

Introduction

The course is an introduction to finance. We shall revisit some of the classical concepts of financial economics: moral hazard, asymmetric information, corporate governance, asset pricing, behavioral biases, the role of information in financial markets, banking and financial crises. The course will cover basic aspects of asset pricing, corporate finance and banking.

Objectives

We will study four broad areas of finance: asset pricing, corporate governance/corporate finance, the role of information in financial markets, and banking and financial crises. The objective is to equip students with tools to understand and do research in finance. At the same time we will discuss current policy developments as a result of the financial crisis.

Learning Outcomes

To master the concepts developed in the course material in such a way that independent research can be carried out.

Competences

General Competences (refer to list of general competences in the MRM)

- Conduct a critical analysis, evaluation and synthesis of new and complex ideas with the objective to produce general principles applicable to business situations.
- Use appropriate tools and techniques for problem solving, correction contrasting and decision validation.
- Demonstrate knowledge and understanding that provide a basis or opportunity for originality in developing and / or application of ideas, often related to a research context.
- Students should be able to communicate clearly and concisely their conclusions, underlying knowledge and reasons to a specialized and non-specialized audience.
- Students should possess the learning outcomes that enable them to continue studying in a way that will be largely self-directed or autonomous.

Specific Competences

- Conduct a critical analysis, evaluation and synthesis of new and complex ideas with the objective to produce general principles applicable to business situations.
- Ability to articulate research questions that could extend our understanding of the field, and design a research program to answer them.

Content

We shall start with an overview of the current financial system and institutions. Next, there will be an introduction to asset pricing, where we will discuss valuation of financial securities; the CAPM model; the market efficiency hypothesis and a discussion of the assumption of rational expectations. Presented papers will evaluate the empirical validity of some of the theories presented.

Next topic focuses on the role of information in financial markets. We aim to study the determinants of market quality parameters such as trading intensity, volatility, liquidity, informativeness of prices and volume. In order to do this, we will focus on the market microstructure of financial markets, i.e. how trading rules affect market quality. We will present a model of asymmetric information competitive rational expectations equilibrium, together with empirical papers which analyse the informational effect on asset prices. Next, we shall focus on strategic bidders who compete in demand schedules in a rich information structure environment, which allows for common and private values. We shall conclude on studying how behavioural biases affect asset prices and other market quality parameters.

The next block of the course will focus on corporate governance and corporate finance. We shall study moral hazard and asymmetric information when dealing with monitoring, control rights, managerial compensation. We shall apply these concepts to the management of banks.

Finally, we shall discuss banking theory and financial crises, and the role of regulation in mitigating their effects to markets and the overall economy. In particular we will explore the relationship between competition and stability in banking, stylized facts of the financial industry and the current financial crises.

Methodology

The course will be conducted in the doctoral seminar style in 20 sessions. Each topic will typically consist of a lecture that introduces the main concepts followed by a student presentation of a recent paper in the area of interest. The papers will be varied in methodology in order to give students exposure to the field. Some papers will focus on mathematical modeling, others will use empirical data and some will be policy oriented. There will be also an emphasis on how finance is related to other areas of management such as corporate governance, control, strategic management and economics.

Each student will have to present twice in the class.

Evaluation

The measuring of the learning outcomes and the grading of the course for the students will be according to the class presentations.

