Explaining Disparities in Personal Bankruptcy Outcomes

NBER Household Finance Research Grant Proposal

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1 Research Proposal

Each year, close to one million individuals enter bankruptcy, and consumer bankruptcy provides more resources to U.S. households than all state unemployment insurance programs combined (Lefgren, McIntyre, and Miller, 2010). Given its key role, a first-order policy concern is understanding whether and why the bankruptcy system seems to work less well for financially distressed households in certain groups. For example, a recent ProPublica article (Kiel and Fresques, 2017) found that personal bankruptcy filers from black zip codes are more than twice as likely to have their cases dismissed (without any debt relief) than observationally similar filers from white zip codes. Building on prior research showing that judges play a key role in determining bankruptcy outcomes, in this project we propose to examine the role played by bankruptcy judges and trustees in affecting outcomes for particular groups.

Our motivating research questions include: Are there important differences in bankruptcy outcomes across groups? To what extent do unconditional disparities reflect correlations of group status with filer-level observables or unobservables? What role is there for homophily to explain disparities across groups, specifically the relative group membership of the judge, bankruptcy trustee, and applicant? Importantly, we hypothesize that the bankruptcy trustee plays an important role in determining outcomes, a fact that is underexplored in the literature. Our project will test for both judge and trustee bias.

This proposal seeks funding to assemble an unprecedented nationwide dataset of detailed bankruptcy outcomes where meaningful demographic characteristics of the judge, trustee, and filer can be observed or more confidently imputed than ever before. Funding from this grant proposal will be instrumental in securing the necessary Lexis Nexis CourtLink subscriptions needed to access the relevant court filings. We have experience processing personal bankruptcy filing PDFs from PACER (the electronic repository of U.S. Court documents) into usable data on individual liabilities and assets, and we have participated in demonstrations of the needed Lexis Nexis products to verify that they contain invaluable documents to which our universities' current Lexis Nexis subscriptions do not provide access. Importantly, we will make our processed data publicly available. (Sharing the raw PDFs would violate our Lexis Nexis agreement and be less useful to researchers anyway.) Accordingly, receiving this funding would facilitate the construction of a significant public good.

We will test for and analyze the role of bias in explaining disparities in many types of bankruptcy outcomes, many of which have not been studied before because of data limitations. Traditional bankruptcy outcomes include dismissal (when the judge rejects the filing), chapter selection (Chapter 13 is less generous), bankruptcy refiling rates, and discharged debts. Richer outcomes not usually available to bankruptcy researchers include conversion (when the judge forces a conversion from Chapter 7 to Chapter 13), net debt forgiveness (defined as discharged assets minus payments out of seizable assets), home valuation, which debts are discharged, and whether the court made filing eligibility exceptions to time-since-filing, income means-testing thresholds, or asset holding thresholds.

1.1 Data

In ongoing work, we have collected the schedules of assets and liabilities from personal bankruptcy filers in three states from PACER. These forms are submitted with initial bankruptcy filings and contain rich data on the timing and composition of applicant liabilities, as well as the nature and valuation of applicant assets. Using the common structure of these tables, we have honed a set of algorithms that process PDF court filings into applicant-level data. We will adapt these methods to the nationwide case-level data we obtain from Lexis Nexis to understand what liabilities were

discharged, which were contested, and which assets were seized. An important component of the filing data is the identity of the filer, trustee, and bankruptcy judge. From these names, bankruptcy addresses listed on bankruptcy filings, and public records on judge and trustee addresses, we will merge the filing data to InfoUSA, a database to which Duke subscribes, that records person-level demographics including ethnicity, marital status, voter status, and immigration status.

1.2 Estimation Strategy

To quantify bias for each group (e.g., race), we will first document disparate outcomes by race and then relate differences in outcomes for filers across groups to the group status of judges and trustees. Suppose a decision maker (in our setting, a judge or trustee) evaluates agents (here, filers) and assign them a binary outcome $Y \in \{0,1\}$. Without loss of generality, suppose that $Y = 1$ is a "bad" outcome. Judges observe a binary group status $G_i \in 0,1$ for each filer i and a vector of characteristics $x_i \in \mathbb{R}_N$. Each filer has a potential outcome $Y_i = Y_{Gi}$ for $G_i \in \{0,1\}$. Because these are binary outcomes, without loss of generality we can write $Y_i = Y_{0i} + (Y_{1i} - Y_{0i})G_i$.

The difference in potential outcomes $Y_{1i} - Y_{0i}$ is the causal effect of group status $G_i = 1$. We define Y_{0i} and Y_{1i} to be the potential outcomes that only change if the filer's group status changes. Other characteristics that affect their outcomes may be caused by/correlated with group status G_i, but we assume in this notation that these other factors are held constant. Therefore $Y_{1i} - Y_{0i}$ reflects differences in outcomes for filers who are identical except for their group status. We define this difference $Y_{1i} - Y_{0i}$ to be group-specific bias.

The average disparity in outcomes across groups is $E(Y_i|G_i = 1) - E(Y_i|G_i = 0)$, which can be written as the average treatment effect on the treated (ATT) plus a selection effect term

$$\text{average disparity} = [E(Y_{1i}|G_i = 1) - E(Y_{0i}|G_i = 1)] + [E(Y_{0i}|G_i = 1) - E(Y_{0i}|G_i = 0)]$$

The ATT is the average group-specific bias due among people in group $G_i = 1$. The share of the disparities due to bias is

$$\%\text{ disparity due to bias} \equiv \upsilon = \frac{E(Y_{1i}|G_i = 1) - E(Y_{0i}|G_i = 1)}{E(Y_{1i}|G_i = 1) - E(Y_{0i}|G_i = 1) + E(Y_{0i}|G_i = 1) - E(Y_{0i}|G_i = 0)}.$$

Note that the above is in essence a causal attribution parameter. Our goal is to estimate an informative lower bound for υ, which will provide a conservative estimate of the share of bankruptcy outcome disparities across groups that can be attributed to the bias of judges and trustees.

