

Frankfurt School Exchange Student Information

Overview of Winter Semester 2023 MSc Modules

Master of Finance*

Core courses and concentrations courses might be combined but it can happen that there is one or two clashes, for scheduling constraints. Please note that some combinations of concentrations might not be compatibles with other courses. These incompatibilities will be indicated on the selection platform.

Quarter Schedules courses:

Quarter 1:	Academic period:	01 September – 17 October 2023
	Exam Week:	19 October – 25 October 2023
Quarter 2:	Academic period:	26 October – 12 December 2023
	Exam Week:	14 December – 20 December 2023

Course	Type of course	Quarter
Statistics & Econometrics	Core course	1
Macro & Monetary Economics	Core course*	1+2
Foundations of Finance	Core course	1
Financial Statement Analysis	Core course	2
Financial Products & Modelling	Core course	2
Monetary Economics & Digital Currencies	Core course*	1+2
International Finance***	Core course	1
Case Studies in Investment Banking**	Concentration course	2
Restructuring & Strategic Management Control	Concentration course	1
Financial Information & Decision-Making	Concentration course	1
Debt Finance	Concentration course	1
Equity Finance	Concentration course	1
Credit Risk	Concentration course	1
FinTech: Disruptive Innovation?	Concentration course	2
Portfolio Management	Concentration course	1
Portfolio Optimization in Continuous Time	Concentration course	2
Financial Engineering**	Concentration course	1
M&A Accounting	Concentration course	2
Sustainable Finance***	Concentration course	2

*This module is scheduled across Q1 and Q2

** These courses are Block weeks and are scheduled from Monday to Saturday

*** Course name changed to Finance & Investment. Module description not available yet

If you combine in your selection core courses and concentrations, it may happen that there will be a clash as they belong to two different intakes. A maximum of two sessions overlap between courses are allowed for international students to enrich the courses portfolio.

**Current as of June 2023. This module catalogue is subject to change.*

Statistics & Econometrics [QUM71024]

Module Coordinator		Mönch, Emanuel			
Programme(s)		Master of Finance			
Term		Semester 1 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Compulsory Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Basic knowledge in Mathematics (differential calculus, linear algebra) and statistical methods (descriptive and inferential statistics, econometrics)			

<p>Content</p>	<p>Statistical Foundations:</p> <ul style="list-style-type: none"> • Probability Basics: Random Variables and Distributions • Moments of Statistical Distributions • Behaviour of Large Samples (Law of Large Numbers) • Central Limit Theorem, Normal Distribution • Conditional Probability and Independence • Covariance and Correlation • Arithmetic and Geometric Series, Discounting <p>Introduction to Econometrics:</p> <ul style="list-style-type: none"> • Classical Linear Regression Model • Ordinary Least Squares (OLS) Estimation of the Linear Regression Model • Inference in the Linear Regression Model • Multivariate Linear Regression Models • OLS Estimation of Multivariate Linear Regression Models • Dynamic Linear Models • Time Series Forecasting • Panel Models <p>Elements of Programming:</p> <ul style="list-style-type: none"> • Introduction to Python • Applications in Probability (Monte Carlo Simulation) • Applications in Financial Econometrics (Regression Analysis)
<p>Intended Learning Outcomes</p>	<p><i>Knowledge:</i> On successful completion of this module, students will have a thorough comprehension of general statistical principles, i.e. they can:</p> <ul style="list-style-type: none"> • explain general statistical principles • understand and critically evaluate statistical charts • design appropriate econometric models for problems in finance • critically interpret statistical/econometric analyses <p><i>Skills:</i> On successful completion of this module, students will have the proven ability to apply statistical and econometric methods to examples and cases from practical finance, i.e. they can:</p> <ul style="list-style-type: none"> • apply basic statistical tools used in the academic literature • demonstrate a competent level of analytical reasoning • design appropriate econometric models • interpret the estimated results • implement data analysis using mainstream programming language (Python) <p><i>Competence:</i> On successful completion of this module students can tackle some statistical and econometric problems, i.e. they can:</p> <ul style="list-style-type: none"> • design themselves and critically evaluate empirical analyses of financial data

Forms of teaching, methods and support	The concepts explained in the class are illustrated with additional exercises and case studies that are part of the lecture notes. Most of the exercises are solved. In addition, some examples are illustrated with corresponding computer code in Python where appropriate.															
Type of Assessment(s) and performance	<table border="1"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance Points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>Assignment</td> <td>60 min</td> <td>30</td> <td>During the module</td> </tr> <tr> <td>Written exam</td> <td>90 min</td> <td>90</td> <td>Exam week</td> </tr> </tbody> </table> <p>Examination Requirements: Relevant for the exam is the content of the lectures. Written test, open notes open book exam, non-programmable calculator.</p>				Type of examination	Duration or length	Performance Points	Due date or date of exam	Assignment	60 min	30	During the module	Written exam	90 min	90	Exam week
Type of examination	Duration or length	Performance Points	Due date or date of exam													
Assignment	60 min	30	During the module													
Written exam	90 min	90	Exam week													
Recommended Literature	<ul style="list-style-type: none"> • Brooks (2019): Introductory Econometrics for Finance, Lecture Notes • Additional material will be distributed in the course 															
Module Structure	Since experience shows that the mathematical and statistical skills of students who specialise in economics and finance differ substantially because of different backgrounds, this module is supposed to provide a common ground for all of them as a starting platform.															
Usability in other Modules/Programmes	Subsequent modules															
Last Approval Date	2022/07/01															

Macro- & Monetary Economics [ECO71013]

Module Coordinator		Winkler, Adalbert			
Programme(s)		Master of Finance			
Term		Semester 1 Q1 & Q2			
Module Duration		1 Semester			
Compulsory/Elective Module		Compulsory Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Bachelor Degree			

Content	<p>I Macroeconomics with microeconomic foundations – The Neoclassical Model</p> <ul style="list-style-type: none"> I.1 Methodological approach I.2 The labour market I.3 The capital market I.4 A real intertemporal model with investment I.5 The money market I.6 The complete neoclassical model <p>II Keynesian Macroeconomics</p> <ul style="list-style-type: none"> II.1 Methodological approach II.2 The labour market and the aggregate supply curve with sticky nominal wages II.3 Deriving the aggregate demand curve from the IS and the LM curve II.4 The complete Keynesian model II.5 The General Theory of Employment, Interest and Money: Selected Issues <p>III Monetary Economics</p> <ul style="list-style-type: none"> III.1 The money supply process: central bank money and the money supply III.2. Conventional monetary policy - instruments. transmission, targets and rules III.3 Monetary policy strategies III.4 Unconventional monetary policy - instruments and transmission III.5 Monetary economics in an open economy
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<p>Intended Learning Outcomes</p>	<p><i>Knowledge:</i> On successful completion of this module, students will have a thorough comprehension of the major models of macroeconomic and monetary theory, i.e. they can:</p> <ul style="list-style-type: none"> • Explain the working of labor, goods, capital and money markets within the respective theories • Compare and contrast theories with regard to interdependence / independence of markets, the neutrality of money, wage and price stickiness and macroeconomic policies, notably monetary policy • Explain the macroeconomic policy approaches with regard to stabilizing the price level and employment. <p><i>Skills:</i> On successful completion of this module, students will have the proven ability to apply advanced knowledge to macroeconomic and monetary policy making, i.e. they can:</p> <ul style="list-style-type: none"> • Analyse the application of monetary policy instruments in different economic settings, i.e. a financial crisis or the COVID-19 pandemic. • Assess and appraise macroeconomic, notably monetary policy, as conducted in mature market economies • Demonstrate effective skills in comprehension of macroeconomic modelling <p><i>Competence:</i> On successful completion of this module, students can take responsibility to transfer these models when assessing real world macroeconomic developments and policy decisions such as oil price shocks, financial shocks and crises, the COVID-19 pandemic, changes in the fiscal balance, changes in interest rates and central bank balance sheets.</p>															
<p>Forms of teaching, methods and support</p>	<p>Interactive Lecture</p>															
<p>Type of Assessment(s) and performance</p>	<table border="1"> <thead> <tr> <th data-bbox="480 1417 699 1496">Type of examination</th> <th data-bbox="699 1417 935 1496">Duration or length</th> <th data-bbox="935 1417 1155 1496">Performance Points</th> <th data-bbox="1155 1417 1375 1496">Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td data-bbox="480 1496 699 1753">Assignments</td> <td data-bbox="699 1496 935 1753">30 min</td> <td data-bbox="935 1496 1155 1753">30</td> <td data-bbox="1155 1496 1375 1753">One assignment each after completion of the neoclassical and Keynesian economics part, including tutorials</td> </tr> <tr> <td data-bbox="480 1753 699 1809">Written exam</td> <td data-bbox="699 1753 935 1809">90 min</td> <td data-bbox="935 1753 1155 1809">90</td> <td data-bbox="1155 1753 1375 1809">Exam week</td> </tr> </tbody> </table>				Type of examination	Duration or length	Performance Points	Due date or date of exam	Assignments	30 min	30	One assignment each after completion of the neoclassical and Keynesian economics part, including tutorials	Written exam	90 min	90	Exam week
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Written exam	90 min	90	Exam week													

