

**COURSE DATA****Data Subject**

<b>Code</b>	36238
<b>Name</b>	Fixed-income operations and markets
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	6.0
<b>Academic year</b>	2020 - 2021

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
1313 - Degree in Business Management and Administration	Faculty of Economics	3	Second term
1921 - D.D. in Business Management Administration-Law	Doubles Studies Faculty of Law - Faculty of Economics	5	First term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1313 - Degree in Business Management and Administration	43 - Compulsory subjects in the pathway: legal-business management	Optional
1921 - D.D. in Business Management Administration-Law	6 - Year 5 compulsory subjects	Obligatory

**Coordination**

<b>Name</b>	<b>Department</b>
PARDO TORNERO, ANGEL	113 - Financial and Actuarial Economics

**SUMMARY**

The course Fixed Income Operations and Markets is taught in the first semester of the fifth year of the Double Degree in Business Administration and Management (ADE) + Law (Compulsory Subject) and in the second semester of the third year of the Degree in Business Administration and Management (Optional Subject). It consists of a total of 6 credits.



The objective of the course is to provide the student with an analysis of the financial operations, the fixed income markets and their derivatives markets. The program of the course is divided into three parts. The first consists of an introductory topic on the negotiation of financial operations. The most important concepts of the Mathematical course, studied in the second year of the double degree, are reviewed, and the different ways of operating are explored, either through simple and double transactions. The second part is divided into three topics dedicated to assets and fixed income markets. The short-term debt is analyzed in detail, both the Treasury Bills and the Company Promissory Notes, the medium and long-term debt, including the analysis of the Treasury Bonds and Obligations and the Corporate Debt. Finally, a descriptive analysis of the Spanish markets for negotiable fixed income securities is carried out. The third part of the course is divided into two topics and deals with the management of interest risk, emphasizing both the study of interest risk and financial immunization and the analysis of derivative assets in both OTC markets and exchanges.

## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

### Other requirements

The basic lines of the course are articulated around the fundamental concepts of the Financial Mathematics and of the analysis and management of interest risk in financial operations. In particular, the aim of the course is to provide the student with a simple, at the same time rigorous and updated, analysis of financial operations and fixed income markets, as they are developed in the Spanish market.

## OUTCOMES

### 1313 - Degree in Business Management and Administration

- Demonstrate capacity for analysis and synthesis.
- Be able to solve problems.
- Be able to make decisions.
- Know the fundamentals that govern financial operations and markets.
- Know the fixed-income and equity markets and their derivatives, as well as the different securities traded on them.
- Be able to value financial assets and derivatives, and to manage fixed-income and equity portfolios.

## LEARNING OUTCOMES



- Possibility of discriminating and selecting among the different financial assets, based on the objectives to be achieved.
- Possibility of trading in the different financial markets including derivatives, based on knowledge of the operation, valuation rules and operation thereof.
- Ability to quantify adequately the different risks to which companies are exposed, taking into account their financial investments.
- Ability to manage the interest risk of fixed income portfolios.

## DESCRIPTION OF CONTENTS

### 1. TRADING OF FINANCIAL TRANSACTIONS

In this first chapter, the goal is twofold. Firstly, to remind the student of key concepts related to financial transactions and financial securities valuation that she learned in previous courses and, secondly, to introduce several ways of trading on the Spanish market.

1. Financial transaction.
  - 1.1. Concept.
  - 1.2. Outstanding balance.
  - 1.3. Loans.
  - 1.4. The internal effective rate and additional terms and conditions.
2. Internal and external liquidity.
3. Market value of the financial transactions.
4. Public and private debt investment.
5. Ways of trading.
  - 5.1. Transaction classification.
  - 5.2. Single transactions
    - 5.2.1. Spot transactions.
    - 5.2.2. Forward transactions.
  - 5.3. Double transactions.
    - 5.3.1. Blocked repos.
    - 5.3.2. Ordinary repos.
    - 5.3.3. Criterion to be followed in the calculus of the price and yield of double transactions.
- 5.4. Stripping and Reconstitution .
6. Rating agencies.

### 2. SHORT-TERM DEBT



This chapter tackles the concept, characteristics and valuation of the most relevant short-term fixed income securities in the Spanish market: Treasury bills and commercial paper issued by firms and Spanish regional governments.

