



15.474 Current Topics in Finance

Spring 2021

The course covers a series of advanced topics in finance. The topics are selected at the discretion of the instructors, in line with their current research. For each topic, the course proposes a rapid overview of the literature, an in-depth presentation of selected contributions, and a list of potential research topics. Primarily for doctoral students in finance, economics, and accounting.

Please see the “Course Schedule” and “Readings” sections below for the precise topics to be covered in the course this year. The course is designed to jump-start PhD dissertations; there is no final exam.

The PhD students interested in finance are strongly encouraged to take this course multiple times since the research covered will change every year.

Class Schedule

The class meets once per week, on Friday, 9:00 am – 12:00 pm. Note: This is a hyflex course; in-person classroom E62-650.

Course Website

The course website is on Canvas and all teaching materials will be posted on this site (<https://canvas.mit.edu/courses/8715>). Class Zoom links, announcements, and lecture notes will be posted there.

Office Hours

Eben Lazarus: Tuesday (2/23 & 3/2), 2:30-4pm, or by appointment (elazarus@mit.edu; email for Zoom link)

Leonid Kogan: Tuesday (3/9 & 3/16), 2:30-4pm, or by appointment (lkogan2@mit.edu)

Adrien Verdelhan: any time, by appointment; adrienv@mit.edu

Taha Choukhmane: by appointment; tahac@mit.edu

Christopher Palmer: by appointment; cjpalmer@mit.edu

Primary Course Admin

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Pre-requisites

This course is intended for M.I.T. finance and economics Ph.D. students. The students who are taking this course should have already taken econometrics, microeconomics and introductory financial economics.

Course Requirements and Grading

There is no final exam. Grading is based on attendance and participation.

Course Materials

Class notes and readings will be available on the course website. There is no required textbook for this course; most of the material taught is not yet in textbooks.

Sloan Values

You are responsible for upholding Sloan's code of conduct. For more details on Sloan's academic policies, please read the document "Classroom Values in Practice" which is available on the course website.

Course Schedule

Session	Date	Topic
1 & 2	February 19	Asset Pricing (Eben Lazarus)
3 & 4	February 26	Asset Pricing (Eben Lazarus)
5 & 6	March 5	Asset Pricing (Leonid Kogan)
7 & 8	March 12	Asset Pricing (Leonid Kogan)
9 & 10	March 19	International Finance (Adrien Verdelhan)
11 & 12	March 26	International Finance (Adrien Verdelhan)
13 & 14	April 2	International Finance (Adrien Verdelhan), Household Finance (Taha Choukhmane)
15 & 16	April 9	Household Finance (Taha Choukhmane)
17 & 18	April 16	Household Finance (Taha Choukhmane)
19 & 20	April 23	Machine Learning Applications (Victor Duarte)
21 & 22	April 30	Machine Learning Applications (Victor Duarte)
23 & 24	May 7	Corporate Finance and Household Finance (Christopher Palmer)
25 & 26	May 14	Corporate Finance and Household Finance (Christopher Palmer)

Topics

Sessions 1 and 2, February 19: Long-run macro-finance facts and puzzles

Topics: Valuation ratios in the time series and cross section; output, cash flows, and prices in the long run.

Suggested readings:

Jordà, Ò, M. Schularick, and A. M. Taylor (2017). “Macrofinancial History and the New Business Cycle Facts.” In M. Eichenbaum and J. A. Parker (Eds.), *NBER Macroeconomics Annual 2016*, Volume 31, Chapter 3, pp. 213–263.

Golez, B., and P. Koudijs (2018). “Four Centuries of Return Predictability.” *Journal of Financial Economics* 127(2), 248–263.

van Binsbergen, J. H. (2020). “Duration-Based Stock Valuation: Reassessing Stock Market Performance and Volatility.” Working Paper.

Greenwald, D. L., M. Lettau, and S. C. Ludvigson (2019). “How the Wealth Was Won: Factor Shares as Market Fundamentals.” Working Paper.

Schmelzing, P. (2019). “Eight Centuries of Global Real Interest Rates, R-G, and the ‘Suprasecular’ Decline, 1311–2018.” Working Paper.

Kuvshinov, D., and K. Zimmermann (2020). “The Expected Return on Risky Assets: International Long-Run Evidence.” Working Paper.

Sessions 3 and 4, February 26: Asset-pricing tests and derivatives

Topics: The joint hypothesis problem and SDF variation; cross-sectional model tests; the term structure and cross section of risk and return; identification with derivatives prices.