Recommended Literature	<p>I Macroeconomics with microeconomic foundations – The Neoclassical model</p> <ul style="list-style-type: none"> Williamson, S. (2018), Macroeconomics, 6th ed., Pearson: Boston et al., pp. 1 – 37, 98-141, 306 - 350, 379 – 440 <p>II Keynesian Macroeconomics</p> <ul style="list-style-type: none"> Williamson, S. (2008), Macroeconomics, 3rd ed., Pearson: Boston et al., pp. 441 - 474 Williamson, S. (2018), Macroeconomics, 6th edition, Pearson: Boston et al., chapter 14. <p>III Monetary Economics</p> <ul style="list-style-type: none"> Bofinger, P. (2001), Monetary Policy, Oxford University Press: Oxford , pp. 1- 6, 11-15, 40-53, 71-102, 105 – 116, 127 – 153, 164 – 202, 205 – 228, 240 – 274, 300 – 307, 387 – 403 Borio, C. and A. Zabai (2016). Unconventional monetary policies: a reappraisal. BIS Working Papers No. 570, Basel. Deutsche Bundesbank (2017),The role of banks, non-banks and the central bank in the money creation process, Monthly Report, April, 13-33
Module Structure	<p>I Macroeconomics with microeconomic foundations – The neoclassical model</p> <p>II Keynesian macroeconomics</p> <p>III Monetary economics</p>
Usability in other Modules/Programmes	Subsequent modules
Last Approval Date	2022/05/06

Foundations of Finance [FIN71016]

Module Coordinator		Sangiorgi, Francesco			
Programme(s)		Master of Finance			
Term		Semester 1 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Compulsory Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Bachelor Degree			
Content		<p>This course is intended to provide a market-oriented framework for analyzing the major types of financial decisions made by corporations. Lectures and readings will provide an introduction to present value techniques, capital budgeting principles and problems, asset valuation, the operation and efficiency of financial markets, and the financial decisions of firms. Throughout the class, we will solve problems to enhance our understanding of the covered topics.</p> <p>Topics:</p> <ul style="list-style-type: none"> • Time value of money and the Net Present Value rule • Interest rates and bond valuation • Measuring risk, diversification, mean-variance analysis • CAPM and multifactor models • Stock valuation • Market efficiency • Capital budgeting techniques • Capital structure • Payout policy 			

Intended Learning Outcomes	<p><i>Knowledge:</i> On successful completion of this module, students will have a thorough comprehension of i) the functioning of asset markets and the fundamental tools of asset valuation, and ii) the analysis of the main capital structure and investment decisions made by corporations. They will be able to:</p> <ul style="list-style-type: none"> • Explain the nature and role of different financial markets • Describe the importance of risk and return in financial decision making • Discuss the impact of financial market frictions on the financing decisions of firms <p><i>Skills:</i> On successful completion of this module, students will acquire the theoretical foundations and analytical tools necessary for financial decision making and valuation, i.e. they can:</p> <ul style="list-style-type: none"> • Apply key financial concepts to value financial securities • Implement valuation techniques for capital budgeting purposes • Evaluate the impact of financing decisions on firm value <p><i>Competence:</i> On successful completion of this module, students will understand the key concepts of modern asset pricing and corporate finance theory and will be able to apply them to practice. In particular, they can:</p> <ul style="list-style-type: none"> • Apply asset pricing and corporate finance theory to solve problems that investors and firms typically face • Synthesize and critically evaluate information for sound financial decision making • Analyze and interpret data correctly to select value-enhancing projects 												
Forms of teaching, methods and support	Lectures and problem sets												
Type of Assessment(s) and performance	<table border="1" data-bbox="480 1417 1378 1615"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance Points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>Written exam</td> <td>120 min</td> <td>120</td> <td>Exam week</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Type of examination	Duration or length	Performance Points	Due date or date of exam	Written exam	120 min	120	Exam week				
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Recommended Literature	<ul style="list-style-type: none"> • Berk and DeMarzo, Corporate Finance, 2014, 3rd ed., Pearson • Bodie, Kane and Marcus, Investments, 2014, 10th ed., McGraw-Hill 												
Module Structure	11 classes including lectures and problem sets corrections, plus additional tutorials with the teaching assistant of the course.												
Usability in other Modules/Programmes	Other finance modules												
Last Approval Date	2022/05/10												

Financial Statement Analysis [ACC71012]

Modulkoordinator		Zhang, Ning			
Studiengang		Master of Finance			
Studienabschnitt		Semester 1 Q1 & Q2			
Moduldauer		1 Semester			
Pflicht- /Wahlpflichtmodul		Pflicht			
Credits:		6			
Häufigkeit des Angebots		Jährlich			
Sprache		Englisch			
Gesamt Workload	150 h	Akademische Lehrstunden:	44	Verbleibender Workload:	Selbststudium
		Eine akademische Lehrstunde entspricht 40 Minuten.			
		Das Selbststudium umfasst die Vor- und Nachbereitung von Veranstaltungen, Leseaufgaben, die Vorbereitung von Tests und Klausuren, Hausarbeiten usw.			
Voraussetzungen für die Teilnahme		None			
Kurzbeschreibung / Lerninhalte		<ol style="list-style-type: none"> 1. Bookkeeping Essentials 2. Foundations of Accrual Accounting 3. Reading Financial Statements 4. Accounting for Revenues & Working Capital 5. Accounting for Non-Current Assets 6. Accounting for Risk 7. Profitability and Working Capital Analysis 8. Risk Analysis 9. Credit Analysis 10. Accounting Quality 			

<p>Qualifikationsziele / Lernergebnisse</p>	<p><i>Knowledge:</i> On successful completion of this module, students will have a thorough comprehension of the major concepts, approaches and techniques useful for financial accounting and financial statement analysis, i.e. they can:</p> <ul style="list-style-type: none"> • Explain how complex business transactions are recorded in financial statements • Illustrate how the recognition of complex business transactions impacts financial ratios • Compare how different stakeholder groups make use of financial accounting information <p><i>Skills:</i> On successful completion of this module, students will have the proven ability to apply their theoretical and applied accounting knowledge and the analytical toolkit to typical decision problems in which financial information is used, i.e. they can:</p> <ul style="list-style-type: none"> • Assess the financial consequences of entering certain transactions • Adjust and extrapolate financial statements to let them articulate • Analyze financial statements for rating and valuation purposes <p><i>Competence:</i> On successful completion of this module, students can take responsibility to transfer these concepts to typical decision situations in finance and management such as</p> <ul style="list-style-type: none"> • Influencing decision making by designing tools and processes for rating and investment decisions • Synthesizing accounting practices with business transaction design • Identifying reporting incentives and challenging assumptions about accounting quality
<p>Lernformen, Methodik und Betreuung</p>	<ul style="list-style-type: none"> • Lecture • Discussion • Exercises • Case studies

<p>Art der Prüfungsleistungen im Modul und Akkumulationspunkte</p>	<table border="1" data-bbox="480 338 1378 663"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Points</th> <th>Due or due date</th> </tr> </thead> <tbody> <tr> <td>Final exam</td> <td>80 minutes</td> <td>80</td> <td>End of module</td> </tr> <tr> <td>Two team case reports</td> <td>Take-home/in-class assignments</td> <td>20</td> <td>During the module</td> </tr> <tr> <td>Two quizzes</td> <td>25 minutes (each)</td> <td>20</td> <td>During the module</td> </tr> </tbody> </table> <p>Examination Requirements:</p> <p><u>Written Exam</u> Closed-note/closed-book exam. Non-programmable calculator allowed.</p> <p><u>Team Work</u> Cases are made available on the course website. Students are assigned to groups and all groups are required to work through all cases. However, only a few groups per case will be chosen to hand in their work for grading.</p> <p>Group tasks will not be assigned before Session 7. The deliverable for each case study consists of an annotated spreadsheet file (or an annotated Python/SAS file), due by email to the TAs in the morning of the day of class in which the respective topic will be covered.</p> <p><u>Quizzes</u> There are <i>three</i> closed-note/closed-book quizzes (each graded with a maximum of 5 performance points). The best <i>two</i> quizzes are counted towards the final grade. There is no retake option for any of the three quizzes. Nonprogrammable calculators are allowed, but not required.</p>	Type of examination	Duration or length	Points	Due or due date	Final exam	80 minutes	80	End of module	Two team case reports	Take-home/in-class assignments	20	During the module	Two quizzes	25 minutes (each)	20	During the module
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<p>Literaturhinweise</p>	<p><u>Course material:</u></p> <p>Slides will be provided to accompany the lecture. Other course material of a more preparatory nature (readings, cases, case inputs files, etc.) will be posted to the course website prior to class.</p> <p>Additional literature: We recommend the following textbook to students who want to gain in-depth insights into GAAP and IFRS:</p> <ul style="list-style-type: none"> • Picker et al.: Applying IFRS Standards. 4th ed. John Wiley & Sons 2016 • Weil, Schipper, and Francis, Financial Accounting: An Introduction to Concepts, Methods and Uses, South-Western College Publishing, 2012 • Stephen H. Penman, Financial Statement Analysis and Security Valuation (Fifth edition), McGraw Hill. 																
<p>Modulstruktur</p>	<p>Part I: Financial statements preparation Part II: Financial statements analyses</p>																

Verwendbarkeit für andere Module und Programme	Subsequent modules
Letztes Freigabedatum	09.07.2021

Financial Products & Modelling [FIN71574]

Module Coordinator		Vilkov, Grigory			
Programme(s)		Master of Finance			
Term		Semester 1 Q2			
Module Duration		1 Semester			
Compulsory/Elective Module		Compulsory Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One acadmic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Previous Core Modules, Python basics			
Content		<p>Financial Markets</p> <ul style="list-style-type: none"> • Trading, Instruments, Participants, and Mechanics • Regulatory Framework <p>Introduction to Financial Products</p> <ul style="list-style-type: none"> • Discrete-Time Valuation Framework • Equity Derivatives • Valuation of Fixed Income Instruments • Introduction to Interest Rate Derivatives: Swaps <p>Introduction to Modeling: Tools and Programming with Python</p> <ul style="list-style-type: none"> • Introduction to Python • Pricing / linear algebra • Solving all course-related problems in Python 			

