

# **CORPORATE FINANCE**

#### Doble grado Administración de Empresas y Relaciones Internacionales / Dual Business Administration and International Relations BBABIR SEP-2023 COR-NBAIR.3.M.B

Area Finance Number of sessions: 25 Academic year: 23-24 Degree course: THIRD Number of credits: 5.0 Semester: 1° Category: COMPULSORY Language: English

### Professor: CARLOS GALLO VILLORIA

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### **CARLOS GALLO VILLORIA**

The financial markets and the investment industry have been the world in which Carlos Gallo has developed his professional career. He has several areas of linterest: foreign exchange and its interactions with decision making, the evaluation and analysis of the risk return relationship, optimal and efficient portfolios construction, fundamental analysis and valuation of companies and all types of investable assets, well as all the issues regarding investments.

Carlos Gallo makes a daily utilization of the concepts he teaches in courses, and some more, in order to help markets behave in the best efficient manner, for the benefit of all investors. "Finance knowledge can be as interesting or even more than soccer, and it is relatively simple to understand technical concepts at a record time". These concepts are very useful in your lives, and can help you to determine if the products or services offered by financial consultants are adequate or not. After all, almost every family save same money asks for a mortgage to buy a house and some years later face the prospects of savings to maintain its leaving standards on retirement.

The development of a personal career in the financial markets, starting at MEFF,RV, the Spanish Market for Futures and Options, followed by hisincorporation as a derivatives expert at HSBC Investment Bank in Madrid.

Some years later he joined Caixabank Asset Management, the financial management firm in which he did specialist investments in global equity markets as the Japanese, British, Swiss and the euro zone. Nowadays he manages the total return funds at the fund manager.

#### ACADEMIC EXPERIENCE

Price to the Best Professor IE Business School 2011.

Professor of Finance, Advanced Finance, Corporate Finance, International

Financial Management, Foreign exchange, Risk Governance and Decisiones

financieras y valoración at

EXMBAOL, XMBAOL, Master In Managemen, MIF, MIAF, GMIF, IMBA, Woman in Finance and Decisiones Financieras and Programa de Dirección Financiera in differente years since 2008 to nowadays. Professor of the Road to MMT at the IEU program Professor CFA Charterholder Levels I and II, 2004-nowadays, Instituto de Inversiones Bursátiles (IEB, Cunef, Instituto de Empresa (IE), UCM 05-nowadays. Professor Military Discipline and Tactics, Spanish Ground Forces Army, 1993

#### CORPORATE EXPERIENCE

Head of Total Return, Caixabank Asset Management Sept 2005-nowadays.

Chair Board CFA Spain 2006-2008 Board Member: CFA Spain 2003-2006

Managing Director Wealth Management Madrid Area. Invercaixa Gestión (Oct 2004-sept 2005)

Head of Eurozone Equity Investments, Invercaixa Gest.(Jan 2001-sept 2004)

Manager Cooperation Fund, later merged with the Socially Ethics Mutual Fund.

Analyst Global Sectors Media and Autos. Inv. Gest (Jan 2001-sept 2004)

Manager Technology and Telecommunications Mutual Funds. Inv. Gest (June 1999-dec 2000)

Manager of Mutual Funds in Japanese, Swiss and British Equity Markets (Sept 1998-dec 2000). InverCaixa Gestión SGIIC.

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#### SUBJECT DESCRIPTION

This is an introductory course in Finance. The course provides an overview of the theories and the practical applications of Finance.

#### LEARNING OBJECTIVES

The main objective of this course is to develop a framework and basic tools for financial decisionmaking, and to provide a solid grounding in the principles and practice of corporate finance.

Another objective is to be confident with the use of Excel spreadsheets for solving practical finance problems. Applied finance exercises requiring the use of Excel are introduced in a coherent and complementary way with the other subjects that are part of the Business Administration Degree.

The course is designed with the following specific objectives:

- To teach the fundamental methods and skills of finance.
- To prepare you to make sound personal and professional financial decisions.
- To provide the knowledge that enables you to better understand the role of finance in the real life and management.
- To prepare you to take more advanced courses in finance and other business areas.

## **TEACHING METHODOLOGY**

This course is divided into 25 sessions. The 24th session will be the review session and the 25th session will be the final examination.

The basic financial concepts are taught through the classes. In order to follow the classes, the students are expected to be familiar with the contents discussed in class by reading in advance the corresponding chapters and the slides. The professor encourages the students to ask any questions during the class. Discussions on the problem sets and presentation are also welcome. After the class, individual study and content review is required to master the knowledge in the classes.