Course Outline & Bibliography

#	Title of session and material
1	Overview of the financial system and interest rates. <i>Function and Structure Instruments.</i> <i>Players and Regulation.</i> <i>Behavior of interest rates.</i> <i>Term Structure.</i> Readings: Mishkin, Ch. 1, 2, 4, 5 and 6 (Background). Lecture: Xavier Vives
2	Valuing financial assets. <i>Valuation of common stocks.</i> <i>Portfolio mean variance analysis.</i> <i>CAPM.</i> Readings: Ross, Westerfield and Jaffe (2005), Ch. 9 and 10. Fama and French (2004). Presenters: Anna Bayona / Xavier Vives
3	Valuing assets and market efficiency. <i>Market efficiency hypothesis.</i> <i>Rational expectations.</i> <i>Asymmetric information.</i> Readings: Mishkin, Ch. 7. Vives, sections 4.1, 4.2, 2008. Lecture: Xavier Vives
4	Market efficiency and anomalies. <i>Market efficiency.</i> <i>Anomalies.</i> <i>Behavioural explanations.</i> <i>Active management.</i> <i>Asset management fees.</i> Readings: Shiller (2003). Malkiel (2013) Presenter: Student 1
5	Endowment investing. Practical case. <i>Portfolio management.</i> Readings: Perold and Stafford (2010) Presenter: Student 2
6	Market microstructure and information aggregation by prices. <i>Winner's curse.</i> <i>Competition in a uniform price auction with incomplete information.</i> Readings: Vives (2014a). Lecture: Xavier Vives

7	Dynamic trading Readings: Cespa & Vives (2015) Evans and Neufeld (2014) Lecture: Xavier Vives
8	Dynamic trading and technology <i>Algorithmic trading.</i> <i>High Frequency Trading.</i> Readings: Kirilenko et al. (2014) Kirilenko et al. (2013) Presenter: Student 3
9	Disagreement and asset pricing Readings: Banerjee (2011) Presenter: Kanishk Bandyopadhyay
10	Corporate finance and corporate governance <i>Theories of Corporate Governance.</i> <i>Review of Agency Theory.</i> <i>Moral hazard and capital structure.</i> Readings: Tirole, Ch. 2. Tirole (2001) Lecture: Xavier Vives
11	Value at risk, liquidity and leverage. <i>Banking and asset demand.</i> <i>Dynamics of leverage.</i> Readings: Shin (2011), Ch. 2, 3. Lecture: Xavier Vives
12	Real Estate. <i>Geography and Housing Supply.</i> Readings: Imrohoroglu and Tüzel (2014) Presenter: Mahsa Memarian
13	Banking and financial crises. <i>Bank runs as coordination failures.</i> Readings: Mishkin, Ch. 9, 10, 17, 18. Vives (2006) Vives (2014b) Lecture: Xavier Vives
14	Regulation, competition and policy. <i>Capital and liquidity requirements.</i> <i>Competition policy.</i> Readings: Mishkin, Ch. 11, 12, 15, 16. Vives (2006, 2010) Vives (2014b,c) Lecture: Xavier Vives

15	Financial Stability. <i>Lender of Last Resort.</i> <i>Resolution.</i> Readings: Rochet and Vives (2004) Lecture: Xavier Vives
16	The Federal Reserve and the Banking Crisis of 1931 <i>Financial crisis.</i> <i>Bank failures.</i> Readings: Moss & Bolton (2009) Presenter: Student 4
17	The financial crisis of 2007-2009 <i>Financial crisis.</i> <i>Bank failures.</i> Readings: Moss & Bolton (2011) Presenter: Student 5
18	The IMF and international crises Readings: Abdelal et al. (2011) Presenter: Student 6
19	Banking supervision in the eurozone Readings: Wiggins et al. (2015a,b) Presenter: Student 7
20	Resolution in the eurozone <i>Fortis and Dexia</i> Readings: Wiggins et al. (2015c,d) Presenter: Student 8

Bibliography

Required Book:

- Mishkin, F.S. (2010), *The Economics of Money, Banking and Financial Markets, the Business School Edition, 3rd Edition*, Addison-Wesley.

