

Module Nr.	224		
Title	International Financial Modeling		
Applicability			
Module type	obligatory		
Language of Instruction	English		
Teaching Methods	Tuition in seminars	Frequency of offer	weekly
Semester	5. Semester		
SWS	4		
ECTS-Credits	5	Workload	50 / 40 / 40 / 20
Corresponding Courses		Prerequisites	
Assessment Method	SP (written exam)	Exam aids to be used	PC, Laptop, Open book
Responsibility for the course	Prof. Dr. Dr. Häcker		
Lecturer(s)	Prof. Dr. Dr. Häcker		

### Learning outcomes

With regard to the qualification category of *knowledge and understanding*, the course participants are able to:

- provide an overview of the most important valuation methods and to compare these.
- relate corporate finance to other modules such as financial management, portfolio management and derivatives.
- relate corporate planning to corporate valuation and to describe the linkages in their own words.

With regard to the qualification category of *abilities*, the course participants are able to:

- use their knowledge about planning and valuation methods to develop a professional standard model for corporate valuation which incorporates the principles of financial modeling.
- obtain the data necessary for a corporate valuation from information providers such as Bloomberg or Thomson Reuters and to process the data.
- independently structure complex tasks in corporate valuation and to develop independent modules to solve these tasks.
- critically evaluate the results of the corporate valuation and to clarify any differences.
- interpret the results of the corporate valuation and to independently draw conclusions for corporate finance transactions.
- review the structure of the valuation model and the results of the corporate valuation with the help of a model review.

With regard to the qualification category of *competencies*, the course participants are able to:

- transfer the results from the corporate valuation to other modules such as financial management, portfolio management and derivatives and to combine them with these modules.
- manage a project in the field of corporate valuation and to develop proprietary solutions in a team of valuation experts.
- compile a transparent and comprehensive documentation of assumptions and methods for a given valuation project.
- structure the process of corporate valuation and to apply the standards of professional financial modeling.
- master theoretical and empirical challenges of corporate valuation.
- apply their knowledge to specific valuation projects and to adjust it to actual valuation situations.
- critically challenge the assumptions, algorithms and results of every valuation approach.
- present and defend the valuation results in front of clients

Knowledge	Understanding	Abilities	Competences
Subject	✓	✓	✓
System	✓	✓	✓
Self	✓	✓	✓
Social	✓	✓	✓

## Contents

1. Overview of the Methods of Company Valuation
2. Company Valuation using Discounted Cash Flow Models
  - 2.1 Basics of Corporate Planning
  - 2.2 WACC Approach
    - 2.2.1 The Idea behind the WACC Approach
    - 2.2.2 Calculating the Operative Free Cash Flows
    - 2.2.3 Determining the Cost of Capital
    - 2.2.4 Calculation of the Company Value
  - 2.6 Sensitivity Analysis
  - 2.7 Scenario Analysis
3. Company Valuation using Market Capitalization and Book Value
  - 3.1 Overview of Market Capitalization
  - 3.2 Overview of Book Value
  - 3.3 Valuation Process using Market Capitalization and Book Value
    - 3.3.1 Obtaining the Required Data
    - 3.3.2 Calculating the Market Capitalization
    - 3.3.3 Calculating the Book Value
4. Stock Market Multiples
  - 4.1 Overview of Stock Market Multiples
  - 4.2 Valuation Process with Stock Market Multiples
    - 4.2.1 Derivation of the Peer Group
    - 4.2.2 Selection of Appropriate Multiples
    - 4.2.3 Collection of the Required Data
    - 4.2.4 Calculation of the Stock Market Multiples
    - 4.2.5 Application of the Stock Market Multiples to the Target Company
5. Transaction Multiples
  - 5.1 Overview of Transaction Multiples
  - 5.2 Comparison of Stock Market and Transaction Multiples
  - 5.3 Valuation Process with Transaction Multiples
    - 5.3.1 Selection from the Database
    - 5.3.2 Narrowing Down the Selection in Excel
    - 5.3.3 Calculating the Transaction Multiples
    - 5.3.4 Application of the Transaction Multiples to the Target Company
  - 5.4 The Football Field Graph
    - 5.4.1 Application of the Football Field Graph
    - 5.4.2 The Modeling Process in Three Steps

## Methods of teaching and study

Literature study, case studies on the implementation of a corporate valuation exercise as well as Excel-based exercises. With the chapter "Corporate Finance" of the textbook "Financial Modeling" and additional literature sources, the course participants have access to a comprehensive set of materials on the topic corporate finance. The implementation of the methods of corporate finance in Excel while considering the standards of financial modeling is presented in a detailed and comprehensive manner.

The case studies help to implement the valuation methods for a given task in a model-based and applied fashion. Excel-based exercises help to critically assess the material studied. Test questions help in the exam preparation. The self-study of the participants is supported via e-learning.

## Literature

Recommended literature:

**Häcker, J., Ernst, D. (2017):** Financial Modeling - An Introductory Guide to Excel and VBA Applications in Finance, Macmillan, London.

Further Literature:

**Benninga, S. (2014):** Financial Modeling, 4. Auflage, MIT Press, Cambridge Massachusetts.

**Day, A. L. (2007):** Mastering Financial Modelling in Microsoft Excel, 2. Auflage, Prentice Hall.

**Ernst, D./Häcker, J. (2011):** Applied International Corporate Finance, Vahlen, München, 2. Auflage.

**Hawley, D./Hawley, R. (2007):** Excel Hacks Tips&Tools for streamlining your spreadsheets, 2. Auflage, O'Reilly, Sebastopol.

**Munter, M. (2006):** Guide to Managerial Communication, Prentice Hall, 7. Auflage.

**Powell, S. G. (2008):** Modeling for Insight: A master class for business analysts, J. Wiley & Sons, Hoboken.

**Sengupta, C. (2004):** Financial Modeling using Excel and VBA, John Wiley & Sons, Hoboken, New Jersey.