<p>Intended Learning Outcomes</p>	<p><i>Knowledge:</i> On completion of this model, students will be able to express substantial knowledge on financial products and modelling, i.e., they can:</p> <ul style="list-style-type: none"> • Describe the organization and functionality of financial markets and their regulatory framework • Identify the most relevant financial instruments for a specified purpose <p><i>Skills:</i> On successful completion of this model, students will have the proven ability to apply learned methods to the financial products and modelling (within discrete pricing framework), e.g., they can:</p> <ul style="list-style-type: none"> • Analyze financial markets and evaluate financial instruments of different levels of complexity using Python environment • Develop an appropriate solution for a given financial risk situation and know how to implement the solution using various financial instruments • Evaluate financial instruments with required standard and non-standard features theoretically and in Python • Write simple functional programs in Python for product evaluation, trading and risk management purposes <p><i>Competence:</i> On successful completion of this model, students will have acquired the competence to:</p> <ul style="list-style-type: none"> • Evaluate and manage complex financial instruments to adequately solve financial management problems • Assume a responsible position in the area of financial risk management, investment banking, asset management or corporate finance 															
<p>Forms of teaching, methods and support</p>	<p>Lectures, applied tutorials, individual home assignments</p>															
<p>Type of Assessment(s) and performance</p>	<table border="1" data-bbox="480 1518 1378 1872"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance Points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>Written Exam as Online Quiz</td> <td>80 minutes</td> <td>80</td> <td>Exam week</td> </tr> <tr> <td>Individual home assignments</td> <td>5 assignments, from 2 to 6 hours each, depending on the competency level</td> <td>40</td> <td>During the module, about weekly</td> </tr> </tbody> </table> <p>Assignments allow for learning efficient use of programming for modeling and solving tasks related to financial modeling. Exam tests the theoretical knowledge acquired in the course and the efficient application of modeling skills to solving practical examples.</p>				Type of examination	Duration or length	Performance Points	Due date or date of exam	Written Exam as Online Quiz	80 minutes	80	Exam week	Individual home assignments	5 assignments, from 2 to 6 hours each, depending on the competency level	40	During the module, about weekly
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Written Exam as Online Quiz	80 minutes	80	Exam week													
Individual home assignments	5 assignments, from 2 to 6 hours each, depending on the competency level	40	During the module, about weekly													

Recommended Literature	<p><i>Extensively used in the course</i></p> <ul style="list-style-type: none"> • Hull, John C : Options, Futures and other Derivatives,10th ed., Pearson • QuantEcon online book : https://python-programming.quantecon.org/intro.html • Online tutorials for Python (DataCamp, etc.) <p><i>Useful as an additional reference</i></p> <ul style="list-style-type: none"> • Sundaram, Rangarajan K. and Sanjiv Das, Derivatives: Principles and Practice, Mcgraw Hill Book 2010
Module Structure	<p>This module discusses the most important financial instruments. These include stocks, bonds, and derivatives like swaps, futures, options. For all instruments, we will clarify the intermediate and final cash flows, introduce basic valuation methods, and discuss possible applications. The module also discusses rules of securities trading as well as the organization and functionality of securities exchanges and over-the-counter markets. Most classes will involve both theoretical discussions and practical applications using Python. Students are expected to invest significant amount of time into learning Python and applying it to solving homework, exam, and other modeling problems.</p>
Usability in other Modules/Programmes	Subsequent modules, thesis
Last Approval Date	2022/05/10

**Monetary Economics & Digital Currency
[ECO71015]**

Modulkoordinator		Winkler, Adalbert			
Studiengang		Master of Finance			
Studienabschnitt		Semester 1 Q1			
Moduldauer		1 Semester			
Pflicht- /Wahlpflichtmodul		Pflicht			
Credits:		6			
Häufigkeit des Angebots		Jährlich			
Sprache		Englisch			
Gesamt Workload	150 h	Akademische Lehrstunden:	44	Verbleibender Workload:	Selbststudium
		Eine akademische Lehrstunde entspricht 40 Minuten.			
		Das Selbststudium umfasst die Vor- und Nachbereitung von Veranstaltungen, Leseaufgaben, die Vorbereitung von Tests und Klausuren, Hausarbeiten usw.			
Voraussetzungen für die Teilnahme		Bachelor Degree, successful participation of courses in macroeconomics and microeconomics			

<p>Kurzbeschreibung / Lerninhalte</p>	<p>I Introduction</p> <p>1. Mainstream macroeconomics: where money is inessential</p> <p>II The pure theory of money</p> <p>2. A primer on money</p> <p>3. New monetarist economics – Money and the search for trade</p> <p>4. New monetarist economics – Money and informational frictions</p> <p>5. Private sector digital currencies – Are Bitcoin et al money?</p> <p>III. Central Banks</p> <p>6. The origin and evolution of central banks</p> <p>7. Central Bank Digital Currency (CBDC)</p> <p>IV. Monetary policy</p> <p>8. Credit, money, saving and investment</p> <p>9. The conduct of monetary policy: The price stability mandate and the Phillips Curve</p> <p>10. The conduct of monetary policy: Conventional and unconventional monetary policy</p> <p>11. Box: Monetary policy in an open economy with a fixed exchange rate (if time permits) - The impossible trinity and the uncovered interest rate parity</p>
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<p>Qualifikationsziele / Lernergebnisse</p>	<p><i>Knowledge:</i> On successful completion of this module, students will have a thorough comprehension of the major models of monetary economics, i.e. they can:</p> <ul style="list-style-type: none"> • compare and contrast theories on the origin and functions of money • analyse the implications of private cryptoassets and central bank digital currencies • explain the evolution of central banks • explain monetary policy strategies to maintain price stability. <p><i>Skills:</i> On successful completion of this module, students will have the proven ability to</p> <ul style="list-style-type: none"> • explain and discuss why people hold money and why it is used in the trading process, • explain the role of government and the state in the origin and development of money, • discuss whether and to what extent cryptoassets are money • explain the evolution of central banks and the relationship between central bank and bank money, including central bank digital currency, • describe and explain the main monetary policy instruments as well as the channels of the monetary transmission mechanism • discuss the merits and disadvantages of central bank independence and of various monetary policy strategies <p><i>Competence:</i> On successful completion of this module, students can take responsibility to transfer the models discussed when assessing real world monetary policy, notably changes in central bank interest rates and central bank balance sheets.</p>															
<p>Lernformen, Methodik und Betreuung</p>	<p>Interactive lecture</p>															
<p>Art der Prüfungsleistungen im Modul und Akkumulationspunkte</p>	<table border="1"> <thead> <tr> <th data-bbox="480 1485 699 1563">Type of examination</th> <th data-bbox="699 1485 935 1563">Duration or length</th> <th data-bbox="935 1485 1158 1563">Performance Points</th> <th data-bbox="1158 1485 1378 1563">Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td data-bbox="480 1563 699 1821">Assignments</td> <td data-bbox="699 1563 935 1821">30 min</td> <td data-bbox="935 1563 1158 1821">30</td> <td data-bbox="1158 1563 1378 1821">One assignment each after completion of the pure theory of money and the Central Banks parts, respectively</td> </tr> <tr> <td data-bbox="480 1821 699 1877">Written exam</td> <td data-bbox="699 1821 935 1877">90 min</td> <td data-bbox="935 1821 1158 1877">90</td> <td data-bbox="1158 1821 1378 1877">Exam week</td> </tr> </tbody> </table>				Type of examination	Duration or length	Performance Points	Due date or date of exam	Assignments	30 min	30	One assignment each after completion of the pure theory of money and the Central Banks parts, respectively	Written exam	90 min	90	Exam week
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Assignments	30 min	30	One assignment each after completion of the pure theory of money and the Central Banks parts, respectively													
Written exam	90 min	90	Exam week													

Literaturhinweise

Part I: Introduction

Neoclassical macroeconomics

Williamson, S. (2018), Macroeconomics, 6th edition, Global edition,
<https://ebookcentral.proquest.com/lib/franksfm/reader.action?docID=5833549&ppg=22>

Chapter 4: Consumer and Firm Behavior: The Work-Leisure Decision and Profit Maximization, pp. 118 – 161

Chapter 9: A Two-Period Model: The Consumption-Savings Decision and Credit Markets, pp. 326 – 352

Chapter 11: A Real Intertemporal Model with Investment, 399 – 446

Chapter 12: Money, Banking, Prices and Monetary Policy, 462 – 497

Chapter 13: Business Cycle Models with Flexible Prices and Wages, 498 – 509

Keynesian macroeconomics:

Williamson, S. (2008), Macroeconomics, 3rd (!) ed., Pearson: Boston et al., pp. 441 – 474 (sections II.2-II.5 (excluding Annex))

Part II: The pure theory of money

Ábel, I., Lehmann, K., & Tapaszti, A. (2016). The controversial treatment of money and banks in macroeconomics. *Financial and Economic Review*, 15(2), 33-58.

Alvarez, F. E., Argente, D., & Van Patten, D. (2022). Are cryptocurrencies currencies? Bitcoin as legal tender in El Salvador (No. w29968). National Bureau of Economic Research.

Goodhart, C. A. (1998). The two concepts of money: implications for the analysis of optimal currency areas. *European journal of political economy*, 14(3), 407-432.

Lagos, R., Rocheteau, G., Wright, R. (2017). Liquidity: A new monetarist perspective. *Journal of Economic Literature*, 55(2), 371-440

Williamson, S., & Wright, R. (1994). Barter and monetary exchange under private information. *The American Economic Review*, 104-123

Wright, R. (youtube), <https://www.youtube.com/watch?v=Wz5ijsZXzjk>

Part III: Central Banks

Bindseil, U. (2020). Tiered CBDC and the financial system, ECB Working Paper No. 2351, Frankfurt am Main.

Goodhart, C. A. (1987). Why do banks need a central bank?. *Oxford economic papers*, 39(1), 75-89.

Goodhart, C. (1988). *The evolution of central banks*. MIT press.

Part IV: Monetary policy

Bofinger, P. (2001), *Monetary Policy* (<https://ebookcentral.proquest.com/lib/franksfm/reader.action?docID=1037319&ppg=24>): Chapter 7, pp. 174 – 202, Chapter 8, pp. 248 – 274

Bhattarai, S., Neely, C. J. (2022). An analysis of the literature on international unconventional monetary policy. *Journal of Economic Literature*, 60(2), 527-97.