The challenge in estimating υ is that group-status in non-random in the sense that it is correlated with other factors that may affect outcomes (e.g., race and income). This means in general that $E(Y_{0i}|G_i = 1) \neq E(Y_{0i}|G_i = 0)$, and we do not observe $E(Y_{0i}|G_i = 1)$. We can estimate the average disparity, but estimating the ATT directly is challenging. Without further information, the identified set for the ATT is $[-1, 1]$.

However, we will exploit key institutional features to help obtain a tighter identified set for υ, in particular an estimable lower bound. Consider a setting where judges also belong to either group 1 or 0. Let $J_i \in \{0,1\}$ denote the group status of filer i's judge. We can define potential outcomes in terms of both filer and judge group status as $Y_i = Y_{GJi}$ for $(G_i, J_i) \in \{0,1\} \times \{0,1\}$. Again, because these are binary outcomes, we can also write

$$\begin{aligned}
Y_{0i} &= Y_{00i} + (Y_{01i} - Y_{00i})J_i \\
Y_{1i} &= Y_{10i} + (Y_{11i} - Y_{10i})J_i \\
Y_i &= Y_{00i} + (Y_{01i} - Y_{00i})J_i + [Y_{10i} + (Y_{11i} - Y_{10i})J_i - Y_{00i} - (Y_{01i} - Y_{00i})J_i]\, G_i.
\end{aligned}$$

To simplify expressions, let E^G denote the expectation conditional on $G_i = 1$. When judge group status J_i is independent of filer group status G_i and the potential outcome (e.g. due to random assignment of judges), we can rewrite the ATT using the law of iterated expectations as follows:

$$\begin{aligned} ATT &= E^G(Y_{1i} - Y_{0i}) = E^G(Y_{11i})p_J + E^G(Y_{10i})(1-p_J) - E^G(Y_{01i})p_J - E^G(Y_{00i})(1-p_J) \\ &= \underbrace{E^G(Y_{10i} - Y_{00i})}_{\equiv\beta_0} + p_J \underbrace{E^G(Y_{11i} - Y_{01i} - Y_{10i} + Y_{00i})}_{\equiv\Delta\beta=(\beta_1-\beta_0)}. \end{aligned}$$

Assumption 1: The ATT of G_i for judges of type $J_i = 1$ is nonnegative, that is $\beta_1 \geq 0$.

In the context of bias/discrimination, this assumption means that judges in discriminated group are at best neutral and at worst biased themselves towards their own group. We will test this assumption empirically, but note that influential research in psychology supports this assumption. If $\Delta\beta < 0$, we can draw several conclusions. First, if $\Delta\beta \neq 0$ bias is present in the judicial decision-making process. If $\Delta\beta < 0$, judges in group 0 are relatively more biased towards filers in group 1, compared to judges in group 1. Finally, under Assumption 1, the bias for judges in group $J_i = 0$ has a lower bound: $\beta_0 \geq -\Delta\beta$.

An important assumption under claim 1 above is an exclusion restriction. In particular, what we ultimately need is that judge group status is independent of of the potential outcomes and filer group status. Random assignment of judges only implies random judge group status if an exclusion restriction holds. Specifically, judge assignments must only affect the outcome, within a filer group, through judge status. This would be violated if judges in different groups systematically evaluate characteristics correlated with filer group status differently. For example, this would fail if both judges in group 1 are more likely to assign $Y = 1$ when income z is higher and income z is correlated with group status G_i (compared to judges in group 0).

Given $\Delta\beta < 0$ and $p_J \in (0, 1)$, the identified set for the ATT is now

$$ATT = \beta_0 + p_J\beta_1 \in [-\Delta\beta(1-p_J), 1 + \Delta\beta p_J].$$

When $\Delta\beta < 0$, we now have a much larger lower bound than before ($-\Delta\beta(1-p_J) > 0 > -1$).

One way to test for failure (or assess the direction of bias) for random assignment of judge group status would be to interact judge group status with other observables that affect bankruptcy outcomes. Here, the richness of the case-level data will be essential. For example, we will see whether judges of different group status on average evaluate filer debt types differently when choosing a bankruptcy outcome, testing whether judges from different groups evaluate filer characteristics correlated with group status (employment status, types of debt, etc.) similarly within filer groups. Such heterogeneity will help us learn what triggers group bias, e.g., whether group-bias seems more pronounced for people with certain types of debt. We will further test the assumption that the ATT for judges with type $J_i = 1$ is greater than or equal to zero.

We will use random assignment to estimate a constant effects version of the potential outcome model. Specifically for all i,

$$\begin{aligned} Y_{10i} - Y_{00i} &= \beta_0 \\ Y_{11i} - Y_{01i} &= \beta_1 \\ Y_{01i} - Y_{00i} &= \beta_2. \end{aligned}$$

As before, let $\Delta\beta = \beta_1 - \beta_0$. With these assumptions, we can rewrite the model as

$$Y_i = E(Y_{00i}) + \beta_0 G_i + \Delta\beta G_i J_i + \beta_2 J_i + \varepsilon_i$$

where $\varepsilon = Y_{00i} - E(Y_{00i})$. Employing OLS we can consistently estimate $\Delta\beta$.

2 Itemized Budget

This proposal seeks funding for two years of subscription access to a Lexis Nexis product that will allow us to download PDFs of personal bankruptcy court filings from every U.S. bankruptcy district for the last 10-15 years, depending on the district. Relative to other personal bankruptcy data sources used in the literature currently, this data access would allow us to observe (or merge in) meaningful demographic characteristics of the judge, trustee, and filer along with a richer set of bankruptcy outcomes than has been examined previously. We will process the PDFs into data suitable for econometric analysis using a set of Python algorithms we have developed in prior work. We reiterate that we will make our processed data publicly available.

