

MAX MILLER  
*Finance Department*  
*University of Pennsylvania*  
*The Wharton School*  
*Philadelphia, PA 19104 USA*  
*Email: maxmil@wharton.upenn.edu*  
*Website: max-miller.finance*  
*Phone: (404) 626-7940*

## Education

---

PRESENT UNIVERSITY OF PENNSYLVANIA, THE WHARTON SCHOOL  
*PhD in Finance, August 2017 – May 2023 (Expected)*

2013 EMORY UNIVERSITY, GOIZUETA SCHOOL OF BUSINESS  
*Bachelor of Business Administration, Finance*

## Fields of Interest

---

- Asset Pricing, Household Finance, Political Economy

## Job Market Paper

---

### 1. Who values democracy?

*MFA Best Doctoral Paper Award (2021)*

*WEA PhD Candidate Award For Outstanding Research (2021)*

*EFA Engelbert Dockner Memorial Prize for the Best Paper by Young Researchers, Runner-Up (2021)*

*FMA Best Paper in Investments (2021)*

*Bank of Canada Graduate Student Paper Award, Runner-Up (2022)*

*Colorado Finance Summit Best PhD Paper Award (2022)*

Abstract: I show democratizations have a large, negative impact on asset valuations driven by a rise in redistribution risk. Across 90 countries over 200 years, risk premia are substantially elevated in democratizations, similar in magnitude to financial crises. Using a shift in Catholic church doctrine in support of democracy, I provide causal evidence that democratization increases risk premia. Successful democratizations lead to substantial redistribution: the size of the public sector grows, income inequality falls, and the labor share of income rises. A model of asset prices and political regimes in which wealthy asset market participants face redistribution risk in democratizations can quantitatively explain these effects. The model also explains the negligible asset pricing response to autocratizations. Neither an increase in macroeconomic risk nor generic political risk can explain the results.

Presented at: Econometric Society European Winter Meeting, Econometric Society World Congress, EFA (Poster Session), MFA, MFA Doctoral Symposium, Trans-Atlantic Doctoral Conference, WFA, World Finance Conference, Young Economist Symposium, EFA, NFA, FMA, UBC Winter Finance Conference, BSE Summer Forum, Bank of Canada GSPA Conference, Colorado Finance Summit

## Publications

---

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

## Working Papers

---

1. **Social Security and Trends in Wealth Inequality**  
with Sylvain Catherine and Natasha Sarin  
*Revise and Resubmit, Journal of Finance*

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

*SFS Cavalcade Best Paper in Asset Pricing* (2021)

*Marshall Blume Prize in Financial Research* (2022)

Abstract: 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 \$4.9 trillion in 1989 to \$52.6 trillion in 2019. When we adjust the discount rate for long-run macroeconomic risk, this increase remains sizable, growing from over \$4.0 trillion in 1989 to \$41.2 trillion in 2019. Consequently, by 2019, Social Security wealth represents 59% of the wealth of the bottom 90% of the wealth distribution.

Presented at: Chicago Annual Household Finance Conference\*, EconTwitter Conference\*, NBER SI CRIW\*, Red Rock Finance Conference\*, CEPR European Conference on Household Finance\*, Northern Finance Association\*, NBER Public Finance\*, ASU Sonoran\*, SFS Cavalcade, WFA\*, NBER SI Inequality and the Macroeconomy\*

\*Denotes presentation by co-author

2. **Sovereign default and the decline in interest rates**  
with James Paron and Jessica Wachter

Abstract: 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 SI Capital Markets, SF Fed Conference on Macro and Monetary Policy\*, WFA\*, NBER SI Asset Pricing

\*Denotes presentation by co-author

### 3. Foreign Influence in U.S. Politics

with Marco Grotteria and Lakshmi Naaraayanan

**Abstract:** We provide novel insights on the nature and scope of foreign lobbying and influence in US politics. To do so, we introduce a comprehensive dataset of date-stamped meetings between foreign agents and individual US legislators, spanning 2000 to 2018 and covering 146 countries and 1,200 legislators. From this new dataset, five facts emerge: (1) improvements in diplomatic relations with the US are associated with fewer meetings; (2) meetings are positively related to legislator law-making effectiveness and past employment connections with lobbyists while they are unrelated to political ideology; (3) foreign agents maintain connections with all legislators even after they depart from committees that are important to foreign countries; (4) around these meetings, foreign countries benefit from increased financial aid and assistance, and advantageous product tariffs; and (5) meetings between representatives of a given foreign country and US legislators are associated to changes in the ethnic composition of registered voters and an increase in privately-sponsored foreign trips to these countries. Overall, these results provide the first large-sample evidence of foreign influence in US politics and present new observations to guide work in economics, public finance, and political science.

