

4MFCEZ01 - Fixed Income Markets

Professor: Carole GRESSE
Contact information:
carole.gresse@dauphine.psl.eu
christine.lehingue@dauphine.psl.eu
Department: MSO
Semester: 1
Program: Master Finance

Course level: Graduate (M1)
Domain: Business
Teaching language: English
Number of in-class hours: 36
Number of course sessions: 9 lectures (3h each) + 6 tutorials (01:30 each) + Exam
ECTS: 6

Course description and objectives

This course aims at presenting the fundamental principles of fixed income investments. It starts with a description of debt securities, debt markets, and risks associated with investing in corporate and sovereign bonds. The course recalls the traditional valuation model of bonds and explains how to measure bond returns. It explains the relationships between yields, spot interest rates, and forward rates, and presents the interest rate term structure. It studies the measurement of interest rate risk and the impact of credit risk on corporate bond valuation. The course also addresses the arbitrage-free valuation approach.

Assignments and grading

- Tutorial participation: 15%
- Mid-term exam: 35%
- Final exam: 50%

The numerical grade distribution will dictate the final grade. The passing grade for a course is 10/20.

Class participation: Active class participation – this is what makes classes lively and instructive. Come on time and prepared. Class participation is based on quality of comments, not quantity.

Exam policy: In the exam, students will not be allowed to bring any document (except if allowed by the lecturer). Unexcused absences from exams or failure to submit cases will result in zero grades in the calculation of numerical averages. Exams are collected at the end of examination periods.

Course Outline

Chapter 1. Reviewing the Basics in Fixed Income Mathematics

Chapter 2. Features of Debt Securities and Overview of Interest Rate Markets

- Section 1. Monetary markets
- Section 2. Bond definition and features
- Section 3. Bond markets
- Section 4. Specific types of bonds
- Section 5. Size of sovereign bond markets

Chapter 3. Traditional Valuation of Debt Securities

Section 1. General principles of valuation

Section 2. Present value properties

Section 3. Valuing specific types of bonds (semi-annual pay bonds and zero-coupon bonds)

Section 4. Valuing a bond between coupon payments

Section 5. Bond return analysis

Chapter 4. Risks Associated with Investing in Bonds

Section 1. Interest rate risk

Section 2. Credit risk

Section 3. Other risks

Chapter 5. The Measurement of Interest Rate Risk

Section 1. The full valuation approach

Section 2. Price volatility characteristics of bonds

Section 3. Measuring bond price sensitivity to interest rates

Section 4. Duration

Section 5. Convexity

Chapter 6. Interest Rate Term Structure and Arbitrage-Free Valuation

Section 1. The yield curve

Section 2. The spot rate curve

Section 3. Forward rates

Section 4. The determinants of the interest rate term structure

Bibliography

- Petitt, Barbara S., Jerald E. Pinto, and Wendy L. Pirie, *Fixed Income Analysis*, 3rd edition, 2015, Wiley, CFA Institute Investment Series.

MyCourse

This course is on MyCourse: **Yes**, open to self- enrolment until 6 October 2019.

Academic integrity

Be aware of the rules in Université Paris Dauphine about plagiarism and cheating during exams. All work turned in for this course must be your own work, or that of your own group. Working as part of a group implies that you are an active participant and fully contributed to the output produced by that group.

Academic calendar

Dates (Monday/Sunday)		M1 droit / SG / S.ECO/S.SSO **
02/09/19	09/08/19	
09/09/19	15/09/19	1
16/09/19	22/09/19	2
23/09/19	29/09/19	3
30/09/19	06/10/19	4
07/10/19	13/10/19	5
14/10/19	20/10/19	6
21/10/19	27/10/19	7
28/10/19	03/11/19	Holidays
04/11/19	10/11/19	8
11/11/19	17/11/19	9
18/11/19	24/11/19	10
25/11/19	01/12/19	11
02/12/19	08/12/19	12
09/12/19	15/12/19	Review w.
16/12/19	22/12/19	Exams
23/12/19	29/12/19	Holidays
30/12/19	05/01/20	
06/01/20	12/01/20	
13/01/20	19/01/20	