We have contacted Lexis Nexis for an academic-license quote (attached) to download personal bankruptcy court filings in bulk. Their per-license annual subscription fee is approximately $3,000. We request funding for two two-year licenses and one one-year license. Having three concurrent licenses the first year will allow us to download case filings from Lexis Nexis servers in bulk from each of our three universities and facilitate more of the PIs and participating RAs to be able to access the data simultaneously. In year two, we anticipate only needing two concurrent licenses, as the majority of the data collection and analysis should be completed in year one.

Itemized Budget

Expense Description	Quoted Price	Quantity	Amount
2-year Lexis Nexis CourtLink Subscription	$6,100	2 licenses	$12,200
1-year Lexis Nexis CourtLink Subscription	$3,408	1 license	$3,408
Total			$15,608
Total Requested			$15,000

3 List of Attachments

1. Quote from Lexis Nexis for data access
2. CVs for each Principal Investigator

Lexis Nexis follow-up

Jauss, Ron (LNG-USAOH022) <ron.jauss@lexisnexis.com>

Wed 2/19/2020 12:41 PM

To: Sasha Indarte <sasha.indarte@duke.edu>
Cc: McGuire, David (LNG-DAY) <david.mcguire@lexisnexis.com>

1 attachments (100 KB)
Lexis Advance National Primary Enhanced .docx;

Dr. Indarte,

It was a pleasure to connect with you regarding your interest in our Bankruptcy database.

Bankruptcy materials are located in our National Primary Law menu which I have attached for your review.

Pricing for a one year contract with one user/ID is $3,408.

A two year contract with one user/ID is $3,000 in year one and $3,100 in year two.

Please let me know of any questions. Your Account Manager, David McGuire, should be back in the office this Monday, February 24th.

Respectfully,

Ron
Ron Jauss
Relationship Manager
LexisNexis | Academic & Library Solutions
937.247.3339 Direct

Bronson Argyle

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Brigham Young University
Provo, UT
84606

Phone: (801)-422-5159
email: bsa@byu.edu
website: BYU Faculty Directory

Education

Columbia University

Ph. D. in Financial Economics, 2014.
Thesis Title: *Portfolio Spillovers and a Limit to Diversification.*
Thesis Chairman: Professor Kent Daniel.
MPhil in Finance, 2011.

Brigham Young University

B.S. in Physics (Magna Cum Laude) with University Honors, 2008.
minor in Mathematics, 2008.
minor in Economics, 2008.

Employment

Brigham Young University, Marriott School, Provo, UT
Assistant Professor of Finance, August 2014 - present.
Teaching Responsibilities: Money, Banking, and Business (Fall 2014, Fall 2015, Fall 2016, Fall 2017, Winter 2019)

Research and Teaching Assistant, Columbia University, 2009-2013.
Consultant, Edgewood Management, LLC., 2012- 2013.
Algorithmic Programmer - Smile, 2010-2012.
Consultant, Gertrude Hawk Chocolate, 2010-2011.
Research Assistant - BYU Chaos & Complexity Group, 2007-2008.
CERN, Research Intern, 2007.
Research Assistant - BYU Quantum Optics Group, 2005-2007.

Publications

1. "Monthly Payment Targeting and the Demand for Maturity" with Taylor Nadauld and Chris Palmer. *Review of Financial Studies, Forthcoming.*
2. "The Capitalization of Consumer Financing into Durable Goods Prices" with Taylor Nadauld, Chris Palmer, and Ryan Pratt. *Journal of Finance, Forthcoming.*
3. Contributions to "Algorithm for Generating Derivative Structures" by Hart, G. L. W., Forcade, R.. Phys. Rev. B 77 (2008).

Working Papers

1. "Real Effects of Search Frictions in Consumer Credit Markets" with Taylor Nadauld and Chris Palmer.
2. "Price Comovement and Time Horizon: Fads & Fundamentals" with Robert Turley.
3. "Short it again" with Karl Diether.
4. "Overselling Winners and Losers: How Mutual Funds Trading Affects Asset Prices" with Li An.
5. "Portfolio Spillovers and a Limit to Diversification".
6. "Bayesian Variable Selection and Factor Models".
7. Contributions to "Algorithm for Generating Derivative Structures" by Hart, G. L. W., Forcade, R.. Phys. Rev. B 77 (2008).

Presentations & Seminars

* denotes scheduled; + denotes co-author

SFS Cavalcade, (May, 2019)
Cornell IBHF Household and Behavioral Finance Symposium+, (May, 2019)
Philadelphia Fed, (December, 2018)
WFA-CFAR+, (November, 2018)
University of Texas-Austin+, (November, 2018)
NYU+, (November, 2018)
Princeton+, (November, 2018)
MIT, (October, 2018)
SITE+, (October, 2018)
University of Washington+, (July, 2018)
Fed Board+, (June, 2018)
University of Minnesota+, (May, 2018)
Wharton+, (April, 2018)
MIT Sloan+, (March, 2018)
HULM, (March, 2018)
American Finance Association annual meeting, (January, 2018)
Chicago Federal Reserve*+, (December, 2017)
CFPB Workshop on Risks, Trends, and Innovations in Credit Card Lending and Other Revolving Credit+, (December, 2017)
University of Utah, (November, 2017)
Duke University+, (October, 2017)
FDIC Consumer Research Symposium, (October, 2017)
University of North Carolina+, (October, 2017)
Boston Federal Reserve+, (October, 2017)
New Perspectives on Consumer Behavior in Credit and Payments Markets, (September, 2017)