The purpose of learning Finance is to apply it to the real life. We will relate the theories in this course to real-life applications. Therefore, it's important to keep up by working exercises. Doing exercises is the best way to learn Finance. Problem sets for each topic will be provided to the students. Students will have to prepare in advance the problem sets, which will be graded. The problem sets are the building block towards the midterm and the final exam.

IE University teaching method is defined by its collaborative, active, and applied nature. Students actively participate in the whole process to build their knowledge and sharpen their skills. Professor's main role is to lead and guide students to achieve the learning objectives of the course. This is done by engaging in a diverse range of teaching techniques and different types of learning activities such as the following:

| Learning Activity   | Weighting | Estimated time a<br>student should<br>dedicate to prepare for<br>and participate in |  |
|---|-----------|---|--|
| Lectures  | 10.4 %    | 13.0 hours  |  |
| Discussions   | 8.8 %     | 11.0 hours  |  |
| Exercises in class,<br>Asynchronous sessions,<br>Field Work | 8.8 %     | 11.0 hours  |  |
| Group work  | 32.0 %    | 40.0 hours  |  |
| Individual studying   | 40.0 %    | 50.0 hours  |  |
| TOTAL   | 100.0 %   | 125.0 hours   |  |

#### PROGRAM

#### CONTENT

See below for the textbook used. BMA stands for Brealey, Myers & Allen: Principles of Corporate Finance.

The course consists of two parts. The first part of the course starts with an introduction to Corporate Finance and the basic hypotheses widely used. Then it focuses on the applications of the time value of money: the investment decisions criteria and fixed income securities. The second part introduces the concept of risk and its relationship with return: portfolio theory.

### PART 1: INTRODUCTION TO CORPORATE FINANCE

### SESSION 1 (LIVE IN-PERSON)

Introduction to Corporate Finance

## **SESSION 2 (LIVE IN-PERSON)**

Investment Decisions Criteria: NPV Lecture:

- Time Value of Money
- NPV & mechanics
- Compound interest rate & inflation rate
- NPV shortcut applications

Reading Assignment:

Book Chapters: BMA ch. 1, 2. (Book) (See Bibliography)

## **SESSION 3 (LIVE IN-PERSON)**

Investment Decisions Criteria: NPV Lecture:

- Time Value of Money
- NPV & mechanics
- Compound interest rate & inflation rate
- NPV shortcut applications

Reading Assignment:

Book Chapters: BMA ch. 1, 2. (Book) (See Bibliography)

## **SESSION 4 (LIVE IN-PERSON)**

Investment Decisions Criteria: NPV Lecture:

- Time Value of Money
- NPV & mechanics
- Compound interest rate & inflation rate

- NPV shortcut applications

Reading Assignment:

Book Chapters: BMA ch. 1, 2. (Book) (See Bibliography)

## **SESSION 5 (LIVE IN-PERSON)**

Investment Decisions Criteria: NPV Lecture:

- Time Value of Money
- NPV & mechanics
- Compound interest rate & inflation rate
- NPV shortcut applications

Reading Assignment:

Book Chapters: BMA ch. 1, 2. (Book) (See Bibliography)

## **SESSION 6 (ASYNCHRONOUS)**

Introduction to Fixed Income Lecture:

- Introduction to Bonds
- Term Structures of Interest Rates
- Spot & Forward Interest Rates
- Agency Default Risk & Bond Ratings
- Bond Pricing
- Arbitrage
- Yield to Maturity (YTM)

Reading Assignment:

Book Chapters: BMA ch. 3. (Book) (See Bibliography)

## **SESSION 7 (LIVE IN-PERSON)**

Introduction to Fixed Income Lecture:

- Introduction to Bonds
- Term Structures of Interest Rates
- Spot & Forward Interest Rates
- Agency Default Risk & Bond Ratings
- Bond Pricing
- Arbitrage
- Yield to Maturity (YTM)

Reading Assignment:

Book Chapters: BMA ch. 3. (Book) (See Bibliography)

## **SESSION 8 (LIVE IN-PERSON)**

Introduction to Fixed Income Lecture:

- Introduction to Bonds
- Term Structures of Interest Rates
- Spot & Forward Interest Rates
- Agency Default Risk & Bond Ratings
- Bond Pricing
- Arbitrage
- Yield to Maturity (YTM)

Reading Assignment:

Book Chapters: BMA ch. 3. (Book) (See Bibliography)

## **SESSION 9 (LIVE IN-PERSON)**

Introduction to Fixed Income

Lecture:

