

Number of ECTS credits : 4

Course language : Anglais

Course leader : GUYOT ALEXIS

Speakers : BAZIH Jad

≡

COURSE DESCRIPTION

This module aims at addressing the key aspects of business valuation in the current economic climate. The first part focuses on the contexts of evaluation, the main methods and the importance of the evaluation process. An important part is devoted to the cost of capital and the components of various sources of capital. It is then possible to present the main evaluation methods and implement them in practical examples and actual case studies. Some case studies are carried out by professionals. The final session will open the debate through a reflection on the contributions and limitations of the method of real options.

≡

COURSE OBJECTIVES

- At the end of this module, students should be able to:
- Compute the WACC and its components
 - Use different techniques to value a firm
 - Understand, search-seek and extract relevant information from various data sources
 - Extract Information from the main financial statements
 - Update and Adjust current figures
 - Estimate Discount Rates
 - Estimate Cash Flows
 - Estimated Discount Rates
 - Decide on what is the most appropriate evaluation for different companies
 - Develop a group report

≡

LEARNING OBJECTIVES

C4B learning goal	LG1 - Analysis
C4B learning objective	LO1 - Make use of critical analysis/critical thinking skills
Outcomes	Lev. 0 - Niv. 0 - NC
C4B learning goal	LG1 - Analysis
C4B learning objective	LO2 - Analyse complex situations
Outcomes	Lev. 0 - NC
C4B learning goal	LG2 - Action
C4B learning objective	LO5 - Evaluate, prevent and manage short, medium and long-term risks
Outcomes	Lev. 0 - NC
C4B learning goal	LG4 - CSR
C4B learning objective	LO11 - Identify ethical issues and act on them from an ethical perspective
Outcomes	Lev. 0 - NC
C4B learning goal	LG5 - Cooperation
C4B learning objective	LO14 - Work effectively in a team
Outcomes	Lev. 0 - NC

≡ TACKLED CONCEPTS

- Discount Rates
 - o Cost of Equity
 - o Cost of Debt
 - o WACC
- Estimate Cash Flows
 - o Measure and Update Earnings
 - o From Earnings to Cash Flows
- Estimate Growth
 - o Stable
 - o 2-stage Growth Models
 - o 3-stage Growth Models
- Relative Valuation
 - o Earnings Multiples
 - o Book Value Multiples
 - o Sales Multiples
- Real Options
 - o Option to Expand
 - o Option to Abandon
 - o Option to Delay
 - o Equity as an option to liquidate

≡ LEARNING METHODS

10 x 3 hour lectures will be used to introduce new material and to expand areas of financial theory but much of the learning will be done through case study work. Students will be required to analyse a situational problem and to put forward a solution for discussion.

≡ EXPECTED WORK AND EVALUATION

Mid-term exam : Group Coursework 30% of the final mark
Final Exam : Written Exam, 70% of the final mark, open book, calculator needed

For the group project, you will know your group and group members by the end of the first week of the module.

Late submissions will be penalized by 10%/day (max 30%) reduction of the final grade.

≡ BIBLIOGRAPHY

Damodaran on Valuation, Wiley, 2nd edition <http://www.scholarvox.com/reader/index/docid/10051129/searchterm/damodaran>
Investment Valuation, A. Damodaran, Wiley, 2nd edition
Corporate Finance, European edition, HILLIER et al., 2010

≡ EVALUATION METHODS

30 % : Groups 1 + 2 Continuous assessment
70 % : Groups 1 + 2 Final exam

≡ SESSIONS

1 Introduction LECTURE : 03h00

2 DCF I LECTURE : 03h00

- Discount Rates
 - o Cost of Equity
 - o Cost of Debt
 - o WACC
 - o Case Studies

3**DCF II**LECTURE : 03h00

- Estimate Cash Flows
 - o Measure and Update Earnings
 - o From Earnings to Cash Flows
 - o Case Studies

4**DCF III**LECTURE : 03h00

- Estimate Growth
 - o Stable
 - o 2-stage Growth Models
 - o 3-stage Growth Models

5**DCF case studies**LECTURE : 03h00

- DCF Examples - Complete Case Studies – Full Valuations

6**Relative valuation**LECTURE : 03h00

- Introduction to Relative Valuation
 - o Earnings Multiples
 - o Book Value Multiples
 - o Sales Multiples

7**Relative valuation case studies**LECTURE : 03h00

- Relative Valuation and DCF Examples - Complete Case Studies – Full Valuations

8**Real options**LECTURE : 03h00

- Introduction to Real Options
 - o Option to Expand
 - o Option to Abandon
 - o Option to Delay

9**Real options case studies**LECTURE : 03h00

- Equity as an option to liquidate
- Real Option, Relative Valuation and DCF Examples - Complete Case Studies – Full Valuations

10**Recoup and Revision**LECTURE : 03h00

Number of ECTS credits : 4

Course language : Anglais

Course leader : GALARIOTIS EMILIOS

Speakers : GALARIOTIS EMILIOS

≡ COURSE DESCRIPTION

The course is on portfolio management but it makes links to other courses and subject areas such as corporate finance, evaluation of investments, the use of financial information/ratios, risk management. At the same time the course has interdisciplinary links with references examples and content relating to accounting, statistics...