Deutsche Bundesbank (2017), *The role of banks, non-banks and the central bank in the money creation process*, Monthly Report, 13- 33.

Jakab, Z., Kumhof, M. (2015), *Banks are not intermediaries of loanable*

	<p>funds—facts, theory and evidence, Bank of England Staff Working Paper No. 529</p> <p>Jordà, O, Taylor, A.M. (2019), Riders on the Storm, Paper prepared for the Federal Reserve Bank of Kansas City Economic Policy Symposium, Jackson Hole, August 2019, https://www.kansascityfed.org/~media/files/publicat/sympos/2019/jt%20riders%20on%20the%20storm%20082809%20kcfed.pdf?la=en</p>
Modulstruktur	<p>Part I: Introduction</p> <p>Part II: The pure theory of money</p> <p>Part III: Central Banks</p> <p>Part IV: Monetary policy</p>
Verwendbarkeit für andere Module und Programme	Subsequent modules
Letztes Freigabedatum	15.03.2023

**Case Studies in Investment Banking
[FIN77381]**

Module Coordinator		Hirst, Simon			
Programme(s)		Master of Finance			
Term		Semester 3 Q2			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Corporate Finance, Corporate Valuation			

<p>Content</p>	<p>This course is about the business of modern investment banking. As such, it covers all important business areas that arise in investment banking practice, ranging from M&A / Private Equity to Equity Capital Markets and Debt Capital Markets. It also includes a segment on Venture Capital funding for pre-IPO companies. The course emphasizes the role of the investment banking financial advisor and his/her importance in generating and completing deals that are in the best interests of their clients.</p> <p>The course heavily builds on cases to develop the learning experience. The cases help to apply corporate finance and valuation tools and concepts to real-world problems in modern investment banking. Every Case Study has been written by the Professor using actual numbers sourced from annual reports and prospectuses. Many cases include the outputs of detailed Excel spreadsheets, so as to ensure consistency and allow students to see how numbers are actually calculated. This is done at the level of an experienced investment banker, so contrasts with many traditional business school cases. The cases involve recent, very large, high profile transactions, each selected because of the unique lessons that can be learned from it.</p> <p>The course prepares students that aim at working in leading investment banks, private equity funds, sovereign wealth funds, strategy consulting firms and the corporate finance departments of major global corporates. Therefore the learning method involves a combination of case studies, in-class excel exercises and mentoring sessions led by the Professor. After the first day, the class will form into self-selected teams and each team will have private 20-minute group with the Professor in the afternoon session. This is an essential part of the learning process, because it will illustrate the thought process required to solve complex corporate finance issues.</p>
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<p>Intended Learning Outcomes</p>	<p>Knowledge: On successful completion of this module, students will have an in-depth understanding of modern investment banking, e.g. they can:</p> <ul style="list-style-type: none"> • Summarise and interpret investment banking case situations related to M&A, Private Equity, Equity Capital Markets (including venture capital financing and IPOs), and Debt Capital Markets • Understand the key numerical aspects of each type of transaction • Understand each type of transaction in the context of real companies, using their own Financial Statements and the Notes relating thereto <p>Skills: On successful completion of this module, students will have the proven ability to relate the gained knowledge and studied concept to real world situations, e.g. they can:</p> <ul style="list-style-type: none"> • Apply valuation models to real world situations • Identify the demands of clients in investment banking • Prepare and solve cases in modern investment banking <p>Competence: On successful completion of this module, students will be able to transfer the learned concepts to the investment banking industry and corporate finance departments of large global corporations, e.g. they can:</p> <ul style="list-style-type: none"> • Partake in the financial advisory process • Relate the knowledge of an IB practitioner to a valued client • Identify new transaction opportunities for clients
<p>Forms of teaching, methods and support</p>	<p>Lectures & Case Study Discussions</p> <p><u>Lectures</u> i) Specific Case Study presentations in M&A, Equity Capital Markets & Debt Capital Markets ii) Presentations explaining the concepts, mechanics and calculations relating to each of these transaction types</p> <p><u>Excel</u> In-Class Excel Exercises where the professor will use his own templates, and guide the class through writing the formulas for themselves</p> <p><u>Team Mentoring Sessions</u> Working as a team and using the Professor as their mentor to undertake the Case Study exam</p>

Type of Assessment(s) and performance

Type of examination	Duration or length	Performance Points	Due date or date of exam
Multiple choice test	30 Minutes	30	Exam Week
Case studies (group)	20 minutes	70	Saturday morning session
Excel test	20 minutes	20	Friday afternoon (end)

The **Multiple Choice Exam** is an individual quiz on concepts taught in Class during the module and involves 30 questions to be answered in 30 minutes, each with 4 possible answers, only one of which is correct. 1 point per correct answer - no negative marks for wrong answers

The **Case Study Exam** is a group project which will cover a specific Investment Banking Case set by Prof. Hirst. It will require a Powerpoint Presentation and an Excel Model. Time will be set aside during part of each of the last 4 days of Lectures for Case Preparation under the mentorship of the Professor. Teams will be given 20 minutes to present their Case on Saturday morning. Each team will be graded separately, but members of each team will be awarded the same team grade.

Excel Test will require students to write the formulas in a standardised template which has been demonstrated in class. This is an individual test - a number of students will not need the full 20 minutes to complete the task.

<p>Recommended Literature</p>	<p>Required:</p> <ul style="list-style-type: none"> • Cases studies and presentations/excel spreadsheets(will be made available in the course) <p>Highly Recommended:</p> <ul style="list-style-type: none"> • Course Notes (Part I and II) by Simon R. Hirst - available on line prior to course commencement. They cover key accounting concepts, as they relate to corporate finance) <p>Recommended (to refresh corporate finance basics):</p> <ul style="list-style-type: none"> • Damodaran, A., Damodaran on Valuation, John Wiley & Sonso • Berk, J. and De Marzo, P., Corporate Finance, Pearson International • Hillier, D., Ross, S., Westerfield, R., Jaffe, J. and Jordan, B., Corporate Finance, McGraw-Hill, European Edition • Brealey, R., Myers, S. and Allen, F., Corporate Finance, McGraw-Hill International Edition
<p>Module Structure</p>	<p>The module structure has three elements:</p> <ul style="list-style-type: none"> • Presentations which give a detailed understanding of the key concepts relating to M&A/Private Equity, Equity Capital Markets and Debt Capital Markets • Case Studies in each of these topics, using live examples with a detailed analysis of the numbers in each case • Review of financial models which are used to interpret numbers in each type of transaction
<p>Usability in other Modules/Programmes</p>	<p>Other modules in Corporate Finance Concentration; M&A and Advanced M&A electives</p>
<p>Last Approval Date</p>	<p>2021/03/10</p>

**Restructuring & Strategic Management
Control [MGT72035]**

Module Coordinator		Mahlendorf, Matthias			
Programme(s)		Master of Finance			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Foundations of Finance; Financial Statement Analysis			
Content		<p><i>“Even though the particular focus of restructuring may change over time—yesterday’s Internet crisis is tomorrow’s real estate/private equity/banking[/COVID] crisis —companies in general restructure for the same reasons: to improve their financial performance; to take advantage of new strategic opportunities; and to increase their market value through improved communication and enhanced credibility with investors, analysts, and other capital market participants. The many factors that trigger restructuring—competition, technological change, macroeconomic shocks, market volatility, taxes, regulation, and financial speculation—are omnipresent and cut across industries, countries, and time”</i> (S. C. Gilson, Harvard Business School)</p> <p>The module Restructuring & Strategic Management Control aims at analyzing firms in financial distress and developing solutions to improve profitability. The module will contribute to acquiring theoretical knowledge and practical applications about how financial and nonfinancial information is used in strategic and operational decision-making in turnarounds.</p>			

<p>Intended Learning Outcomes</p>	<p><i>Knowledge:</i> Students become acquainted with tools and techniques to evaluate the success of firms. Having taken the course, students can:</p> <ul style="list-style-type: none"> • Explain various methods that help to understand the reasons for unprofitability and to improve the strategy • Illustrate how a company is managed after bankruptcy has been declared and • Specify how debt & liabilities, equity & assets, and employee claims can be restructured to allow a fresh start for the company <p><i>Skills:</i> Students learn to analyze complex situations of firms in distress and to develop suggestions for restructuring firms. On successful completion of this module, students can:</p> <ul style="list-style-type: none"> • Reconsider the business model • Manage turnaround activities • Assess the profitability on the corporate and business unit levels and • Select performance indicators which support the achievement of short and long-term objectives <p><i>Competence:</i> Upon successful completion of this module students will be prepared for a career in consulting firms, the financial advisory task of audit firms, and more generally for executive positions in the finance function of medium-sized and large corporations. Students become qualified to:</p> <ul style="list-style-type: none"> • Develop solutions in challenging financial situations • Reposition the strategy of a firm based on the analysis of financial and nonfinancial data • Communicate restructuring requirements with different stakeholders in a constructive manner
<p>Forms of teaching, methods and support</p>	<ul style="list-style-type: none"> • Pre-class assignments • Lecture with integrated Excel exercises • In-class discussions • Simulation games (e.g. Sony's Battle for Video Game Supremacy; Balanced Scorecard Simulation) • Executive guest lectures