- Introduction to Bonds
- Term Structures of Interest Rates
- Spot & Forward Interest Rates
- Agency Default Risk & Bond Ratings
- Bond Pricing
- Arbitrage

- Yield to Maturity (YTM)

Reading Assignment:

Book Chapters: BMA ch. 3. (Book) (See Bibliography)

## **SESSION 10 (LIVE IN-PERSON)**

Introduction to Fixed Income Lecture:

- Introduction to Bonds
- Term Structures of Interest Rates
- Spot & Forward Interest Rates
- Agency Default Risk & Bond Ratings
- Bond Pricing
- Arbitrage
- Yield to Maturity (YTM)

Reading Assignment:

Book Chapters: BMA ch. 3. (Book) (See Bibliography)

## **SESSION 11 (LIVE IN-PERSON)**

Introduction to Fixed Income Lecture:

- Introduction to Bonds
- Term Structures of Interest Rates
- Spot & Forward Interest Rates
- Agency Default Risk & Bond Ratings
- Bond Pricing
- Arbitrage
- Yield to Maturity (YTM)

Reading Assignment:

Book Chapters: BMA ch. 3. (Book) (See Bibliography)

## PART 2: RISK AND PORTFOLIO THEORY

## **SESSION 12 (LIVE IN-PERSON)**

Other Investment Criteria

Lecture:

- Alternatives to NPV (IRR & Payback Period) & critiques
- Investments with different lives

Reading Assignment:

Book Chapters: BMA ch. 5. (Book) (See Bibliography)

## **SESSION 13 (ASYNCHRONOUS)**

Other Investment Criteria Lecture:

- Alternatives to NPV (IRR & Payback Period) & critiques

- Investments with different lives

Reading Assignment:

Book Chapters: BMA ch. 5. (Book) (See Bibliography)

## **SESSION 14 (LIVE IN-PERSON)**

Other Investment Criteria Lecture:

- Alternatives to NPV (IRR & Payback Period) & critiques
- Investments with different lives

Reading Assignment:

Book Chapters: BMA ch. 5. (Book) (See Bibliography)

## **SESSION 15 (LIVE IN-PERSON)**

Other Investment Criteria

Lecture:

Alternatives to NPV (IRR & Payback Period) & critiques Investments with different lives Reading Assignment:

Book Chapters: BMA ch. 5. (Book) (See Bibliography)

## **SESSION 16 (LIVE IN-PERSON)**

Portfolio Theory and CAPM Lecture:

- Mean Variance Analysis
- Mean Variance Frontier
- Capital Allocation Line
- Capital Market Line
- Capital Asset Pricing Model (CAPM)
- Systemic vs. diversifiable risk
- Arbitrage Asset Pricing Theory
- Beta Estimation
  - Cost of Capital:

- Unlevering betas
- WACC

Reading Assignment: Book Chapters: BMA ch. 7, 8, 9. (Book) (See Bibliography)

## **SESSION 17 (LIVE IN-PERSON)**

Portfolio Theory and CAPM Lecture:

- Mean Variance Analysis
- Mean Variance Frontier
- Capital Allocation Line
- Capital Market Line
- Capital Asset Pricing Model (CAPM)
- Systemic vs. diversifiable risk
- Arbitrage Asset Pricing Theory
- Beta Estimation
  - Cost of Capital:
  - Unlevering betas
- WACC
- Reading Assignment:

Book Chapters: BMA ch. 7, 8, 9. (Book) (See Bibliography)

## **SESSION 18 (LIVE IN-PERSON)**

Portfolio Theory and CAPM Lecture:

- Mean Variance Analysis
- Mean Variance Frontier
- Capital Allocation Line
- Capital Market Line
- Capital Asset Pricing Model (CAPM)
- Systemic vs. diversifiable risk
- Arbitrage Asset Pricing Theory
- Beta Estimation
  - Cost of Capital:
  - Unlevering betas
  - WACC

Reading Assignment:

Book Chapters: BMA ch. 7, 8, 9. (Book) (See Bibliography)

## **SESSION 19 (LIVE IN-PERSON)**

Portfolio Theory and CAPM Lecture:

- Mean Variance Analysis
- Mean Variance Frontier
- Capital Allocation Line
- Capital Market Line
- Capital Asset Pricing Model (CAPM)
- Systemic vs. diversifiable risk
- Arbitrage Asset Pricing Theory
- Beta Estimation
  - Cost of Capital:
  - Unlevering betas
  - WACC

Reading Assignment:

