Leadership

Codirectors

John C. Heaton
Joseph L. Gidwitz Professor of Finance

Zhiguo He
Fuji Bank and Heller Professor of Finance and Jeuck Faculty Fellow

Steven N. Kaplan
Neubauer Family Distinguished Service Professor of Entrepreneurship and Finance and Kessenich E.P. Faculty Director at the Polsky Center for Entrepreneurship and Innovation

Robert Vishny
Myron S. Scholes Distinguished Service Professor of Finance and Neubauer Faculty Director of the Davis Center

Executive Board

Administration

Marisa Milazzo
Director of Research Systems and Development

Jennifer Williams
Senior Associate Director of Operations

Fama-Miller Center Annual Report 2021
Since July 2020, the Fama-Miller Center has renewed:

23 data subscriptions
and acquired
13 new datasets

From July 2020 through June 2021, the Fama-Miller Center for Research in Finance provided funding for:

23 research projects
2 academic conferences
3 Fama-Miller Center visitors

Thank you to our alumni and friends who supported the Fama-Miller Center during the period from July 1, 2020 to June 30, 2021:

Mac and Leslie McQuown
Thomas H. Batten, '12
Constance M. Frydenlund, '87
W. Theodore Kuck, '73
Ross Charitable Family Fund
Prakash H. Sakraney Jr., '85
Andrew Wong, BS '96, MBA '02, PhD '02
A call for proposals was sent to Chicago Booth faculty and PhD students in September 2020 and April 2021. The codirectors, John Heaton and Zhiguo He, met with the members of the board of directors, Steven Kaplan and Robert Vishny, to review the proposals and make recommendations for funding to the Deputy Dean for Faculty Pietro Veronesi. Dean Veronesi approved funding for 23 research projects, two conferences, and three Fama-Miller Center visitors.

The charts on this page show a comparison of total funding requested versus total funding awarded; total funding requested by faculty and PhD students; and total funding awarded to faculty and PhD students for the period of July 2020 through June 2021. A list of the projects funded is on the following page.
Research Funding 2020–21

These tables show the projects funded from July 2020 through June 2021 as well as the names of the researchers.

### November 2020

**PROPOSAL**  
Bank Enforcement Actions and Lending to Minorities  
Compustat Snapshot on WRDS  
Global Portfolio Investment and Currency Risk Management in a Low-rate Environment  
Politics in the Firm  
The Cost of Capital  
The Dynamics of Shock Propagation: Theory and Evidence  
The Evolution of Human Capital Restrictions  
The Pricing of Risky Debt: An Application to Commercial Real Estate  
What Explains Geographic Variation in Corporate Investment? A Tale of Colonial Hangover  
Add'l Funding: Empirical and Theoretical Research on High-frequency Trading and Financial Market Design  
Add'l Funding: The Externalities of Fire Sales: Evidence from Collateralized Loan Obligations

**RESEARCHERS**  
Rimmy Tomy, Chicago Booth  
Robert Bushman, UNC Kenan-Flagler Business School  
Anda Kleymanova, Federal Reserve Board  
Yueran Ma, Chicago Booth  
Wenxin Du, Chicago Booth  
Ralph Koijen, Chicago Booth  
Emanuele Colonnelli, Chicago Booth  
Niel Gormsen, Chicago Booth  
Kilian Huber, Chicago Booth  
Seongjin Park, Chicago Booth Finance PhD Student  
Eric Budish, Chicago Booth  
Shohini Kundu, Chicago Booth Finance PhD Student

### Midcycle 2021

**PROPOSAL**  
Credit Constraints and the Valuation of Public Amenities  
ETF Active月ness and Trade-offs  
Impact Preferences; Evidence from US Depositors  
Partisan Disagreement and Asset Demand  
The Financialization of Monetary Policy  
The Importance of Investor Heterogeneity: An Examination of the Corporate Bond Market  
Behavioral Approaches to Financial Decision-Making Conference (Virtual)  
Household Lending Conference  
Add'l Funding: Option-Implied Spreads and Option Risk Premia

**RESEARCHERS**  
John Heilbron, Chicago Booth Finance PhD Student  
Lubos Pastor, Chicago Booth  
Yao Zeng, The Wharton School  
Agustin Hurtado, Chicago Booth Finance PhD Student  
William Cassidy, Chicago Booth Finance PhD Student  
Matthew (Blair) Vornsatz, Chicago Booth Finance PhD Student  
Sangmin (Simon) Oh, Joint PhD Program in Financial Economics  
Jian (Jane) Li, Chicago Booth Finance PhD Student  
Samuel Hartmark, Chicago Booth  
Alex Imas, Chicago Booth  
Abigail Sussman, Chicago Booth  
Pietro Veronesi, Chicago Booth  
Mihir Gandhi, Chicago Booth Finance PhD Student