Philadephia Federal Reserve+, (September, 2017)
Red Rock Finance Conference, (September, 2017)
National Bureau of Economic Research household finance summer institute+, (July, 2017)
Western Finance Association annual meeting, (June, 2017)
San Francisco Federal Reserve+, (May, 2017)
Ohio State alumni conference+, (April, 2017)
MIT Sloan+, (April, 2017)
BYU brown bag, (March, 2017)
NYU Household Finance Conference+, (Feb, 2017)
CFPB Conference, (December, 2016)
Haas+,(September, 2016)
Berkeley Finance+,(September, 2016)
BYU brown bag, (May, 2016)
Red Rock Finance Conference, (September, 2015)
BYU brown bag, (May, 2015)
European Financial Management Association+, (June, 2015)
Columbia University finance lunch seminar, (October, 2013)
Columbia University PhD student seminar, (October, 2013)
Columbia University PhD student seminar, (April, 2012)
Columbia University PhD Seminar, (November, 2011)
BYU Spring Research Conference, (Spring, 2008)
APS annual meeting, (March, 2008)
APS 4C SPS meeting (October, 2007)

Fellowships, Grants, and Awards

Professional

Best Corporate Finance paper, SFS Cavalcade 2019.
Finance Professor of the Year, BYU Finance Society, 2016-2017.
Best Paper Award, Ohio State Alumni Conference, 2017.
Finance Professor of the Year, BYU Finance Society, 2015-2016.
Finance Professor of the Year, BYU Finance Society, 2014-2015.
PhD Student Invitee to Red Rock Finance Conference, 2013.
Paul and Sandra Montrone Doctoral Fellowship, Columbia Business School, 2011.
Exemplary paper in B9311-011: (PhD) Corporate Finance. (received 3 times), 2010.
National Merit Scholar, 2004-2008.
Dean's undergraduate list (all semesters at Brigham Young University), 2004-2008.
BYU University Honors, 2008.

Personal

Eagle Scout, 2000.

Media Coverage

- "The Seven-Year Auto Loan: America's Middle Class Can't Afford Its Cars" by the Wall Street Journal. https://www.wsj.com/articles/the-seven-year-auto-loan-americas-middle-class-cant-afford-their-cars-11569941215, September 2019.
- "Real Effects of Search Frictions in Consumer Credit Markets" covered by the Wall Street Journal. https://www.wsj.com/articles/the-costs-of-getting-just-one-rate-quote-1522414800, March 2017.
- "Real Effects of Search Frictions in Consumer Credit Markets" covered by marketwatch. https://www.marketwatch.com/story/people-are-making-a-major-mistake-when-choosing-auto-loans-2017-10-24, October 2017.
- "Real Effects of Search Frictions in Consumer Credit Markets" covered by twocents. https://twocents.lifehacker.com/dont-forget-you-can-shop-around-for-car-loans-1819515702, October 2017.

Professional Service

Ad hoc referee for the *Review of Financial Studies,* the *Journal of Finance, ReStat,* and *Management Science.*

Coordinator for 3 Slide Thursday, BYU.

Faculty Advisor for MathFin Club, BYU.

Discussant at the FMA Annual Meeting 2015, substitute discussant for WFA 2015.

Dissertation committee member for Jaehyun Cho (2015).

Columbia University MSFE Admissions: Fall 2010, Fall 2011, and Fall 2012.

Helped run PhD Lunch Seminar, Columbia University, 2010-2011.

Organized corporate finance reading group, Columbia University, 2010.

Public Service

Harlem Young Men Organiziation, President, 2012-2014

Hot Dogs & Homework, Youth Tutor, Manhattan, 2009-2010.

Service Missionary, Montreal, 2002-2004.

Sasha Indarte

Updated: February 19, 2020

Department of Finance
Fuqua School of Business
Duke University

Email: sasha.indarte@duke.edu
Website: https://sashaindarte.github.io/
Citizenship: USA

Academic Positions

Assistant Professor of Finance, Duke University, Fuqua School of Business — Jul. 2019 – Present

Education

Ph.D. Economics, Northwestern University — 2019
Dissertation: "Essays in Empirical Macroeconomics and Finance"

M.A. Economics, Northwestern University — 2015

B.A. Economics and B.A. Applied Mathematics & Statistics, Macalester College — 2013

Research Interests

Empirical Macroeconomics ● Household Finance ● Financial Intermediation ● Monetary Policy ● Real Estate

Papers

Working Papers

"The Impact of Debt Relief Generosity and Liquid Wealth on Household Bankruptcy"

"Financial Crises and the Transmission of Monetary Policy to Consumer Credit Markets"

"Bad News Bankers: Underwriter Reputation and Contagion in Pre-1914 Sovereign Debt Markets"

Work in Progress

"Rural-Urban Income Inequality: The Role of Gender Norms" (with Paul Mohnen)

Academic Activities

Invited Seminars (including scheduled)

2020: Wharton ● Federal Reserve Bank of Boston ● Harvard Business School ● UCL ● Federal Reserve Bank of Minneaplis ● Macalester College

2019: Rice (Jones) ● Notre Dame (Mendoza) ● Boston College (Carroll) ● Federal Reserve Board of Governors ● London School of Economics ● London Business School ● NYU (Stern) ● Federal Reserve Bank of New York ● Toronto (Rotman/Scarborough) ● Duke (Fuqua) ● University of British Columbia (Vancouver School of Economics) ● University of Maryland ● HEC Montreal ● Bocconi University ● Sveriges Riksbank ● IIES

Conferences (including scheduled)

2020: Midwest Finance Association Annual Meeting ● SFS Cavalcade ● 5th Rome Junior Finance Conference ● WFA

2019: NBER Summer Institute (Law & Economics) ● Conference on Housing, Financial Markets & Monetary Policy (UCLA) ● New Perspectives on Consumer Behavior in Credit and Payments Markets (Consumer Finance Institute, Federal Reserve Bank of Philadelphia) ● WAPFIN@Stern ● MIT Sloan Junior Faculty Finance Conference ● 2nd European Midwest Micro/Macro Conference ● 2019 Financial Stability Conference: Financial Stability: Risks, Resilience, and Policy (Federal Reserve Bank of Cleveland and the Office of Financial Research)

2018: Macro Financial Modeling Winter meeting (Becker Friedman Institute) ● The Becker Friedman Institute's Macro Financial Modeling Summer Session for Young Scholars

2017: Society for Economic Dynamics Meeting ● CITE Conference (Becker Friedman Institute)

2016: Fall Midwest Macro Meeting (Federal Reserve Bank of Kansas City) ● Economics Graduate Students Conference (Washington University in St. Louis) ● Empirics and Methods in Economics Conference ● Macalester College ● Becker Friedman Institute's Macro Financial Modeling Summer Session for Young Scholars

2015: Princeton Initiative: Macro, Money and Finance

Discussions (including scheduled)

2020: Alejandro Drexler, Andre Guettler, Daniel Paravisini, and Ahmet Ali Taskin, "Competition Between Arm's Length and Relational Lenders: Who Wins the Contest?" AFA, January, 2020.