Book Chapters: BMA ch. 7, 8, 9. (Book) (See Bibliography)

## **SESSION 20 (ASYNCHRONOUS)**

Portfolio Theory and CAPM Lecture:

- Mean Variance Analysis
- Mean Variance Frontier
- Capital Allocation Line
- Capital Market Line
- Capital Asset Pricing Model (CAPM)
- Systemic vs. diversifiable risk
- Arbitrage Asset Pricing Theory
- Beta Estimation
  - Cost of Capital:
  - Unlevering betas
  - WACC

Reading Assignment:

Book Chapters: BMA ch. 7, 8, 9. (Book) (See Bibliography)

## **SESSION 21 (LIVE IN-PERSON)**

Portfolio Theory and CAPM Lecture:

- Mean Variance Analysis
- Mean Variance Frontier
- Capital Allocation Line
- Capital Market Line
- Capital Asset Pricing Model (CAPM)
- Systemic vs. diversifiable risk
- Arbitrage Asset Pricing Theory
- Beta Estimation

- Cost of Capital:
- Unlevering betas
- WACC

Reading Assignment:

Book Chapters: BMA ch. 7, 8, 9. (Book) (See Bibliography)

## **SESSION 22 (LIVE IN-PERSON)**

Portfolio Theory and CAPM Lecture:

- Mean Variance Analysis
- Mean Variance Frontier
- Capital Allocation Line
- Capital Market Line
- Capital Asset Pricing Model (CAPM)
- Systemic vs. diversifiable risk
- Arbitrage Asset Pricing Theory
- Beta Estimation
  - Cost of Capital:
  - Unlevering betas
  - WACC

Reading Assignment:

Book Chapters: BMA ch. 7, 8, 9. (Book) (See Bibliography)

## **SESSION 23 (LIVE IN-PERSON)**

Portfolio Theory and CAPM Lecture:

- Mean Variance Analysis
- Mean Variance Frontier
- Capital Allocation Line
- Capital Market Line
- Capital Asset Pricing Model (CAPM)
- Systemic vs. diversifiable risk
- Arbitrage Asset Pricing Theory
- Beta Estimation
  - Cost of Capital:
  - Unlevering betas
  - WACC

Reading Assignment:

Book Chapters: BMA ch. 7, 8, 9. (Book) (See Bibliography)

## **SESSION 24 (LIVE IN-PERSON)**

Review session

## **SESSION 25 (LIVE IN-PERSON)**

#### Final Exam

### **EVALUATION CRITERIA**

Your final grade in the course will be based on both individual and group work of different characteristics that will be weighted in the following way:

| criteria                   | percentage | Learning<br>Objectives | Comments     |
|----------------------------|------------|------------------------|--------------|
| Final Exam                 | 45 %       |                        |              |
| Intermediate Tests         | 25 %       |                        | Midterm Exam |
| Workgroups                 | 20 %       |                        | Problem sets |
| <b>Class Participation</b> | 10 %       |                        |              |

#### **RE-SIT / RE-TAKE POLICY**

#### A. CLASS PARTICIPATION (it represents 10% of the overall grade)

The students are expected to come prepared and participate actively (and voluntarily) during lectures. In addition, the professor can cold-call on students, particularly on those who have not participated in a while. The students are required to obey the "IE UNIVERSITY'S CODE OF CONDUCT IN CLASS" (see Section 8). Three main criteria will be used in reaching judgment about your class participation:

- <u>Depth and Quality of Contribution</u>: The most important dimension of participation concerns what it is that you are saying. A high quality comment reveals depth of insight, rigorous use of case evidence, consistency of argument, and realism.
- Moving Your Peers' Understanding Forward: Great ideas can be lost through poor presentation. A high-quality presentation of ideas must consider the relevance and timing of comments, and the flow and content of the ensuing class discussion. It demands comments that are concise and clear, and that are conveyed with a spirit of involvement in the discussion at hand.
- <u>Frequency</u>: Frequency refers to the attainment of a threshold quantity of contributions that is sufficient for making a reliable assessment of comment quality. The logic is simple: if contributions are too few, one cannot reliably assess the quality of your remarks. However, once threshold quantity has been achieved, simply increasing the number of times you talk does not automatically improve your evaluation. Beyond the threshold, it is the quality of your comments that must improve. In particular, one must be especially careful that in claiming more than a fair share of "airtime", quality is not sacrificed for quantity. Finally, your attempts at participation should not be such that the instructor has to "go looking for you". You should be attempting to get into the debate on a regular basis.