Suggested readings:

Gormsen, N. J. and E. Lazarus (2021). “Duration-Driven Returns.” Working Paper.

van Binsbergen, J. H., and R. S. J. Koijen (2017). “The Term Structure of Returns: Facts and Theory.” *Journal of Financial Economics* 124(1), 1–21.

Hansen, L. H., and R. Jagannathan (1991). “Implications of Security Market Data for Models of Dynamic Economies.” *Journal of Political Economy* 99(2), 225–262.

Augenblick, N., and E. Lazarus (2020). “Restrictions on Asset-Price Movements Under Rational Expectations: Theory and Evidence.” Working Paper.

Giglio, S., and B. Kelly (2018). “Excess Volatility: Beyond Discount Rates.” *Quarterly Journal of Economics* 133(1), 71–127.

Session 5 & 6, March 5: Introduction to Asset Pricing Models with Production

Topics: Models of firm investment in partial and general equilibrium, implications for asset pricing

Suggested readings:

Gomes, J. F., L. Kogan, and L. Zhang (2003). "Equilibrium cross section of returns." *Journal of Political Economy* 111(4), 693-732.

Zhang, L. (2005). The value premium. *Journal of Finance* 60(1), 67-103

Clementi, G. L., Palazzo, B. (2018). "Investment and the Cross-Section of Equity Returns." *The Journal of Finance*, 74(1), 281-321.

Kaltenbrunner, G., Lochstoer, L. (2010). "Long-Run Risk through Consumption Smoothing." *The Review of Financial Studies*, 23(8), 3190-3224.

Kogan, L., D. Papanikolaou, 2012, "Economic Activity of Firms and Asset Prices." *Annual Review of Financial Economics*, 4, 361-384.

Kogan, L., D. Papanikolaou, 2013, "Firm Characteristics and Stock Returns: The Role of Investment-Specific Shocks." *Review of Financial Studies*, 26, 2718-2759.

Kogan, L., D. Papanikolaou, 2014, "Growth Opportunities, Technology Shocks, and Asset Prices." *Journal of Finance*, 69, 675-718.

Kogan, L., 2004, "Asset Prices and Real Investment." *Journal of Financial Economics*, 73(3), 411-431.

Session 7, March 12: Displacement Risk

Topics: Models with technological innovation risk and imperfect risk sharing

Suggested readings:

Garleanu, N., L. Kogan, S. Panageas, 2012, "Displacement Risk and Asset Returns." *Journal of Financial Economics*, 105, 491-510.

Kogan, L., D. Papanikolaou, A. Seru, and N. Stoffman, 2017, "Technological Innovation, Resource Allocation, and Growth." *Quarterly Journal of Economics*, 132, 665-712.

Kogan, L., D. Papanikolaou, L. Schmidt, and J. Song, 2020, "Technological Innovation and the Distribution of Labor Income Growth." Working paper.

Kogan, L., D. Papanikolaou, N. Stoffman, 2020, "Left Behind: Creative Destruction, Inequality, and the Stock Market," *Journal of Political Economy*, 128, 855-906.

Dou, W., Kogan, L., Wu, W., 2020, "Common Fund Flows: Flow Hedging and Factor Pricing," 2020 NASDAQ award for the best paper on Asset Pricing at the WFA Conference.

Panageas, S., "The Implications of Heterogeneity and Inequality for Asset Pricing," NBER Working Paper 26974, April 2020.

Kogan, L., Papanikolaou, A., 2019, "Technological Innovation, Intangible Capital, and Asset Prices," *Annual Review of Financial Economics*, 11, 221-242.

Session 8, March 12: Valuation in Proof-of-Stake Payment Systems

Topics: Token valuation in Proof-of-Stake payment systems and network security

Suggested readings:

Cong, Lin William, Ye Li, and Neng Wang, 2018, “Tokenomics: Dynamic Adoption and Valuation.” Working Paper

Sockin, Michael and Wei Xiong, 2018 “A Model of Cryptocurrencies.” Working Paper.

Budish, Eric, 2018, “The Economic Limits of Bitcoin and the Blockchain.” NBER Working Paper No. 24717

Giulia Fanti, Leonid Kogan, Pramod Viswanath, 2018, “Economics of Proof-of-Stake Payment Systems.” Working paper.

Session 9 & 10, March 19: Risk and returns in currency markets

Topics: The uncovered interest rate parity; The cross-section of currency risk premia; Macro-finance approaches to FX puzzles.

Suggested readings: Slides posted on Canvas, Lustig, Roussanov, and Verdelhan (RFS, 2011), Verdelhan (JF, 2018).

