Princeton University

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Topics in Financial Economics: "Institutional Finance"
- Preliminary Syllabus –

Time and Location:
MW 4:15 – 5:45, Fisher B06.
(The lecture on April 20th has to be moved.)

Aim of the Course:
This is a topics course and reflects issues that are important for understanding the current crisis. Crisis relevant papers are drawn from asset pricing, corporate finance and macroeconomics.

Structure of the Course:

I) Asymmetric Information Models
1. Market Microstructure Models
   - Rational Expectations Equilibrium versus Bayesian Nash Equilibrium Concept
   - Insider Trading Models and Sequential Trade Models
2. Allocative and Informational Efficiency
3. Higher Order Uncertainty, No-Trade Theorems

II) Bubbles, Limits to Arbitrage
1. Noise Trader Risk (myopic versus long horizons) – Role of Hedging Demand
2. Synchronization Risk

III) Financial (Dis)Intermediation
1. Debt Capacity Limits
   a. Borrower's Balance Sheet effects
      i. Debt overhang
      ii. Risk shifting
      iii. Credit Rationing
   b. Lending Channel
2. Role of Financial Intermediaries
   a. Project Selection (incl. monopoly lending)
   b. Maturity transformation
      i. Liquidity shocks – Bank Runs
      ii. Incentivize management
      iii. Maturity rat race
   c. Create information-insensitive claims (securitization)
3. Securitization and Disintermediation
   - Securitization

- Shadow Banking System

IV) Financial Amplifiers – Liquidity Spirals

1. Market Liquidity and Funding Liquidity
2. Systemic Risk
   - Fire-sale Externalities
   - Network Externalities
3. Predatory Trading

V) Implications for Macro and Monetary Economics

1. Credit Cycles
2. Debt Overhang and Monetary Economics

VI) Optimal Expectations and Heterogeneous Beliefs *

*optional

<u>Detailed Reading List:</u>
Students should focus on readings that are marked with a star.

I) ASYMMETRIC INFORMATION MODELS

<u>3 Books:</u>
*Markus K. Brunnermeier, Jan. 2001, *Asset Pricing under Asymmetric Information - Bubbles, Technical Analysis, Herding and Crashes*, Oxford University Press.
CHAPTER 1-3. (see detailed references in this book)

Vives, Xavier, forthcoming, *Information and Learning in Markets: The Impact of Market Microstructure*. http://webprofesores.iese.edu/xvives/books.asp (difficult to download)

O'Hara, Maureen, 1995, *Market Microstructure Theory*, Blackwell Publishers.

<u>Papers</u>
Allen, Franklin, Stephen Morris and Hyun Shin, 2006, Beauty Contest Iterated Expectations, Review of Financial Studies, 19, 161-177.

II) LIMITS TO ARBITRAGE AND BUBBLES

<u>Book:</u>
Andrei Shleifer, 2000, *Inefficient Markets – An Introduction to Behavioral Finance*, Oxford University Press.

<u>Papers:</u>
*DeLong, J. Bradford, Andrei Shleifer, Lawrence H. Summers and Robert Waldmann, 1990a, Noise Trader Risk in Financial Markets, Journal of Political Economy 98, 703-738.

*Abreu, Dilip and Markus Brunnermeier, 2003, Bubbles and Crashes, Econometrica 71, 173-204.

*Abreu, Dilip and Markus Brunnermeier, 2003, Synchronization Risk and Delayed Arbitrage, Journal of Financial Economics 66, 341-360.

DeLong, J.B., A. Shleifer, L. Summers and R. Waldmann, 1990b, Positive Feedback Investment Strategies and Destabilizing Rational Speculation, Journal of Finance 45, 375-395.

Friedman, M., 1953, The Case of Flexible Exchange Rates, in Essays in Positive Economics, Chicago: University of Chicago Press.

Shleifer, Andrei and Robert W. Vishny, The Limits of Arbitrage, Journal of Finance, 52(1), 35-55.

Mitchell, Mark, Todd Pulvino and Erik Stafford, 2002, Limited Arbitrage in Equity Markets, Journal of Finance 57, 551-584.