Presented at: Craig Holden Memorial Conference, CEPR Political Economy\*, ISB Summer Conference, FMA

\*Denotes presentation by co-author

### 4. Who hedges interest-rate risk? Implications for wealth inequality

with Sylvain Catherine, James Paron, and Natasha Sarin

**Abstract:** We present a life-cycle model in which households can invest in short- or long-term assets to hedge against interest-rate risk. Our model matches important stylized facts. First, the share of long-term assets in households' wealth is hump-shaped over the life-cycle. Within cohorts, it increases with wealth and earnings. Second, wealth inequality grows when interest rates fall, but only when wealth does not include the value of Social Security. Hedging demand against interest-rate risk can explain 40% of long-run changes in wealth inequality since 1960.

Presented at: LBS Summer Finance Symposium\*

\*Denotes presentation by co-author

## 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)*

## Media Attention

---

1. Social Security and Trends in Wealth Inequality: Marginal Revolution, Pro-Market, The Economist
2. Relaxing household liquidity constraints through social security: MarketWatch, MarketWatch, MarketWatch

## Conference Presentations/Invited Seminars

---

2023	University of Delaware (Scheduled)
2022	UBC Winter Finance Conference, Craig Holden Memorial Conference, BSE Summer Forum, ISB Summer Conference, Bank of Canada GSPA Conference, FMA, Colorado Finance Summit
2021	NBER SI Asset Pricing, WFA, MFA, MFA Doctoral Symposium, SFS Cavalcade, Trans-Atlantic Doctoral Conference, World Finance Conference, Young Economist Symposium, EFA, NFA, FMA
2020	NBER SI Capital Markets, Econometric Society World Congress
2019	Econometric Society European Winter Meeting

## Invited Discussions

---

2022	FMA
2021	Trans-Atlantic Doctoral Conference, Young Economist Symposium, World Finance Conference

## Honors and Awards

---

2022	Colorado Finance Summit Best PhD Paper Award
2022	Marshall Blume Prize in Financial Research
2022	Bank of Canada Graduate Student Paper Award, Runner-Up
2022	Jacobs Levy Center Grant
2022	Jacobs Levy Center Dissertation Fellow
2021	FMA Best Paper in Investments
2021	EFA Engelbert Dockner Memorial Prize for the Best Paper by Young Researchers, Runner-Up
2021	WFA PhD Candidate Award For Outstanding Research
2021	SFS Cavalcade Best Paper in Asset Pricing
2021	MFA Best Doctoral Paper Award
2020	Red Rock Finance Conference Best Paper Award
2019	Rodney White Center Grant
2019	Jacobs Levy Center Grant

## Teaching Experience

---

### *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. Donald Keim), Policy Decisions by Central Banks (Prof. Zvi Eckstein)

---

## References

---

### Jules van Binsbergen (Chair)

Professor of Finance  
University of Pennsylvania  
The Wharton School  
Finance Department  
julesv@wharton.upenn.edu  
(215) 573-3106

### Joao Gomes

Professor of Finance  
University of Pennsylvania  
The Wharton School  
Finance Department  
gomesj@wharton.upenn.edu  
(215) 898-3666

### Jessica A. Wachter

Professor of Finance  
University of Pennsylvania  
The Wharton School  
Finance Department  
jwachter@wharton.upenn.edu  
(215) 898-7634

### Sylvain Catherine

Assistant Professor of Finance  
University of Pennsylvania  
The Wharton School  
Finance Department  
scath@wharton.upenn.edu  
(215) 898-7514

## Service

---

Referee	<i>Journal of Finance, American Economic Review: Insights, Review of Finance, National Tax Journal</i>
Other	Co-founder of the <i>Inter-Finance PhD Seminar</i> which provides a forum for students from finance PhD programs across the United States to present and discuss their research.

## Coding and Software Skills

---

Proficient	Python, R, Stata, Matlab
Basic	SAS, SQL

## Employment/Other Research Experience

---

2022	U.S. Securities and Exchange Commission, Office of the Chief Economist, Economist
2019	Research Assistant to Prof. Jules van Binsbergen
2019	Research Assistant to Prof. Lucian Taylor
2015-17	Research Assistant, Federal Reserve Board of Governors, Flow of Funds
2014-15	Research Assistant to Prof. Francis X. Diebold; Expatriate of the Friday Morning Econometrics Group
2013-14	Operations Analyst, YP

## Other Education

---

2015-16	Non-Degree Student, George Washington University
2014-15	Post-Baccalaureate Certificate in Mathematical Economics, University of Pennsylvania

## Interests

---

Hobbies	Basketball (Wharton League Champion, 2022), chess, tennis, football, guitar, piano, ukulele.
---------	----------------------------------------------------------------------------------------------