

CAPITAL MARKETS

IE University

Professor: **ROBERTO KNOP MUSZYNSKI**

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Academic year: 23-24

Degree course: THIRD

Semester: 1^o

Category: **COMPULSORY**

Number of credits: 3.0

Language: English

PREREQUISITES

Students should be familiar with basic aspects of mathematics in order to be able to deal with issues related to finance and financial markets. A good command of spreadsheets and calculators is desirable.

SUBJECT DESCRIPTION

The course will provide an understanding of the functioning of financial markets in general and capital markets in particular. The interrelation between finance and economics will be addressed so that the student will understand the dynamics of capital movements and the functioning of markets, including the latest trends and the impact of new technologies on financial activity.

OBJECTIVES AND SKILLS

After taking this course, students should be able to:

- Have a capital markets overview from a structural, operational, and basic quantitative point of view.
- Understand basic capital structure and the tradeoffs involved in the use of alternative sources of finance by weighting the factors that determine the optimal level of borrowing.
- Ascertain the capital and financial markets dynamics and drivers, as well as the prevailing trends at present.
- Gather the key elements and features of the main financial instruments in the different markets.
- Compare financial instruments in order to choose the most suitable one in each case under the given circumstances.

METHODOLOGY

Classes will have a combination of theory and practice with simple examples, many of them based on Excel. Up-to-date tools and information on capital markets activity will be provided to give the student tangible access to all relevant concepts.

Teaching methodology	Weighting	Estimated time a student should dedicate to prepare for and participate in
Lectures	66.67 %	50 hours
Discussions	6.67 %	5 hours
Exercises	6.67 %	5 hours
Group work	13.33 %	10 hours
Other individual studying	6.67 %	5 hours
TOTAL	100.0 %	75 hours

PROGRAM

SESSION 1 (LIVE IN-PERSON)

Capital markets introduction

We will start with an introduction to capital markets, explaining the role of stocks and bonds or loans as key vehicles for raising finance. The main characteristics of internal and external financing will be presented, apart from that which comes from profits generated in previous years. The contribution of capital and the level of debt are the basic sources of financing in addition to the results. There must be a balance between these two sources.

This first session will also provide a brief introduction to the primary and secondary markets for shares and bonds.

SESSION 2 (LIVE IN-PERSON)

Financial mathematics key concepts.

We will move on to fundamental questions of financial mathematics and especially the treatment of interest rates.

In that sense, we will cover an essential knowledge of financial mathematics necessary to know how to compute the price/cost of the financial instruments being later studied. Consequently, we will explain the theoretical base from "the time value of money", as well as carry out a series of practical exercises on compounding and discounting to prove that the theory has been fully understood. To do so, we will learn how to use a financial calculator and the financial related functions in Excel (Present Value, Future Value, Amortization, NPV and IRR as a proxy of the key YTM concept)

SESSION 3 (LIVE ONLINE)

Bank Financing

The banking sector continues to be one of the most important debt finance provider. We will review how banks have evolved through and out of the crisis and how its regulation and tech challenges will shape their future. An introductory review of concepts such as RWA, Capital ratios and several ratios will help that purpose. We will be able to understand how and why banks operate the way they do and its impact on its corporate clients through its lending relationship

SESSION 4 (LIVE IN-PERSON)

The Money Markets and Short- Term Financing

In this session we will look into the money markets as an essential kind of short-term financing (as well as investment) instruments even after the major changes brought about by the last global financial crisis. To this extent, we will analyze its origins and reasons to exist, a number of diverse products highlighting their communalities, as well the differences from each other and the present trends in terms of trading. We will learn how to compute their price and how to choose among them by applying what we have previously learnt in terms of the YTM concept.

SESSION 5 (LIVE ONLINE)

Bond markets (1)

In this session we will first look into the markets dealing with fixed income instruments, to understand their dynamics, the price formation, possible inefficiencies, the agents operating in them and their recent evolution and trends, with emphasis in the bonds market and its different classifications. The consolidated global bond market is the largest one in terms of both volume and value worldwide and it is the preferred source of long terms funding of the main corporations and governments across the globe. We will learn to compute the bonds price through the YTM key concept and will get to understand the variables that impact the trading conditions.

SESSION 6 (LIVE IN-PERSON)

Bond markets (2)

As a follow up, we will cover in this session a bonds issuance transaction by analyzing the phases and milestones the process is made up of, the roles being played by the different participants, as well as the recommendations aiming to accomplish the set goals in terms of both price-objective and time-schedule. The credit rating process shall be specifically examined being a key condition precedent with major implications for the issuer going forward.

SESSION 7 (LIVE IN-PERSON)

Bond markets (3)

We will explain the full valuation process and risk measurement. The target will be to explain how to calculate and interpret the sources of return from investing in a fixed-rate bond. Define, calculate, and interpret Macaulay, modified, and effective durations.

Describe how the term structure of yield volatility affects the interest rate risk of a bond.