2019: Natalie Bachas, Olivia S. Kim, and Constantine Yannelis, "Loan Guarantees and Credit Supply." The Fourteenth New York Fed / NYU Stern Conference on Financial Intermediation, November, 2019.

J. Anthony Cookson, Erik Gilje, and Rawley Heimer, "Shale Shocked: The Long Run Effect of Wealth on Household Debt." NFA Annual Conference, September, 2019.

Marco Macchiavelli and Luke Pettit, "Liquidity Regulation and Financial Intermediaries." 8th MoFiR Workshop on Banking, June, 2019.

David Echeverry, "Information Frictions and Mortgage-Backed Security Design: Lack of Sophistication or Opaque Assets?" Notre Dame Real Estate Roundtable, May, 2019.

Ramin P. Baghai, Rui Silva, and Luofu Ye, "Teams and Bankruptcy." Duke/UNC Innovation and Entrepreneurship Research Conference, April, 2019.

Academic & Professional Associations

Phi Beta Kappa Honors Society
Omicron Delta Epsilon International Economics Honors Society

Fellowships & Awards

Macro Financial Modeling Initiative Dissertation Fellowship, Becker Friedman Institute (2017)

Susan Schmidt Bies Prize for Doctoral Student Research on Economics and Public Policy, Northwestern University (for "Bad News Bankers: Underwriter Reputation) and Contagion in Pre-1914 Sovereign Debt Markets," 2016)

First-Year Doctoral Studies Fellowship, Northwestern University (2013)

First Place Term Paper, Minnesota Economic Association Student Paper Contest (for "Mutually Reinforcing Debt and Financial Crises in Spain and Ireland: A VAR Approach," 2013)

Outstanding Paper, Twelfth Annual Carroll Round, Georgetown University (for "Financial and Sovereign Debt Crises in Spain: Fiscal Limits and Spillovers," 2013)

Robert L. Bunting Prize in Economics, Macalester College (2013)

John M. Dozier Prize, Macalester College (2012)

Research Poster Award, Joint Mathematics Meetings (for "Estimating Survival Functions for Symmetric Distributions under Peakedness Order Constraints," 2011)

Research Poster Award, Society for the Advancement of Chicanos and Native Americans in Science (for "Estimating Survival Functions for Symmetric Distributions under Peakedness Order Constraints," 2010)

IBM Scholarship, Macalester College (2010)

Lowell Thomas Endowed Prize for Public Speaking, Macalester College (2010)

DeWitt Wallace Scholarship, Macalester College (2009)

Bob Kommerstad Scholarship, South High Foundation (2009)

Teaching

Duke University

MMS 525: Foundations of Corporate Finance

Northwestern University (teaching assistant)

ECON 201: Introduction to Macroeconomics

ECON 362: International Finance

Macalester College (preceptor/teaching assistant)

ECON 420: Quantitative Macroeconomic Analysis

ECON 371: Intermediate Macroeconomic Analysis

ECON 242: Economics of Gender

ECON 119: Principles of Economics

MATH 137: Single Variable Calculus

MATH 155: Introduction to Statistical Modeling

June 2019

BENJAMIN IVERSON

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ACADEMIC EMPLOYMENT

2017 – present — MARRIOTT SCHOOL OF BUSINESS, BRIGHAM YOUNG UNIVERSITY
Ford Motor Company – Richard E. Cook Assistant Professor of Finance

2013 – 2017 — KELLOGG SCHOOL OF MANAGEMENT, NORTHWESTERN UNIVERSITY
Assistant Professor of Finance

EDUCATION

2008 – 2013 — HARVARD UNIVERSITY
Ph.D. in Business Economics
A.M. in Economics

2000 – 2006 — BRIGHAM YOUNG UNIVERSITY
B.A. in Economics
Double-minor in Mathematics and Business

OTHER EMPLOYMENT

2006 – 2008 — FEDERAL RESERVE BANK OF NEW YORK
Assistant Economist, Financial Intermediation Research Group

2004, 2005 — LOOMIS, SAYLES & CO., LLP
Summer Investment Analyst, Global Bond Fund

RESEARCH INTERESTS

Corporate Finance, Corporate Restructuring, Financial Intermediation, Household Finance

REFEREED PUBLICATIONS

"Bankruptcy Spillovers," with Shai Bernstein, Emanuele Colonnelli, and Xavier Giroud, forthcoming, *Journal of Financial Economics*.

"Asset Allocation in Bankruptcy," with Shai Bernstein and Emanuele Colonnelli, *Journal of Finance* 74, No.1 (February 2019): 5-53 (Lead Article).

"Get in Line: Chapter 11 Restructuring in Crowded Bankruptcy Courts," *Management Science* 64, Issue 11 (November 2018): 4967-5460.

"The Ownership and Trading of Debt Claims in Chapter 11 Restructuring," with Victoria Ivashina and David Smith, *Journal of Financial Economics* 119, Issue 2 (February 2016): 316-335.
Jensen Prize for Best Paper in Corporate Finance and Organization (Second Prize)

"Subprime Foreclosures and the 2005 Bankruptcy Reform," with Donald Morgan and Matthew Botsch, *Federal Reserve Bank of New York Economic Policy Review* 18, No. 1 (March 2012): 47-57.