### May 2021

**PROPOSAL**  
Asset Pricing with Heterogeneously Attentive Investors: An Application of the US Municipal Bond Market  
Global Investor Expectations and Exchange Rate  
Partisan Policy and Bank Churn  
Partisan University Governance  
Rent Pricing Behaviors and Eviction  
Ricardian Equivalence and Payroll Taxation  
The Role of Big Business Over Time and Across Societies  
World Transparency Survey Project  
Add'l Funding: Social Inflation  
Add'l Funding: The Cost of Capital  
Visitor: Franceso D’Acunto, Boston College  
Visitor: Sabrina Howell, NYU Stern  
Visitor: Tobias Moskowitz, Yale School of Management

**RESEARCHERS**  
Ethan Azaria, Joint PhD Program in Financial Economics  
Ching-Tse Chen, Chicago Booth Finance PhD Student  
Eric Xuwei Jiang, USC  
Emanuele Colonnelli, Chicago Booth  
Elizabeth Kempf, Chicago Booth  
Seongjin Park, Chicago Booth Finance PhD Student  
Constantine Yannelis, Chicago Booth  
Scott Baker, Northwestern Kellogg  
Adam Isen, US Department of Treasury  
Emanuele Colonnelli, Chicago Booth  
Thomas Rauter, Chicago Booth  
Sangmin (Simon) Oh, Joint PhD Program in Financial Economics  
Niels Gormsen, Chicago Booth  
Kilian Huber, Chicago Booth  
Michael Weber, Chicago Booth  
Robert Vishny, Chicago Booth  
Anil Kashyap, Chicago Booth
An Update on Our Research Professionals

In Summer Quarter 2020, Livia Amato, Laurenz De Rosa, Daniel (Zongsheng) Huang, and Michael Yip joined the Center’s research professional program to provide research support to Booth finance faculty. Three of the center’s current research professionals, Pranav Garg, Sanhitha Jugulum, and Julien Weber will enter PhD programs at Yale School of Management (finance), Columbia College (economics), and New York University (economics), in fall 2021.
Our 2020–21 Research Professionals

Fama-Miller Center for Research in Finance offers a unique predoctoral opportunity for research professionals with undergraduate degrees or masters degrees in economics and finance or in fields with related skills such as statistics, mathematics, or computer science.

Our two-year research professional program is designed to be an ideal transitional position for recent graduates who are interested in attending a top PhD program in finance or economics. Our research professionals gain valuable experience working with some of the world's top researchers in these fields.

Livia Amato
Livia Amato joined the Fama-Miller Center (FMC) in fall of 2020. She has a BSc in economics and business from LUISS University and a MSc in international finance from HEC Paris. Her current research interests focus on asset pricing, macrofinance, macroeconomics, and monetary policy. As a research professional, she is currently working with Professors Anil Kayshap, Lubos Pastor, Quentin Vandeweyer, and Constantine Yannelis.

Yann Decressin
Yann Decressin started at the FMC in the summer of 2019. He earned his BA in economics (with honors) and statistics from UC Berkeley. His research interests are focused in macrofinance, especially monetary policy transmission, shadow banks, and regulation. He is currently working with Professors Jessica Jeffers, Steve Kaplan, Michael Weber, and Eric Zwick on a variety of projects.

Laurenz De Rosa
Laurenz De Rosa joined the FMC in fall 2020 after earning his bachelor's and master's degree in economics from the University of Mannheim. His current research interests include asset pricing and corporate finance. He is assisting Professors Elisabeth Kempf, Ralph Koijen, and Amir Sufi on multiple projects.

Pranav Garg
Pranav Garg joined the FMC in 2019. Pranav Garg started the program. He earned a bachelor’s in economics with honors from the University of Delhi and a master’s degree in economics from the Paris School of Economics. His current research interests include macrofinance, household finance, banking, international economics, and political economy. He is assisting Professors Emanuele Colonelli, Scott Nelson, Amir Sufi, Anthony Lee Zhang, and Eric Zwick. Pranav will start the finance PhD program at Yale School of Management in fall 2021.

Daniel (Zongsheng) Huang
Daniel Huang started with the FMC in fall 2020. He earned a BA in economics, a BEing in electronic engineering from Tsinghua University, and a MS in financial mathematics from the University of Chicago. His research interests are behavioral finance and economics, macrofinance, institutional economics, and political economy. Daniel is currently assisting Professors Wenxin Du, Zhiguo He, Elisabeth Kempf, Yueran Ma, and Eric Zwick.

Sanhitha Jugulum
Sanhitha Jugulum joined the FMC program in January 2019. Sanhitha has a bachelor’s degree in economics from St. Stephen’s College, University of Delhi, and a master’s degree in public policy from the University of Chicago’s Harris School of Public Policy. Her current interests include corporate finance and asset pricing. She is assisting Professors Elisabeth Kempf, Raghuram Rajan, Emanuele Colonelli, and Eric Zwick. Sanhitha will begin her PhD program in economics at Columbia University in fall 2021.

