Master of Science in Finance
Self-study pre-course in Finance

Vaduz, July 2018

The candidate for the MSc in Finance at University of Liechtenstein should be aware of the basic topics in the fields of stock and bond valuation, risk and return connection and categories of options. The following chapters cover these topics:

Brealey, R., Myers, S., and Allen, F. (2017). *Principles of corporate finance* (12th ed.). New York, NY: McGraw Hill. [1]

Chapter 2	How to Calculate Present Values
Chapter 3	Valuing Bonds
Chapter 4	The Value of Common Stocks
Chapter 5	Net Present Value and Other Investments Criteria
Chapter 6	Making Investment Decisions with the Net Present Value Rule
Chapter 7	Introduction to Risk and Return
Chapter 8	Portfolio Theory and the Capital Asset Pricing Model
Chapter 9	Risk and the Cost of Capital
Chapter 13	Efficient Markets and Behavioural Finance
Chapter 20	Understanding Options
Chapter 23	Credit Risk and the Value of Corporate Debt
Chapter 24	The Many Different Kinds of Debt

We expect our students to familiarize themselves with the content of the above chapters before the start of the study period, as they provide the basis for the lectures in the first semester. It is entirely up to the student to acquire the necessary knowledge as recommended by us to ensure a smooth start into the study programme.

Should you have any questions, please contact us at master.finance@uni.li.

Prof. Marco J. Menichetti
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[1] Newer versions of this book are available, but the topics covered are the same.

Master of Science in Finance
Self-study pre-course in Mathematics and Statistics

Vaduz, July 2018

Any candidate for the Master's programme in Finance should be aware of the basic topics in the fields of mathematics and statistics. The following topics cover this pre-course:

- Mathematics
    - Sets
    - Functions (one- and multi-dimensional)
    - Matrices
    - Linear Programming
    - Derivations
    - Integrals
- Statistics
    - Random Variables (one- and multidimensional)
    - Density Functions and its Distributions
    - Addition, Multiplication and Convolution of Random Variables
    - Regressions
    - Test-Statistics

Literature:

Jacques, I. (2013). *Mathematics for economics and business*. New York, NY: Pearson Education.

Lind, D. A., Mason, R. D., & Marchal, W. G., (2000). *Basic statistics for business and economics*. Boston, MA: McGraw-Hill/Irwin.

We expect our students to familiarize themselves with the content of the above literature before the start of the study period, as they provide a basis for the lectures in the first semester. It is entirely up to the student to acquire the necessary knowledge as recommended by us to ensure a smooth start into the study programme.

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