WORKING PAPERS

"Trade Creditors' Information Advantage," with Victoria Ivashina.

"Can Gambling Increase Savings? Empirical Evidence on Prize-linked Savings Accounts," with Shawn Cole and Peter Tufano.

"Learning by Doing: Evidence from Bankruptcy Judges," with Josh Madsen, Wei Wang, and Qiping Xu.

PRESENTATIONS

* scheduled, † presented by co-author, ‡ discussant

2019 AFA Annual Meeting, University of Utah, University of Texas-Dallas, SFS Cavalcade‡, Financial Intermediation Research Society (FIRS)†, Analysis Group*

2018 AFA Annual Meeting‡, University of Amsterdam, WFA Annual Meeting†, Wabash River Finance Conference†, EFA Annual Meeting†, Yale Junior Finance Conference‡, FMA Annual Meeting†, Finance, Organizations, and Markets (FOM) Conference‡

2017 Jackson Hole Finance Group Conference, Princeton University, Midwest Finance Association Annual Meeting, Midwest Finance Association Annual Meeting‡, NBER Corporate Finance Spring Meeting, Northeastern University Finance Conference, SFS Cavalcade, Luxembourg School of Finance, NBER Law and Economics Summer Institute†, BYU Red Rocks Conference‡, University of Houston

2016 Adam Smith Workshops for Asset Pricing and Corporate Finance, Federal Reserve Bank of New York, Georgia State University CEAR-Finance Conference, WFA Annual Meeting, MoFiR Conference‡, University of Toronto (Economics), Brigham Young University (Marriott)

2015 AEA Annual Meeting, Northwestern University, Midwest Finance Association Annual Meeting, Midwest Finance Association Annual Meeting‡, NBER Corporate Finance Spring Meeting‡, Finance UC Conference (Pontificia Universidad Catolica de Chile), EFA Annual Meeting‡, Finance, Organizations and Markets (FOM) Conference†, MIT Sloan Junior Faculty Finance Conference, NBER Corporate Finance Fall Meeting†, University of Illinois – Urbana-Champaign

2014 AFA Annual Meeting‡, Adam Smith Workshops for Asset Pricing and Corporate Finance‡, Boulder Summer Conference on Consumer Financial Decision Making, Brigham Young University, University of Illinois – Chicago, Conference on Creditors and Corporate Governance (U. of Chicago), Research in Behavioural Finance Conference (Erasmus), NBER Household Finance Conference

2013 University of Chicago (Booth), Ohio State University (Fisher), Dartmouth University (Tuck), New York University (Stern), Columbia GSB, Yale School of Management, Federal Reserve Bank of New York, Duke University (Fuqua), London Business School, Northwestern University (Kellogg), UC Berkeley (Haas), University of Southern California (Marshall), Federal Reserve Board, McGill-Todai Market Frictions Conference, McGill-Todai Market Frictions Conference‡, BYU Red Rocks Conference‡

2012 Harvard University, Conference on Creditors and Corporate Governance (U. of Chicago)†, Brigham Young University (Marriott)

2011 AFA Annual Meeting, Harvard University, University of Virginia (Darden) †, Massachusetts Institute of Technology (Sloan), Financial Intermediation Research Society†, Erasmus University†, Stanford Institute for Theoretical Economics†, EFA Annual Meeting†, D2D Fund

2010 AEA Annual Meeting†, Harvard University

2009 Brown University†, Federal Reserve Bank of Chicago†, Financial Intermediation Research Society†

FELLOWSHIPS AND AWARDS

Outstanding Researcher, Finance Department, Brigham Young University, 2019
The Ford Motor Company - Richard E. Cook Professorship, 2017
Kellogg Faculty Impact Award, 2017
Jensen Prize for Best Paper on Corporate Finance and Organizations in the *Journal of Financial Economics* (Second Prize) for "The Ownership and Trading of Debt Claims in Chapter 11 Restructuring," 2016
Doctoral Fellowship, Harvard University, 2008-2013
Performance Plus Award, Federal Reserve Bank of New York, 2007
Heritage Scholarship, Brigham Young University, 2000-2006

PROFESSIONAL ACTIVITIES

Referee:

American Economic Review, Quarterly Journal of Economics, Journal of Finance, Review of Financial Studies, Review of Economics and Statistics, Journal of Money, Credit and Banking, Management Science, Journal of Economics and Management Strategy, Review of Corporate Finance Studies, Review of Finance

Conference program committees:

Financial Management Association Meeting 2015-2017, Western Finance Association Meeting 2016-2019, Midwest Finance Association Meeting 2017-2019, European Finance Association Meeting 2017-2019

PERSONAL INFORMATION

Citizenship: USA; Family: married with 5 children
Languages: English (native), Spanish (fluent); Hobbies: guitar, skiing, fly fishing

CHRISTOPHER J. PALMER

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Cambridge, MA 02142
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EDUCATION

Ph.D., Economics, Massachusetts Institute of Technology, June 2014.
Thesis: *Essays on the Functioning of Housing and Labor Markets.*

B.A. and B.S., Economics and Mathematics, Brigham Young University, Provo, Utah, April 2008.
Thesis: *An Analysis of the Returns to Higher Education in Armenia.*
Magna cum Laude and University Honors. Phi Kappa Phi.

FIELDS OF SPECIALIZATION

Household finance; Real-estate finance; Credit markets; Banking; Structured finance; Urban economics; Applied econometrics.