Julien Weber
In the summer of 2019, Julien Weber joined the program. He has a BA from the University of St. Gallen and a MSc from the Stockholm School of Economics, both in economics. His current research interests include banking and macroeconomics. He is assisting Professors Lars Hansen, Anil Kashyap, Yueran Ma, Michael Weber, and Anthony Zhang on a variety of projects. Julien will enter the economic PhD program at New York University in fall 2021.

Michael Yip
Michael Yip started the FMC program in fall 2020. Michael has a bachelor’s degree in economics from the Chinese University of Hong Kong, and a MSc in finance and economics from the London School of Economics and Political Science. His current research interests include asset pricing, macroeconomics, and the application of machine learning in these areas. He is currently assisting Professors George Constantinides, Stefan Nagel, Scott Nelson, Anthony Zhang, and Eric Zwick on various projects.

Our 2020–21 Research Professionals

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Selfish Corporations

We conduct large-scale surveys of US citizens aimed at measuring perceptions of large corporations’ environmental, social, and governance practices and investigate how these perceptions affect the public support for economic policies. The public demands corporations to behave better within society, a sentiment we label “big business discontent.” We experimentally vary individual perceptions through animated videos highlighting corporations’ role in society and by changing the order of survey sections. We show that higher big business discontent lowers support for corporate bailouts. These effects persist after a week, are reflected in costly behavioral actions, and span the full political spectrum.
Liquidity, Pledgeability, and the Nature of Lending

We (Diamond and Rajan with coauthor Yunzhi Hu) develop a theory of how corporate lending and financial intermediation change based on the fundamentals of the firm and its environment. We focus on the interaction between the prospective net worth or liquidity of an industry and the firm’s internal governance or pledgeability. Variations in prospective liquidity can induce changes in the nature, covenants, and quantity of loans that are made, the identity of the lender, and the extent to which the lender is leveraged. We offer predictions on how these might vary over the financial cycle.

Douglas W. Diamond
Merton H. Miller
Distinguished Service Professor of Finance

Raghuram Rajan
Katherine Dusak Miller
Distinguished Service Professor of Finance

Zhiguo He
Fuji Bank and Heller
Professor of Finance and Jeuck Faculty Fellow

Margin Trading and Leverage Management

We (He with coauthors Jiangze Bian, Zhi Da, Dong Lou, Kelly Shue, and Hao Zhou) use granular data covering regulated (brokerage-financed) and unregulated (shadow-financed) margin trading during the 2015 market turmoil in China to provide the first systematic analysis of margin investors’ characteristics, leverage management policies, and liquidation choices. We show that leverage constraints induced substantial forced and preemptive sales, and leverage and cash management differed substantially across investor and account types. We explore the relation between margin trading and shock propagation, and show that China’s price limit rule led to unintended contagion across stocks. Compared to brokerage investors, shadow investors were closer to their leverage constraints, and played a more significant role in transmitting shocks across stocks.

Zhiguo He
Fuji Bank and Heller
Professor of Finance and Jeuck Faculty Fellow
What is CEO Overconfidence? Evidence from Executive Assessments

We (Kaplan with coauthors Morten Sorensen and Anastasia A. Zakolyukina) use detailed assessments of CEO personalities to explore the nature of CEO overconfidence as it is commonly measured. Longholder, the option-based measure of CEO overconfidence introduced by Malmendier and Tate (2005a) and widely used in behavioral corporate finance and economics literature, is significantly related to several specific characteristics that are associated with overconfident individuals as well as individuals of lower ability. Similar relations hold for overconfidence measures based on CEOs’ earnings guidance. Investment-cash flow sensitivities are larger for both Longholder and less able CEOs. After controlling for ability and other characteristics, Longholder CEOs’ investments remain significantly more sensitive to cash flows. These results suggest that overconfidence, as measured by Longholder, is correlated with lower ability but still reflects empirically distinct aspects of overconfidence.

The Political Polarization of US Firms

Executive teams in US firms are becoming increasingly politically polarized. We (Kempf with coauthors Vyacheslav Fos and Margarita Tsoutsoura) establish this new fact using political affiliations from voter registration records for top executives of S&P 1500 firms between 2008 and 2018. The rise in political homogeneity is explained by both an increasing share of Republican executives and increased sorting by partisan executives into firms with like-minded individuals. We further document substantial heterogeneity across party lines in executives’ beliefs, as proxied by their trading of company stock around presidential elections, as well as in firms’ investment decisions.
Fifty Shades of QE: Comparing Findings of Central Bankers and Academics

We (Kempf and Pastor with coauthors Brian Fabo and Martina Jancokova) compare the findings of central bank researchers and academic economists regarding the macroeconomic effects of quantitative easing (QE). We find that central bank papers find QE to be more effective than academic papers do. Central bank papers report larger effects of QE on output and inflation. They also report QE effects on output that are more significant, both statistically and economically, and they use more positive language in the abstract. Central bank researchers who report larger QE effects on output experience more favorable career outcomes. A survey of central banks reveals substantial involvement of bank management in research production.

