



Programm / Program		Bachelor of Science				Master of Science						
Lehrveranstaltung / Module	Investition und Finanzierung		Wertpapieranalyse		Option Pricing		Corporate Finance		Risk Controlling			
<b>Beschreibung / Description</b>	Gegenstand der Veranstaltung sind zunächst die Methoden der Investitionsbewertung unter Sicherheit bei flacher und nicht-flacher Zinsstruktur. Wert wird auf die Kapitalwert- und die Interne-Zinsfuß-Methode gelegt. Im zweiten Teil werden die verschiedenen Finanzierungsformen behandelt, wobei die Kapitalkosten als Renditeforderungen der Financiers eine besondere Rolle spielen. Den Abschluss bilden Zinssicherungsinstrumente.		Diese Veranstaltung behandelt die Bewertung von Investitionen unter Risiko und gliedert sich gemäß den drei großen Wertpapiergruppen Anleihen, Aktien und Derivate. Wir widmen uns dabei den jeweiligen Risikocharakteristika der Finanzkontrakte. Wert wird deshalb auf eine angemessene Risikomessung gelegt, die sich im jeweiligen Bewertungskalkül niederschlägt. Anwendungen beziehen sich vor allem auf das Risikomanagement.		Aims of the course are to analyse derivative financial instruments and to consider how these instruments are used to hedge particular kinds of risk or to change the distribution of the portfolio's return in a preferred way. Emphasis of the course lies on different pricing models that include the binomial and the Black-Scholes model. Therefore, students learn the concept of risk neutral valuation technique. Furthermore, we discuss exotic options. Finally, interest rate derivatives and certificates are considered.		Goal of the course is to convey a broad knowledge of corporate finance. The lecture starts analysing the CAPM, also under market imperfections. Following, we deal with different performance measures. An important issue is to be familiarized with insights of the capital structure, i.e. the Modigliani-Miller propositions, and company valuation, in particular the DCF method. Subsequently, risk management deals with hedging and the risk management cycle. Finally, agency theory is presented, particularly including the LEN model.		The course makes students familiar with different concepts of risk measurement and methods of risk controlling. In the first part, measures of downside risk are discussed. The second part presents the analysis of market risk. Students learn to calculate the value-at-risk of stocks, bonds, and derivatives. In the field of credit risk, Basel Accords regulations are presented. Furthermore, students get to know credit pricing and credit risk models.			
<b>Grobgliederung / Macro-structure</b>	<b>A. Investition</b> Kapitalwert, Annuität, Interner Zinsfuß, Zinsstruktur  <b>B. Finanzierung</b> Eigen- und Fremdfinanzierung, Mezzanine-Money, Kapitalstruktur  <b>C. Zinssicherung</b> Swaps, Caps und Forward-Darlehen		<b>A. Anleihen</b> Duration, Key Rate Duration  <b>B. Aktien</b> Portfolioselektion, Kapitalmarkttheorie, Performancemessung  <b>C. Optionen</b> Zahlungsprofile, Bewertungsmodelle		<b>A. Price Bounds</b> Payoff Profiles, Price Bounds, Put-Call Parity  <b>B. Valuation Models</b> Binomial Model, Black-Scholes Formula, Greeks  <b>C. Exotic Options</b>  <b>D. Interest Rate Derivatives</b>		<b>A. Cost of Equity</b> CAPM, Performance Measurement, Capital Structure  <b>B. Cost of Debt</b> Credit Risk  <b>C. Company Valuation</b>  <b>D. Risk Management</b>		<b>A. Downside Risk</b> Stochastic Dominance, Lower Partial Moments  <b>B. Market Risk</b> Value-at-Risk of Stocks, Bonds, and Derivatives  <b>C. Credit Risk</b> Rating, Credit Valuation			
Inhalt / Content	Vorlesung		Übungen		Lecture		Exercises		Lecture		Exercises	
1	Kapitalwertmethode (inkl. Fisher-Separation)	Renditeberechnung	Duration I (Preissensitivität von Anleihen)	Duration	Payoff Profiles, Profit-and-Loss (P'n'L) Diagrams	Payoff Profiles, P'n'L Diagrams, Price Bounds	Cost of Equity: Capital Asset Pricing Model (CAPM)		Portfolio Selection and CAPM (Recap)	The Basel Accords		Stochastic vs. Mean-variance Dominance