1. Introduction.
2. Treasury bills.
  - 2.1. Characteristics
  - 2.2. Issued in auction.
  - 2.3. Interest rates.
  - 2.4. Ways of trading.
  - 2.5. Internal effective rates.
3. Commercial paper issued by firms.
  - 3.1. Characteristics
  - 3.2. Issue and trading.
  - 3.3. Interest rates.
  - 3.4. Internal effective rates.
4. Commercial paper issued by the Generalitat Valenciana.

### **3. MID-TERM AND LONG-TERM DEBT**

This chapter tackles the study of the characteristics and valuation of mid-term and long-term Public and Private Debt securities. It specially focuses on the issues in auctions of Government bonds and their subsequent trading, as well as on the wide range of corporative bonds traded on the SEND market.

1. Bonds:
  - 1.1. Concept and notation.
  - 1.2. Classification and types of issue.
2. Government bonds.
  - 2.1. Characteristics
  - 2.2. Issued in auction.
  - 2.3. Tipos de interés.
  - 2.4. Ways of trading.
  - 2.5. Internal effective rates.
  - 2.6. Strip bonds.
3. Corporative debt.
  - 3.1. Bonds with options.
  - 3.2. Other fixed income private securities.



#### **4. FIXED INCOME TRADABLE SECURITIES MARKETS**

This chapter deals with the basic characteristics of primary and secondary fixed income Markets in the present Spanish financial system.

1. Public Debt Market
  - 1.1. Introduction.
  - 1.2. Institutional framework of the Public Debt Market.
  - 1.3. The Public Debt Primary Market.
  - 1.4. The Public Debt Secondary Market.
2. Private Fixed Income Market
  - 2.1. Introduction.
  - 2.2. The Primary Market.
  - 2.3. The Secondary Market.
    - 2.3.1. The AIAF Market.
    - 2.3.2. The Stock Exchanges.
    - 2.3.3. SEND
    - 2.3.4. Debt Market in book-entry form.

#### **5. THE INTEREST RATE RISK**

This chapter is devoted to the analysis of interest rate risk. In order to face potential non-expected variations in interest rates, the goal is analyzing the consequences derived from the management of fixed income portfolios.

1. Valuing financial transactions and interest rates.
2. Spot and Forward interest rates.
3. Term structure of interest rates.
  - 3.1 Definition.
  - 3.2. Applications and limits.
4. The price risk.
  - 4.1. Concept.
  - 4.2. Duration and convexity.
5. The reinvestment risk and the financial immunization.
6. Interest rate risk and trading of financial transactions.

#### **6. INTEREST RATE DERIVATIVES**

This chapter deals with the main characteristics, uses and settlement of derivatives instruments on interest rates traded on OTC Markets.

1. Forward Rate Agreements (FRA).
  - 1.1. Concept and characteristics.
  - 1.2. Calculation of maximum and minimum interest rates.



- 1.3. Settlement of the contract and example.
- 1.4. Hedging and speculation.
- 2. SWAP Agreements.
  - 2.1. Concept and components.
  - 2.2. Hedging and speculation.
  - 2.3. Settlement of the contract and example.
  - 2.4. Difference with FRA.
- 3. OTC options on interest rates.
  - 3.1. CAP options.
  - 3.2. FLOOR options.
  - 3.3. COLLAR options.
- 4. Derivatives in Exchanges

## WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	30,00	100
Classroom practices	30,00	100
<b>TOTAL</b>	<b>60,00</b>	

## TEACHING METHODOLOGY

The course has a theoretical-practical nature, so the theoretical classes will be complemented with practical classes dedicated to solving exercises that provide the necessary complements for the correct understanding of the contents of the theoretical classes. To that end, in addition to the resolution of numerical issues, the aim is to familiarize the student with the terminology, operation and functioning of the Spanish fixed income financial markets, using for this purpose brochures and quotation bulletins supplied by the markets, as well as information published in the press.

The theoretical classes will consist of the exposition by the professor of the topics of the course. The participation of the student in terms of their critical capacity and debate will be positively valued. On the other hand, the practical classes will consist in the resolution of practices by the professor and/or the student. For the development of these classes the student will be given a questionnaire of exercises, from which some of them will be allocated to personal work. In addition, individual or group practical exercises will be required, which must be given to the professor or presented in class.