The course is designed to cover more than 70% of the CFA material hence is well balanced and applicable.

Course Outline

- General introduction to finance, financial markets and to portfolio theory
- Investor Risk and Return preferences
- Portfolio mathematics
- Asset pricing
- The Markowitz Model
- Index Models
- Asset allocation
- Selecting and managing equity portfolios
- Evaluating the performance of portfolios and managers
- Portfolio management in efficient markets vs. behavioural portfolio management strategies

≡ COURSE OBJECTIVES

The main objective of this course is to learn the key theory with practical applications relevant to portfolio management.

After completing this course you will be able to:

- Classify assets and understand their interrelations and the impact of these
- Measure and manage risk and returns
- Select and monitor an Investment and build a portfolio
- Practically understand and apply asset pricing

≡ LEARNING OBJECTIVES

C4B learning goal	LG1 - Analysis
C4B learning objective	LO1 - Make use of critical analysis/critical thinking skills
Outcomes	Lev. 3 - Detect one's own biases and evaluate their impacts on the formulated opinion
C4B learning goal	LG2 - Action
C4B learning objective	LO5 - Evaluate, prevent and manage short, medium and long-term risks
Outcomes	Lev. 3 - Prioritize risk scenarios, decide a risk management plan and ensure the implementation of a risk management/prevention plan

≡ TACKLED CONCEPTS

- Allocation of funds to portfolios
- Portfolio Performance Evaluation
- Portfolio Mathematics
- Risk - Return - Utility functions
- Asset Pricing models
- Index model(s)
- Behavioral Finance and portfolio Management
- Passive and active portfolio Management

≡ LEARNING METHODS

Lectures, practical lab applications, homework, class work (group and individual); self assessed work; discussions.

≡ EXPECTED WORK AND EVALUATION

Attendance at each class from the beginning to the end is required, as the knowledge is built gradually and evolves within each class and across classes.

After a class you will receive your notes and at the end of each set of notes you will find your:

- a) homework that you are expected to do before the next class (where applicable).
- b) a reading list of what you should read before the next class (this may include your book and/or articles published in international refereed journals).

During the class we will have group, or individual work and discussions that you should all participate in.

≡ BIBLIOGRAPHY

Book: Modern Portfolio Theory and Investment Analysis E.J. Elton; S.J. Brown; W.N. Goetzmann; M. J. Gruber ISBN 978-0-470-05082-8 John Wiley & Sons, Inc. You can use the latest 9th or an earlier edition of the book as they are very similar. There are copies in the library.

The course uses several resources and therefore you should not expect all topics to be covered in the textbook. Detailed reading lists (where appropriate) will be given at the end of each set of lecture notes. You are also encouraged to undertake your own search for additional relevant literature and follow up relevant references contained in the literature identified.

≡ EVALUATION METHODS

100 % : Groups 1 +2 Final exam

≡ SESSIONS

1 Introduction I

BRIEFING : 02h00

Introduction to the course

Aims and objectives, teaching and learning methods, topics to be covered class rules.

Introduction finance and risk (forms of risk, investors attitudes towards risks and risk return relationship).

2 Introduction II

LECTURE : 04h00

Asset Pricing and introduction to Portfolio mathematics

Measurement of systematic risk by beta an CAPM (Capital Asset Pricing Model) regression analysis description and excel example. Introduction to portfolio mathematics.

3 Portfolio Mathematics + Asset Allocation

LECTURE : 04h00

We complete portfolio mathematics, i.e. portfolio risk and return for 1, 2, 3 and N assets, correlation and covariance, with applications that use real data, in other words we cover portfolio mathematics. We then look analytically at the risk aversion coefficient and utility and introduce asset allocation

4 Asset Allocation application + International Diversification + Index models

LECTURE & PRACTICAL WORK : 04h00

After completing Capital Allocation; Asset Allocation; Security Selection, and using practical examples for each, we apply an international asset allocation example using real data from 7 countries in excel to create constrained and unconstrained efficient frontiers. This will act as the link of asset allocation to international diversification that we will discuss before we look into index models that simplifies the process.