PROFESSIONAL POSITIONS

2018 – Albert and Jeanne Clear Career Development Professor, Massachusetts Institute of Technology, Sloan School of Management
2019 – Affiliate, Jameel Poverty Action Lab
2018 – Faculty Research Fellow, National Bureau of Economic Research
2018 – Visiting Scholar, Federal Reserve Bank of Boston
2018 – Academic Affiliate, ideas42
2017 – Assistant Professor, Massachusetts Institute of Technology, Sloan School of Management
2015, 18 Visiting Scholar, Federal Reserve Bank of New York
2014 – 17 Assistant Professor, University of California, Berkeley, Haas School of Business
2014 – 17 Faculty Associate, Fisher Center for Real Estate and Urban Economics
2015 – 17 Visiting Scholar, Federal Reserve Bank of San Francisco
2011 – 14 Visiting Fellow, Federal Reserve Bank of Boston
2002 – 06 Summer Research Analyst, Compass Lexecon

AWARDS, HONORS AND FELLOWSHIPS

2019 SFS Cavalcade Award for the Best Paper in Corporate Finance
2017 – 19 Golub Center for Finance and Policy Fellow
2017 Earl F. Cheit Outstanding Teaching Award, Haas School of Business
2016 – 17 Hellman Faculty Fellow
2015 – 17 Barbara and Gerson Bakar Faculty Fellow
2015 – 16 Berkeley-Haas Club 6 Member (teaching award)
2012 – 14 Humane Studies Fellow
2011 Lincoln Institute C. Lowell Harriss Dissertation Fellow
2008 National Science Foundation Graduate Research Fellow
2008 Brigham Young University Economics Department Valedictorian
2007 Brigham Young University Economics Outstanding Teaching Assistant Award

PUBLICATIONS

"The Capitalization of Consumer Financing into Durable Goods Prices." *Journal of Finance*, Forthcoming (with Bronson Argyle, Ryan Pratt, and Taylor Nadauld). Winner of 2019 SFS Cavalcade Award for the Best Paper in Corporate Finance.

"Monthly Payment Targeting and the Demand for Maturity." *Review of Financial Studies*, Forthcoming (with Bronson Argyle and Taylor Nadauld).

"How Quantitative Easing Works: Evidence on the Refinancing Channel." *Review of Economic Studies*, Forthcoming (with Marco Di Maggio and Amir Kermani).

"Ending Rent Control Reduced Crime in Cambridge." *AEA Papers and Proceedings*, 2019, 109, 381-384 (with David Autor and Parag Pathak).

"Finite Sample Bias Corrected IV Estimation for Weak and Many Instruments." *Advances in Econometrics*, 2016, 34, 245-273 (with Matt Harding and Jerry Hausman).

"IV Quantile Regression for Group-Level Treatments, with an Application to the Effects of Trade on the Distribution of Wages." *Econometrica*, March 2016, 84(2), 809-833 (with Denis Chetverikov and Brad Larsen).

"Housing Market Spillovers: Evidence from the End of Rent Control in Cambridge, Massachusetts." *Journal of Political Economy*, June 2014, 122(3), 661-717 (with David Autor and Parag Pathak).

"Heteroskedasticity-Robust Inference in Finite Samples." *Economics Letters*, August 2012, 116(2), 232-235 (with Jerry Hausman).

WORKING PAPERS

"Errors in the Dependent Variable of Conditional Quantile Models." Revise and Resubmit, *Econometrica*, September 2016 (with Jerry Hausman, Haoyang Liu, and Ye Luo). NBER Working Paper No. 25819.

"Real Effects of Search Frictions in Consumer Credit Markets." October 2017 (with Bronson Argyle and Taylor Nadauld). MIT Sloan Research Paper No. 5242-17.

"Testing the Effectiveness of Consumer Financial Disclosure: Experimental Evidence from Savings Accounts." March 2019 (with Paul Adams, Stefan Hunt, and Redis Zaliauskas). NBER Working Paper No. 25718.

"Creating Moves to Opportunity: Experimental Evidence on Barriers to Neighborhood Choice." August 2019 (with Peter Bergman, Raj Chetty, Stefanie DeLuca, Nathaniel Hendren, and Larry Katz). NBER Working Paper No. 26164.

"Gentrification and the Amenity Value of Reductions in Crime: Evidence from Rent Deregulation" September 2017 (with David Autor and Parag Pathak). NBER Working Paper No. 23914.

"Why Did So Many Subprime Borrowers Default During the Crisis: Loose Credit or Plummeting Prices?" September 2015.

DOCTORAL THESES SUPERVISED

Sheisha Kulkarni, University of California, Berkeley, 2019 (initial placement: University of Virginia)
Carlos Avenancio-León, University of California, Berkeley, 2018 (initial placement: Indiana University)
Waldo Ojeda, University of California, Berkeley, 2018 (initial placement: Baruch College)
Haoyang Liu, University of California, Berkeley, 2017 (initial placement: Florida State University)
Calvin Zhang, University of California, Berkeley, 2017 (initial placement: Philadelphia Federal Reserve)

GRADUATE TEACHING

Corporate Finance (MIT MBA 15.402)
Current Topics in Finance (MIT PhD 15.474)
Real Estate Finance (Berkeley MBA 283)
Asset-backed Securitization (Berkeley MFE 230M)
Doctoral Seminar (Topics Course) in Real Estate Research (Berkeley PhD 289A)
Urban & Regional Economics (TA for MIT 14.573)

UNDERGRADUATE TEACHING

Microeconomic Theory and Public Policy (TA for MIT 14.03)
Research & Communication in Economics (TA for MIT 14.33)
Advanced Econometrics (TA for MIT 14.36, BYU Econ 588)
Intro to Econometrics (TA for BYU Econ 388)
Price Theory II (TA for BYU Econ 382)
Economics Principles & Problems (TA for BYU Econ 110)

