Pricing of Climate Risk Insurance:

Regulatory Frictions and Cross-Subsidies

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- **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

$$Discount_{i,s,t} = \frac{\text{Rate}\Delta\text{Received}_{i,s,t}}{\text{Rate}\Delta\text{Target}_{i,s,t}}$$

- Source of variation? states? insurers? or s*i?

- Insurers strategically choose *RateΔTarget*

  - 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)

	n rate filings$_{i,s,t+1}$			Discount$_{i,s,t+1}$		
	(1)	(2)	(3)	(4)	(5)	(6)
own st loss$_{i,s,t}$	0.198	0.011	0.143**	−0.059*	−0.040*	0.060
	(0.141)	(0.052)	(0.055)	(0.031)	(0.023)	(0.043)
State friction	High	Medium	Low	High	Medium	Low

- Following losses, insurers in high-friction states are less likely to file rate changes, receive lower approved rate changes

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- Do realized losses reflect E(future losses) or underlying risks & justify rate increases? More so in some states?

- What else is different across states?

  - 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

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- 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 *RateΔTarget* higher following losses in high-friction states?

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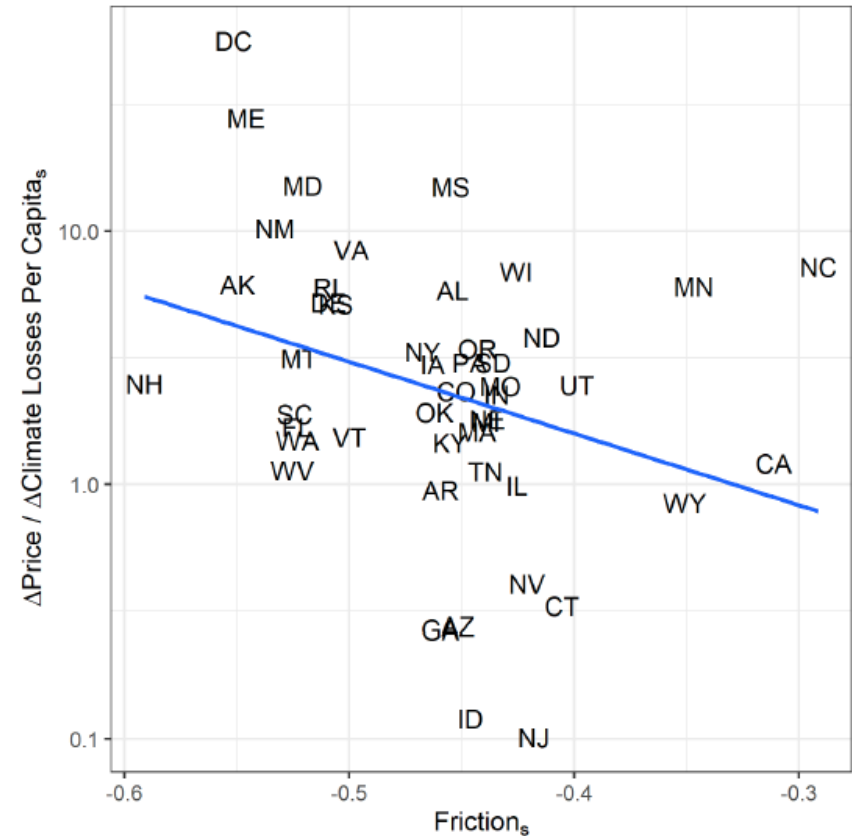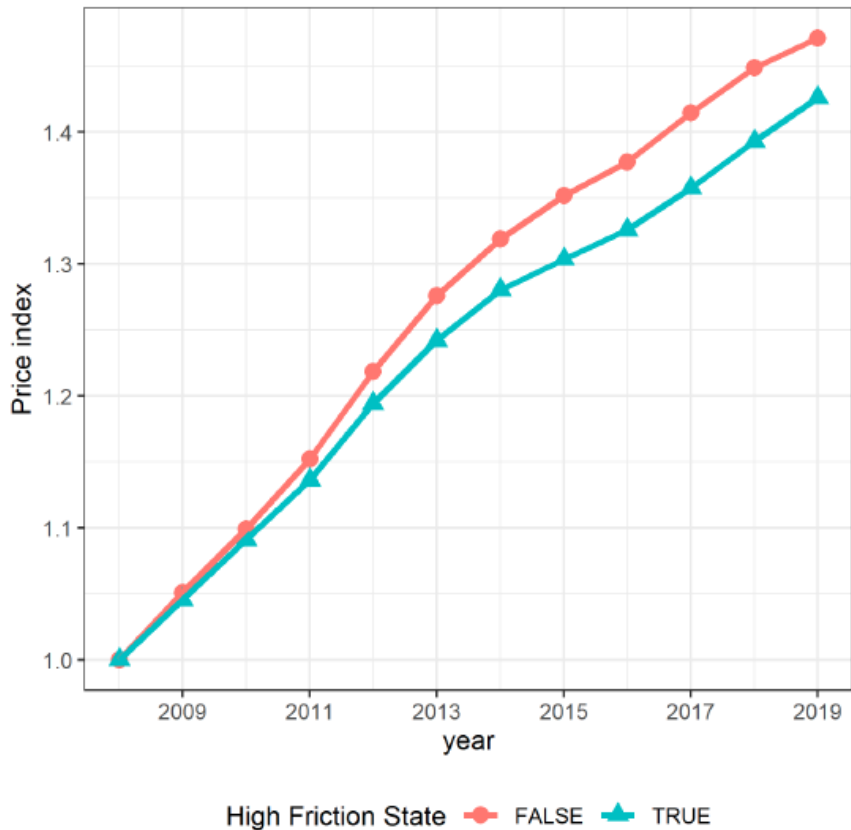
- High-friction states experienced
  - smaller price increase, 2008-2019
  - smaller price increases compared to growth in climate losses

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 <u>expected</u> 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

- Important topic;

- Novel idea;

- Fascinating results;

- Great paper!