5**Modern Portfolio Management (passive and active)**

LECTURE & PRACTICAL WORK : 04h00

Today we cover the Modern portfolio management process and its ethics as well as the different stages of the portfolio process. We look at passive portfolio management, how to create index funds and judge index fund managers and also at active portfolio management and analyze a hedge portfolio active strategy, style investing timing and security selection. For all of the above we use real market data to show how they are calculated.

6**Portfolio Performance Monitoring**

LECTURE & PRACTICAL WORK : 04h00

Today we cover portfolio performance evaluation and monitoring, the pitfalls based on AIMR, the methods as well as their applications and limitations. More specifically, we look at a timing and selection evaluation to link this class to the last one and we then move on to time weighted returns, peer group comparison (first the traditional and simpler method and then the more recent using style analysis approach to group peers). We then cover risk adjusted measures such as the Treynor ratio, Sharpe ratio, Appraisal or Information ratio, Jensen's alpha, and their differential measures of performance as well. In all of these we use practical examples.

7**further practical applications of portfolio management + Neoclassical and Behavioral Finance and Portfolio Management I**

COMPUTER LAB : 04h00

Today is the day where the course comes together and all little pieces should fall in place. We use a package called PFL and real data to make capital and asset allocation decisions as well as security selection decisions, with and without short sale constraints, with and without a risk free asset and with differential borrowing and lending on the risk free asset. We also use index models to optimize our selection in addition to the mean variance approach and we also look into forming active style investment portfolios (smallcap vs. large cap). There are also data given to you for homework as well as the solutions and solved examples of (for self-assessment), that can be used to make P/E ratio-based Value and growth portfolios, or low price portfolios.

Today we also introduce (and next week we complete) Neoclassical and behavioral finance. We start with Neoclassical Finance and its foundation, that is, the Efficient Markets Hypothesis (EMH) that has implications for financial theory and practice as well as portfolio management at all its stages [Planning: forecasts etc.; implementation including evaluation; and rebalancing].

We look in to the definition, importance and foundations of EMH, the testable implications of EMH, its limitations and anomalies, and the impact of all the above on portfolio management. We also discuss practically why some markets and segments of markets can be more or less efficient. We talk about arbitrage and limits to arbitrage under imperfect and perfect substitutes.

We then introduce irrationality of investors based on Behavioural Finance (BF). We discuss the foundations and implications of BF, and the primary Heuristics mental mistakes and Biases (anchoring, overconfidence, gamblers fallacy, representativeness, framing....).

8**Neoclassical and Behavioral Finance and Portfolio Management II and REVISION (Dummy exam paper)**

LECTURE & PRACTICAL WORK : 04h00

Today we complete the Neoclassical vs. Behavioral portfolio management lecture by looking at the two primary mental mistakes of overreaction and underreaction and the associated portfolio management strategies, that is the contrarian portfolio strategy and the momentum portfolio strategy.

We will also make a revision, discuss exam rules and solve in class a dummy exam paper (a dummy exam paper has fictional or past exam questions. It aims at helping you to avoid stress and confusion during the exam and to understand the structure of the exam, the rationale of the questions, as well as good practices in critically answering questions).

Number of ECTS credits : 4

Course language : Anglais

Course leader : DELIS (NTELIS) Manthos (Matthaios) , GUYOT ALEXIS

Speakers : DELIS (NTELIS) Manthos (Matthaios)

≡ COURSE DESCRIPTION

This course aims to analyze banking markets from a microeconomic and a macroeconomic perspective (their use, function, and effects). The analysis includes the role of banks in modern societies, the sources of their risks, management of these risks, banking stability, banking regulation and its types, and the role of banks in central banking (monetary) policy.

≡ COURSE OBJECTIVES

Financial markets and banks are important pillars for the financing of the real economic activity. The main objective of this course is to provide a thorough understanding of the risks associated with banking, the banks' management of these risks, the need to regulate banks and the types of regulations, and the role banks play in the transmission of monetary policy.

Breaking down the main objectives, this course aims to:

- Discuss the role of financial institutions from a general macroeconomic perspective.
- Discuss the specific role of banks in the financial system and the role of asymmetric information.
- Discuss the types of bank risk and their management.
- Provide an understanding of the need to regulate banks in the modern economies.
- Discuss the role of banks in the money creation process and analyse the monetary transmission mechanisms.

