

## Fixed Income

Academic Year: ( 2019 / 2020 )

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Department assigned to the subject:

Coordinating teacher: BALBAS DE LA CORTE, ALEJANDRO

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 1

## OBJECTIVES

This course consists of three sections:

1. The first section focuses on the essentials of the fixed-income markets. This section starts with defining elements, which surveys the diversity of fixed-income securities and provides details on the different features of all types of bonds. Next, we focus on issuance, trading, and funding in fixed-income markets and describe the markets, venues, and conventions for bond trading.
2. The second section of the course deals with several quantitative issues that are especially relevant in fixed-income markets. In more detail, this section focuses on valuation and interest rate risk in these markets jointly with an introduction to the term structure of interest rates. First, the introduction to fixed-income valuation provides a basic understanding of the methods used to value fixed-income securities and to determine relative values between them. Owning fixed-income securities entails various risks. After this valuation, the course deals with identifying and quantifying interest rate risks with special emphasis on risk measures as duration and convexity. Finally, the term structure of interest rates is presented and discussed.
3. The third section of the course will be presented by a practitioner and focuses on a practical perspective of fixed-income products.

## DESCRIPTION OF CONTENTS: PROGRAMME

Professors:

\* Professor: Manuel Moreno (Associate Professor Universidad Castilla-la-Mancha)

\* Cesar Fernandez (Fixed Income Emerging Markets Portfolio Manager en Julius Baer)

## PART I Fixed-Income Essentials

## CHAPTER 1 Fixed-Income Securities: Defining Elements

1. Introduction
2. Overview of a Fixed-Income Security
3. Legal, Regulatory, and Tax Considerations
4. Structure of a Bond's Cash Flows
5. Bonds with Contingency Provisions
6. Summary

## CHAPTER 2 Fixed-Income Markets: Issuance, Trading, and Funding

1. Introduction
2. Overview of Global Fixed-Income Markets
3. Primary and Secondary Bond Markets
4. Sovereign Bonds
5. Non-Sovereign Government, Quasi-Government, and Supranational Bonds
6. Corporate Debt
7. Short-Term Funding Alternatives Available to Banks

## 8. Summary

### PART II Quantitative Aspects of Fixed-Income Markets

#### CHAPTER 3 Introduction to Fixed-Income Valuation

1. Introduction
2. Bond Prices and the Time Value of Money
3. Prices and Yields: Conventions for Quotes and Calculations
4. The Maturity Structure of Interest Rates (Spot and Forward Rates)
5. Yield Spreads
6. Summary

#### CHAPTER 4 Understanding Fixed-Income Risk and Return

1. Introduction
2. Sources of Return
3. Interest Rate Risk on Fixed-Rate Bonds
4. Interest Rate Risk and the Investment Horizon
5. Credit and Liquidity Risk
6. Summary

PART III Practical perspective of fixed-income products.

### LEARNING ACTIVITIES AND METHODOLOGY

The theoretical contents are presented using Power Point slides. The main notions and theoretical topics will be developed in the classroom by the professor. As a general rule, in most of the sessions, approximately half of the time will be devoted to introducing new concepts and theory. Examples and practical applications will also be presented. The objective is to make the session as participative and dynamic as possible. Therefore, students are encouraged to intervene with clarifying and constructive questions or remarks anytime during the session.

The material covered in every session is contained in the recommended chapter. The specific material is mentioned opportunely in the description of contents (see above). Due to the obvious time constraint, class slides will only cover the main aspects of every topic. A successful preparation for the exam requires reading the corresponding material and working on the suggested problems (if any) after every session. These problems must be solved by the students' teams at home.

After handing-in each problem set, the difficulties that students have found to do the activity and the correct way to do it will be discussed in class. Previously to these problems, the professor will explain in class the theoretical background needed to perform each task and will provide hints to work on the activities in an efficient way.

The recommended dynamic for the student is to work on the recommended reading before the corresponding session, attend the session and participate actively in the readings discussion. Then read the corresponding chapters (if additional details are needed) and work on the suggested problems (or questions or  $\zeta$ ) after the session.

### ASSESSMENT SYSTEM

<b>% end-of-term-examination/test:</b>	55
<b>% of continuous assessment (assignments, laboratory, practicals...):</b>	45

1. Homeworks, midterm exams, ...: 45%
2. Final Exam: 55%. The purpose of this exam is to assess the knowledge acquired by students. Exam minimum grade to pass the subject is 4 over 10. The exam will be a closed book one with the help of only a calculator in a standard classroom (that is, not in a computer room).

Students that do not meet the minimum passing grade should retake the subject. If the resit is taken, the above grade criteria also apply

### BASIC BIBLIOGRAPHY

- Pinto, J.E.; Petitt, B.; Pirie, W. L.; Fabozzi, F. J. Fixed Income Analysis Workbook, Wiley, 2015
- Pinto, J.E.; Petitt, B.; Pirie, W. L.; Kopprasch, B. Fixed Income Analysis (CFA Institute), Wiley, 2015