

Salón: PTE

Fechas: 9 al 19 de julio. No clases los sábados

Horario: 9:00 am a 12:30 pm

Programa sujeto a cambios

PURPOSE

This course serves two functions. First, it provides students with a thorough coverage of the principles of asset pricing and market microstructure. It introduces students to advanced finance theory that forms the foundation of modern finance. It provides the necessary background to conduct research. Second, the course offers students with hands-on experience of using computable pricing models to analyse and price modern financial instruments such as options and introduces econometric techniques used in market microstructure.

SYLLABUS

The course is divided into two parts. The first part covers asset pricing by arbitrage and by equilibrium arguments. The second part deals with issues of asymmetric information. Applications will be developed and problem sets discussed during three additional classes.

The relevant chapters of the course texts are required for the first five lectures:

- T. Copeland and J. Weston (1992), Financial Theory and Corporate Policy, Addison Wesley. A good mixture of theory and evidence.
- J-P Danthine and J. Donaldson (2002), Intermediate Financial Theory, Prentice Hall C.- F Huang and R.H. Litzenberger (1988), Foundations of Financial Economics , Prentice Hall
- C.- F Huang and R.H. Litzenberger (1988), Foundations of Financial Economics, Prentice Hall
- J. Hull (2003), Options, Futures and Other Derivatives, Prentice Hall.

- J. Ingersoll (1987), Theory of Financial Decision Making, Rowman and Littlefield
- S. E. Shreve (2004), Stochastic Calculus for Finance I: The Binomial Asset Pricing Model, Springer.
- S.F. Le Roy and J. Werner (2001), Principles of Financial Economics, Cambridge University Press.

LECTURE # 1: Equilibrium in security markets

Consumption-Based Security Pricing / Lucas Model
 First Pass at the CAPM
 Equity Premium Puzzle
 Complete vs. incomplete markets
 Representative vs. heterogeneous agent models

Additional readings:

Le Roy and Werner, ch. 14 and 15
 Danthine and Donaldson, ch. 9
 Lucas, R. (1978), "Asset Prices in an Exchange Economy", *Econometrica*, Vol 46 (6), pp 1429-1445
 Mehra, R. and E. Prescott (1985) "The Equity Premium: A Puzzle", *Journal of Monetary Economics*, Vol. 10, pp 335-359
 Weil P. (1992) "Equilibrium asset prices with undiversifiable labor income risk", *Journal of Economic Dynamics and Control* Vol. 16, pp. 769-790

LECTURE # 2: General Equilibrium with Incomplete Markets

State prices and risk-neutral probabilities
 Spanning
 Constrained inefficiency
 Modigliani and Miller
 Effectively Complete Markets

Additional readings:

Geanakoplos, J.D. 1990. "An Introduction to General Equilibrium with Incomplete Asset Markets," *Journal of Mathematical Economics*, 19:1-38.
 Le Roy and Werner, ch. 5, 6, 16.1-16.7
 Ross, S.A. 1976. "Options and Efficiency," *Quarterly Journal of Economics*, 90: 75-89

LECTURE # 3: Options Pricing

Binomial Asset Pricing Model
Options
Dynamic completion of the markets
Cox-Ross-Rubinstein
Radom-Nikodym Derivative Process
Exotics
Numerical Procedures

Additional readings:

Hull, ch. 8-10, 18
Shreve, ch. 1 and 3
Cox, J., Ross S.A. and Rubinstein, M. 1979. "Option Pricing: A Simplified Approach," *Journal of Financial Economics*, 7: 229-63
Polemarchakis, H.M., and Bon-Il Ku.1990. "Options and Equilibrium," *Journal of Mathematical Economics*, 19:107-112

LECTURE # 4: C.A.P.M. and A.P.T.

Portfolio theory
Mutual fund, SML, efficiency theorem
Factor pricing
A.P.T.

Additional readings:

Geanakoplos, J. and Shubik M. 1990. "The Capital Asset Pricing Model as a General Equilibrium with Incomplete Markets." *The Geneva Papers on Risk and Insurance Theory* , 15(1): 55-71
Huberman, G. 1982. "A Simple Approach to Arbitrage Pricing Theory," *Journal of Economic Theory*, 28: 183-91.
Markowitz, H.M. 1952. "Portfolio Selection," *Journal of Finance*, 7:77-91
Mossin, J. 1965. "Equilibrium in a Capital Asset market," *Econometrica*, 34(4):768-783.
Sharpe, W.F.1964. "Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk," *Journal of Finance*, 19(3):425-442.
Tobin, J. 1958. "Liquidity Preference as Behaviour Towards Risk," *Review of Economic Studies*, 26:65-86.

