MSU Finance Summer School

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1 Corporate Finance

1.1 Corporate Finance Theory (3 lectures)

Lecture 1: Firm capital structure

- Introduction to firm capital structure (data/definitions of leverage).
- How do firms choose capital structure? Modigliani-Miller Theorem (MM).

Literature:

Modigliani, F., and M. Miller, 1958, The cost of capital, corporation finance and the theory of investment, American Economic Review 48, 267-297.

Modigliani, Franco, and Merton Miller, 1963, Corporate income taxes and the cost of capital: A correction, American Economic Review 53, 433–443.

Lecture 2: Signaling and asymmetric information

- Project funding under asymmetric information.
- Optimal security design. Costly state verification and why debt can be optimal to fund projects.

Literature:

Leland, H., Pyle, D. (1977). Informational Asymmetries, Financial Structure, and Financial Intermediation. The Journal of Finance, 32(2), 371-387.

Ross, S. (1977). The Determination of Financial Structure: The Incentive-Signalling Approach. The Bell Journal of Economics, 8(1), 23-40.

Lecture 3: Violations of MM

- Bankruptcy costs. A trade-off theory of capital structure.
- Agency costs. The impact of debt overhang on firm decision-making.
- The leverage ratchet effect.

Literature:

Admati, A.R., DeMarzo, P.M., Hellwig, M.F. and Pfleiderer, P. (2018). The Leverage Ratchet Effect. The Journal of Finance, 73: 145-198.

1.2 Introduction to Structural Estimation (2 lectures)

- What is structural estimation?
- Reduced form vs structural estimation vs calibration.
- Why do we need structural estimation?
- How to do structural estimation?

Literature:

Strebulaev I. A. and Whited T. M. (2012). Dynamic Models and Structural Estimation in Corporate Finance. Foundations and Trends in Finance 6, 1-163.

1.3 Banking (3 lectures)

Lecture 1: Monitoring and real effects

- Types of financial intermediaries and their main functions.
- Intermediation as monitoring.
- Real effects of financial intermediation.

Literature:

Diamond, D.W. (1984). Financial Intermediation and Delegated Monitoring. Review of Economic Studies, LI, 393-414.

Holmstrom, B. and Tirole, J. (1997). Financial Intermediation, Loanable Funds, and the Real Sector, The Quarterly Journal of Economics, Vol. 112, No. 3, pp. 663-691.

Lecture 2: Liquidity mismatch and bank runs

- Maturity mismatch and liquidity risk.
- Probability of bank runs.
- Government guarantees and deposit insurance.

Literature:

Diamond, D.W. and Dybvig, P.H. (1983). Bank Runs, Deposit Insurance, and Liquidity. Journal of Political Economy, Vol. 91, No. 3, pp. 401-419.

Goldstein, I. and Pauzner, A. (2005). Demand-Deposit Contracts and the Probability of Bank Runs, The Journal of Finance, 63: 1293-1327.

Hertzberg, A., Liberti, J.M., and Paravisini, D. (2010).Information and Incentives Inside the Firm: Evidence from Loan Officer Rotation, The Journal of Finance, 65: 795-828.

Lecture 3: Aftermath of the financial crisis

- 2008-2009 recession: reasons and consequences.
- Securitization and shadow banking.
- Regulation and recovery.

Literature:

Bebchuk, L. and Goldstein, I. (2011). Self-fulfilling Credit Market Freezes, The Review of Financial Studies, Vol. 24, 11, 3519-3555.

Benmelech, E., Dlugosz, J., and Ivashina, V. (2012). Securitization without Adverse Selection: The Case of CLOs, Journal of Financial Economics, 106, 91-113.

Gennaioli, N., Shleifer, A., and Vishny, R. (2013). A Model of Shadow Banking, 68: 1331-1363.

2 Asset Pricing and Household Finance

2.1 Intro to fundamental theory of AP (2 lectures)

What can we say about prices with the weakest assumptions possible?

- Basic framework. Market Completeness. Definition of arbitrage. Fundamental theorem of asset pricing (FTAP).
- Arbitrage Pricing. SDF. Risk-neutral measure. SDF bounds. Application to option pricing

Literature: Campbell J., Financial Decisions and Markets, Ch. 4, Cochrane J., Asset Pricing, Ch. 1, 3-5.

2.2 C-CAPM, empirical facts, and puzzles (1 lecture)

Now we specify consumption/portfolio choice problem

- GE model, CRRA preferences, keep complete markets. Puzzles and possible solutions (briefly: rare disasters, habit, recursive preferences, limited participation)

Literature: Campbell J., Financial Decisions and Markets, Ch. 6

2.3 Household Finance (1 lecture)

- Stylized facts about participation across asset classes, stockholding puzzle. Background risk and portfolio choice.

Literature: Campbell J., Financial Decisions and Markets, Ch. 10, 11.1. Guiso, L., Sodini P. Household Finance: An Emerging Field, 2014

3 Behavioral finance (1 lecture)

- Overconfidence and diagnostic expectations.
- Experience effect and memory.
- Rational inattention and behavioral macro.

Literature:

Barberis, N., Shleifer, A., and Vishny, R. (1998). A Model of Investment Sentiment, Journal of Financial Economics, 49(3), 307-343.

Barberis, N., and Thaler, R. (2003). A Survey of Behavioral Finance.

Bordalo, P., Gennaioli, N., and Shleifer, A. (2018). Diagnostic Expectations and Credit Cycles, The Journal of Finance, 73: 199-227.

Gabaix, X. (2020). A Behavioral New Keynesian Model, American Economic Review, Vol. 110, No. 8, pp. 2271-2327.

Malmendier, U. and Nagel, S. (2011). Depression Babies: Do Macroeconomic Experiences Affect Risk Taking? The Quarterly Journal of Economics, Vol. 126, 373-416.

Wachter, J. and Kahana, M. (2021). A Retrieved-Context Theory of Financial Decisions, SSRN.

4 Advanced Financial Theory (3 lectures)

Lecture 1: Introductions to continuous time modeling

- Ito calculus. Girsanov's theorem.
- Deriving the Black-Scholes option pricing formula.

Literature: Duffie, Darrell, 2010. Dynamic Asset Pricing Theory, 3rd Edition. Princeton University Press.

Lecture 2: Optimal control

- Optimal control theory.
- Leland model.

Literature: Leland, Hayne, 1994, Corporate debt value, bond covenants, and optimal capital structure, Journal of Finance 49, 1213–1252.

Lecture 3: Other applications

- *Asset pricing:* optimal portfolio choice.
- *Corporate:* extensions of Leland model, leverage dynamics without commitment.
- *Micro:* principal-agent models.

- *Macro:* general equilibrium models with a financial sector.

Literature:

Duffie, Darrell, 2010. Dynamic Asset Pricing Theory, 3rd Edition. Princeton University Press.

DeMarzo, P.M. and He, Z. (2021), Leverage Dynamics without Commitment. The Journal of Finance, 76: 1195-1250.

Sannikov, Y. (2008). A Continuous- Time Version of the Principal: Agent Problem. The Review of Economic Studies, 75(3), 957-984.

Brunnermeier, Markus K., and Yuliy Sannikov. (2014). "A Macroeconomic Model with a Financial Sector." American Economic Review, 104 (2): 379-421.