≡ LEARNING OBJECTIVES

C4B learning goal	LG1 - Analysis				
C4B learning objective	LO3 - Use cross-disciplinary approaches				
Outcomes	Lev. 3 - Provide analysis from new frameworks of reference and develop/criticize previous frameworks				
Details	-				
Non-acquired (< 50% of total score)	Developing (50% ≥ 60% of total score)	Acquired (60% ≥ 70% of total score)	Advanced (70% ≥ 80% of total score)	Expertise (80% ≥ 100% of total score)	
Through mid term and final exam					

C4B learning goal	LG4 - CSR				
C4B learning objective	LO10 - Identify and understand stakeholder interests				
Outcomes	Lev. 1 - Identify and describe the relevant stakeholders				
Details	-				
Non-acquired (< 50% of total score)	Developing (50% ≥ 60% of total score)	Acquired (60% ≥ 70% of total score)	Advanced (70% ≥ 80% of total score)	Expertise (80% ≥ 100% of total score)	
Through mid term and/or final exam					

≡ TACKLED CONCEPTS

- Understand a wide range of topics about the role of financial institutions and banks in the modern economies and the need to regulate them.
- Understand why banks take on risk, why they are “special” firms, and why they are heavily regulated.
- Analyse the regulatory environment within which banks operate and the implications of that for their competitive environment and performance.
- Analyse case studies on banking crises, types of banking regulation, and the interplay between banks and financial markets.
- Analyse the costs and benefits of banking regulation.
- Understand central banking and regulatory theories, as well as the way banking regulation affects bank risk-taking and the real economy, also from an ethical viewpoint.

≡ LEARNING METHODS

30 h of face to face classes with lectures and case studies
45 h of home work

≡ EXPECTED WORK AND EVALUATION

30% Mid term relating to Part 1
70% Final exam relating to Part 2

≡ BIBLIOGRAPHY

Textbook: Frederic Mishkin. The Economics of Money, Banking and Financial Markets, The, Global Edition, 13th edition.
Primary reading material: Instructor’s slides and textbook

≡ EVALUATION METHODS

70 % : Groups 1 + 2 Final exam
30 % : Groups 1 + 2 Team Project

≡ SESSIONS

1 **Introductory issues in financial intermediation**

BRIEFING : 04h00

2 **Financial Crises and the Subprime Meltdown**

LECTURE : 04h00

3 **Banking and the Management of Financial Institutions**

BRIEFING : 03h00

4 **Corporate Governance in Banking**

BRIEFING : 03h00

5 **Mid-term test**

BRIEFING : 02h00

In-class mid-term examination on the material covered in sessions 1 to 3

6 **Economic Analysis of Financial Regulation**

BRIEFING : 04h00

7 **Central Banking and the Money Supply Process**

BRIEFING : 03h00

8

Tools, Strategies and Tactics of Monetary Policy

LECTURE : 03h00

9

Transmission Mechanisms of Monetary Policy

BRIEFING : 03h00

Number of ECTS credits : 4

Course language : Anglais

Course leader : BLOMKVIST MAGNUS CHRISTOF

Speakers : REES Michael

≡ COURSE DESCRIPTION

Covers financial engineering from a corporate manager's (CFO's) perspective. Focuses on the capital structure of the firm, and the use of this to maximise value and create alignment with strategic, financial and risk management objectives. Covers core principles relating to the use of equity and debt, and the role and structuring of M&A and private equity transactions. Introduces selected quantitative techniques related to many of the topics.

≡ COURSE OBJECTIVES

Create an understanding of the issues and available methods for firms to use financial structuring to maximise their value.

≡ LEARNING OBJECTIVES

C4B learning goal	LG2 - Action			
C4B learning objective	LO5 - Evaluate, prevent and manage short, medium and long-term risks			
Outcomes	Lev. 1 - Locate and state overall risks characterizing a situation			
Details	Being able to apply capital structure theory to analyse problems associated with a firm's financing choice.			
Non-acquired (< 50% of total score)	Developing (50% ≥ 60% of total score)	Acquired (60% ≥ 70% of total score)	Advanced (70% ≥ 80% of total score)	Expertise (80% ≥ 100% of total score)
Tested in a final exam question				

C4B learning goal	LG3 - Entrepreneurship and Innovation			
C4B learning objective	LO7 - Identify needs and draw up an appropriate offer			
Outcomes	Lev. 3 - Construct and formulate a new offer			
Details	-Find an appropriate target firm and chose your risk level. Perform a LBO analysis of the target firm. Execute recommendations for future value creation and analyse the risks associated with your investment.			
Non-acquired (< 50% of total score)	Developing (50% ≥ 60% of total score)	Acquired (60% ≥ 70% of total score)	Advanced (70% ≥ 80% of total score)	Expertise (80% ≥ 100% of total score)
Tested in LBO case study				

≡ TACKLED CONCEPTS

Equity and debt. Modigliani-Miller theory. Capital structures and leverage. Pecking order theory. Trade-off theory. Optimal capital structure. Corporate and personal/investor taxation. Asymmetric information. Signalling. Agency costs. Ratio analysis. Dividends and corporate policy. Financial distress and restructuring. Hybrid financial instruments. Mergers and acquisitions. Public versus private markets. Private equity. Leverage buyouts. Venture capital. Initial public offerings. Management buyouts. Returns, investment assessment. Debt amortisation, waterfall structures, carried interest.