LECTURES # 5: Money and Default

Liquidity / Cash-in-advance
Endogenous Default
Collateral Equilibrium

Additional readings:

Dubey P., Geanakoplos J., and Shubik M.(2005), "Default and Punishment in General Equilibrium", *Econometrica*, vol. 73 No. 1 (Jan.), 1-37
Espinoza, R. A and Tsomocos, D. P. (2007), "Asset Prices in an Exchange Economy with Money and Trade", working paper
Geanakoplos J. (2003), "Liquidity, Default, and Crashes: Endogenous Contracts in General Equilibrium", *Advances in Economics and Econometrics: Theory and Applications, Eighth World Conference, Volume II, Econometric Society Monographs*, pp. 170-205
Geanakoplos J., and Zame, W. R. (1997), "Collateral, Default and Market Crashes", *Cowles Foundation Discussion Paper*
Goodhart CAE, Sunirand P. and Tsomocs D.P. 2004, "A model to analyse financial fragility", *Journal of Financial Stability*, 1:1-30

LECTURE # 6: Optimal bank regulation in the presence of credit and run risks

Propose a model where the banking has the following functions: 1) Provides liquidity insurance; 2) Enhances sharing of aggregate risk; 3) Expands credit extension to the real economy

Study the externalities emerging from intermediation and examine regulation to mitigate their effect

Modify the classic Diamond-Dybvig model to address these issues

Additional readings:

Goodhart, C., Tsomocos, D., "The role of default in macroeconomics", The Mayekawa Lecture, BoJ Monetary and Economic Studies, Vol. 29, November, pp. 49-72, 2011

Kashyap, A., Tsomocos, D., and Vardoulakis, A. "Principles for macroprudential regulation", Banque de France Financial Stability Review, No. 18, pp. 173-182, April 2014

Kashyap, A., Tsomocos, D., and Vardoulakis, A. "How does macroprudential regulation change bank credit supply?" NBER Working Paper No. 20165, May 2014.

LECTURE # 7: The informational role of prices and rational expectations equilibria (REE) and strategic Trading

REE: Concept and problems
Aggregation and transmission of information
Dynamic models
Crashes
No-trade theorems

Canonical models of strategic trading
Temporary liquidity shocks, liquidation risk, predatory trading
Funding constraints, flight to quality, bank runs, corporate sector, productivity
Counterparty risk, insider trading

Additional readings:

The informational role of prices and rational expectations equilibria (REE) *Books:* Grossman (1989), Brunnermeier (2001)

REE: Concept and problems

Grossman (1976),
Grossman (1981),
Jordan and Radner (1982),
Milgrom and Stokey (1982)

Aggregation and transmission of information

Grossman (1976),
Grossman and Stiglitz (1980),
Hellwig (1980),
Admati (1985)

Information acquisition

Grossman and Stiglitz (1980),
Diamond and Verrecchia (1981),
Verrecchia (1982),
Admati and Pfleiderer (1990)

Dynamic models

Brown and Jennings (1989),
Grundy and McNichols (1989),
He and Wang (1995),

Crashes

Genotte and Leland (1990),
Romer (1993)

Books: Brunnermeier (2001)

Surveys: Amihud, Mendelson, and Pedersen (2005), Biais, Glosten, and Spatt (2005),
Madhavan (2000), Stoll, (2003), Shleifer and Summers (1990), Scheinkman and Xiong
(2004)

Order driven markets

Kyle (1985)
Quote driven markets
Glosten and Milgrom (1985),
Easley and O'Hara (1987)

Temporary liquidity shocks, liquidation risk, predatory trading

Grossman and Miller (1988),
Huang (2003),
Brunnermeier and Pedersen (2005)

Funding constraints, flight to quality, bank runs, corporate sector, productivity

Brunnermeier and Pedersen (2005),
Vayanos (2004),

Diamond and Dybvig (1983),
Holmstrom and Tirole (2001),
Eisfeldt (2004)

Counterparty risk, insider trading

Gallmeyer, Hollifield, and Seppi (2004),
Fishman and Hagerty (1995)

EVALUACIÓN:

There will be problem sets and a final examination.

CALIFICACIÓN:

Por determinar

FECHA DE RETIRO:

The student may withdraw the course, without refund, up to one business day before the date of the final test stipulated by the teacher. The University will not return the money for tuition payed for these summer courses.