2	Annuitätenmethode		Duration II (Immunsierung gegenüber Zinsrisiken)		Bounds for Option Prices, Early Exercise, Put-Call Parity		Extensions of the CAPM (Zero-beta Version)			Stochastic Dominance		
3	Interne-Zinsfuß-Methode	Kapitalwert	Key Rate Duration	Key Rate Duration	One-period Binomial Model	Put-Call Parity, One-period Binomial Model	Performance Measurement I (Jensen, Treynor, Sharpe)		Extensions of the CAPM	Downside Risk Criteria		Downside Risk, Lower Partial Moments
4	Rendite- und Zinsstruktur (Yield und Spot Curve)		Entscheidungstheoretische Grundlagen der Aktienanalyse		Multi-period Binomial Model		Performance Measurement II (Timing and Selectivity)			Lower Partial Moments		
5	Terminzinssätze (Forward Curve)	Annuität, Interner Zinsfuß	Erwartungswert-Varianz-Kriterium	Bernoulli-Prinzip	Black-Scholes Formula I (Stochastic Process)	Multi-period Binomial Model, Black-Scholes Formula	Capital Structure, Cost of Capital (Modigliani-Miller Propositions)		Performance Evaluation	Value-at-risk I (Value-at-risk of Stocks)		Value-at-risk of Stocks
6	Eigenfinanzierung I (Private Equity)		Portfolioselektion I (Zwei-Wertpapier-Fall)		Black-Scholes Formula II (Derivation)		Company Valuation I (Discounted Cash Flow)			Value-at-risk II (Value-at-risk of Bonds)		
7	Eigenfinanzierung II (Public Equity)	Eigenfinanzierung	Portfolioselektion II (Mehr-Wertpapier-Fall)	Portfolioselektion	Black-Scholes Formula III (Implicit Volatility)	Black-Scholes Formula (cont.), Greeks	Company Valuation II (Certainty Equivalent)		Modigliani-Miller Propositions, Company Valuation	Value-at-risk III (Value-at-risk of Futures)		Value-at-risk of Bonds
8	Innenfinanzierung		Tobin-Separation und Kapitalmarktgerade		Greeks		Credit Valuation (Merton's Model)			Value-at-risk IV (Value-at-risk of Options)		
9	Fremdfinanzierung I (Kreditformen)	Innenfinanzierung	Capital-Asset-Pricing-Modell (CAPM) und Wertpapierkennlinie	CAPM	Delta and Gamma Hedge	Risk Management	Company Valuation III (Credit Risk)		Merton's Model	Rating I (Balance Sheet-based)		Value-at-risk of Derivatives
10	Fremdfinanzierung II (Kreditsubstitute)		CAPM-Tests		Exotic Options I (Digital Options)		Interest Rate Risk Management (Swaps, Forward Rate Agreements)			Rating II (Rating Accuracy)		
11	Mezzanine-Finanzierung	Fremdfinanzierung	Performancemessung	Performancemessung	Exotic Options II (Barrier Options)	Exotic Options	Financial Risk Management (Hedging with Futures)		Hedge Ratio, Hedging Efficiency	Credit Pricing I (Structural Models)		Rating Accuracy
12	Bilanzanalyse		Exkurs: Kapitalstruktur (Modigliani-Miller-Theorem)		Certificates		Corporate Risk Management			Credit Pricing II (Reduced-form Models)		
13	Kapitalkosten und Leverage-Effekt	Klausurvorbereitung	Optionen I (Zahlungsprofile und Wertgrenzen)	Optionen	Caps and Floors	Certificates, Caps and Floors	Agency Theory I (First- and Second-best)		Principal-Agent Theory, LEN Model	Credit Risk Models I (Expected Loss)		Credit Pricing
14	Zinssicherungsinstrumente (Swaps, Caps und Floors)		Optionen II (Einführung in die Bewertungsmodelle)		Real Options		Agency Theory II (LEN Model)			Credit Risk Models II (Portfolio Credit Risk)		
<b>Basisliteratur / Basic Literature</b>	Reichling, P.; Beinert, C.; Henne, A. (2005): Praxishandbuch Finanzierung, Wiesbaden Ross, S.A.; Westerfield, R.W.; Jordan, B.D. (2009): Fundamentals of Corporate Finance, 9. Aufl., Boston u.a.		Bodie, Z.; Merton, R.C. (2000): Finance, Upper Saddle River Steiner, P.; Uhler, H. (2001): Wertpapieranalyse, 4. Aufl., Heidelberg		Hull, J.C. (2011): Options, Futures, and Other Derivatives, 8 <sup>th</sup> ed., Upper Saddle River		Ross, S.A.; Westerfield, R.W.; Jaffe, J.F. (2009): Corporate Finance, 9 <sup>th</sup> ed., Boston		Hull, J.C. (2009): Risk Management and Financial Institutions, 2 <sup>nd</sup> ed., Upper Saddle River Reichling, P.; Bietke, D.; Henne, A. (2007): Praxishandbuch Risikomanagement und Rating, 2 <sup>nd</sup> ed., Wiesbaden			
<b>Voraussetzungen / Prerequisites</b>	-		Investition und Finanzierung		Wertpapieranalyse / Financial Management		Wertpapieranalyse / Financial Management		Option Pricing			