Type of Assessment(s) and performance	<table border="1"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance Points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>Assignments</td> <td>360 min</td> <td>60</td> <td>Usually before each session</td> </tr> <tr> <td>Written exam</td> <td>60 min</td> <td>60</td> <td>Exam week</td> </tr> </tbody> </table>				Type of examination	Duration or length	Performance Points	Due date or date of exam	Assignments	360 min	60	Usually before each session	Written exam	60 min	60	Exam week
	Type of examination	Duration or length	Performance Points	Due date or date of exam												
Assignments	360 min	60	Usually before each session													
Written exam	60 min	60	Exam week													
<p>Connection between examination types and qualification goals:</p> <ul style="list-style-type: none"> • Assignments about pre-readings -> Assesses knowledge about tools, techniques, and business settings; Assess the competence to communicate and discuss restructuring aspects • Written exam -> Assesses the knowledge about restructuring concepts, the skill to analyze profitability, and the competence to develop solutions in challenging financial situations 																
Recommended Literature	<p>Gilson, S. C. (2010). <i>Creating value through corporate restructuring: Case studies in bankruptcies, buyouts, and breakups</i>. John Wiley & Sons.</p> <p>Datar, S. M., & Rajan, M. V. (2021). <i>Hornsgren's cost accounting: A managerial emphasis</i>. Pearson.</p> <p>Articles and textbook chapters for each topic will be provided via Canvas.</p>															

Module Structure	<p>Topic Cases and Exercises Introduction, Basics of Performance Management & Restructuring; Product portfolio decisions: product lifecycle, BCG matrix, and product portfolio cash flows Futureviews: BCG matrix & cash flows (Canvas) Financial statement & working capital analysis & TRUFA data analytics</p> <p>Restructuring debt (How bankruptcy works) Exercises on the slides Strategic investment decisions: discounted cash flows, scenarios, real options, Monte Carlo Treeshade (Canvas) Restructuring equity and assets Sabine Oil / Gas: Restructuring equity (Canvas) Valuing companies Valuing companies Excel assignment (Canvas) Lower price limits; Transfer pricing Goliath: Role playing exercise (Canvas) Solution/Discussion Transfer pricing Liquidity planning & management Liquidity Exercise Service, product, & customer profitability: activity-based costing Buckeye National (Canvas) Growing a Platform Business: MIT Simulation Game: Platform Wars Sony's Battle for Video Game Supremacy Scaling up: break-even analysis and operating leverage Sustain invest - Compensation and operating leverage <i>Executive guest lecture</i> Investing in distressed situations <i>Executive guest lecture</i> Value based management: DuPont value drivers, return on investment, economic value added Mini Case Goal incongruence of ROI Measuring strategy execution: balanced scorecard, strategy map Restructuring employee claims Mini Case Layoff Decision at Beta-Retail (on the slides) <i>Executive guest lecture</i> Harvard strategy simulation Delta/Signal (Harvard) Strategy simulation debriefing Strategic goals: target setting, incentives, objectives and key results (OKR) Henkel: Building a Winning Culture (Harvard) Note: The structure can be subject to changes.</p>
Usability in other Modules/Programmes	The content will be helpful for other courses related to financial advisory, consulting, turnaround management, restructuring, management accounting, and strategy execution.
Last Approval Date	2022/04/07

**Financial Information & Decision-Making
[MGT72033]**

Module Coordinator		Lent, Laurence			
Programme(s)		Master of Finance			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Basic knowledge of preparing and interpreting financial statements and basic knowledge of statistics (regression analysis).			

<p>Content</p>	<p>The course teaches the latest techniques in using performance measurement and control systems to organize business for better performance. In each of the lectures, we pay especial attention to the role of quantitative (often financial) information and how it helps managers to take better decisions. A central theme of the course is that many managerial questions can be answered by systematically examining data. For this reason, the course includes a hands-on workshop that aims to give students confidence in using statistical software.</p> <p>Topic 1: Organizing business for better performance: organization structure and information Topic 2: Designing jobs for better performance: span of control, accountability, influence, support Topic 3: Managing markets inside the firm: transfer pricing and performance management Topic 4: Aligning employees' actions with strategy: performance goals, incentives, executive compensation Topic 5: Strategic risks and organizational pressure points: risk exposure calculator, dangerous triad Topic 6: Organizational designs to manage risk: boundary controls, belief systems, internal controls Topic 7: STATA workshop: Data collection, variable calculation and descriptive statistics, correlation and linear regressions</p>
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<p>Intended Learning Outcomes</p>	<p><i>Knowledge:</i> On successful completion of this module, students will have a thorough comprehension of how managers use performance measurement and control systems to implement strategies, i.e. they can:</p> <ul style="list-style-type: none"> • Explain the concept of decision usefulness of (quantitative) information in managerial decisions • Summarize the main insights from organizational design theories • Analyze complex organizational design problems and understand how these relate to performance measurement and control solutions • Understand the quantitative techniques managers use to create a "better business" • Describe examples of the use of these techniques by managers to achieve profit goals and strategies • Debate the ethical dimensions of using performance measurement and control techniques in implementing strategies <p><i>Skills:</i> On successful completion of this module, students will have the proven ability to apply advanced knowledge and relate pertinent concepts, i.e. they can:</p> <ul style="list-style-type: none"> • Conduct a profit and risk diagnosis of organizations • Apply the job design tool and understand its workings • Appraise a firm's transferpricing policy in relation to its strategy • Collect and statistically analyze financial and market data • Write algorithms in STATA <p><i>Competence:</i> On successful completion of this module, students can take responsibility to transfer theoretical concepts to typical leadership, management and consulting situations, i.e. they can:</p> <ul style="list-style-type: none"> • Guide decision-making based on quantitative data • Use common data sources for corporate financial information, such as Compustat, CRSP and Execucomp • Compare the effectiveness of various performance measurement and control techniques in solving organizational design problems • Analyze data statistically and translate the findings into non-technical, managerial reports • Demonstrate effective presentation skills 																
<p>Type of Assessment(s) and performance</p>	<table border="1"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance Points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>Presentations, in-class assignments, participation</td> <td>TBD</td> <td>20</td> <td>During the module</td> </tr> <tr> <td>Replication task</td> <td>2 pages written report</td> <td>40</td> <td>During the module</td> </tr> <tr> <td>Project/Case</td> <td>Consulting report (5 pages)</td> <td>60</td> <td>End of module</td> </tr> </tbody> </table>	Type of examination	Duration or length	Performance Points	Due date or date of exam	Presentations, in-class assignments, participation	TBD	20	During the module	Replication task	2 pages written report	40	During the module	Project/Case	Consulting report (5 pages)	60	End of module
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Presentations, in-class assignments, participation	TBD	20	During the module														
Replication task	2 pages written report	40	During the module														
Project/Case	Consulting report (5 pages)	60	End of module														

Recommended Literature	<ul style="list-style-type: none"> • <i>Reading list:</i> <p>We do not use a required textbook in this course (for reasons to be explained during the first lecture). However, students might find it useful to review some of the concepts discussed during the lectures (in a more leisurely fashion) by reading chapters from:</p> <p>Simons, R. Levers of Organization Design: How managers use accountability systems for greater performance and commitment. Boston: Harvard Business School Press, 2005.</p> <ul style="list-style-type: none"> • All other materials will be provided in class.
Module Structure	
Usability in other Modules/Programmes	Other modules in Financial Advisory Concentration.
Last Approval Date	2021/03/02

Debt Finance [FIN71061]

Module Coordinator		Steffen, Sascha			
Programme(s)		Master of Finance			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Foundations of Finance, Corporate Finance			
Content		<p>Topics</p> <ul style="list-style-type: none"> • Introduction to “Debt Finance” & Capital structure decisions of firms • Credit risk • Securitization • Bank lending and contract design • Loan syndication • Debt renegotiation • Secondary markets: Bonds & Loans • Leveraged loan markets and LBOs • Leveraged debt restructuring • Private equity investors in leveraged loans • Middle market lending, direct lending funds 			

<p>Intended Learning Outcomes</p>	<p>Competencies developed</p> <p>The skills and knowledge that you will learn in this course comprise the techniques for financial decision making in an international setting, including</p> <ul style="list-style-type: none"> • Deciding between debt and equity • Financing international projects • Estimating the value of a businesses • Evaluating credit risk of firms • Structuring & negotiating loans • Understanding incentives in lending syndicates • Decide between bond vs loan financing • Explaining funding options available to firms • Understanding the role of commercial and investment banks in raising capital • Understanding causes and consequences of financial crises and the effect of regulation on economic growth <p>This course has two main learning objectives:</p> <ul style="list-style-type: none"> • Show proficiency in finance as a major business function in a global environment. • Display critical thinking and analytical ability for creativity and innovation.
<p>Forms of teaching, methods and support</p>	<p>The course is highly interactive with case studies/exercises in almost every class. Thus, you need to be prepared, have read the lecture material before the class in which they are discussed and be prepared to engage in a discussion which I moderate. I will cold-call students if I have the feeling they are not prepared. Some of the cases are more quantitative in nature but our focus is on the economics. The case studies complement a rigorous discussion of the underlying theory and introduction of institutional characteristics. I will draw from recent empirical and theoretical academic research whenever possible.</p> <p>There will be problem sets to review the material. Problem sets include concept questions (I want you to understand the "why" in addition to the "how") as well as empirical questions. I want you to work on these problem sets on time and I will discuss a subset of the question in two tutorials during the course.</p> <p>Guest speakers from highly reputable firms will strengthen your learning experience.</p>