Complementary Material (some chapters of these books may be required):

- Bodie, Z., Kane, A. and Marcus, A. (2009), *Investments*, 8th ed., McGraw-Hill.
- Danthine, J.P. and Donaldson (2005), *Intermediate Financial Theory*, 2nd Edition, Elsevier.
- Freixas, X. and Rochet, J.Ch. (2008), *Microeconomics of Banking*, 2nd Edition, MIT Press.
- Grinblatt, M. and Titman, S. (2002), *Financial Markets and Corporate Strategy*, 2nd Edition, McGraw-Hill.
- Ross, S.A., Westerfield, R.W. and Jaffe, J.F. (2005), *Corporate Finance*, 7th Edition, McGraw-Hill.
- Shin, H.S. (2011), *Risk and Liquidity. Clarendon Lectures in Finance*, Oxford: Oxford University Press.
- Shleifer, A. (2000), *Inefficient Markets: An Introduction to Behavioral Finance*, Oxford University Press.
- Tirole, J. (2006), *The Theory of Corporate Finance*, Princeton University Press.
- Vives, X. (2000), *Corporate Governance: Theoretical and Empirical Perspectives*, Cambridge University Press.
- Vives, X. (2008), *Information and Learning in Markets*, Princeton University Press.

Session 1: Overview of the financial system and interest rates.

- Mishkin (2010), Chapters 1, 2, 4, 5 and 6.

Complementary Material:

- Grinblatt and Titman (2002), Chapters 4 and 5.
- Bodie, Kane and Marcus (2009), Chapters 5, 6, 7 and 9.

Session 2: Valuing financial assets.

- Fama, E. and K. French (2004), "The Capital Asset Pricing Model: Theory and Evidence," *Journal of Economic Perspectives*, 18, 3, 25-46.
- Ross, Westerfield and Jaffe (2005), Chapters 9 and 10.

Session 3: Valuing assets and market efficiency.

- Mishkin (2010), Chapter 7.
- Vives (2008), Sections 4.1 and 4.2.

Session 4: Market efficiency and anomalies.

- Malkiel, B. G. (2013), “Asset Management Fees and the Growth of Finance,” *Journal of Economic Perspectives*, 27, 2, 97-108.
- Shiller, R.J. (2003), “From Efficient Markets Theory to Behavioral Finance,” *Journal of Economic Perspectives*, 17, 1, 83-104.

Complementary Material:

- Bodie, Kane and Marcus (2009), Chapter 11.
- Grinblatt and Titman (2002). Chapters 9, 10 and 11.
- Ross, Westerfield and Jaffe (2005), Chapter 13.

Session 5: Endowment investing. Practical Case.

- Perold, A. and E. Stafford (2010), Harvard Management Company, *Harvard Business School Finance Case No. 211-004*.

Session 6: Market microstructure and Information aggregation by prices.

- Vives, X. (2014a), “On the Possibility of Informationally Efficient Markets”, *Journal of the European Economic Association*, 12, 5, 1200-1239.

Complementary Material:

- Vives, X. (2010), “Asset Auctions, Information, and Liquidity”, *Journal of the European Economic Association*, 8, 2-3, 467-477.
- Vives, X., (2008), *Information and Learning in Markets*, Princeton University Press. Chapters 4 and 5.

Session 7: Dynamic Trading.

- Cespa, G. and X. Vives (2015), “The Beauty Contest and Short-Term Trading”, *Journal of Finance* 70, 5, 2099-2153.
- Evans, B. and D. Neufeld (2014), “Disrupting Wall Street: High Frequency Trading”, IVEY Publishing Case no. W14540.
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Session 8: Dynamic Trading and Technology.

- Kirilenko, A. A. Andrei and A. W. Lo (2013), “Moore’s Law versus Murphy’s Law: Algorithmic Trading and Its Discontents,” *Journal of Economic Perspectives*, 27, 2, 51-72.
- Kirilenko, A., A. Kyle, M. Samadi and T. Tuzun (2014), “The Flash Crash: The Impact of High Frequency Trading on an Electronic Market”, working paper.

Complementary Material:

- Hendershott, T. C. and Riordan, R. (2013), “Algorithmic Trading and the Market for Liquidity,” *Journal of Financial and Quantitative Analysis* 48: 1001-1024.

Session 9: Disagreement and asset pricing.

- Banerjee, S. (2011), “Learning from Prices and the Dispersion in Beliefs”, *Review of Financial Studies*, 24, 9, 3025-3068.

