles of curve fitting are discussed using various loss functions. Simple regression is developed in excel using the solver and the various regression functionalities. The emphasis is put on interpreting the regression output.介绍曲线拟合的基本原则。通过Excel中的规划求解和多种回归函数介绍一元回归。侧重回归结果的分析。 |
| CAPM & Single Index Model资本资产定价模型及单指数模型Prof. Dr. J. Annaert | * Single index model单指数模型
* Variance decomposition方差分解
* Estimating beta贝塔系数估参
* Systematic risk is priced系统性风险定价
* CAPM: theory资本资产定价模型：理论
* The market portfolio市场投资组合
* Security Market Line证券市场线
* CAPM: empirical testing 资本资产定价模型：经验检验
 |
| Financial Markets金融市场简介Prof. Dr. M. De Ceuster | * Forward and Futures
* Options
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| Exam and Interview in the first two weeks of January, 2018 | * 期末考试 /金融硕士招生面试
 |

***Lecturers*:**

Prof. Dr. J. Annaert

Prof. Dr. M. De Ceuster

Prof. Dr. H. Zhang

***Study Material*:**

Hillier, D., S. Ross, R. Westerfield, J. Jaffe and B. Jordan, Corporate Finance (2nd ed.), McGraw Hill, 2013.

Brooks, C. (2014). Introductory Econometrics for Finance (3rd ed.). Cambridge: Cambridge University Press.

***Price***:

* To be confirmed by Shanghai Lixin University of Accounting and Finance.

***Certificate***:

* For participants who successfully pass the exam.