<p>Type of Assessment(s) and performance</p>	<table border="1"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>Final exam</td> <td>70 minutes</td> <td>70</td> <td>Exam week</td> </tr> <tr> <td>Case Studies</td> <td></td> <td>20</td> <td>During the module</td> </tr> <tr> <td>Paper Presentations</td> <td></td> <td>30</td> <td>During the module</td> </tr> </tbody> </table>	Type of examination	Duration or length	Performance points	Due date or date of exam	Final exam	70 minutes	70	Exam week	Case Studies		20	During the module	Paper Presentations		30	During the module
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Final exam	70 minutes	70	Exam week														
Case Studies		20	During the module														
Paper Presentations		30	During the module														
<p>Recommended Literature</p>	<p><u>Required:</u> Lecture Notes and Slides (and additional material I post throughout the class)</p> <p><u>Recommended:</u> Berk, Jonathan, and Peter DeMarzo, Corporate Finance, Pearson International Edition.</p> <p>Those of you with a limited exposure to finance may also find the following additional text useful:</p> <p>Downes, John, and Jordan Elliot Goodman, <i>Barron's Financial Guides: Dictionary of Finance and Investment Terms</i>, 9th edition (Barron's Educational Series, 2014)</p>																
<p>Module Structure</p>	<p>One of the critical activities a company must do well to succeed is the raising of capital. This course explores the role of financial intermediaries (such as commercial and investment banks or private equity firms) in helping non-financial firms raise capital. We study domestic and international funding markets and financial instruments available to firms to raise capital. We take the view of both the firm that wants to raise capital and the intermediaries who provide funds. While a large part of the class focuses on capital raising issues relevant to larger (publicly listed) firms, we also examine financing choices of smaller firms, so-called small-medium enterprises (SME).</p> <p>We cover topics in this course such as the bank debt versus bond debt, the process, participants and economics of loan syndication, importance of relationships between firms and intermediaries (and between intermediaries), credit risk, financial contracting, and private equity and leveraged buyouts (LBOs). We will discuss these topics also in the context of the 2008-2009 global financial crisis. While most of our discussion takes a micro-level perspective (with implications on firms and contracts etc.), we also discuss macroeconomic implications such as what current credit market conditions might imply for future economic development (e.g. GDP growth or aggregate investment and employment).</p>																
<p>Usability in other Modules/Programmes</p>	<p>Other modules in Corporate Finance Concentration</p>																

Last Approval Date	2021/02/25
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Equity Finance [FIN75382]

Module Coordinator		Umber, Marc			
Programme(s)		Master of Finance			
Term		Semester 3 Q1 & Q2			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Principles or Foundations of Finance; Corporate Finance; Intermediate level Excel modelling skills; Familiarity with key concepts of Accounting;			
Content		<p>The objective of this module is to develop students' appreciation of the aspects of equity financing throughout the lifecycle of a company. The nature of fundraising and contracting changes as companies grow from their nascent, early stages to become mature, large enterprises. Understanding the dynamics between various types of investors (angels, VC, PE, public) and entrepreneurs, and also the practicalities of raising VC and PE funds from institutional investors are key for adequate funding of successful growth companies. The private equity industry has grown from approximately \$500 billion in assets under management in 2000 to over \$2.5 trillion in 2017. Growth by established firms and new entrants has outstripped transaction volume, resulting in substantial competition for deals. Excess money does not always create better economic outcome, and given the long investment horizons in VC and PE, it takes some time to reveal who is actually paying for bad funding decisions.</p>			

<p>Intended Learning Outcomes</p>	<p>To familiarise students with the practicalities of the investment process, esp. from a venture capital and private equity perspective.</p> <p>Knowledge: On successful completion of this module, students will have an in-depth understanding of different types of equity financing, e.g., they will be able to:</p> <ul style="list-style-type: none"> - Understand the varying needs of equity funding throughout the life cycle - Understand structures of institutional equity investors - Explain the concepts of venture capital and private equity investments <p>Skills: On successful completion of this module, students will have the ability to:</p> <ul style="list-style-type: none"> - Evaluate venture capital and private equity investment targets <p>Competence: On successful completion of this module, students can take responsibility to transfer the knowledge and practiced methods in equity financing to real world situations, e.g. they can:</p> <ul style="list-style-type: none"> - Explain the concepts and techniques of equity financing - Identify adequate terms for equity contracting according to the company's stage - Compare and contrast the different types of equity investors 												
<p>Forms of teaching, methods and support</p>	<p>Lectures, case work and team project.</p>												
<p>Type of Assessment(s) and performance</p>	<table border="1" data-bbox="480 1216 1378 1426"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance Points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>Team project</td> <td>15 hours</td> <td>30</td> <td>During the module</td> </tr> <tr> <td>Written exam</td> <td>90 min</td> <td>90</td> <td>Exam week</td> </tr> </tbody> </table>	Type of examination	Duration or length	Performance Points	Due date or date of exam	Team project	15 hours	30	During the module	Written exam	90 min	90	Exam week
Type of examination	Duration or length	Performance Points	Due date or date of exam										
Team project	15 hours	30	During the module										
Written exam	90 min	90	Exam week										
<p>Recommended Literature</p>	<p>Lecture slide sets, student's notes and selected chapters of:</p> <ul style="list-style-type: none"> • Zeisberger, Prah, White, 2017. Mastering Private Equity: Transformation via Venture Capital, Minority Investments and Buyouts. Wiley • Metrick, Yasuda, 2010. Venture Capital and the Finance of Innovation. Wiley • Cumming, Johan, 2013. Venture Capital and Private Equity Contracting. Elsevier 												
<p>Module Structure</p>	<p>This course contains both the theoretical foundations of equity finance, and real-life examples of equity investments. Focus of this module is the company and its need for (external) equity funding, and the complex and far reaching opportunities and threats for stakeholders (entrepreneurs, investors, potential investors).</p>												
<p>Usability in other Modules/Programmes</p>	<p>Other modules in Corporate Finance Concentration</p>												

Last Approval Date	2022/05/18
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Credit Risk [FIN71942]

Module Coordinator		Irle, Sebastian			
Programme(s)		Master of Finance			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		None.			
Content		<ol style="list-style-type: none"> 1. Introduction to credit risk modeling 2. Portfolio default risk 3. Migration and default risk in the trading book 4. Credit Default Swaps (CDS) and estimation of default probabilities with CDS spreads 			

Intended Learning Outcomes	<p><i>Knowledge:</i> On successful completion of this module, students will have a thorough comprehension of loan portfolio default risk models and some structured products, i.e. they can:</p> <ul style="list-style-type: none"> • Specify statistical approaches for analysing the dependency structure between loans; • Review modeling approaches for risk management, particularly involving KMV-type models. <p><i>Skills:</i> On successful completion of this module, students will have the proven ability to apply statistical methods to estimate the risk of financial losses due to rating migrations and defaults, i.e. they can:</p> <ul style="list-style-type: none"> • Estimate probabilities of default from CDS spreads; • Apply risk modeling techniques to compute the VaR of a loan portfolio model; • Apply risk modeling techniques to compute the VaR of trading book positions with specific interest rate risk, taking into account migration and default risks only. <p><i>Competence:</i> On successful completion of this module, students can take responsibility to transfer these methods to situations in organisations, i.e. they can:</p> <ul style="list-style-type: none"> • Appreciate the importance of quantitative risk management; • Discuss any advanced model for migration and default risk with quantitative risk modelers; • Discuss fundamental approaches for pricing structured products with quantitative risk modelers; • Assess and judge quantitative loan portfolio models in the context of bankwide risk management; • Act as an interface between risk modelers and risk managers. 								
Forms of teaching, methods and support	Lecture, script, coding examples, group project.								
Type of Assessment(s) and performance	<table border="1" data-bbox="480 1485 1378 1668"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance Points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>Case study presentations in groups</td> <td>30 min</td> <td>120</td> <td>During the module</td> </tr> </tbody> </table>	Type of examination	Duration or length	Performance Points	Due date or date of exam	Case study presentations in groups	30 min	120	During the module
Type of examination	Duration or length	Performance Points	Due date or date of exam						
Case study presentations in groups	30 min	120	During the module						
Recommended Literature	<ul style="list-style-type: none"> • Hull, E.G.: Options, Futures & Other Derivatives, Prentice-Hall International, London 2000 								
Module Structure	Lecture and group projects.								
Usability in other Modules/Programmes	Other modules in Risk Management concentration.								
Last Approval Date	2022/05/06								

FinTech: Disruptive Innovation? [FIN71944]

Module Coordinator		Kreiterling, Christoph			
Programme(s)		Master of Finance			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Basic knowledge in business administration and financial Management. Working knowledge on presentation software. Class attendance is mandatory.			
Content		<p>FinTech refers to technologically enabled innovation in financial services that could result in new business models, applications, processes or products with an associated material effect on financial markets and institutions and the provision of financial services. FinTech innovations are affecting many different areas of financial services. To keep up with these developments, professionals and students in need to have up-to-date understanding of the sector and its evolution.</p> <p>The goal of this course is to provide students with the skills they need to grasp the intricate interactions of finance, technology, and legislation. The course covers the most important technical advancements that are reshaping the financial industry. We will look at how these technologies reduce frictions in the financial industry, from unit processing costs to asymmetric information and network effects.</p>			

<p>Intended Learning Outcomes</p>	<p>This course is designed to provide students with an in-depth understanding of</p> <ol style="list-style-type: none"> (1) how to integrate FinTech technologies/analytics into new business ideas, (2) how to be effective managers in an environment where FinTech technologies are strategic to an organization, (3) the major areas of FinTech, including What is FinTech? and What are FinTechs? (4) FinTech applications in Money, Payment, Emerging Technologies, Digital Finance, Alternative Finance, FinTech Regulation, RegTech, Data and Security, the Future of Data Driven Finance, core technologies that drive FinTech, such as Blockchain, AI, and Big Data, (5) the FinTech environment the ecosystem, (6) how to cope with the future direction of change initiated by FinTech developments.
<p>Forms of teaching, methods and support</p>	<p>Class attendance is mandatory.</p> <p>The course will involve a mix of lectures with active student participation, team assignments and presentations, and peer-review of students' work.</p> <p>Student are expected to demonstrate a high level of in-class participation, including asking questions, sharing personal experience, answers instructor's questions, and answering quizzes.</p>