≡ LEARNING METHODS

Class lectures. Class exercises. Group work: identify, research, prepare, write-up and present a case study on a topic related to the course (to be assigned by instructor).

≡ EXPECTED WORK AND EVALUATION

Class attendance

Supplementary exercises to be provided by course instructor.

≡ BIBLIOGRAPHY

Corporate Finance (Welch, 4th or 5th Edition) – available for free on-line in pdf form.

Lessons in Corporate Finance (Asquith and Weiss), John Wiley & Sons, 2nd Edition.

Corporate Finance (Ross, Westerfield, Jaffe, Jordan), McGraw Hill, 13th Edition

Mergers, Acquisitions and Corporate Restructurings (Gaughan), John Wiley & Sons.

Selected reading and articles or supplementary materials assigned by the lecturer.

≡ EVALUATION METHODS

30 % : Group 1 + 2 Continuous assessment

70 % : Group 1 + 2 Final exam

≡ SESSIONS

1 Introduction to Corporate Financial Engineering

LECTURE : 02h00

This session provides an overview of the course (content, requirements, expectations) as well as an introduction to the topic of financial engineering and the key issues addressed.

2 Modigliani-Miller Theory

LECTURE : 02h00

This session covers the Modigliani-Miller propositions and assumptions, the firm cost of capital and the effects of leverage.

3 Introduction to Capital Structure

LECTURE : 02h00

This session discusses the theories around capital structure, including pecking order and the trade-off theory.

4 Taxation Effects

LECTURE : 02h00

This session covers the effects of taxation on optimal capital structure, including corporate and investor taxes on interest and dividends.

5 Leverage Analysis

LECTURE : 02h00

This session analysis the effects of leverage on selected financial metrics at book values and at market values.

6 Dividends

LECTURE : 02h00

This session covers the roles and types of dividends, including share-buy backs, dividend policy and choices, and the use of preference shares.

7 Capital Structure in Practice

LECTURE : 02h00

This session covers overall decisions relating to capital structure, focussing on debt, convertible debt, as well as the debt implied within leases.

8**Corporate Restructuring**

LECTURE : 02h00

This session covers the process and options relating to corporate restructuring in distress, including the use of divestments, and an introduction to IPOs.

9**Mergers and Acquisitions (I)**

LECTURE : 02h00

This session covers M&A, including its motivation, merger waves, the process and its challenges, and value creation.

10**Mergers and Acquisitions (II)**

LECTURE : 02h00

This session covers key players and some key financing aspects of deals.

11**LBOs and Private Equity**

LECTURE : 02h00

This session discusses the structure of PE funds, the sources of value creation, and their incentive structures.

12**Quantitative Methods for Financial Engineering (I)**

LECTURE : 02h00

This session focuses on common types of calculations that are used for measuring and awarding returns in the private equity sector, such as IRRs, waterfall returns, and carried interest.

13**Quantitative Methods for Financial Engineering (II)**

LECTURE : 02h00

This session focuses on the calculations of debt profiles (e.g., refinancing, repayment, amortisation), and (time permitting) also explores other topics (such as sensitivities and scenarios).

14**Course Recap and Exam Preparation**

LECTURE : 02h00

This session is used to review main aspects of the course and reinforce students' preparation for the final exam.

15**Case Presentations and Course Close**

LECTURE : 02h00

This session allows each group to present key highlights and learnings from their case studies. (Full write-ups handed in by single deadline beforehand).

Number of ECTS credits : 4

Course language : Anglais

Course leader : GUYOT ALEXIS

Speakers : GUYOT ALEXIS

≡ COURSE DESCRIPTION

The aim of this course is to give knowledge to students about default risk and skills to assess it. Students will apply credit scoring techniques used in the banking industry as well as within companies to assess borrowers' risk of default.

Prerequisites for this course:

- Financial analysis course (basic level, such as the one offered in Semester 3 of the Grande Ecole programme)
- Basic math, probability theory & statistics

A brief reminder of these topics will take place within the course.

