FINANCE 937
Topics in Macro Finance
Fall 2018

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DESCRIPTION

Finance 937 is a semester long course in quantitative macro-finance theory. It is intended for advanced doctoral students in finance, economics and related fields. The course connects five literatures: (i) firm selection, investment and growth; (ii) models of corporate, household and sovereign debt; (iii) macro models with a financial sector; (iv) dynamic banking models; and, to a lesser extent, (v) production based asset pricing.

The course is part of the Doctoral sequence in Finance. It follows logically from FNCE 924. It is intended to complement (with minimum overlap) the asset pricing courses FNCE 921 and FNCE 934. The choice of topics is also designed to appeal to economics students with an interest in Macro or IO.

Our approach is to develop and discuss in detail a set of core ideas. Course lectures summarize and combine material from several key papers, often using a consistent notation and methodology. These core insights are then used to discuss recent literature.

The reading list has two parts. It is expected that you will read the core papers and those assigned for presentation. The supplementary readings are reasonably extensive. Past students found this to be a very useful reference for the remaining of their graduate studies and beyond.

Despite the quantitative nature of the material there is only a limited time for teaching numerical methods. Students with deeper interests are encouraged to take the (excellent) classes offered in the Economics department.

CORE READINGS
1. **Quantitative Corporate Finance: Investment, Leverage and Heterogeneity**
   - Corbae, Dean and Pablo D’Erasmo, Capital Requirements in a Quantitative Model of Banking Industry Dynamics, working paper, Federal Reserve Bank of Philadelphia, 2014

2. **Asset Pricing with Leverage**
   - Gomes, João and Lukas Schmid, Equilibrium Asset Pricing with Leverage and Default, forthcoming, *Journal of Finance*, 2018

3. **Macroeconomic Models with Financial Imperfections**

4. **Quantitative Macro-Finance Models**
   - Elenev, Vadim, Tim Landvoigt, and Stijn Van Nieuwerburgh, A Macroeconomic Model with Financially Constrained Producers and Intermediaries, Working Paper, 2018
FURTHER READINGS

Firm Selection, Growth and Investment

Continuous Time Tools
- Dixit, Avinash, and Pindyck, Robert, Ch. 5, 6, 10 and 11, Investment Under Uncertainty, Princeton University Press, 1994
- Benjamin Moll’s website: http://www.princeton.edu/~moll/notes.htm

Optimal Investment with Frictions
- Caballero, Ricardo, and Engel, Eduardo, Explaining the Investment Dynamics in U.S. Manufacturing: A Generalized (S,s) Dynamics, Econometrica, 1999
- DeMarzo, Peter, Michael Fishman, Zhiguo He, and Neng Wang, Dynamic Agency and the Q Theory of Investment, Journal of Finance, 2009

Mergers and Corporate Restructuring

Firm Selection and Growth

Macro Investment
- Philippon, Thomas, The Bond Market’s Q, Quarterly Journal of Economics, 2009

IO and Macro
- Carvalho, Vasco and Grassi, Basile, Large Firms and the Business Cycle, unpublished manuscript, 2017

Corporate, Household and Sovereign Debt
**Optimal Capital Structure of Firms**


**Corporate Investment with Debt**


**Household and Sovereign Debt**

- Corbae, Dean, Quintin, Erwan, Leverage and the Foreclosure Crisis, *Journal of Political Economy*, 2015

**Asset Pricing with Debt**

**Credit Spreads**

Asset Pricing in General
• Favilukis, Jack, Xiaojie Lin and Xiaofei Zhao, The Elephant in the Room: the Impact of Labor Obligations on Credit Markets, working paper University of British Columbia, 2018

**Macroeconomic Models with Financial Imperfections**

*Macro Theory Models with Financing Frictions*
• Kiyotaki, Nobuhiro and John Moore, Credit Cycles, *Journal of Political Economy*, 1999
• Bianchi, Javier and Enrique Mendoza, Optimal Time-Consistent Macropudential Policy, *Journal of Political Economy*, 2018

*Macro Theory Models with “Bank Runs”*

*Quantifying Financial Frictions*
• Christiano, Lawrence, Motto, Roberto, and Rostagno, Massimo, Financial Factors in Business Cycles, working paper, Northwestern University, 2010
• Hall, Robert, Quantifying the Forces Leading to the Collapse of GDP after the Financial Crisis, *NBER Macroeconomics Annual*, 2014

*Models with Heterogeneous Firms*
• Khan, Aubhik and Julia K. Thomas, Credit Shocks and Aggregate Fluctuations in an Economy with Production Heterogeneity, *Journal of Political Economy*, 2014
• Crouzet, Nicolas, Corporate Debt Structure and the Macroeconomy, working paper, Columbia University, 2015

**Quantitative Macro-Finance Models**

*Macro Models of Firm Financing Frictions*

*Monetary Policy and Banks*
• Gertler, Mark and Peter Karadi, A Model of Unconventional Monetary Policy, *Journal of Monetary Economics*, 2011
• Bianchi, Javier and Bigio, Saki, Banks, Liquidity Management and Monetary Policy, Working Paper 2018

*Mortgage Finance*
• Greenwald, Daniel, The Mortgage Credit Channel of Macroeconomic Transmission, Working Paper, 2018
• Elenev, Vadim, Mortgage Credit, Aggregate Demand, and Unconventional Monetary Policy, Working Paper, 2017

*Banking and Regulation*

*Sovereign Debt with Intermediaries*

**GRADES**
Problem Set 50%

There will be two large quantitative problem sets to capture the key ideas from each half of the course. The problem sets are designed to help you understand the key issues involved in numerically solving a particular class of models. To maximize learning they should be done in teams of 2 students.

Paper Presentations 50%

At the end of each section we will assign two or three recent papers for student presentation. Everyone is expected to prepare a brief 10 slide (20 minute) summary discussion of each assigned paper. A student will be randomly selected to present the paper, followed by a general class discussion.

Please note: Homework and presentations should be submitted on Canvas.

There is no final exam.