Describe the relationship among a bond's period return, its duration, and the investment horizon

SESSION 8 (LIVE ONLINE)

Equity markets (1)

We will aim to gain an understanding of the main drivers of the equity markets, beginning for how the share prices are determined, following by the impact of external macro events on the evolution of the markets. Public market versus private market; equity seeding round, family & friends, angel investors, venture capital, private equity. Dilution, control.

SESSION 9 (LIVE IN-PERSON)

Equity markets (2)

We will focus on the hedging uses of the derivatives for equity positions. We will provide the theoretical base, with an eminently practical nature, in order to meet their application as hedging instruments and also as speculative version, as well as the misuse of derivatives.

SESSION 10 (LIVE IN-PERSON)

Currency markets

The importance of FOREX considerations deserves a specific session as it is, on the one hand, a financial market (whilst admittedly a particular one) and, on the other hand, FOREX exposure may have an essential impact on making the financing decision depending on the context where the company operates. In this sense, we will cover an initial approach to the FOREX market: spot and forward markets and the available hedging instruments but mainly we will ascertain the advantages and constraints of getting financing denominated in foreign currency and the associated implications.

SESSION 11 (LIVE ONLINE)

Derivatives (1)

The aim of the session is to provide all the knowledge about the foundations, description and management of the financial derivatives instruments. The objective of this course is for students to begin to understand the importance of financial engineering in the development of financial markets and its instruments derivatives.

We will be focusing in explaining what they are and how to properly use the main instruments, generally known as "financial derivatives" or simply "derivatives".

SESSION 12 (LIVE IN-PERSON)

Derivatives and Financing (2)

We will focus on the hedging uses of the derivatives for financing positions. We will provide the theoretical base, with an eminently practical nature, in order to meet their application as hedging instruments and also as speculative version. There are going to be explain the different type of derivatives (futures, options, and swaps) for different type of assets (currency, equity, interest rates, commodities) by concentrated specifically for interest rates

SESSION 13 (LIVE IN-PERSON)

Market risk in capital markets

The main market risk indicators will be explained, with a special focus on value at risk, expected shortfall and stress testing. The main methodologies will be discussed and explained from a very practical perspective.

SESSION 14 (LIVE IN-PERSON)

Case study presentations

SESSION 15 (LIVE IN-PERSON)

Exam

BIBLIOGRAPHY

Recommended

- Juan Ramirez. *Handbook of Corporate Equity Derivatives and Equity Capital Markets..* Wiley. ISBN 9781119975908 (Printed)

- John C. Hull. (2017). *Options, Futures, and Other Derivatives*. 10th. Pearson.

ISBN 9780134631493 (Digital)

- Roberto Knop. *Structured Products*. Wiley. ISBN 9780471486473 (Printed)
- Tuckman, Serrat. *Fixed Income Securities..* Wiley. ISBN 9780470904039 (Digital)
- Frank Fabozzi. (1997). *Advances in fixed income valuation modelling and risk management*. FJF. ISBN 1883249171 (Printed)

EVALUATION CRITERIA

Criteria	Percentage	Comments
Final Exam	50 %	
Group Presentation	30 %	
Class Participation	20 %	

RETAKE POLICY

Any student whose weighted final grade is below 5 will be required to sit for the retake exam to pass the course (except those not complying with the attendance rules, whom are banned from this possibility). Grading for retakes will be subject to the following rules:

- The retakes will consist of a comprehensive exam. The grade will depend only on the performance on this exam; continuous evaluation over the semester will not be taken into account.
- The exam will be designed bearing in mind that the passing grade is 5 and the maximum grade that can be attained is 8 out of 10.
- Dates and location of the retakes will be posted in advance and will not be changed.

PROFESSOR BIO

PhD, MRICS, MFIA, CESGA

Professional with extensive experience in: financial markets (consultancy, management and risks), banking (management and risks), real estate (management, risks, consultancy and valuation). Extensive teaching activity in national and international postgraduate courses related to finance and real estate. Extensive publication activity in financial matters.

Academic background:

PhD in Economic and Business Sciences in "Banking and Stock Exchange" at the Universidad Autónoma de Madrid. Thesis developed on real estate guarantees: "Determining factors in the quotation and valuation of loans with real guarantee". Rating: Cum Laude. July 2018

Degree in Economics and Business Administration from the Universidad Autónoma de Madrid, specialising in Economic Structure. June 1991.

MFIA Master. Financial Master in Alternative Investments. (Id: 49830)

MRICS: Accredited since October 2017

CESGA: ESG certified since December 2021

Academic experience:

Professor in various courses held during the last thirty years (1991-2023) in different financial institutions, regulatory institutions, universities, supranational bodies and business school. Topics: finance, valuation, management, risks and real estate.