≡ COURSE OBJECTIVES

Upon completion of the module, you should have:

- advanced knowledge and critical understanding in rating, scoring and default prediction techniques applied in the banking & corporate industry
- demonstrated ability to exercise critical judgment on complex situations
- the ability to assess a company's financial position and risk of bankruptcy through a solid and detailed analysis of its financial statements, business environment, strategy and financing decisions
- the understanding of the impact of ESG dimensions on credit rating

≡ LEARNING OBJECTIVES

C4B learning goal	LG1 - Analysis				
C4B learning objective	LO2 - Analyse complex situations				
Outcomes	Lev. 3 - Support one's conclusions and issue well-reasoned recommendations				
Details	Give a opinion about a company's credit risk using a rating methodology				
Non-acquired (< 50% of total score)	Developing (50% ≥ 60% of total score)	Acquired (60% ≥ 70% of total score)	Advanced (70% ≥ 80% of total score)	Expertise (80% ≥ 100% of total score)	
Rating methodology not acquired: incomplete and/or major errors and/or shortcomings	Rating methodology acquired but with minor computing errors and/or minor shortcomings	Full rating methodology acquired: business risk profile, financial risk profile, mapping grid, standard adjustments, rating drivers	Previous level + Detailed analysis of rating drivers & additional factors of risk	Previous level + Rating outlook & detailed analysis of the factors that could lead to a notch downgrade or upgrade	

C4B learning goal	LG2 - Action				
C4B learning objective	LO5 - Evaluate, prevent and manage short, medium and long-term risks				
Outcomes	Lev. 2 - Determine the potential risks plus the degree of probability and time frame, work out various risk scenarios				
Details	Estimate a probability of default using default predicting models				
Non-acquired (< 50% of total score)	Developing (50% ≥ 60% of total score)	Acquired (60% ≥ 70% of total score)	Advanced (70% ≥ 80% of total score)	Expertise (80% ≥ 100% of total score)	
Risk modeling methodology not acquired: incomplete and/or major errors and/or shortcomings	Risk modeling methodology acquired but with minor computing errors and/or minor shortcomings	Full risk modeling methodology acquired: model parameters are correctly estimated	Previous level + correct classification of new data	Previous level + analyzing other model parameters (accuracy/goodness of fit/statistical significance) and/or comparing default prediction models	

C4B learning goal	LG4 - CSR				
C4B learning objective	LO12 - Take a decision from economic, social and environmental perspectives				
Outcomes	Lev. 3 - Make choices and arbitrate according to sustainability criteria				
Details	Capturing ESG (Environmental, Social and Governance) risk in credit ratings				
Non-acquired (< 50% of total score)	Developing (50% ≥ 60% of total score)	Acquired (60% ≥ 70% of total score)	Advanced (70% ≥ 80% of total score)	Expertise (80% ≥ 100% of total score)	
Insufficient identification of ESG dimensions & criteria and their impact on credit rating	Identification of 2 out of the 3 ESG dimensions & criteria as well as their impact on credit rating	Full identification of the 3 ESG dimensions & criteria as well as their impact on credit rating	Previous level + quantifying the impact of ESG factors on credit rating	Previous level + identifying the differences between the methodologies used by the main credit rating agencies	

≡ TACKLED CONCEPTS

Default risk
 Rating
 Scoring
 ESG dimensions and credit rating
 Covenant package
 Technical default & insolvency
 Default prediction models

≡ LEARNING METHODS

Interactive online quizzes
Case studies

Numerical applications

Softwares used in this class:

- Excel (extensively used)
- R an open statistical software (used for sessions on predicting default risk)

≡ EXPECTED WORK AND EVALUATION

Both formative (in class) and summative (final exam) assessments.

30% of the final grade is assessed by a coursework (credit report). A full guideline about learning objectives, grading and expectations will be available in due time on Blackboard.

70% of the final grade is assessed by an individual final exam (closed books, 1 non programmable calculator authorized)

≡ BIBLIOGRAPHY

Damadoran, A. Corporate Finance: Theory and Practice. John Wiley & sons

Tan, P. N., Steinbach M., Kumar V. Introduction to data mining. Pearson

≡ EVALUATION METHODS

30 % : Groups 1 + 2 Team Project

70 % : Groups 1 + 2 Final exam

≡ SESSIONS

1

Rating & scoring

LECTURE : 03h00

S&P Rating methodology

- Assessing a business profile
- Assessing a financial profile
- Determining an anchor rating
- Modifiers
- Recovery rating

Scoring methodology

- Bank of France score
- Scoring grid in use within the banking industry

2

Moody's credit risk assessment (part 1)

LECTURE : 03h00

Moody's rating methodology

- Using industry specific mapping grids

Moody's standard adjustments

- Unfunded defined benefit pension plans

3

Moody's credit risk assessment (part 2)

LECTURE : 03h00

Moody's standard adjustments

- Operating leases
- Capitalized interest

4**Moody's credit risk assessment (part 3)**LECTURE : 03h00

Moody's standard adjustments

- Capitalized development costs
- Interest expense on discounted long term non debt liabilities
- Hybrid securities

5**Moody's credit risk assessment (part 4)**LECTURE : 03h00

Moody's standard adjustments

- Factoring arrangements
- Consistent measure of FFO
- Non recurring and exceptional items
- *Total SA case study*