## EVALUATION

The evaluation procedure of the course will consist of:



1. A written exam, which may consist of both theoretical questions and real problems and cases. This exam will account for 60% of the final grade.
2. Continuous assessment based on class attendance and other classroom training activities and participation and involvement in the teaching-learning process. This section will consist of an evaluation of the practical activities carried out by the student, based on questionnaires, the elaboration of works, and/or oral presentations. The evaluation of the written questionnaires / tests is also included. This section will represent 40% of the final grade. All the works requested are individual and, due to the time necessary for their elaboration that would make it unfeasible to include them in the final exam, they are considered as non-recoverable.

The final grade is obtained from the weighted average of the marks of each part of the evaluation, provided that the part corresponding to the written test or exam officially called by the Faculty of Economics has been passed. In case the written test or exam is not passed, the final grade will be the weighted sum of the test score and the continuous assessment, without exceeding a maximum of 4.5.

Two aspects should be taken into account: i) those students who do not pass the course in first call, will have the option of being evaluated in second call maintaining the qualification obtained in section 2, not being able to deliver for this second call the so-defined non-recoverable works; ii) in the second call the same evaluation and weighting criteria will be used as in the first call.

## REFERENCES

### Basic

- Bibliografía básica
  - Asociación Española de Banca (2013): Definiciones para la interpretación de las confirmaciones de operaciones documentadas al amparo del contrato marco de operaciones financieras.
  - AFI (2015): Guía del Sistema Financiero Español, Biblioteca de Economía y Finanzas, Ediciones Empresa Global, Madrid, 7ª Edición.
  - Código de la Ordenación de los Mercados Financieros, <https://boe.es/legislacion/codigos/codigo.php?id=215&modo=1&nota=0>.
  - Knop, R. (2005): Manual de Instrumentos Derivados, Biblioteca de Economía y Finanzas, 13, Ediciones Empresa Global, Madrid.
  - Meneu, V.; M.P. Jordá y M.T. Barreira (1994): Operaciones Financieras en el mercado español, Editorial Ariel Economía, Barcelona.
  - Meneu, V.; E. Navarro y M.T. Barreira (1992): Análisis y Gestión del riesgo de interés, Editorial Ariel Economía, Barcelona.
  - Navarro, E. (2019): Matemáticas de las operaciones financieras, Ediciones Pirámide, Madrid.
  - Vilariño, A.; J. Pérez y F. García (2008): Derivados. Valor Razonable, Riesgos y Contabilidad. Teoría y casos prácticos. Ed. Pearson Educación.



### Additional

- WEBS de interés

AEB: <https://www.aebanca.es/es/index.htm>

AIAF: <http://www.aiaf.es/esp/asp/Portadas/Home.aspx>

Banco de España: [www.bde.es](http://www.bde.es)

BME: <http://www.bmemarketdata.es/esp/Fin-Dia-Historica/Boletin-de-Operaciones-de-Deuda-Publica>

BME Renta Fija: <http://www.aiaf.es/esp/asp/Portadas/Home.aspx>

CNMV: [www.cnmv.es](http://www.cnmv.es)

EUREX: [www.eurexchange.com](http://www.eurexchange.com)

Generalitat Valenciana: [www.gva.es](http://www.gva.es)

MEFF: [www.meff.es](http://www.meff.es)

SEND: <http://www.aiaf.es/esp/asp/Portadas/HomeSEND.aspx>

Tesoro Público: [www.tesoro.es](http://www.tesoro.es)

### ADDENDUM COVID-19

**This addendum will only be activated if the health situation requires so and with the prior agreement of the Governing Council**

In the case teaching and evaluation cannot be carried out as indicated in the teaching guide, both will be taught as follows:

1) Contents.

The contents initially included in the teaching guide are maintained.

2) Volume of work and temporary planning of teaching.

The weight of the different activities that add up to the hours of dedication in ECTS credits marked in the original teaching guide remains the same.

The programmed sessions, both theoretical and practical, will be taught on the same dates and times with the same duration.

3) Teaching methodology.



- a. Upload of materials to the virtual classroom
- b. Proposal of activities through the virtual classroom
- c. Synchronous video conferences via BBC
- d. Asynchronous video conferences via BBC (sending an email with the weekly schedule)
- e. Tutorial by video conferences (Skype)
- F. Submission of links to news related to the subject

4) Evaluation.

The same structure as that proposed in the teaching guide is maintained.