Pricing of Climate Risk Insurance: Regulatory Frictions and Cross-Subsidies

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Overview

• Measure regulatory frictions in home insurance rate setting
• In high-friction states
  • Insurers adjust rates less frequently, by less after losses
• Insurers cross-subsidize insurance rates across states
  • In response to losses in high-friction states, insurers increase rates in low-friction states
• Rates are disconnected from underlying risk, grow faster in states with low frictions
• Very important topic! Very clever! Great paper!
Measurement Regulatory Frictions

\[ \text{Discount}_{i,s,t} = \frac{\text{Rate}_\Delta \text{Received}_{i,s,t}}{\text{Rate}_\Delta \text{Target}_{i,s,t}} \]

- Source of variation? states? insurers? or s*i?
- Insurers strategically choose \text{Rate}_\Delta \text{Target}
  - Equilibrium where insurers ask for larger rate increases, regulators heavily discount their request
  - Authors: if Discount is low (frictions are high), losses/premia is high in the following year
  - However, insurers manipulate reported losses (Ge 2021) to obtain higher rate increases (Grace & Leverty 2010)
• Following losses, insurers in high-friction states are less likely to file rate changes, receive lower approved rate changes
Price Setting Response to Own Losses

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<th>n rate filings(_{i,s,t+1})</th>
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<td>own st loss(_{i,s,t})</td>
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State friction

- High
- Medium
- Low

- Expected losses: some (high-friction) states allow insurers to use projected future losses to justify rate changes?
- Existing markups: in high-friction states, insurers’ markups are already higher on average?
- Distribution of losses: y variable is bounded at 0
Price Setting Response to Own Losses

Authors: rate filing is costly, why bother if the payoff is small in high-friction states?

If insurers need the rate increase & regulators are likely to discount the requests, insurers should ask for a larger rate increase in each request

• Is Rate\(\Delta Target\) higher following losses in high-friction states?

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• High-friction states experienced
  • smaller price increase, 2008-2019
  • smaller price increases compared to growth in climate losses
Price Growth & Losses

• Why do we care about price growth? What if high-friction states started out with higher mark-up?
• Hard to measure the expected loss or underlying risk
• A large portion of climate loss absorbed by government flood insurance
• Suggestion: examine insurers’ profitability
• Insurer stops selling homeowners insurance in a state
• Not renewing (often opposed by regulators) vs. not selling new policies
Residual Market

- High-friction, more rate suppression, could also predict a smaller residual market
Overview

- Important topic;
- Novel idea;
- Fascinating results;
- Great paper!