Climate Risk and Household Finance

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Climate Risk and Household Finances

- **Many channels** through which climate risk can affect household finances.

- My remarks will focus on the **asset side** of household balance sheets.
  - **Real estate** (Giglio, Maggiori, Rao, Stroebel, and Weber, 2020)
  - **Stock market** (Engle, Giglio, Kelly, Lee, and Stroebel, 2020)

- **Key issues** in addressing these risk exposures

Climate Risk and **Real Estate**

(Giglio, Maggiori, Rao, Stroebel, and Weber, 2020)

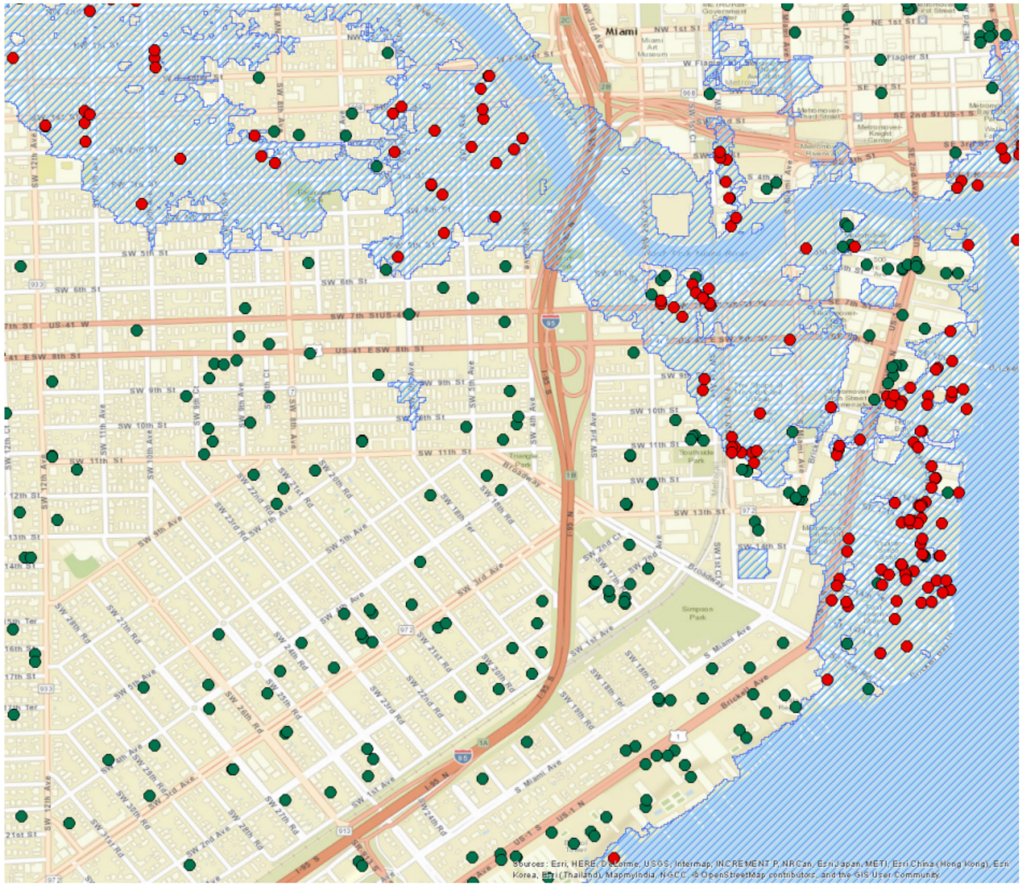
- **Real estate** is a fundamental asset for most people

- Inextricably tied to **location**, exposed to physical climate risk
  - Flooding and hurricanes
  - Wildfires
  - Rising Sea Levels

- Which houses are exposed, and how exposed are they?
  - **Measurement** of differential exposure to climate risk
  - Geocode locations + merge with NOAA maps on 6-feet sea level rise predictions

Climate Risk and **Real Estate**

(Giglio, Maggiori, Rao, Stroebel, and Weber, 2020)



Climate Risk and **Real Estate**

(Giglio, Maggiori, Rao, Stroebel, and Weber, 2020)

- Aren't high-exposure and low-exposure houses different in other dimensions?
- Exploit time variation in attention to climate change
- Climate attention measured at zip-quarter level by share of real estate listing mentioning climate-related issues (e.g., elevation, flood plain, etc.)

> *Example 1:* Diamond in the Rough on water with pier and dock! **Owner holds letter of expemption from FEMA, stating high elevation, flood insurance may not be required,** minutes to area beaches, Close to Jacksonville and Wilmington.

FINDING: After increases in climate risk attention, there is a differential decline of more-exposed vs. less-exposed property prices.

→**Climate Risk is Priced in Real Estate**, therefore directly important to households through this channel

Climate Risk and **Equity Valuations**

(Engle, Giglio, Kelly, Lee, and Strobel 2020)

- Households are also exposed to climate risks through their equity portfolios. How?
- Use E-scores to measure exposure to climate risks
- Climate attention measure: Mentions of climate change in WSJ (also adjusted by ‘sentiment’ – good vs. bad news)

FINDING: Firms with high E-scores outperform in periods with negative news about climate change.

→**Climate Risk is Priced in Equity Markets**

→ Can use factor-neutral long-short portfolio based on E-Scores to hedge negative climate news

Key Issues

1. **Measurement**
   - Risk exposures of households' assets

2. **Communication**
   - Are households fully aware of these risk exposures?

3. **Risk-sharing**
   - Heterogeneity in risk exposures: opportunity to share risks
   - Appropriate financial instruments to hedge these risks

4. **Time-horizon**
   - Many of the risks linked to climate change operate on very long time scales