Session 10: Corporate finance and corporate governance.

- Tirole, ch. 2.
- Tirole, J. (2001), “Corporate Governance”, *Econometrica*, 69, 1, 1-35.
- Vives (2000), Chapter 1.

Complementary Material:

- Grinblatt and Titman (2002). Chapter 18 and 19.
- Ross, Westerfield and Jaffe (2005), Chapter 1.

Session 11: Value at risk, liquidity and leverage.

- Shin (2011), Chapters 2 and 3.

Session 12: Real Estate.

- Imrohroglu, A. and S. Tüzel (2014), "Firm Level Productivity, Risk, and Return", *Management Science*, 60, 8, 2073-2090.

Complementary material:

- Dougal, C., C. Parsons and S. Titman (2012), "Urban Vibrancy and Corporate Growth", *Journal of Finance*, 70, 1, 163-210.
- Tuzel, S. (2015), “Corporate Real Estate Holdings and the Cross-Section of Stock Returns”, *Journal of Economic Dynamics and Control*, 17, 907-928.

Session 13: Banking and financial crises.

- Mishkin (2010), Chapters 9, 10, 17 and 18.
- Vives, X. (2006), “Banking and Regulation in Emerging Markets”, *The World Bank Research Observer*, 21, 2, 179-206.
- Vives, X. (2014b), “Strategic Complementarity, Fragility, and Regulation”, *Review of Financial Studies*, 27, 12, 3547-3592.

Session 14: Regulation, competition and policy.

- Mishkin (2010), Chapters 11, 12, 15 and 16.
- Vives, X. (2006), “Banking and Regulation in Emerging Markets”, *The World Bank Research Observer*, 21, 2, 179-206.
- Vives, X. (2010), “Competition and Stability in Banking”, in *Monetary Policy under Financial Turbulence, The Proceedings of the Annual Conference of the Central Bank of Chile*, L. Céspedes, R. Chang and R. Saravia (eds.), Santiago de Chile.
- Vives, X. (2014b), “Strategic Complementarity, Fragility, and Regulation”, *Review of Financial Studies*, 27, 12, 3547-3592.
- Vives, X. (2014c), “Will Basel III Work?”, Voxeu.org, December 22 <http://www.voxeu.org/article/beyond-basel-iii>

Session 15: Financial stability.

- Rochet, J. C. and X. Vives (2004), “Coordination Failures and the Lender of Last Resort: Was Bagehot Right After All?” *Journal of the European Economic Association*, 2, 6, 1116–1147.

Complementary Material:

- Haldane, A. (2012), “The Dog and the Frisbee”, Speech at the FRB of Kansas City’s 366 Economic Policy Symposium, Jackson Hole.
- Hanson, S. G., Kashyap, A. K. and Stein, J. C. (2011). “A Macroprudential Approach to Financial Regulation”, *Journal of Economic Perspectives*, 25, 3-28.
- Shin, H.S. (2009), “Reflections on Northern Rock: The Bank Run that Heralded the Global Financial Crisis”, *Journal of Economic Perspectives*, 23, 1, 101-120.
- Vives, X. (2015), “A Framework for Banking Structural Reform”, Voxeu.org, March 17. <http://www.voxeu.org/article/framework-banking-structural-reform>

Session 16: The Federal Reserve and the banking crisis of 1931.

- Moss, D. and C. Bolton (2009), “The Federal Reserve and the Banking Crisis of 1931”, *Harvard Business School Case 709040*.

Session 17: The financial crisis of 2007-2009.

- Moss, D. and C. Bolton (2011), “Fighting a Dangerous Financial Fire: The Federal Response to the Crisis of 2007-2009”, *Harvard Business School Case 9-711-104*.

Session 18: The IMF and international crises.

- Abdelal, R., D. Moss and E. Kintgen (2011), “The International Monetary Fund in Crisis”, *Harvard Business School Case 9-708-035*.