Anatomy of Corporate Borrowing Constraints

Macro-finance analyses commonly link firms’ borrowing constraints to the liquidation value of physical assets. For US non-financial firms, we (Ma with coauthor Chen Lian) show that 20 percent of debt by value is based on such assets (“asset-based lending” in creditor parlance), whereas 80 percent is based predominantly on cash flows from firms’ operations (“cash flow-based lending”). A standard borrowing constraint restricts total debt as a function of cash flows measured using operating earnings (“earnings-based borrowing constraints”). These features shape firm outcomes on the margin: first, cash flows in the form of operating earnings can directly relax borrowing constraints; second, firms are less vulnerable to collateral damage from asset price declines and fire sale amplification may be mitigated. Taken together, our findings point to new venues for modeling firms’ borrowing constraints in macro-finance studies.
Two Tales of Debt
We (Ma with coauthor Amir Kermani) study the nature of debt among US non-financial firms and its determinants. One approach of debt enforcement lends against the liquidation value of discrete assets (such as fixed assets or working capital). Another approach lends against the going-concern value of the business. Using a new dataset on the liquidation value of different types of assets as well as the going-concern value of distressed firms across major industries, we present several findings. First, non-financial firms have limited liquidation values from fixed assets and working capital, which sum to around 23 percent of book assets for the average firm. Second, firms with lower liquidation values have more loans with monitoring and tighter performance covenants. Third, lower liquidation values are associated with higher interest rates, but only for debt against discrete assets. We finally present a model that matches the main findings, which demonstrates how covenants and control right institutions facilitate borrowing well beyond liquidation values.

Corporate Flexibility in a Time of Crisis
We (Ma with coauthors John W. Barry, Murillo Campello, and John R. Graham) use timely surveys of US CFOs to study how flexibility shapes companies’ responses to the onset of the COVID-19 crisis and drives longer-term changes in the corporate sector. The three dimensions of corporate flexibility that we study perform distinct functions, yet complement each other. We find that workplace flexibility, namely the ability for employees to work remotely, plays a central role in modulating firms’ employment and investment planning during the crisis. Investment flexibility allows firms to increase or decrease capital spending plans based on their business condition during the crisis, which is shaped by workforce flexibility. Finally, financial flexibility contributes to stronger employment and investment plans. We show that the role played by workplace flexibility is new and was absent during the 2008 financial crisis. CFOs expect the workplace transformation of 2020 to have lasting effects for years to come: high workplace flexibility firms foresee continuation of remote work, stronger employment recovery, and a shift away from traditional capital investment, whereas low workplace flexibility firms will rely more on automation to replace labor.

Asset Specificity of Non-Financial Firms
We (Ma and coauthor Amir Kermani) study asset specificity of US non-financial firms using a new dataset on the liquidation recovery rates of all major asset categories across industries. First, we find a high average level of asset specificity. Second, across industries, physical attributes of assets account for substantial variations in liquidation recovery rates. Over time, macroeconomic and industry conditions have the most impact when assets are not firm-specific. Third, higher asset specificity is associated with less disinvestment, greater investment response to uncertainty, and more Q dispersion, consistent with theories of investment irreversibility. Finally, rising intangibles have had a limited impact on firms’ liquidation values.
Importing Activists: Determinants and Consequences of Increased Cross-border Shareholder Activism

We (Maffett and Skinner with coauthor Anya Nakhmurina) use a comprehensive sample of nearly 7,000 shareholder activism campaigns across 56 countries to examine how corporate governance regulations interact with activism to drive changes in real corporate-sector outcomes. We develop a novel country-level framework of regulatory characteristics that serve as necessary precursors for minority shareholders to influence firm governance. We find that the incidence of both foreign and domestic activism, as measured by the number of campaigns, increases by over 60 percent (95 percent) following reforms that increase shareholder voting rights (board independence). Using these shareholder-empowering changes to governance regulation as shocks to the threat of activism, and the presence of independent institutional investors to identify high-activism-risk firms, we find that firms facing a high threat of activism (including non-targeted firms) increase profitability, reduce investment, and increase payouts. These effects are concentrated in countries where the preexisting corporate governance regulations are weaker and the level of activism was relatively low; we find little evidence of significant changes in countries with historically higher levels of activism. Overall, our results suggest that, when shareholder-empowering governance regulations give activists a way to gain access to untapped markets, they can serve as catalysts for widespread changes in corporate activities.

Mark Maffett
Associate Professor of Accounting

Douglas J. Skinner
Deputy Dean for Faculty and Eric J. Gleacher Distinguished Service Professor of Accounting

Going-Concern Debt of Financial Intermediaries

We (Ma and coauthor José A. Scheinkman) study asset and debt characteristics of US bank holding companies. We show that financial institutions, especially large institutions, are not just about holding discrete assets. Services and going-concern values are important, and capital market debt against going-concern values accounts for 10 to 15 percent of total assets, comparable to the volume of capital market debt against discrete assets. We find that financial institutions’ debt against going-concern values has weak monitoring, relative to similar debt among non-financial firms. We argue that weak monitoring prevails because creditors cannot easily punish or restructure these institutions should they violate covenants, which limits covenants’ usefulness.