Session 11 & 12, March 26: Interest rate risk vs currency risk; complete vs incomplete markets in international finance

Topics: Interest rate risk meets currency risk; Exchange rates in incomplete markets: a second-look at the key puzzles.

Suggested readings: Slides posted on Canvas, Lustig and Verdelhan (AER, 2019), Lustig, Stathopoulos, and Verdelhan (AER, 2019), Colacito and Croce (JPE, 2011).

Session 13, April 2: Returns without risk in currency markets

Topics: The case of the covered interest rate parity condition.

Suggested readings: Slides posted on Canvas, Du, Tepper, and Verdelhan (JF, 2018), He and Krishnamurthy (AER, 2012), Garleanu and Pedersen (RFS, 2011), Gabaix and Maggiori (QJE, 2015).

Session 14, April 2: Intra-household bargaining

Addoum (2017), “Household Portfolio Choice and Retirement”, *Review of Economics and Statistics*.

Boar, (2021). “Dynastic precautionary savings”, *Review of Economic Studies*, forthcoming.

Chiappori, Mazzocco (2017). “Static and intertemporal household decisions”. *Journal of Economic Literature*.

Hertzig, A. (2016). “Time-consistent individuals, time-inconsistent households”. *Journal of Finance*.

Sessions 15 and 16, April 9: Nudges

Beshears, Choi, Laibson, Madrian, Skimmyhorn (2021). “Borrowing to save? The impact of automatic enrollment on debt”, *Journal of Finance*, forthcoming.

Blumenstock, Callen, Ghani (2018). "Why Do Defaults Affect Behavior? Experimental Evidence from Afghanistan" *American Economic Review*.

Chetty, Friedman, Leth-Petersen, Nielsen, Olsen (2014). “Active vs. passive decisions and crowd-out in retirement savings accounts: Evidence from Denmark”. *The Quarterly Journal of Economics*.

Choukhmane, 2019, “Default Options and Retirement Saving Dynamics”, working paper.

Session 17 and 18, April 16: Household portfolio choice

Briggs, Cesarini, Lindqvist, and Östling, (2021), “Windfall gains and stock market participation”, *Journal of Financial Economics*.

Choi, Robertson (2020), “What Matters to Individual Investors? Evidence from the Horse’s Mouth”, *Journal of Finance*.

Fagereng, Gottlieb, Guiso, 2017, “Asset market participation and portfolio choice over the life-cycle”, *Journal of Finance*.

Giglio, Maggiori, Stroebel, Utkus (2020) “Five Facts About Beliefs and Portfolios”, *American Economic Review*.

Session 19 and 20, April 23: Introduction of machine learning for computational economics

Topics: ML software and hardware for computational economics. Fundamentals of ML: Neural networks and stochastic optimization.

Suggested readings:

“Python Programming for Economics and Finance”

<https://python-programming.quantecon.org/intro.html>

Session 21 and 22, April 30: Intertemporal optimization and structural estimation

Discrete-time intertemporal optimization with policy gradients. Continuous-time dynamic programming with generalized policy iteration. Applications to structural estimation.

Suggested readings:

“Human-level control through deep reinforcement learning”

<https://www.nature.com/articles/nature14236>

“Monte Carlo Gradient Estimation in Machine Learning”

<https://deepmind.com/research/publications/Monte-Carlo-Gradient-Estimation-in-Machine-Learning>

“Machine Learning for Continuous-Time Finance”

<https://www.dropbox.com/s/xee7ygskh0z4g8o/main.pdf?dl=0>

“Gradient-Based Structural Estimation”

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3166273

Session 23, May 7: Stock Buybacks: What’s all the fuss about?

Acharya, Viral V, and Guillaume Plantin. 2019. “Monetary Easing, Leveraged Payouts and Lack of Investment.” NBER Working Paper.

https://www.nber.org/system/files/working_papers/w26471/w26471.pdf

(*) Almeida, Heitor, Vyacheslav Fos, and Mathias Kronlund. 2016. “The Real Effects of Share Repurchases.” *Journal of Financial Economics* 119 (1). Elsevier BV: 168–85.

<https://doi.org/10.1016/j.jfineco.2015.08.008>.

Babenko, Ilona. 2009. “Share Repurchases and Pay-Performance Sensitivity of Employee Compensation Contracts.” *The Journal of Finance* 64 (1): 117–50.

<https://doi.org/10.1111/j.1540-6261.2008.01430.x>.