*Markus K. Brunnermeier, Jan. 2001, *Asset Pricing under Asymmetric Information - Bubbles, Technical Analysis, Herding and Crashes*, Oxford University Press (CHAPTER 6).

*Allen, F., Morris, S., Postlewaite, A., 1993. Finite Bubbles with Short Sales Constraints and Asymmetric Information. Journal of Economic Theory 61, 206-229.

*Blanchard, Olivier J. and Watson, Mark W., 1982, Bubbles, Rational Expectations, and Financial Markets, in Paul Wachtel, ed., Crises in Economic and Financial Structure. Lexington MA: Lexington Books, 295-315.

Cutler, David M., Poterba, James M. and Summers, Lawrence H., 1989, What moves Stock Prices? Journal of Portfolio Management 15, 4-12.

III) FINANCIAL (DIS)INTERMEDIATION

Book:
Tirole, Jean, 2005, *The Theory of Corporate Finance*, Chapter 3.

Papers:
Brunnermeier, Markus K., 2009, Deciphering the Liquidity and Credit Crunch 2007-08, Journal of Economic Perspectives.

Rajan, Raghuram, 2005, Has Financial Development Made the World Riskier? in *The Greenspan Era: Lessons for the Future*, Federal Reserve Bank of Kansas City.
http://www.kc.frb.org/PUBLICAT/SYMPOS/2005/PDF/Rajan2005.pdf
subsequent discussion http://www.kc.frb.org/publicat/sympos/2005/PDF/GD5_2005.pdf

Myers, 1977, Determinants of Corporate Borrowing, Journal of Financial Economics, 5, 147-175.

Townsend, Robert, 1979, Optimal Contracts and Competitive Markets with Costly State Verification," Journal of Economic Theory, 21, 417-425.

Bolton, Patrick and David S. Scharfstein, 1990, A Theory of Predation Based on Agency Problems in Financial Contracting," American Economic Review, 80, 93-106.

Stiglitz, Joseph E. and Andrew Weiss, 1981, Credit Rationing in Market with Imperfect Information, American Economic Review, 71(3), 393-410.

Holmstrom, Bengt and Jean Tirole, 1997, Financial Intermediation, Loanable Funds, and the Real Sector," Quarterly Jouranl of Economics, 112, 663-691.

Rajan, Raghu, 1992, Insiders and Outsiders: The Choice Between Informed and Arm's length debt", Journal of Finance, 47, 1367-1400.

Sharpe, S, 1990, Asymmetric Information, Bank Lending and Implicit Contracts: A Stylilzed Model of Customer Relationships, Journal of Finance 45, 1069-1087.

Diamond, Douglas and Philip Dybvig, 1993, Bank Runs, Deposit Insurance, and Liquidity, Journal of Political Economy.

Calomiris, Charles W. and Charles M. Kahn, The Role of Demandable Debt in Structuring Optimal Banking Arrangements, American Economic Review, 1991, 497-513.

Brunnermeier, Markus and Martin Oehmke, 2009, "Maturity Rat Race", slides

Gorton, Gary and George Pennacchi, 1990, Financial Intermediaries and Liquidity Creation, Journal of Finance 45, 49-72.

DeMarzo, Peter, 2005, The Pooling and Tranching of Securities: A Model of Informed Intermediation, Review of Financial Studies, 18, 1-35.

*****Guest Lecture*****

IV) FINANCIAL AMPLIFIERS

<u>Papers:</u>

Brunnermeier, Markus K., 2009, Deciphering the Liquidity and Credit Crunch 2007-08, Journal of Economic Perspectives.

Reinhart, Carmen and Kenneth Rogoff, 2008c, This Time Is Different: A Panoramic View of Eight Centuries of Financial Crises, mimeo, Harvard University, http://www.economics.harvard.edu/faculty/rogoff/files/This_Time_Is_Different_SHORT.pdf

Reinhart, Carmen and Kenneth Rogoff, 2008b, Banking Crises: An Equal Opportunity Menace, NBER Working Paper No. 14587. http://www.economics.harvard.edu/faculty/rogoff/files/Banking_Crises.pdf

1. Market Liquidity versus Funding Liquidity

*Grossman, Sandy and Merton Miller, 1988, Liquidity and Market Structure, Journal of Finance 43, 617-633.