Yueran Ma
Assistant Professor of Finance and Liew Family Junior Faculty Fellow

Mark Maffett
Associate Professor of Accounting

Yueran Ma
Assistant Professor of Finance and Liew Family Junior Faculty Fellow

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There are two prevailing theories of borrower default: strategic default—when debt is too high relative to the value of the house—and adverse life events—such that the monthly payment is too high relative to available resources. It has been challenging to test between these theories in part because adverse events are measured with error, possibly leading to attenuation bias. We (Noel and coauthor Peter Ganong) develop a new method for addressing this measurement error using a comparison group of borrowers with no strategic default motive: borrowers with positive home equity. We implement the method using high-frequency administrative data linking income and mortgage default. Our central finding is that only 3 percent of defaults are caused exclusively by negative equity, much less than previously thought; in other words, adverse events are a necessary condition for 97 percent of mortgage defaults. Although this finding contrasts sharply with predictions from standard models, we show that it can be rationalized in models with a high private cost of mortgage default.

Pascal Noel
Neubauer Family Assistant professor of Finance and Kathryn and Grant Swick Faculty Scholar

Research Papers Posted in 2020–21

How Costly is Noise? Data and Disparities in Consumer Credit

We (Nelson and coauthor Laura Blattner) show that lenders face more uncertainty when assessing default risk of historically under-served groups in US credit markets and that this information disparity is a quantitatively important driver of inefficient and unequal credit market outcomes. We first document that widely used credit scores are statistically noisier indicators of default risk for historically underserved groups. This noise emerges primarily through the explanatory power of the underlying credit report data (e.g., thin credit files), not through issues with model fit (e.g., the inability to include protected class in the scoring model). Estimating a structural model of lending with heterogeneity in information, we quantify the gains from addressing these information disparities for the US mortgage market. We find that equalizing the precision of credit scores can reduce disparities in approval rates and in credit misallocation for disadvantaged groups by approximately half.

Scott Nelson
Assistant Professor of Finance

Why Do Borrowers Default on Mortgages? A New Method for Casual Attribution

There are two prevailing theories of borrower default: strategic default—when debt is too high relative to the value of the house—and adverse life events—such that the monthly payment is too high relative to available resources. It has been challenging to test between these theories in part because adverse events are measured with error, possibly leading to attenuation bias. We (Noel and coauthor Peter Ganong) develop a new method for addressing this measurement error using a comparison group of borrowers with no strategic default motive: borrowers with positive home equity. We implement the method using high-frequency administrative data linking income and mortgage default. Our central finding is that only 3 percent of defaults are caused exclusively by negative equity, much less than previously thought; in other words, adverse events are a necessary condition for 97 percent of mortgage defaults. Although this finding contrasts sharply with predictions from standard models, we show that it can be rationalized in models with a high private cost of mortgage default.
Dissecting Green Returns

Green assets delivered high returns in recent years. This performance reflects unexpectedly strong increases in environmental concerns, not high expected returns. German green bonds outperformed their higher-yielding non-green twins as the “greenium” widened, and US green stocks outperformed brown as climate concerns strengthened. To show the latter, we (Pastor with coauthors Robert F. Stambaugh and Lucian A. Taylor) construct a theoretically motivated green factor—a return spread between environmentally friendly and unfriendly stocks—and find that its positive performance disappears without climate-concern shocks. The factor lags those shocks, curiously, by about a month. A theory-driven, two-factor model featuring the green factor explains much of the recent underperformance of value stocks.

Secured Credit Spreads and the Issuance of Secured Debt

Credit spreads for secured debt issuances are lower than for unsecured debt issuances, especially when a firm’s credit quality deteriorates, the economy slows, or average credit spreads widen. Yet healthy firms tend to be reluctant to issue secured debt when other forms of financing are available, as we (Rajan with coauthors Efraim Benmelech and Nitish Kumar) demonstrate with an analysis of security issuance over time and in particular around the COVID-19 pandemic shock in the United States in early 2020. We find that for firms that are rated below-investment grade and that have few alternative sources of financing in difficult times, the likelihood of secured debt issuance is positively correlated with the premium associated with secured debt. It is uncorrelated for firms that are investment-grade. This pattern of issue behavior is consistent with firms seeing unencumbered collateral as a form of insurance, to be used only in extremis.
A Goldilocks Theory of Fiscal Policy

Fiscal policy in advanced economies faces a “Goldilocks dilemma.” Fiscal consolidation risks prolonged episodes at the zero lower bound (ZLB), while fiscal expansion raises sustainability concerns. This paper proposes a dynamic fiscal policy framework to study fiscal space subject to this trade-off. At the core of our analysis is a deficit-debt diagram, which we use to measure how much fiscal expansion is necessary to avoid the ZLB, when fiscal policy can run deficits indefinitely, and at what debt level the interest rate rises above the growth rate. Rising inequality and weak aggregate demand expand fiscal space, allowing greater indefinite deficits, while slowing growth tightens the ZLB constraint, requiring greater and greater debt levels. We characterize the effects of various tax policies on fiscal space and provide a cross-country comparison.