The classes have been given in Spanish as well as in English. Highlights of the courses are as follows:

Banco Bilbao Vizcaya Argentaria, Banco de España, Banco Interamericano de Desarrollo, Banco Popular, Banco Santander, Banesto, Banif, Bankia, Bolsa de Valores de Colombia, Bulbank (Sofia-Bulgaria), Comisión Nacional del Mercado de Valores (CNMV), Confederación Española de Cajas de Ahorro (CECA), Deusto, Deutsche Bank, Ernest & Young, Escuela de Economía, Escuela de Finanzas Aplicadas, Escuela de Negocios NovaCaixaGalicia, Fundación Abanca, Fundación de Estudios, Financieros, ICADE, IESIDE, IFAES, ING, Instituto Canario de Empresa, Instituto de Crédito Oficial, Instituto de Estudios Bursátiles (IEB), Instituto de Estudios Financieros (IEF), Instituto de Estudios Superiores de Administración (IESA) Caracas-Venezuela, Instituto de Estudios Superiores San Pablo CEU, Instituto Español de Analistas Financieros, Instituto BME, Kirguistan Central Bank, Ministerio de Finanzas Ecuador, Morgan Stanley, Options & Futures Institute, Peat Marwick, Tesoro Público, UNED, Unespa, Universidad de Oviedo, West LB-Düsseldorf, Zurich Insurance.

IE Capital Markets teacher for the Saudi Altamayuzz Enrichment Program

IE Capital Markets teacher for the Saudi Internal Audit Program

IE Capital Markets teacher for the MIM Program

IE Capital Markets teacher for the BIE Program

IE Real Estate Finance teacher for the BBA Program

Corporate experience:

- Analistas Financieros Internacionales, Analytics Director, (2020-currently)
- Jones Lang Lasalle (JLL) Head of Valuations & Senior Advisor (2017-2019)
- SAREB. Director of Risks and Assessments (2013-2017)
- Banesto. Director of Treasury Risks (2008-2013)
- Barclays. Director of ALM Risks and structuring (2002-2008)
- Santander Bank. Director of Methodologies Market Risk (1996-2002)
- Analistas Financieros Internacionales, Derivative Instruments (1991-1996)

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OTHER INFORMATION

GENERAL OBSERVATIONS

Each student has four attempts over two consecutive academic years to pass this course.

For every BIE Program mandatory class, students are required to obtain the minimum grade of 5 required to pass the course. Students whose grade in the Final Exam is below 5 should have a final grade no greater than 4.9. In the event there is no final exam this rule applies to the part that is the greatest share of the final grade.

Dates and location of the final exam will be posted in advance and will not be changed.

Students must attend at least 70% of the sessions. Students who do not comply with the 70% attendance rule will receive a 0.0 on their first and second attempts and go directly to the third one (they will need to enroll in this course again the following academic year).

Students who are in the third or fourth attempt should contact the professor during the first two weeks of the course.

ATTENDANCE

Attendance is mandatory at IE University, as it is an essential factor of IE's learning methodology. While we do closely monitor attendance in each course, we also consider our students responsible for their own agenda and commitments, as adult university students. With that in mind, each student may miss up to 30% of the sessions within a given course and still maintain the possibility of passing that given course. This 30% "buffer" is to be used for any absences, such as: illnesses, personal emergencies, commitments, official/governmental matters, business and/or medical appointments, family situations, etc. Students should manage their various needs, and situations that may arise, within that 30% buffer. If a student is absent to more than the allowed 30% of the sessions (regardless of the reason), s/he will obtain a 0.0 grade for that course in both the ordinary and extraordinary calls of the current academic year, and s/he will have to retake the course during the following academic year. Having established the rule, we strongly discourage to use this buffer as granted, we highly recommend attending 100% of the classes as it will improve your learning outcomes, it will increase the class performance and it might improve your participation grade.

Extreme cases involving emergencies such as: extended hospitalizations, accidents, serious illnesses and other contexts involving force majeure, are to be consulted with the Program Management team for assessment of the situation and corresponding documentation, so that Program Management can support and guide each student optimally.

PLAGIARISM / ACADEMIC HONESTY

Plagiarism is the dishonest act of presenting another person's ideas, texts or words as your own. This includes in order of seriousness of the offense:

- providing faculty sources;
- copy-pasting material from your own past assignments (self-plagiarism) without the instructor's permission;
- copy-pasting material from external sources even while citing them;
- using verbatim translations from sources in other languages without citing them; copy-pasting material from external sources without citing them;
- and buying or commissioning essays from other parties.

IEU students must contact the professor if they don't know whether the use of a document constitutes plagiarism. The professor will advise the student on how to present said material. All written assignments have to be submitted through Turnitin, which produces a similarity report and detects cases of plagiarism. Professors are required to check each student's academic work in order to guarantee its originality. If the originality of the academic work is not clear, the professor will contact the student in order to clarify any doubts. Students using external tutorial support should report it to the professor and the BIE Program from the moment they began receiving this support. In the event that the meeting with the student fails to clarify the originality of the academic work, the professor will inform the Director of the Bachelor Program about the case, who will then decide whether to bring the case forward to the BIE Academic Review Panel. Very high similarity scores will be automatically flagged and forwarded to the Academic Review Panel.

Plagiarism constitutes a very serious offense and may carry penalties ranging from getting a zero for the assignment to expulsion from the university depending on the severity of the case and the number of times the student has committed plagiarism in the past.