<p>Type of Assessment(s) and performance</p>	<p>Class attendance is mandatory.</p> <table border="1" data-bbox="480 405 1378 770"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>Class Participation</td> <td>Daily</td> <td>30 (6 points for each days 1 to 5)</td> <td>Throughout module</td> </tr> <tr> <td>Group Assignments</td> <td>Daily</td> <td>30 (6 points for each days 1 to 5)</td> <td>Throughout module</td> </tr> <tr> <td>Final Individual Presentation</td> <td>15-20 minutes</td> <td>60</td> <td>Final session</td> </tr> </tbody> </table> <p>The course will have 3 types of examinations:</p> <p>1) Class Participation: 1a. Competencies evaluated: Ability to communicate effectively and to utilize complex reasoning processes.</p> <p>2) Group Assignments: 2a. Competencies evaluated: Ability to work in a cooperative/collaborative manner. In particular, displaying ability to work with others as a member of a team and fostering team cooperation. Ability to regulate one's own learning and development and to meet required deadlines.</p> <p>3) Final Individual Presentation 3a. Competencies evaluated: Ability to gather and utilize information from a variety of sources in a variety of modes. Display of knowledge of concepts, generalizations, processes and strategies that are considered critical to specific content areas.</p>	Type of examination	Duration or length	Performance points	Due date or date of exam	Class Participation	Daily	30 (6 points for each days 1 to 5)	Throughout module	Group Assignments	Daily	30 (6 points for each days 1 to 5)	Throughout module	Final Individual Presentation	15-20 minutes	60	Final session
Type of examination	Duration or length	Performance points	Due date or date of exam														
Class Participation	Daily	30 (6 points for each days 1 to 5)	Throughout module														
Group Assignments	Daily	30 (6 points for each days 1 to 5)	Throughout module														
Final Individual Presentation	15-20 minutes	60	Final session														
<p>Recommended Literature</p>	<p>Compulsory literature:</p> <p>Citi GPS (2016) Digital Disruption: How FinTech Is Forcing Banking to a Tipping Point. Available at http://citi.us/37zAPBq</p> <p>Schueffel, P. (2016). Taming the beast: A scientific definition of fintech. Journal of Innovation Management, 4(4), 32-54. Available at https://bit.ly/3K5MVz7</p> <p>KPMG (2022) The Pulse of FinTech H2 2021. Available at https://bit.ly/3rRdCkT</p>																

Module Structure	<p>(please note: structure is in draft)</p> <p>Part 1 / Day 1: INTRODUCTION Course Introduction: FinTech opportunity to improve the financial system. Financial Innovation: Theory, History, Today. ESG and FinTechs Fintechs as Data Organisations Crypto ecosystem (Exchanges, Custody, Investment, ...) Core Banking technologies impact FinTechs Privacy and financial data. Platforms: Economics and Strategy. How Big Data Changes Things.</p> <p>Part 2 / Day 2: USE CASES Intro to Disruptive Technology Cases in FinTech. Impact of FinTech on value chain of TradFi. Crypto related further use cases (DeFi) Payments – infrastructure/digital banks InsurTechs RegTech WealthTech CyberSecurity Impact on ESG through FinTechs PropTech (Property/Real Estate technology) Cybersecurity BNPL/PTOF</p> <p>Part 3 / Day 3: INDUSTRY IMPACT Open Finance / Embedded Finance Platformification Markets and Price Discovery. Capital Allocation. Financial Inclusion AI Platforms and Fintech data & applications.</p> <p>Part 4 / Day 4: BEHIND THE SCENES FinTech operational, technology, and regulatory risks. Cyber Security, Fraud, Crime and Law Enforcement in FinTech. FinTech blow-ups and failures. FinTech Company Valuation & Asset Bubbles.</p> <p>Part 5 / Day 5: BUILDING THE FUTURE Using Insights from FinTech to Improve Financial Behaviour. TradFi and FinTech: Opponents or partners? Policy Implications for Regulators and Investors. Financial Inclusion and Exclusion. Future ESG impact. The Labour Market After FinTech. Course wrap-up.</p> <p>Part 6 / Day 6: ? Final Presentations</p>
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Usability in other Modules/Programmes	Elective and Thesis.
Last Approval Date	2022/05/12

Portfolio Management [FIN73942]

Module Coordinator		Cocoma, Paula Andrea			
Programme(s)		Master of Finance			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Financial Products and Modeling (with introduction to programming)			

<p>Content</p>	<p>Theory & Practice of portfolio optimization</p> <ul style="list-style-type: none"> • Risk, Risk Premium, and the CAPM: Estimating expected returns, systematic risk, estimating CAPM alpha and beta • Equities in the Cross-Section: The equity market, portfolios based on stock characteristics, the Fama-French three (four) factors • Equities in the Time-Series: The Random Walk model, Market timing and predicting stock returns, Estimating volatility, time-varying volatility (ARCH and GARCH), Fama-Macbec tests • Other Asset Classes: Derivatives, Fixed Income, Alternatives, Main risk factors and importance of correlation for portfolio construction • Portfolio Choice: Optimal portfolio, limits of Mean-Variance, Black-Litterman • Portfolio Management implementation: Liquidity, Currency risks, Shrinkage, Constraints, Rebalancing • Risk Management: VaR, tail-risk, Conditional VaR, Expected Shortfall, Estimation • Portfolio Management in practice: Asset Management for individuals, Mutual Funds, ETFs, Performance Measurement, ESG investments
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<p>Intended Learning Outcomes</p>	<p>Knowledge: <u>On successful completion of this module, students will have a thorough comprehension of quantitative portfolio management, i.e. they can:</u></p> <ul style="list-style-type: none"> • Specify modern portfolio optimization tools and methods, applied to single and multiple asset classes • Outline the evolution of portfolio management from modern portfolio theory as formulated by Markowitz (1952) to risk parity modelling, benchmarking, and multi-factor modelling, which are the state of the art in the asset management industry. • Specify modern risk management and tail-risk optimization tools and methods, applied to single and multiple asset classes • Outline the evolution of portfolio risk, in particular tail-risk, management from modern risk management theory, beginning with Value-at-Risk in 1993, to risk parity modelling, dynamic tail-risk optimization and portfolio insurance models, and multi-factor modelling, which are the state of the art in the asset management industry and financial risk management <p>Skills: <u>On successful completion of this module, students will have the proven ability to apply theoretical tools in real situations, i.e. they can:</u></p> <ul style="list-style-type: none"> • Use various portfolio and risk optimization techniques in realistic situations • Evaluate risk and performance for various portfolios • Build risk optimized portfolio using modern portfolio theory (with necessary adjustments) and more advanced approaches. <p>Competence: <u>On successful completion of this module, students can transfer the acquired knowledge and methods to real life situations in organizations, i. e. they can:</u></p> <ul style="list-style-type: none"> • Research, process, and analyze market information to build efficient portfolios from multiple asset classes • Analyze portfolio performance including profitability and risk profile • Assume a responsible position in the area of financial risk management, investment banking (both sell - and buy-side), and asset management, e.g. as portfolio managers
<p>Forms of teaching, methods and support</p>	<p>Lectures, group home assignments (3 students each), in-class discussions and exercises of the practical issues in portfolio management</p>

Type of Assessment(s) and performance	Type of examination	Duration or length	Performance Points	Due date or date of exam
	Class preparation and participation	Daily	10	During the module
	2 group home assignments	at least two sessions	40	During the module
	Quiz	30 minutes	20	To be announced
	Written Exam	50 minutes	50	Exam week
	Competencies evaluated: critical reasoning and judgment of course material (class participation). Programming skill and data management (Problem Sets). Discerning of competing theoretical knowledge (Quiz). Theoretical knowledge and argumentative skills (Final Exam)			
Recommended Literature	<p><i>Extensively used in the course:</i></p> <p>Asset Allocation From Theory to Practice and Beyond, By William Kinlaw, Mark P. Kritzman, David Turkington (2021)</p> <p>Additional material posted on Canvas</p>			
Module Structure	<p>This module starts with the extensive discussion of the theoretical and computational tools used in the portfolio analysis and in risk management. Theoretical lectures will be supported by group home assignments/ in-class quizzes. In these home assignments the students will apply the covered theoretical tools to a number of real portfolio analysis problems, also introduced in class in the form of lectures.</p> <p>Extending the portfolio risk management perspective in the first half we will have a deeper emphasis on portfolio optimization methods such as risk parity and multi-factor investing. The second half focuses on portfolio tail risk, which discusses in detail Value-at-Risk and its extensions of tail-risk management for portfolio risk optimization, followed by micro risk management using risk factors.</p>			
Usability in other Modules/Programmes	Other modules in Capital Markets and Risk concentrations.			
Last Approval Date	2022/02/21			

**Portfolio Optimization in Continuous Time
[FIN93944]**

Module Coordinator		Vecer, Jan			
Programme(s)		Master of Finance			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Statistics and Econometrics; Capital Markets or Risk Management concentration			
Content		<p>Basis concepts: no arbitrage theory, risk neutral measure, utility maximization under the subjective market measure, finding optimal payoff function</p> <p>Review of financial models in continuous time: simple random walk, Brownian motion, stochastic calculus, concept of no arbitrage and risk neutral measure, replication and hedging</p> <p>Metron's portfolio problem, link to derivative prices, approximation with traded options, estimation of the model parameters, comparison with Markowitz portfolio theory, model implementation using real market data</p> <p>Bayesian approach to modeling: principles of Bayesian statistics, comparison to the frequentist approach, working with multiple trading models including automatic recalibration of model parameters, asymptotic wealth distribution for Bayesian traders</p>			