Amir Sufi
Bruce Lindsay Professor of Economics and Public Policy

The Life Cycle of a Bank Enforcement Action and Its Impact on Minority Lending

This paper studies the role banking supervision plays in improving access to credit for minorities by investigating how enforcement decisions and orders (EDOs) affect bank borrower base. We (Tomy with coauthors Byeongchan An, Robert Bushman, and Anya Kleymenova) document significant changes in the underlying demographic mix of residential mortgage borrowers. After an EDO’s termination, banks significantly increase residential mortgage lending to minorities and increase their market share of lending to this group within the counties where they operate. EDO banks are also less likely to deny loans to minority borrowers, and their reasons for loan denial change. Our results are consistent with banks catering to regulators after EDO termination.

Rimmy E. Tomy
Associate Professor of Accounting and Kathryn and Grant Swick Faculty Scholar

Community Membership and Reciprocity in Lending: Evidence from Informal Markets

We (Tomy with coauthor Regina Wittenberg Moerman) study how wholesalers assess borrower credit risk and extend trade credit to retailers in economies where formal market institutions, such as financial reporting systems, auditing, and courts, are nonexistent or function poorly. Using the setting of a large market in India, we find that community membership plays a strong role in the access to credit. Wholesalers are more likely to provide trade credit and to offer less restrictive credit terms to within-community retailers, are more lenient when these retailers default, and are less likely to experience defaults from them. Our results provide suggestive evidence that this cooperation between same-community wholesalers and retailers is achieved through an indirect reciprocity mechanism, which is sustained by within-community information flows and provides insurance against income shocks.

Rimmy E. Tomy
Associate Professor of Accounting and Kathryn and Grant Swick Faculty Scholar

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Research Papers Posted in 2020–21

Option-Implied Spreads and Option Risk Premia

We (Veronesi with coauthors Christopher Culp, Mihir Gandhi, and Yoshio Nozawa) propose implied spreads (IS) and normalized implied spreads (NIS) as simple measures to characterize option prices. IS is the credit spread of an option’s implied bond, the portfolio long a risk-free bond and short a put option. NIS normalizes IS by the risk-neutral default probability and reflects tail risk. IS and NIS are countercyclical and predict implied bond returns, while neither, like implied volatility, predicts put returns. These opposite predictability results are consistent with a stochastic volatility, stochastic jump intensity model, as put premia increase in volatility but decrease in jump intensity, while implied bond premia increase in both.

Self-image Bias and Lost Talent

We (Veronesi and coauthor Marciano Siniscalchi) propose an overlapping-generation model wherein researchers belong to two groups, M or F, and established researchers evaluate new researchers. Group imbalance obtains even with group-neutral evaluations and identical productivity distributions. Evaluators’ self-image bias and mild between-group heterogeneity in equally productive research characteristics lead the initially dominant group, say M, to promote scholars with characteristics similar to theirs. Promoted F-researchers are few and similar to M-researchers, perpetuating imbalance. Candidates’ career concerns and institutions’ hiring practices exacerbate talent loss. Mentorship reduces group imbalance, but increases F-group talent loss. Affirmative action reduces both. Our mechanism explains existing evidence and suggests different policies.
Fiscal Policy and Household's Inflation Expectations: Evidence from a Randomized Control Trial

Rising government debt levels around the world are raising the specter that authorities might seek to inflate away the debt. In theoretical settings where fiscal policy "dominates" monetary policy, higher debt without offsetting changes in primary surpluses should lead households to anticipate this higher inflation. Are household inflation expectations sensitive to fiscal considerations in practice? We (Weber with coauthors Olivier Coibion and Yuriy Gorodnichenko) field a large randomized control trial of US households to address this question by providing randomly chosen subsets of households with information treatments about the fiscal outlook and then observing how they revise their expectations about future inflation as well as taxes and government spending. We find that information about the current debt or deficit levels has little impact on inflation expectations but that news about future debt leads them to anticipate higher inflation, both in the short run and long run. News about rising debt also induces households to anticipate rising spending and a higher rate of interest for government debt.