*Brunnermeier, Markus K. and Lasse Pedersen, Market Liquidity and Funding Liquidity, 2007, www.princeton.edu/~markus/liquidity.

Genotte, Gerard and Hayne Leland, 1990, Market Liquidity, Hedging and Crashes, American Economic Review 80, 999-1021.

Shleifer, Andrei and Robert W. Vishny, Liquidation Values and Debt Capacity: A Market Equilibrium Approach, Journal of Finance, 47, 1343-1346.

2. Systemic Risk: Fire-Sale and Network Externality

*****Student Presentations*****

<u>Book:</u>
Tirole, Jean, 2005, *The Theory of Corporate Finance*, Chapter 12.

<u>General Equilibrium Papers:</u>

Hart (1975), On the Optimality of Equilibrium when the Market Structure is Incomplete, Journal of Economic Theory, 11 (3), 418—443.

Stiglitz (1982), The Inefficiency of Stock Market Equilibrium, Review of Economic Studies, 49, 241-261.

Geanakoplos and Polymarchakis (1986), Existence, Regularity, and Constrained Suboptimality of Competitive Allocations When the Asset Market is Incomplete, Chapter in "Uncertainty, Information and Communication", Essays in honor of Kenneth J. Arrow, Volume III. 65 – 95.

Banking Papers:
Bhattacharya, Sudipto and Douglas Gale, 1987, Preference Shocks, Liquidity and Central Bank Policy," in *New Approaches to Monetary Economics*, ed. By William A. Barnett and Kenneth J. Singleton. Cambridge University Press, Cambridge, UK

Allen, Franklin and Douglas Gale (2004) Financial Intermediaries and Markets, Econometrica, 72, 1023-1061.

Caballero, Ricardo and Arvind Krishnamurthy, Smoothing Sudden Stops, Journal of Economic Theory, 119(1), 104-127

Regulation – Systemic Risk Measure Paper:
Adrian, Tobias and Markus K. Brunnermeier, CoVaR, working paper

Network Paper:
Eisenberg, L, and T.H. Noe (2001), Systemic Risk in Financial Systemis, Management Science, 47, 236-249.

3. LTCM and Predatory Trading
*Brunnermeier, Markus K. and Lasse Pedersen, 2005, Predatory Trading, Journal of Finance, 60, 4, 1825-1863, www.princeton.edu/~markus/predatory_trading.

Bruce Carlin, Miguel Lobo and S. Viswanathan, (2007), Episodic Liquidity Crisis: Cooperative and Predatory Trading, Journal of Finance.
http://faculty.fuqua.duke.edu/areas/finance/phd/carlin/carlin_lobo_viswanathan.pdf

V) IMPLICATIONS FOR MACRO AND MONETARY ECONOMICS

Book:
Tirole, Jean, 2005, *The Theory of Corporate Finance*, Chapter 13.

Papers:
Kiyotaki, Nobu and John Moore, 1997, Credit Cycles, Journal of Political Economy, 105, 211-248.

Lamont, Owen, 1995, Corporate Debt-Overhang and Macroeconomic Expectations, American Economic Review, 85 (5), 1106-1117

VI) OPTIMAL EXPECTATIONS AND HETEREOGENOUS BELIEFS

Papers:
*Brunnermeier, Markus K. and Jonathan Parker, 2005, Optimal Expectations, American Economic Review, 95(4), 1092-1118.
http://www.princeton.edu/~markus/research/papers/optimal_expectations.htm

*Brunnermeier, Markus K., Christian Gollier, and Jonathan Parker, 2007 , Optimal Beliefs, Asset Prices, and the Preference for Skewed Returns, American Economic Review, 97 (2), 159-165. http://www.princeton.edu/~markus/research/papers/optimal_beliefs_skewed_returns.pdf

Gollier, Optimal Illusions and Decisions under Risk, Working paper, University of Toulouse, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=648602