Intended Learning Outcomes	<p>Knowledge:</p> <p>On successful completion of this module, students will have a thorough comprehension of cutting edge techniques of modern portfolio theory, including:</p> <ul style="list-style-type: none"> - deep understanding of models in continuous time finance - utility maximization and finding optimal payoff functions - estimate market parameters by Bayesian statistical techniques - construct robust optimal portfolios with dynamic evolution for arbitrary asset classes <p>Skills:</p> <p>On successful completion of this module, students will be able:</p> <ul style="list-style-type: none"> - analyze market data in order to create dynamically evolving scenario predictions for future asset price evolutions - work with large financial data sets (using Python) - identify sets of profitable scenarios and replicate them by trading - compute confidence intervals for the final portfolio values <p>Competence:</p> <p>The graduates of this course can apply this knowledge in investment or hedge funds, banks, or in wealth management firms.</p>								
Forms of teaching, methods and support	Lecture, discussion, computer simulations, case studies and questions								
Type of Assessment(s) and performance	<table border="1" data-bbox="480 1350 1378 1568"> <thead> <tr> <th data-bbox="480 1350 700 1429">Typ of examination</th> <th data-bbox="700 1350 935 1429">Duration or length</th> <th data-bbox="935 1350 1155 1429">Performance points</th> <th data-bbox="1155 1350 1378 1429">Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td data-bbox="480 1429 700 1568">Individual Project in Python</td> <td data-bbox="700 1429 935 1568">20 hours, including in session project development</td> <td data-bbox="935 1429 1155 1568">120</td> <td data-bbox="1155 1429 1378 1568">End of module</td> </tr> </tbody> </table>	Typ of examination	Duration or length	Performance points	Due date or date of exam	Individual Project in Python	20 hours, including in session project development	120	End of module
Typ of examination	Duration or length	Performance points	Due date or date of exam						
Individual Project in Python	20 hours, including in session project development	120	End of module						
Recommended Literature	Vecer, J.: Principles of Bayesian Portfolio Choice								
Module Structure	The focus of the module is to fully grasp no arbitrage theory with the consequences on construction of attainable portfolios. The lectures and supplementary materials will help students to master financial data analysis using modern programming languages (such as Python).								
Usability in other Modules/Programmes	Capital Markets, Master Thesis								
Last Approval Date	2022/05/02								

Financial Engineering [FIN74942]

Module Coordinator		Heidorn, Thomas			
Programme(s)		Master of Finance			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Derivative Analysis			
Content		<ol style="list-style-type: none"> 1. Understanding Interest Rate Risk <ol style="list-style-type: none"> 1.1 Forecast 1.2 Value at Risk for Rates 1.3 Cash Flow at Risk 1.4 Interest Rate Swaps 2. Pricing and Risk Analysis <ol style="list-style-type: none"> 2.1 Reverse/Leverage Floater 2.2 Callable Bond 2.3 Collared Floater 2.4 Interest Rate Swap with Euribor in Arrears 3. Structuring a Financial Package <ol style="list-style-type: none"> 3.1 Individual Pension Plan 3.2 Pension Plan from a Life Insurance 3.3 Foreign Exchange Management for a Corporate 3.4 Kerosine Hedge for an Airline 			

Intended Learning Outcomes	<p>Knowledge: On successful completion of this module, students will have a thorough comprehension of the major concepts, approaches and techniques in Financial Engineering i.e. they can:</p> <ul style="list-style-type: none"> • Evaluate complex financial products • Understand the arbitrage relations in the financial market • Create solutions for individual financial situations <p>Skills: On successful completion of this module, students will have the proven ability to apply advanced knowledge to efficiently manage financial positions, i.e. they can</p> <ul style="list-style-type: none"> • Analyze the risk/return relationship of the products • Communicate the solution to the customer • Work in international groups under pressure <p>Competence: On successful completion of this module, students can take responsibility to transfer these concepts to typical leadership and management situations in banks, such as Treasury, Sales and Trading.</p>								
Forms of teaching, methods and support	Transfer of the elements of investment banking under time pressure with the help of group case studies and external talks.								
Type of Assessment(s) and performance	<table border="1" data-bbox="480 1115 1378 1267"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance Points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>Case Studies</td> <td>120 min</td> <td>120</td> <td>During the module</td> </tr> </tbody> </table>	Type of examination	Duration or length	Performance Points	Due date or date of exam	Case Studies	120 min	120	During the module
Type of examination	Duration or length	Performance Points	Due date or date of exam						
Case Studies	120 min	120	During the module						
Recommended Literature	<ul style="list-style-type: none"> • John C. Hull: Options, Futures and other Derivatives, Prentice Hall International 8th Edition 2012 • Hans R. Stoll / Robert E. Whaley: Futures and Options, South Western Publishing Cincinnati 1993 • Heidorn Thomas: Finanzmathematik in der Bankenpraxis, Gabler 6. Auflage 2009 								
Module Structure	Financial engineering will take application a step further. Under strong time constraints the students will use their knowledge from the capital market concentration to prepare and present case studies. On the one hand this focuses on pricing, analysing and selling financial products to clients. On the other hand the students learn to work in international groups. Additionally special talks by market specialists on FX trading and interest rate markets give additional insight.								
Usability in other Modules/Programmes	Other modules in Capital Markets concentration								
Last Approval Date	2021/10/14								

M&A Accounting [ACC71222]

Module Coordinator		Löw, Edgar			
Programme(s)		Master of Finance			
Term		Semester 3 Q2			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		This module aspires to make you familiar with the financial reporting implications of M&A transactions resulting in subsidiaries, associate companies, joint ventures or pure financial instruments investments. Therefore basic knowledge of preparing and interpreting financial statements under International Financial Reporting Standards (IFRS) would be helpful to follow the course properly. Risk Management, Corporate Finance, Financial Statement Analysis.			

Content	<ol style="list-style-type: none"> 1) Strategic aspects of M&A transactions <ul style="list-style-type: none"> • Preparation of a transaction from the perspective of accounting • Internal and external communication (including capital market communication) • Integration into the IT system and other technical aspects 2) Linkage to company valuation <ul style="list-style-type: none"> • Cash flow versus accrual • Purchase price allocation • Intangible assets 3) Group/group consolidation <ul style="list-style-type: none"> • Differentiation of investments (subsidiary, associate company, joint ventures, financial investments) • accounting consequences 4) Purchase of a company <ul style="list-style-type: none"> • Concept of control • Purchase price and purchase price allocation • Goodwill and goodwill accounting (including impairment test) • Date of consolidation • Full consolidation method • Minorities 5) Consolidation of special purpose entities 6) Associate companies and equity method 7) Joint ventures 8) Financial instruments <ul style="list-style-type: none"> • Introduction
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<p>Intended Learning Outcomes</p>	<p>Accounting for M&A transactions is relevant for all larger companies. M&A transactions are investments that often involve large amounts of money and can profoundly change the size and structure of companies, with potentially large effects on firm value. Studies in industrial economics and corporate finance show that a high percentage of M&A transactions fail to meet their operational and financial goals. Therefore, transparent and meaningful reporting on the consequences of M&A transactions is crucial for effective monitoring of managerial decision making.</p> <p><i>Knowledge:</i> On successful completion of this module, students should be able to:</p> <ul style="list-style-type: none"> • Point out the significance of different types of M&A transactions for companies in today's economy • Discuss the validity of different M&A strategies and their consequences for firm value • Explain the process involved in incorporating newly acquired subsidiaries into parent companies' consolidated financial statements (purchase price allocation) • Interpret the accounting concept of goodwill and its treatment in subsequent reporting periods (including goodwill impairment test) • Cover the financial reporting effects of investments in joint ventures and associates <p><i>Skills:</i> This module focusses on financial statements prepared under International Financial Reporting Standards (IFRS) which publicly traded companies domiciled in the EU are required to apply. Students will enhance their ability to:</p> <ul style="list-style-type: none"> • Recapture briefly the basics of preparing and analyzing consolidated IFRS statements • Deal with the most important accounting rules and reporting requirements for M&A transactions and for financial instruments • Interpret financial statements before and after major acquisitions/desinvestments • Interact between balance sheet and p/l information on the one hand and information provided within the notes on the other hand <p><i>Competence:</i> Students should be able to</p> <ul style="list-style-type: none"> • Differentiate and apply different accounting rules regarding M&A transactions • Use the full consolidation method as well as the equity method in order to implement respective transactions • Interpret and analyze risks and rewards of M&A transactions out of financial statements (including notes)
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Type of Assessment(s) and performance	<table border="1"> <thead> <tr> <th>Type of examination</th> <th>Duration</th> <th>Performance points</th> <th>Due date</th> </tr> </thead> <tbody> <tr> <td>Group presentation</td> <td>90 min</td> <td>120</td> <td>During the module</td> </tr> </tbody> </table>	Type of examination	Duration	Performance points	Due date	Group presentation	90 min	120	During the module
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Recommended Literature	<p>Recommended Literature</p> <p>For major parts of the course you may refer to the following commentaries by leading international accounting and audit firms</p> <ul style="list-style-type: none"> • <i>Deloitte</i>, iGAAP, every edition since 2019 • <i>Ernst & Young</i>, International GAAP, every edition since 2019 • <i>KPMG</i>, Insights into IFRS, every edition since 2019 • <i>PwC</i>, Manual of Accounting, every edition since 2019 <p>IFRS</p> <p>This module is based on the IFRS pronouncements that regulate the accounting for investments in subsidiaries, joint ventures, and associates, in IFRS consolidated financial statements. Therefore, it is important for you to access to these standards. This is generally possible in the following ways</p> <ul style="list-style-type: none"> • IASB website (registration required): http://www.ifrs.org/IFRSs/IFRS.htm • EU Official Journal • Several text editions, some of them bilingual <p>Useful websites of financial accounting standard setters</p> <ul style="list-style-type: none"> • International Accounting Standards Board (IASB): www.ifrs.org • U. S. Securities Exchange Commission: www.sec.gov • Financial Accounting Standards Board (FASB): www.fasb.org • European Financial Reporting Advisory Group (EFRAG) endorsement update: http://www.efrag.org/Front/Home.aspx <p>Useful news sources on (international) financial accounting</p> <ul style="list-style-type: none"> • Current news on (international) financial accounting developments on Deloitte's websites at www.iasplus.com (English) or www.iasplus.de (German). • Newsletters from CFO magazine (www.cfo.com; English) and GASC (www.drsc.de; German). 								
Module Structure									
Usability in other Modules/Programmes	Other modules in Financial Advisory Concentration								

Last Approval Date	2022/05/10
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