Effective Policy Communication: Targets versus Instruments

Communication targeting households and firms has become a stand-alone policy tool of many central banks. But which forms of communication, if any, can reach ordinary people and manage their economic expectations effectively? In a large-scale randomized control trial, we (Weber and coauthors Francesco D'Acunto, Daniel Hoang, and Maritta Paloviita) show that communication manages expectations when it focuses on policy targets and objectives rather than on the instruments designed to reach such objectives. It is especially the least sophisticated demographic groups, whom central banks typically struggle to reach, who react more to target-based communication. When exposed to target-based communication, these groups are also more likely to believe that policies will benefit households and the economy. Target-based communication enhances policy effectiveness and contributes to strengthen the public’s trust in central banks, which is crucial to ensure the effectiveness of their policies.
Epidemic Responses Under Uncertainty

We (Yannelis with coauthors Michael Barnett and Greg Buchak) examine how policymakers react to a pandemic with uncertainty regarding key epidemiological parameters by embedding a macroeconomic SIR model in a robust control framework. We find that optimal policy under uncertainty generates optimal mitigation responses that are asymmetric with respect to the initial estimate of the pandemic’s severity. When underestimating the severity, the robust control approach leads to a harsher quarantine, closer to the true optimal level, compared to a naive approach. When overestimating, the planner initially implements a policy similar to the true optimal policy but fails to relax it as the pandemic abates.

Does Private Equity Investment in Health Care Benefit Patients? Evidence from Nursing Homes

The past two decades have seen rapid increase in private equity (PE) investment in health care, a sector in which intensive government subsidy and market frictions could lead high-powered for-profit incentives to be misaligned with the social goal of affordable, quality care. This paper studies the effects of PE ownership on patient welfare at nursing homes. With administrative patient-level data, we (Yannelis with coauthors Atul Gupta, Sabrina T. Howell, and Abhinav Gupta) use a within-facility, differences-in-differences design to address non-random targeting of facilities. We use an instrumental variables strategy to control for the selection of patients into nursing homes. Our estimates show that PE ownership increases the short-term mortality of Medicare patients by 10 percent, implying 20,150 lives lost due to PE ownership over our 12-year sample period. This is accompanied by declines in other measures of patient well-being, such as lower mobility, while taxpayer spending per patient stay increases by 19 percent. We observe operational changes that help to explain these effects, including declines in nursing staff and compliance with standards. Finally, we document a systematic shift in operating costs post-acquisition toward non-patient care items such as monitoring fees, interest, and lease payments.
Monetary Policy Transmission in Segmented Markets

We (Zhang with coauthors Jens Eisenschmidt and Yiming Ma) show that dealer market power impedes the pass-through of monetary policy in the European repo market. The current literature has mostly centered around collateral scarcity, where scarce and heterogeneous collateral causes repo rates to fall below policy rates and to diverge across collateral types. Using a dataset covering both inter-dealer and OTC repo trades, we find significant dispersion in repo rates that cannot be explained by collateral scarcity alone. We show that this is because most non-dealer and non-banks do not have access to e-trading on centralized exchanges. Instead, they rely on OTC-intermediated access to repo markets through dealer banks. As a result, dealers exhibit significant market power, which causes the pass-through of the ECB’s policy rate to the large OTC segment of the market to be inefficient and unequal. Our model and estimates imply that a customer-facing secured funding facility like the Fed’s RRP can alleviate dealer market power and improve the pass-through of monetary policy in repo markets.
Published and Forthcoming Papers from Fama-Miller Center Support 2020–21


Liew Fama-Miller Fellowships 2020–21

Liew Fama-Miller Fellowships are awarded to PhD students in the Chicago Booth finance program and the Joint Program in Financial Economics based on merit, overall performance, or seminar papers.
The Fama-Miller family mourns the tragic loss of our dear friend and colleague Yiran Fan. On January 9, 2021, Yiran's life was tragically taken in an act of senseless violence.

Yiran first joined the center in 2015 as a research professional before getting accepted to the Joint PhD Program in Financial Economics at Booth. He was a superstar in our research professional program. Brilliant, kind, and always willing to help his fellow colleagues. A dynamic person, academically smart with love and passion for the arts. In his spare time he would act and direct plays. He had a unique and infectious laugh that brought so much joy to all around him.

This year we were fortunate to have him return to the center as the Fama-Miller Professional Development Fellow where he was mentoring the current research professionals and facilitating their weekly seminar series.

Yiran has touched so many lives and left imprints on our hearts. During this difficult time, we remember Yiran and all of his contributions to the center. He is truly missed and will be forever remembered.

Special Thank You to Sangmin (Simon) Oh

In January 2021, Sangmin (Simon) Oh, graciously filled in for Yiran Fan as the Fama-Miller Professional Development Fellow for the remaining year. Simon is currently a third-year PhD student in the Joint Program in Financial Economics. He studied electrical engineering and finance at the University of Pennsylvania before coming to Chicago Booth for his PhD education. He is interested in the role of intermediaries in financial markets and machine learning applications in finance. At Chicago Booth, he has worked with Stefan Nagel, Ralph Koijen, and Steven Kaplan on his past research projects. He was also a teaching assistant for Douglas Diamond, Zhiguo He, Ralph Koijen, and Brent Neiman. Outside of research, he organizes the Econ Dynamics working group with Lars Hansen; the Booth ML in Finance reading group, and the finance brownbag. Simon is a president at the Political Economy Club at Chicago Economics and served last year on the Chicago Booth Standing Committee on PhD climate.

