

MAX MILLER  
*Finance Department*  
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## Education

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- PRESENT UNIVERSITY OF PENNSYLVANIA, WHARTON SCHOOL OF BUSINESS  
*PhD in Finance, May 2022 (Expected)*
- 2013 EMORY UNIVERSITY, GOIZUETA SCHOOL OF BUSINESS  
*Bachelor of Business Administration, Finance Concentration – Finance, May 2013*

## Fields of Interest

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- Asset Pricing
- Household Finance
- Political Economy

## Publications

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1. **Relaxing household liquidity constraints through social security**  
with Sylvain Catherine and Natasha Sarin  
*Journal of Public Economics* (2020)  
Press: MarketWatch, MarketWatch, MarketWatch
2. **Mutual Funds: Skill and Performance**  
with Jonathan Berk and Jules van Binsbergen  
*Journal of Portfolio Management* (2020)

## Working Papers

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1. **Democratization, Inequality, and Risk Premia**  
*Midwest Finance Association (MFA) Best Doctoral Paper Award* (2021)

Periods of democratization exhibit economically large spikes in risk premia. In a panel data set covering 85 countries over 200 years, several proxies for risk premia are significantly elevated during periods of democratization, despite little to no effect on aggregate consumption and dividends. This result is explained in an asset pricing model in which wealthy asset market participants must redistribute their income if democracy consolidates. Finally, in a quasi-natural experiment emanating from a shift in Catholic church doctrine in support of democracy in 1963, average returns were significantly higher for majority Catholic autocracies relative to control countries in a triple difference-in-differences framework. These results are key to understanding how political institutions and the distribution of economic and political power influence asset returns.

Presented at: Econometric Society - European Winter Meeting, Econometric Society World Congress, European Finance Association (EFA; Poster Session), MFA, MFA Doctoral Symposium, Trans-Atlantic Doctoral Conference (Scheduled), Western Finance Association (WFA; Scheduled)

**2. Social Security and Trends in Wealth Inequality**

with Sylvain Catherine and Natasha Sarin

*Red Rock Finance Conference Best Paper Award (2020)*

Recent influential work finds large increases in inequality in the U.S. based on measures of wealth concentration that notably exclude the value of social insurance programs. This paper revisits this conclusion by incorporating Social Security retirement benefits into measures of wealth inequality. We find that top wealth shares have not increased in the last three decades when Social Security is properly accounted for. This finding is robust to assumptions about how taxes and benefits may change in response to system financing concerns. When discounted at the risk-free rate, real Social Security wealth increased substantially from \$4.8 trillion in 1989 to \$41.3 trillion in 2016. When we adjust the discount rate for long-run macroeconomic risk, this increase remains sizable, growing from over \$3.9 trillion in 1989 to \$33.9 trillion in 2016. Consequently, by 2016, Social Security wealth represents 57% of the wealth of the bottom 90% of the wealth distribution.

Presented at: Chicago Annual Household Finance Conference\*, EconTwitter Conference\*, NBER Summer Institute (CRIW)\*, Red Rock Finance Conference\*, CEPR European Conference on Household Finance\*, Northern Finance Association\*, NBER Public Finance\*, ASU Sonoran\*, SFS Cavalcade (Scheduled), WFA (Scheduled)

Press: Marginal Revolution, Pro-Market, The Economist

\*Denotes presentation by co-author

**3. Sovereign default and the decline in interest rates**

with James Paron and Jessica Wachter

Sovereign debt yields have declined dramatically over the last half-century. Standard explanations for this decline, including aging populations and increases in asset demand from abroad, encounter difficulties when confronted with the full range of evidence across asset classes. We propose instead that the decline in inflation and default risk caused falling interest rates, a phenomenon that is not unique to our century. We show that a model with investment, inventory storage, and sovereign default captures the decline in interest rates, the stability of equity valuation ratios, and the recent reduction in investment and output growth corresponding to the zero lower bound.

Presented at: NBER Summer Institute (Capital Markets), SF Fed Conference on Macro and Monetary Policy\*, WFA (Scheduled), NBER Summer Institute (Asset Pricing)

\*Denotes presentation by co-author

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**Technical Reports**

**1. International Portfolio Investment Holdings of Long-term Securities in the Enhanced Financial Accounts**

with Elizabeth Holmquist and Youngsuk Yook

*FEDS Note (2016)*

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**Teaching Experience**

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*Teaching Assistant:*

- 2020 PhD Asset Pricing (Prof. Nikolai Roussanov)
- 2019 PhD Asset Pricing (Prof. Nikolai Roussanov), Investment Management (Prof. Robert Stambaugh), Investment Management (Prof. Donald Keim), Financial Technology (Prof. Shimon Kogan)
- 2018 Investment Management (Prof. Don Keim), Policy Decisions by Central Banks (Prof. Zvi Eckstein)

**Conference Presentations**

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- 2019 Econometric Society – European Winter Meeting
- 2020 NBER SI (Capital Markets), Econometric Society – World Congress, EFA (Poster Session)
- 2021 MFA, MFA Doctoral Symposium, SFS Cavalcade (Scheduled), Trans-Atlantic Doctoral Conference (Scheduled), WFA (Scheduled)

**Service**

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Reviewer for the *American Economic Review: Insights, Review of Finance*

**Coding and Software Skills**

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- Proficient Python, R, Stata, Matlab, L<sup>A</sup>T<sub>E</sub>X, LyX, Microsoft Excel
- Basic SAS, SQL

**Honors and Awards**

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- 2019 Rodney White Center Grant, Jacobs Levy Grant
- 2020 Red Rock Finance Conference Best Paper Award
- 2021 MFA Best Doctoral Paper Award

**Previous Employment/Research Experience**

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- 2019 Research Assistant to Jules van Binsbergen
- 2019 Research Assistant to Luke Taylor
- 2015-2017 Research Assistant, Federal Reserve Board of Governors, Flow of Funds
- 2014-2015 Research Assistant to Professor Francis X. Diebold; Expatriate of the Friday Morning Econometrics Group
- 2013-2014 Operations Analyst, YP

## Other Education

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2015-2016 Non-Degree Student, George Washington University

2014-2015 Post-Baccalaureate Certificate in Mathematical Economics, University of Pennsylvania

## Interests

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Sports Basketball, Flag Football, and Tennis

Basketball Tuck Inter-MBA Tournament Champion (2018, 2019 - Runner-Up), Harvard Inter-MBA Tournament (2019 - Runner-Up), UPenn Inter-Graduate School Champions (2018, 2019), Graduate Division Intramural Champion (2018, 2019 - Runner-Up)

Football Graduate Division Intramural Champion (2015)

Fantasy Fantasy Football League Champion (2006, 2014, 2019) – League Champion Trophy named “The Maxwell Jacobson Miller Achievement Award for Fantasy Football Excellence”

Music Guitar, Ukulele, and Piano