6**ESG & credit rating**LECTURE : 03h00

Integration of ESG factors into credit risk assessment

S&P approach

Moody's approach

Fitch approach

7**Covenant package**LECTURE : 03h00

Covenant types

Covenant breach

technical default

Duties of the management

Legal consequences

*Findus case study***8****Default prediction models: naïve Bayesian classifiers**LECTURE : 03h00

Fitting a bayesian model

Computer lab session

9**Default prediction models: Linear Discriminant Analysis**LECTURE : 03h00

Altman z-score

Fitting a LDA model

Computer lab session

10**Default prediction models: Logit models**LECTURE : 03h00

Fitting a Logit model

Computer lab session

Number of ECTS credits : 4

Course language : Anglais

Course leader : MEZERET THIERRY , MIFFRE JOELLE

Speakers : MEZERET THIERRY , MIFFRE JOELLE

≡ COURSE DESCRIPTION

This module aims to provide students with the necessary training to develop an advanced understanding of money markets, foreign exchange, derivatives and commodities.

Part 1. Is dedicated to give students a strong knowledge and understanding of the money markets.

Part 2. Provides students with specialist knowledge of international trade and currency markets.

Part 3. Gives the students an in depth knowledge of derivatives, in particular futures, swaps and options, so that they will be able to calculate the price of such instruments from first principles.

Cross-over program with the following module: Portfolio management

≡ COURSE OBJECTIVES

Upon completion of the module, you should have:

- specialist knowledge of the different types of cash instruments in the money markets
- advanced knowledge and critical understanding in currency exchange rates with an appreciation of international trade and capital flows
- describe the investment and risk characteristics of derivatives
- an in-depth knowledge of the uses and functionality of basic derivative products, and be able to calculate the underlying value of such products

≡ LEARNING OBJECTIVES

C4B learning goal	LG1 - Analysis
C4B learning objective	LO2 - Analyse complex situations
Outcomes	Lev. 3 - Support one's conclusions and issue well-reasoned recommendations

C4B learning goal	LG3 - Entrepreneurship and Innovation
C4B learning objective	LO7 - Identify needs and draw up an appropriate offer
Outcomes	Lev. 1 - Identify and describe the characteristics of the market concerned

≡ TACKLED CONCEPTS

Money market instruments

International capital flows

Exchange rates: Quotations, strategies, regimes

Forwards and Futures: Concepts and strategies

Commodity futures

Options: Concept, strategies, pricing and the Greeks

Interest rate swaps and currency swaps

Swaptions

≡ LEARNING METHODS

30 hours face-to-face

Group coursework

Excel-based applications

Case study

Practical exercises

Personal readings

The course will be evaluated through a coursework and a final exam that will test whether the students have acquired the learning objectives LG1 and LG2.

≡ EXPECTED WORK AND EVALUATION

Part of the course is devoted to the pricing of derivatives and to their use for risk and asset management. To meet these objectives, we will make use in class of a case study and of numerous Excel spreadsheets that facilitate the analysis of such complex concepts. The students will also get the chance to learn by themselves (personal reading, exercises) and to develop interpersonal skills by working together (group coursework).

≡ BIBLIOGRAPHY

Hull, J., *Options, Futures and Other Derivatives*, 10th edition, 2018, Pearson, ISBN-10: 013447208X.

Madura, J., *International Financial Management*, 13th edition, 2018, Cengage Learning, ISBN: 9781337099738.

Miffre, J., 2016, Long-short commodity investing: A review of the literature, *Journal of Commodity Markets*, 1, 3-13.

≡ EVALUATION METHODS

70 % : Group 1 Final exam

30 % : Group 2 Mid term quizz

70 % : Group 2 Final exam

30 % : Group 1 Continuous assessment

≡ SESSIONS

1 Money market instruments and cash management

BRIEFING : 02h00

Treasury-bill, Certificate of deposit, Banker's acceptance, Commercial paper, Interbank deposit, Repurchase agreements
The Baumol and Miller-Orr models of cash management

2 Currencies

BRIEFING : 04h00

International flow of funds
Foreign exchange markets
Exchange rate determination
Strategies in foreign exchange markets
Government influence on FX rates

3 Options markets and strategies

BRIEFING : 03h00

Options definition
Strategies involving one or more options and a stock
Strategies involving two or more options of the same class: spreads

Strategies involving options from different classes

4 Option pricing I: Arbitrage and binomial pricings

BRIEFING : 03h00

Determinants of option prices
Arbitrage pricing and the put-call parity relationship
Binomial pricing

5 Option pricing II: Monte-Carlo simulation and Black and Scholes

BRIEFING : 03h00

Monte-Carlo simulations
Black and Scholes pricing model
Case study: Pricing of an IBM call