CONFERENCE PRESENTATIONS AND INVITED TALKS

2019 Luxembourg School of Finance
University of British Columbia Sauder School of Business
Baruch College (Real Estate)
University of Chicago Booth School of Business (Accounting)
Opportunity & Inclusive Growth Institute Conference
Stanford Institute for Theoretical Economics (Financial Regulation)
NBER Summer Institute (Risks of Financial Institutions)
Philadelphia Federal Reserve Auto Lending Conference
Central Bank of Ireland
Oxford University Saïd School of Business (Finance)
Imperial College (Finance)
Notre Dame Real Estate Workshop
Washington University in St. Louis Olin Household Finance Conference
University of Notre Dame (Finance)
Wharton Real Estate Conference
Harvard University (Behavioral)
American Economic Association (Rent Control; Dysfunction in the Real Estate Market)

2018 Association for Public Policy Analysis & Management
New York University Stern School of Business (Real Estate Finance)

University of Texas, Austin (Finance)
Princeton University (Finance)
NBER Summer Institute (Law & Economics)
Stanford Institute for Theoretical Economics (Financial Regulation)
Federal Reserve Board of Governors
Minnesota Corporate Finance Conference
Bureau of Economic Analysis
University of Pennsylvania Wharton School Finance

2017 Federal Reserve Bank of Chicago
UNC Junior Finance Roundtable
Greater Boston Urban and Real Estate Economics Seminar
Federal Reserve Bank of Boston
MIT Public Finance / Labor Seminar
Stanford Institute for Theoretical Economics (Financial Regulation)
NBER Summer Institute (Household Finance)
Federal Reserve Bank of San Francisco
Boulder Summer Conference on Consumer Financial Decision Making
Duke Public and IO Seminar
MIT Sloan School of Management Finance Group
Consumer Financial Protection Bureau
NYU Salomon Center Conference on Household Finance

2016 Consumer Financial Protection Bureau Research Conference
Urban Economics Association
Stanford Graduate School of Business Finance Group
University of California, Davis Economics Department
Penn State Smeal College of Business Institute for Real Estate Studies
Russell Sage Foundation
Econometric Society Winter Meetings (Housing and Macroeconomics)

2015 New York University Stern School of Business (Real Estate Finance)
Urban Economics Association (Local Labor Markets)
Department of Housing and Urban Development
University of Southern California Price School of Public Policy
NBER Summer Institute (Real Estate)
UBC Centre for Urban Economics and Real Estate Summer Symposium
Federal Deposit Insurance Corporation
Consumer Financial Protection Bureau
National Economic Council
London Business School Finance Department
Federal Reserve Bank of San Francisco
University of California, Berkeley Economics Department (Labor Seminar)
American Economic Association (Credit and Balance Sheets During the Great Recession)

2014 Federal Reserve Bank of Philadelphia
Urban Economics Association (Housing, Credit and Supply)

Stanford Institute for Theoretical Economics (New Models of Financial Markets)
NBER Summer Institute (Crime)
NBER Summer Institute (Real Estate)
Federal Reserve Board of Governors
Federal Reserve Bank of New York
University of California, Berkeley Haas School of Business Real Estate Group
University of Pennsylvania Wharton School Real Estate Group
Yale School of Management Economics Group
University College London Department of Economics
London School of Economics Urban Geography Department
London School of Economics Finance Department
Northwestern University Kellogg School of Management Finance Department
Harvard Business School Finance Unit
Brigham Young University Marriott School of Management Finance Department
Duke University Fuqua School of Business Finance Department

2013 Brigham Young University Economics Department
Utah State University Huntsman School of Business Economics & Finance Department
MIT Public Finance / Labor Seminar

PROFESSIONAL ACTIVITIES

Referee for *AEJ: Applied Economics, AEJ: Economic Policy, AEJ: Macroeconomics, American Economic Review, AER: Insights, Economic Journal, Economics of Education Review, Economics of Transition, Empirical Economics, Journal of Applied Econometrics, Journal of Banking and Finance, Journal of Econometrics, Journal of Finance, Journal of the European Economics Association, Journal of Financial Economics, Journal of Political Economy, Journal of Public Economics, Journal of Urban Economics,* J-PAL North America, *Management Science, Quarterly Journal of Economics, Review of Economics and Statistics, Review of Economic Studies, Review of Financial Studies*

Discussant for Columbia Banking Conference (2019), AEA (2019), Red Rock Finance Conference (2018), NBER Real Estate (2018), AEA (2018), Stress Testing Research Conference (2017), NBER Corporate Finance (2017), NBER Real Estate (2017), Kellogg Household Finance Conference (2017), AFA (2017), UEA (2016), Imperial-FCA Conference on Consumer Choice in Mortgage Markets (2016), NBER Household Finance (2016), JRCPPF Financial Innovation and the Macro Economy (2016), Macro Financial Modeling (2016), UEA (2015), Berkeley Crowdfunding Symposium (2015), Red Rock Finance Conference (2015), NBER EASE Financial Stability (2015), WFA Summer Real Estate Symposium (2015), SFS Finance Cavalcade (2015), American Real Estate & Urban Economic Association (2015), Urban Economics Association (2014), European Finance Association (2014)

Program Committee for European Finance Association, SFS Cavalcade, Yale Real and Private-Value Assets Conference

Academic Advisor, Creating Moves to Opportunity Project

RESEARCH GRANTS

2018 J-PAL North America "Creating Moves to Opportunity in the Twin Cities" (with Nathaniel Hendren)
2016 Hellman Family Faculty Fund "Who Benefitted from the Federal Reserve's Unconventional Monetary Policy?"
2012 George and Obie Shultz Fund, "Can Fiscal Stimulus Rescue the Housing Market? Evidence from the First-Time Homebuyer Tax Credit"

OTHER ACTIVITIES AND SERVICE

2011 – 18 Small Business Mentor, G&V Tailoring
2005 – 10 Armenian Translator, The Church of Jesus Christ of Latter-day Saints
2002 – 04 Missionary, The Church of Jesus Christ of Latter-day Saints, Armenia
2002 Athlete Driver, Salt Lake City Winter Olympic Games Olympic Village

LANGUAGES

English (native), Armenian (fluent)