#### B. PROBLEM SETS (the sets represent a total of 20% of the overall grade)

The problem sets contribute to a total of 20% of your grade, you are recommended to work in groups no larger than 4 or 5 students and hand in 1 copy of the assignment promptly at the deadline (start of the session). Late assignments will not be graded. These problem sets will serve as guidance toward the midterm and the final exam. Please pay attention to the presentation of your solutions, it will be taken into account for the marks.

C. MIDTERM EXAM

The midterm exam is a mandatory and individual computer-based assessment. It counts 25% of the final mark. The content of the midterm will be based on the previous problem sets. Please ensure you bring a non-graphing, non-financial calculator to the exam.

#### D. FINAL EXAM

The final exam is a mandatory and cumulative computer-based exam. A minimum grade of 4/10 is required for this exam in order to pass the subject, even if the aggregate mark of the course including all the assessments is greater than 5. The retake policy will follow the university rule (see below).

#### **RE-SIT / RE-TAKE POLICY**

Each student has four (4) chances to pass any given course distributed over two (2) consecutive academic years. Each academic year consists of two calls: one (1) ordinary call (during the semester when the course is taking place); and one (1) extraordinary call (or "re-sit") in June/July.

Students who do not comply with the 70% attendance requirement in each subject during the semester will automatically fail both calls (ordinary and extraordinary) for that Academic Year and have to re-take the course (i.e., re-enroll) during the next Academic Year.

The Extraordinary Call Evaluation criteria will be subject to the following rules:

- Students failing the course in the ordinary call (during the semester) will have to re-sit evaluation for the course in June / July (except those students who do not comply with the attendance rule, and therefore will not have that opportunity, since they will fail both calls and must directly re-enroll in the course during the next Academic Year).
- It is not permitted to change the format nor the date of the extraordinary call exams or deadlines under any circumstance. All extraordinary call evaluation dates will be announced in advance and must be taken into consideration before planning the summer (e.g. internships, trips, holidays, etc.)
- The June/July re-sit will consist of a comprehensive evaluation of the course. Your final grade for the course will depend on the performance in this exam or evaluation only. I.e., continuous evaluation over the semester (e.g. participation, quizzes, projects and/or other grade components over the semester) will not be taken into consideration on the extraordinary call. Students will have to achieve the minimum passing grade of 5 and the maximum grade will be capped at 8.0 (out of 10.0) i.e., "notable" in the extraordinary call.
- Re-takers: Students who failed the subject on a previous Academic Year and are now reenrolled as re-takers in a course will need to check the syllabus of the assigned professor, as well as contact the professor individually, regarding the specific evaluation criteria for them as re-takers in the course during that semester (ordinary call of that Academic Year). The maximum grade that may be obtained as a retaker during the ordinary call (i.e., the 3rd call) is 10.0 (out of 10.0). The evaluation will be realized as follows: Option 1. Midterm exam (40%) and the final comprehensive exam (60%). The student must obtain a 5 out of 10 minimum in the final exam in order to pass the subject. Option 2. The student may also choose to take the final exam as the only assessment (100%). For both options, the passing grade is 5.

After exams and other assessments are graded by the professor (on either the ordinary or extraordinary call), students will have a possibility to attend a review session (whether it be a final exam, a final project, or the final overall grade in a given course). Please be available to attend the session in order to clarify any concerns you might have regarding your grade. Your professor will inform you about the time and place of the review session.

- Students failing more than 18 ECTS credits after the June/July re-sits will be asked to leave the Program. Please, make sure to prepare yourself well for the exams in order to pass your failed

subjects.

In case you decide to skip the opportunity to re-sit for an exam or evaluation during the June/July extraordinary call, you will need to enroll in that course again for the next Academic Year as a re-taker, and pay the corresponding tuition fees. As you know, students have a total of four (4) allowed calls to pass a given subject or course, in order to remain in the program.

### **BIBLIOGRAPHY**

### Compulsory

- Brealey, Myers & Allen. (2022). *Principles of Corporate Finance (BMA).* 14th. McGraw Hill. ISBN 9781265074159 (Digital)

Only Connect Access through:

https://connect.mheducation.com/class/c-gallo-cor-nbair3mb-2nd-semester-2023

### **BEHAVIOR RULES**

Please, check the University's Code of Conduct <u>here</u>. The Program Director may provide further indications.

## ATTENDANCE POLICY

Please, check the University's Attendance Policy <u>here</u>. The Program Director may provide further indications.

## ETHICAL POLICY

Please, check the University's Ethics Code <u>here</u>. The Program Director may provide further indications.