We would like to extend a special thank you to Simon for coming in for the remaining two quarters and leading with our research professionals. He made a huge impact during such a difficult time and did a wonderful job mentoring. We truly appreciate all the hard work and dedication in an unprecedented environment and situation.
The Fama-Miller Research Professional Development Fellowship recognizes one outstanding entering third- or fourth-year Chicago Booth finance or Joint Program in Financial Economics PhD student per year. The Fama-Miller Research Professional Development Fellow is expected to lead the weekly Fama-Miller Center research professional seminar, guiding the research professionals’ discussion during the seminar, and providing feedback to the presenter afterward. The fellow is selected among applicants annually by the faculty directors of the Fama-Miller Center based primarily on academic merit.

The fellowship was awarded to Aditya Chaudry, a fourth-year PhD student in finance. He studied finance and mathematics at the University of Virginia before coming to Booth. His research addresses important questions in asset pricing and macrofinance using sophisticated statistical and machine learning methods as well as novel identification approaches. Aditya has served as a research assistant for Niels Gormsen and a teaching assistant for John Heaton, Stefan Nagel, and Ralph Koijen. Outside of research he organizes the Machine Learning in Finance reading group and the Asset Pricing reading group.
Due to the COVID-19 pandemic all of the conferences this year were held via video conference.

Household and Corporate Lending Conference
March 25–26, 2021
The Household and Corporate Lending Conference studied how competition, government policy, and other frictions impact the functioning of consumer credit markets. The conference was split over two days and organized by Constantine Yannelis and Anthony Zhang, both from the University of Chicago Booth School of Business.

To view the schedule go to: research.chicagobooth.edu/famamiller/household-lending-conference/schedule

Behavioral Approaches to Financial Decision-Making Conference
September 23–24, 2020
The University of Chicago Booth School of Business contains world-leading groups in financial decision-making. Groups as diverse as decision science, marketing, economics, and finance each bring their unique tool set to answering questions that are closely related, though often the divisions between fields makes dialogue across them difficult. The aim of the conference was to leverage Booth’s multidisciplinary strengths to draw leading scholars from economics, finance, decision science, and psychology together in a discussion of addressing pressing questions related to how individuals make financial decisions. The conference brought together a small group of scholars from various fields.

Conference organizers were Samuel Hartzmark, Alex Imas, and Abigail Sussman, all from Chicago Booth. The list of papers and speakers can be viewed on the conference website: research.chicagobooth.edu/famamiller/conference-in-behavioral-finance-and-decision-making

Conference on the Financial Consequences of the COVID-19 Pandemic
October 12–16, 2020
The Conference on the Financial Consequences of the COVID-19 Pandemic was organized with the Journal of Finance and was held by video conference in five daily two-hour sessions.

The goal of the conference was to bring together economists from academia and policymaking institutions to discuss research papers that shed light on the economic effects of the pandemic on corporate, household, financial, and government sectors and on the policy responses to the crisis.

Conference organizers were Philip Bond, University of Washington Foster School of Business; Stefan Nagel, University of Chicago Booth School of Business; Amit Seru, Stanford University; and Wei Xiong, Princeton University.

The schedule can be viewed on the conference website: research.chicagobooth.edu/famamiller/financial-consequences-of-covid-19?sc_lang=en
### Looking Ahead

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<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td><strong>July 2021</strong></td>
<td>Simon Mayer, a recent PhD graduate from Erasmus University Rotterdam and the Tindergen Institute, joins the center as the 2021–22 Research Fellow.</td>
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<td>The new cohort of FMC research professionals, which includes Hanson Ho, Rahul Chauhan, Yingxuan Yang, and Zichen Zhao, begins their two-year program at the center.</td>
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<td><strong>October 2021</strong></td>
<td>The Fama-Miller Center sends a call for proposals for research funding.</td>
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<td>The Fama-Miller Center will host the Chicago Household Finance Conference at the University of Chicago's Gleacher Center.</td>
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<td>Francesco D'Acunto from Boston College will visit Chicago Booth as a Fama-Miller Center Visiting Fellow.</td>
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<td>The Fama-Miller Center started hiring for the research professional program (summer 2022).</td>
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<td><strong>November 2021</strong></td>
<td>The Fama-Miller Center awards research funding.</td>
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<td>Giorgia Piacentino from Columbia University will visit Chicago Booth as a Fama-Miller Center Visiting Fellow.</td>
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<td><strong>March 2022</strong></td>
<td>The Fama-Miller Center sends a call for proposals for research funding.</td>
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<td><strong>April 2022</strong></td>
<td>The center sends out the Fama-Miller Research Professional Development Fellowship application for 2022–23.</td>
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<td>Tobias Moskowitz from Yale University will visit Chicago Booth as a Fama-Miller Center Visiting Fellow.</td>
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<tr>
<td><strong>May 2022</strong></td>
<td>The Fama-Miller Center awards research funding.</td>
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