

PHILIP MULDER

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THE WHARTON SCHOOL, UNIVERSITY OF PENNSYLVANIA

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Contact Information

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Graduate Studies

The Wharton School, University of Pennsylvania, 2017 to present

Thesis Title: “Essays on the Economics of Disaster Risk”

Expected Ph.D. Completion Date: May 2022

Thesis Committee and References:

Professor Olivia S. Mitchell (committee chair)
The Wharton School, University of Pennsylvania,
mitchelo@wharton.upenn.edu

Professor Benjamin J. Keys (dissertation supervisor)
The Wharton School, University of Pennsylvania
benkeys@wharton.upenn.edu

Professor Benjamin B. Lockwood
The Wharton School, University of Pennsylvania
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Professor Arthur van Benthem
The Wharton School, University of Pennsylvania
arthurv@wharton.upenn.edu

Undergraduate Studies

Bachelor of Arts, Mathematics and Economics (*summa cum laude*), Kalamazoo College, 2015

General Course, Mathematics, The London School of Economics, 2014

Teaching and Research Fields:

Primary: Real Estate and Household Finance, Environmental/Energy Economics, Applied Microeconomics

Secondary: Urban Economics, Public Economics

Teaching Experience:

Fall 2021	<i>Evaluating Evidence</i> , Wharton Guest Lecturer for Professor Iwan Barankay
Spring 2020	<i>Environmental and Energy Economics and Policy</i> , Wharton Teaching Assistant for Professor Arthur van Benthem
Fall 2019	<i>Honors Intermediate Microeconomics</i> , Wharton Teaching Assistant for Professor Gilles Duranton
2014-2015	<i>Probability, Calculus, and Real Analysis</i> , Kalamazoo College Teaching Assistant for Professor John Fink

Research Experience:

2018-2020	Research Assistant to Professor Benjamin Keys The Wharton School
2015-2017	Senior Research Analyst Federal Reserve Bank of New York, Money and Payment Studies
2014	Summer Research Analyst Federal Reserve Bank of New York, Money and Payment Studies

Professional Activities

2021	Discussant American Real Estate and Urban Economics Association National Meeting
2019	Invited Participant Berkeley/Sloan Summer School in Environmental and Energy Economics
Referee Service	Review of Economics and Statistics, Journal of Urban Economics, Journal of Pension Economics and Finance, Environment Systems and Decisions

Honors, Scholarships, and Fellowships:

2020, 2021	Russell Ackoff Doctoral Student Fellowship
2019, 2020, 2021	Bradley Graduate Fellowship
2018	Amy Morse Award (top 1 st year Ph.D. student in Applied Economics)

Research Papers:

Mismeasuring Risk: The Welfare Effects of Flood Risk Information (JOB MARKET PAPER)

Rapidly improving data and models are giving homeowners more information about their disaster risk while also increasing insurance premiums for the highest risk homes. In this paper, I study the economic consequences of using better flood risk models to more accurately identify and price flood insurance for high-risk homes. I estimate my results with administrative flood insurance policy data and a novel survey measuring flood insurance demand, risk perceptions, and objective risk. To identify the effects of risk information, I use variation created by outdated elevation data and risk models that caused high-risk homes to be misclassified as low-risk. My findings show that flood risk classification provides valuable information not only for insurers, but also for homeowners. Misclassifying high-risk homes as low-risk causes owners to underestimate their current and future flood risk, invest less in risk-reducing adaptation, and buy less flood insurance despite substantially lower premiums. Embedding these estimates in a sufficient statistics model with dynamic risk and endogenous risk beliefs and adaptation, I find that identifying and pricing the estimated six million high-risk homes outside the floodplain would increase social welfare by \$138 billion.

Neglected No More: Housing Markets, Mortgage Lending, and Sea Level Rise (with Benjamin Keys)

In this paper, we explore dynamic changes in the capitalization of sea level rise (SLR) risk in housing and mortgage markets. Our results suggest a disconnect in coastal Florida real estate: From 2013-2018, home sales volumes in the most-SLR-exposed communities declined 16-20% relative to less-SLR-exposed areas, even as their sale prices grew in lockstep. Between 2018-2020, however, relative prices in these at-risk markets finally declined by roughly 5% from their peak. Lender behavior cannot reconcile these patterns, as we show that both all-cash and mortgage-financed purchases have similarly contracted, with little evidence of increases in loan denial or securitization. We propose a demand-side explanation for our findings where prospective buyers have become more pessimistic about climate change risk than prospective sellers. The lead-lag relationship between transaction volumes and prices in SLR-exposed markets is consistent with dynamics at the peak of prior real estate bubbles.

Conference Presentations:

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| 2021 | American Real Estate and Urban Economics Association ASSA Meeting
Northeast Workshop on Energy Policy and Environmental Economics*
NBER Real Estate Summer Institute |
| 2020 | Urban Economics Association Virtual Meeting |

What's at Stake? Understanding the Role of Home Equity in Flood Insurance Demand (with Yanjun Liao)

Millions of homeowners are exposed to increasing financial risk from natural disasters. Yet, many households are uninsured against the costliest disaster: flooding. We show that low home equity is an important driver of low flood insurance take-up. To isolate the causal effect of home equity on flood insurance demand, we exploit price changes over the housing boom and bust. Insurance take-up follows house price dynamics closely, with a home price elasticity around 0.3. Multiple mechanism tests suggest that mortgage default acts as implicit disaster insurance. As a result, households do not fully internalize their disaster risk.

Conference Presentations:

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| 2021 | Eastern Economics Association*
OSU PhD Real Estate Finance Conference
UCLA Climate Adaptation Symposium* |
| 2020 | Urban Economics Association Virtual Meeting* |