6**Hedging and the Greeks**BRIEFING : 03h00

Naked position, covered position, stop-loss strategy

The “Greeks”

Case study: Recovering and interpreting the Greeks: the case of an IBM call

7**Forward and futures**BRIEFING : 03h00

Concepts

Strategies

8**Commodity futures**BRIEFING : 03h00

The case for long-only commodity investing

The case for long-short commodity investing

9**Swaps and swaptions**BRIEFING : 03h00

Interest rate swaps

Currency swaps

Swaptions

10**Revisions**BRIEFING : 03h00

Number of ECTS credits : 4**Course language :** Anglais**Course leader :** GUYOT ALEXIS**Speakers :** BONIN Florence

≡ COURSE DESCRIPTION

This course is an introduction to the International Financial Reporting Standards (IFRS) and the US Generally Accepted Accounting Standards (GAAP).

≡ COURSE OBJECTIVES

It aims to develop fundamental skills necessary to read and analyze the information contained in the three main financial statements (P&L, balance sheet and statement of cash flows) and notes.

≡ LEARNING OBJECTIVES

C4B learning goal	LG1 - Analysis
C4B learning objective	LO1 - Make use of critical analysis/critical thinking skills
Outcomes	Lev. 0 - Niv. 0 - NC
C4B learning goal	LG2 - Action
C4B learning objective	LO5 - Evaluate, prevent and manage short, medium and long-term risks
Outcomes	Lev. 0 - NC
C4B learning goal	LG5 - Cooperation
C4B learning objective	LO15 - Act with flexibility, adaptability and intellectual curiosity
Outcomes	Lev. 0 - NC

≡ TACKLED CONCEPTS

Balance sheet,
Consolidated financial statements,
IFRS and US GAAP frameworks,
Inventories,
Income taxes,
Long-lived assets,
Noncurrent liabilities,
P&L account,
Statement of cash flows

≡ LEARNING METHODS

Case studies discussion
Readings

≡ EXPECTED WORK AND EVALUATION

Case studies
Chapters reading in one specific book

≡ BIBLIOGRAPHY

Financial accounting and reporting; a global perspectiveHervé Stolowy, Michel lebas, Yuan Ding et George Langlois4th editionCengage Learning 2013

International Financial Statement AnalysisThomas R. Robinson, Elaine Henry and al.,3rd edition, Wiley, 2015

≡ EVALUATION METHODS

30 % : Groupe 1 + 2 Continuous assessment

70 % : Group 1 + 2 Final exam

≡ SESSIONS

1 Financial reporting mechanics and IFRS and US GAAP Framework LECTURE : 03h00

Financial reporting mechanics (the accounting process, accrual and valuation adjustments)
IFRS and US GAAP Framework (Conceptual framework, objective of financial reports, qualitative characteristics of financial reports, constraints on financial reports)

2 Consolidated financial statements LECTURE : 03h00

Joint venture
Methods of consolidations
Financial statement presentation subsequent to the business combination

3 Understanding income statements and balance sheets LECTURE : 03h00

Revenue recognition
Expense recognition
Expenses by nature and by function
Nonrecurring items and nonoperating items
Components and format of the balance sheet
Current assets and current liabilities
Noncurrent assets
Noncurrent liabilities
Equity

4 Understanding balance sheets and cash flow statements LECTURE : 03h00

Noncurrent assets
Noncurrent liabilities
Equity
Components and format of the cash flow statement
Linkages of the cash flow statement with the income statement and balance sheet
Indirect method and direct method in the calculation of the cash flow from operating activities

5 Analyst adjustments to reported financials LECTURE : 03h00

A framework for analyst adjustments
Analyst adjustments related to investments
Analyst adjustments related to inventory
Analyst adjustments related to property, plant and equipment (P,P&E)
Analyst adjustments related to goodwill
Analyst adjustments related to off-balance-sheet financing

6 Inventories LECTURE : 03h00

Cost of inventories
Inventory valuation methods
Inventory method changes
Inventory adjustments

7**Long-lived assets**LECTURE : 03h00

Acquisition of long-lived assets
Depreciation and amortization of long-lived assets
Impairment of assets
Derecognition

8**Income taxes**LECTURE : 03h00

Differences between accounting profit and taxable income
Determining the tax base of assets and liabilities
Temporary and permanent differences between taxable and accounting profit

9**Financial assets and Noncurrent liabilities**LECTURE : 03h00

Investments in financial assets (held-to-maturity and available-for-sale, impairments)
Bonds payable
Leases
Introduction to pensions and other postemployment benefits

10**Case study: a global perspective**LECTURE : 03h00

Creation of a statement of cash flows from an income statement, balance sheets and notes.