

Investment and financial markets

ECTS : 6

**Description du contenu de l'enseignement :**

The objective of this course is to introduce students to the key concepts required to understand how capital markets (primarily equity markets) function. The course is organized into five parts.

**Part 1** examines the organization of trading. The structure of European stock exchanges has evolved significantly over the past 20 years, driven by advances in information technology and changes in the European regulatory environment. Open-outcry systems have gradually been replaced by computer-assisted, continuously operating trading platforms. New trading protocols such as Multilateral Trading Facilities (MTFs) and Dark Pools have emerged; real-time remote access has become standard; high-frequency trading has grown rapidly with latency now below 1 millisecond, while trading costs have fallen sharply.

Financial intermediation has also evolved. The Investment Services Directive (ISD) reshaped the European regulatory landscape by ending the mandatory concentration of orders on a single exchange. Former national monopolies now compete with new entrants, and Euronext's market share has fallen from 100% to less than 50%. Major European companies are now traded across multiple venues. To understand these developments, students must first grasp the sources of transaction costs (both explicit and implicit) and the concept of liquidity. These topics will be covered in detail, with a particular focus on the evolution of Euronext.

**Part 2** introduces the core concepts of return, risk, and the optimization of the risk-return trade-off through efficient portfolios. After defining returns (discrete and continuous) and presenting common risk measures (such as volatility and Value at Risk), the course studies the joint behavior of assets within portfolios. This leads to an understanding of diversification benefits and forms the basis for computing efficient portfolios using Markowitz's program and tracing the efficient frontier.

**Part 3** explores how investors incorporate risk into their decisions. It explains how to measure risk aversion and how it influences market equilibrium. This section derives the Capital Asset Pricing Model (CAPM) and, after discussing its limitations, introduces multi-factor pricing models, notably the Fama–French three-factor model.

**Part 4** is more applied. It shows how the concepts developed in the earlier parts can be used for stock selection and for evaluating the performance of portfolio managers.

**Part 5** studies how information is incorporated into asset prices. The seemingly erratic behavior of stock prices may raise doubts about their informational content: Do prices truly convey valuable information? Why should firms choose to be publicly traded? In an informationally efficient market, the expected gain from price forecasting is zero, but is this actually the case? Although market anomalies (abnormal returns) do exist, closer examination shows that many can be interpreted as compensation for hidden costs (e.g., transaction or information costs) or for bearing additional risks.

**Compétence à acquérir :**

Course objectives:

- Analyze the functioning of markets, trading costs, and liquidity
- Apply the concepts of risk, diversification, and portfolio theory to real situations
- Develop and work with asset pricing models
- Use asset pricing models for stock picking, asset allocation, and fund performance measurement
- Examine how information is incorporated into prices and evaluate price behavior in efficient markets

**Mode de contrôle des connaissances :**

12 3-hour classes. Practical examples and solutions to exercises in class.

Grading: mid-term exam (40%) and final exam (60%).

**Bibliographie, lectures recommandées :**

Class handouts are downloadable from course webpage on MyCourse Bodie Z., A. Kane, A. Marcus, 2014. Investments. McGraw-Hill, 10th ed. Harris, L., 2003. Trading and Exchanges: Market Microstructure for Practitioners. Oxford University Press. Harris, L., 2003. Trading and Exchanges: Market Microstructure for Practitioners. Oxford University Press. Hillier D., Grinblatt M. and S. Titman, 2011. Financial Markets and Corporate Strategy. Irwin-Mc Graw Hill, 2nd European edition. Madura, J. 2015. Financial Markets and Institutions. South Western, 11th ed.

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