Session 19: Banking supervision in the eurozone.

- Wiggins, R., M. Wedow and A. Metrick (2015a), „The Single Supervisory Mechanism“, *Yale Program on Financial Stability Case Study 2014-5A-V1*.
- Wiggins, R., M. Wedow and A. Metrick (2015b), „The Single Resolution Mechanism“, *Yale Program on Financial Stability Case Study 2014-5B-V1*.

Session 20: Resolution in the eurozone.

- Wiggins, R., N. Tente and A. Metrick (2015c), “Cross-Border Resolution-Fortis Group“, *Yale Program on Financial Stability Case Study 2014-5C-V1*.
- Wiggins, R., N. Tente and A. Metrick (2015d), “Cross-Border Resolution-Dexia Group“, *Yale Program on Financial Stability Case Study 2014-5D-V1*.

Complementary material Bank Governance:

- Becht, M., P. Bolton and A. Roëll (2011), “Why Bank Governance is Different,” *Oxford Review of Economic Policy*, 2, 7, 437-463.
- Bebchuk, L. A. and Spamann, H. (2009), “Regulating Bankers' Pay,” *Georgetown Law Journal*, 98, 2, 247-287.

Professor’s Biography

Xavier Vives is professor of Economics and Finance, Abertis Chair of Regulation, Competition and Public Policy, and academic director of the Public-Private Research Center at IESE Business School. He holds a Ph.D. in Economics from UC Berkeley.

He is Research Fellow of CESifo, and was member of its European Economic Advisory Group from 2001 to 2011. Research Fellow of the Center for Economic Policy Research, where he served as Director of the Industrial Organization Program in 1991-1997. Fellow of the Econometric Society since 1992 and elected member of its Council in 2006-2008; of the European Economic Association since 2004 and elected member of its Council 1991-1995; and Research Associate of the European Corporate Governance Institute. From 2010 to 2015 he served in the Advisory Board for Economic Recovery of the Government of Catalonia and from 2011 to 2014 he was Special Advisor to the Vicepresident of the European Commission and Commissioner for Competition, Mr Joaquín Almunia.

From 2001 to 2005 he was Professor of Economics and Finance and The Portuguese Council Chaired Professor of European Studies at INSEAD, and from 1991 to 2001, Director of the Institut d'Anàlisi Econòmica, CSIC. He has taught at Harvard University, Universitat Autònoma de Barcelona, Universitat Pompeu Fabra, the University of California at Berkeley, the University of Pennsylvania, and New York University (King Juan Carlos I Chair). From 2003 until 2013, he was member of the Economic Advisory Group on Competition Policy at the European Commission.

His fields of interest are industrial organization and regulation, the economics of information, and banking and financial economics. He has published in the main international journals and is the author of *Information and Learning in Markets: the Impact of Market Microstructure* (Princeton University Press, 2008), *Oligopoly Pricing: Old Ideas and New Tools* (MIT Press, 1999), editor of *Competition Policy in Europe: Fifty Years on from the Treaty of Rome* (OUP, 2009), *Corporate Governance: Theoretical and Empirical Perspectives* (CUP, 2000), and co-editor of *Capital Markets and Financial Intermediation* (CUP, 1993). He has been editor of the *International Journal of Industrial Organization* in 1993-1997, of the *Journal of the European Economic Association* in 1998-2008 and currently he is editor of the *Journal of Economic Theory* and co-editor of the *Journal of Economics and Management Strategy*.

His current research interests include dynamic rivalry, innovation and competition, banking crisis and regulation, information and financial markets, and competition policy.

He has received several research awards: King Juan Carlos I Prize in 1988; the Catalan Society for Economics Prize in 1996; the Narcís Monturiol Medal in 2002; the Catalonia Economics Prize in 2005; a European Research Council Advanced Grant in 2008, and the Jaime I Prize in Economics in 2013. He is member of the Institut d'Estudis Catalans since 2011 and of the Academia Europaea since 2012.