Comment, Robert, and Gregg A. Jarrell. 1991. “The Relative Signalling Power of Dutch-Auction and Fixed-Price Self-Tender Offers and Open-Market Share Repurchases.” *The Journal of Finance* 46 (4). Wiley: 1243–71. <https://doi.org/10.1111/j.1540-6261.1991.tb04617.x>.

(*) Cochrane, John. 2018. “Stock Buybacks Are Proof of Tax Reform’s Success,” *Wall Street Journal*, [ungated link](#).

Dittmar, Amy K. 2000. “Why Do Firms Repurchase Stock?” *The Journal of Business* 73 (3). University of Chicago Press: 331–55. <https://doi.org/https://doi.org/10.1086/209646>.

(*) Edmans, Alex. 2020. “Do Share Buybacks Really Destroy Long-Term Value?” Harvard Law School Forum on Corporate Governance. <https://corpgov.law.harvard.edu/2020/10/22/do-share-buybacks-really-destroy-long-term-value/>

Elgouacem, Assia and Zago, Riccardo, “Share Buybacks, Monetary Policy and the Cost of Debt” (July 2020). Banque de France Working Paper No. 773. <https://ssrn.com/abstract=3644859>

(*) Franck, Thomas. (March 2, 2021) “Elizabeth Warren rips stock buybacks as ‘nothing but paper manipulation’” CNBC, <https://www.cnbc.com/2021/03/02/elizabeth-warren-rips-stock-buybacks-as-nothing-but-paper-manipulation.html>

Grullon, Gustavo, and Roni Michaely. 2002. “Dividends, Share Repurchases, and the Substitution Hypothesis.” *The Journal of Finance* 57 (4). Wiley: 1649–84.

<https://doi.org/10.1111/1540-6261.00474>.

- Ikenberry, David, Josef Lakonishok, and Theo Vermaelen. 1995. “Market Underreaction to Open Market Share Repurchases.” *Journal of Financial Economics* 39 (2-3). Elsevier BV: 181–208. [https://doi.org/10.1016/0304-405X\(95\)00826-Z](https://doi.org/10.1016/0304-405X(95)00826-Z).
- Kahle, Kathleen M. 2002. “When a Buyback Isn’t a Buyback: Open Market Repurchases and Employee Options.” *Journal of Financial Economics* 63 (2). Elsevier BV: 235–61. [https://doi.org/10.1016/S0304-405X\(01\)00095-2](https://doi.org/10.1016/S0304-405X(01)00095-2).
- Lehn, Kenneth, and Annette Poulsen. 1989. “Free Cash Flow and Stockholder Gains in Going Private Transactions.” *The Journal of Finance* 44 (3). Wiley: 771–87. <https://doi.org/10.1111/j.1540-6261.1989.tb04390.x>.
- Louis, Henock, and Hal White. 2007. “Do Managers Intentionally Use Repurchase Tender Offers to Signal Private Information? Evidence from Firm Financial Reporting Behavior.” *Journal of Financial Economics* 85 (1): 205–33. <http://doi.org/10.1016/j.jfineco.2006.08.003>.
- Manconi, A., Peyer, U., & Vermaelen, T. (2019). “Are Buybacks Good for Long-Term Shareholder Value? Evidence from Buybacks around the World.” *Journal of Financial and Quantitative Analysis*, 54(5), 1899-1935. <https://doi.org/10.1017/S0022109018000984>.
- Noel, T. 1998. “Share Repurchases and Firm Performance: New Evidence on the Agency Costs of Free Cash Flow.” *Journal of Financial Economics* 49 (2). Elsevier BV: 187–222. [https://doi.org/10.1016/S0304-405X\(98\)00022-1](https://doi.org/10.1016/S0304-405X(98)00022-1).

Session 24, May 7: Search in Retail Financial Markets

- Hortaçsu and Syverson (QJE, 2004)
- Argyle, Nadauld, Palmer (WP, 2017) (“Real Effects of Search Frictions...”)
- Allen, Clarke, and Houde (AER, 2014)
- Alexandrov and Koulayev (WP, 2018)

Session 25, May 14: Mental Accounting

- Thaler (JEP, 1990)
- Hastings and Shapiro (AER, 2018)
- Argyle, Nadauld, Palmer (NBER WP, 2019) (“Monthly Payment Targeting...”)
- Hastings and Shapiro (QJE, 2013)

Session 26, May 14: Looser Credit, Higher Prices

- Di Maggio and Kermani (RFS, 2017)
- Favara and Imbs (AER, 2015)
- Argyle, Nadauld, Palmer, Pratt (NBER WP, 2018)
- Adelino, Schoar, Severino (NBER WP, 2012)

