

Cross-Subsidization in Homeowners Insurance

Public questions, academic evidence, and practical implications

The question is structural

State regulation and national capital allocation are not built on the same map.



When these layers do not move together, costs can shift across policyholders, states, or federal programs.

Regulatory reality

Formal model matters less than how much discretion is exercised.

Prior approval

Rates generally require approval before use

File-and-use

Rates are filed and may be used unless disapproved

Use-and-file

Rates are used first and filed shortly after

The regulatory environment is shaped by approvals, delays, filing scrutiny, and political pressure.

The standard regulatory test

The same three words drive very different policy tensions.

Not excessive

Consumer affordability

Not inadequate

Premium adequacy

Not unfairly discriminatory

Fair classification

Cross-subsidization arises when one objective is emphasized in a way that shifts cost to another group.

Three distinct claims

The debate becomes clearer when the mechanisms are separated.

Claim 1

WITHIN-STATE

Residual markets

Assessments spread costs within one state

Claim 2

CROSS-STATE

Carrier portfolios

National writers may shift pressure across states

Claim 3

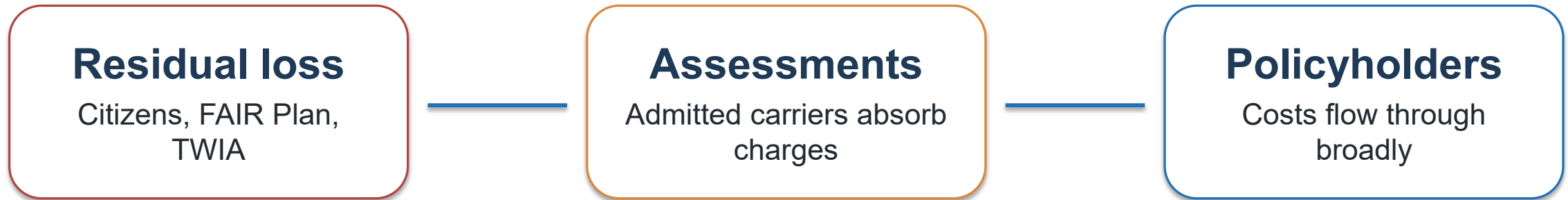
FEDERAL

NFIP + disaster aid

Federal programs shape homeowners decisions

Claim 1: Residual markets spread cost

The mechanism is explicit, observable, and state-specific.



This is the cleanest cross-subsidization claim because it produces visible cash flows.

Claim 1: What the evidence supports

Residual-market growth is real, but the cause is not one-dimensional.

Most observable support

Statutes, assessments, residual-market
policy counts

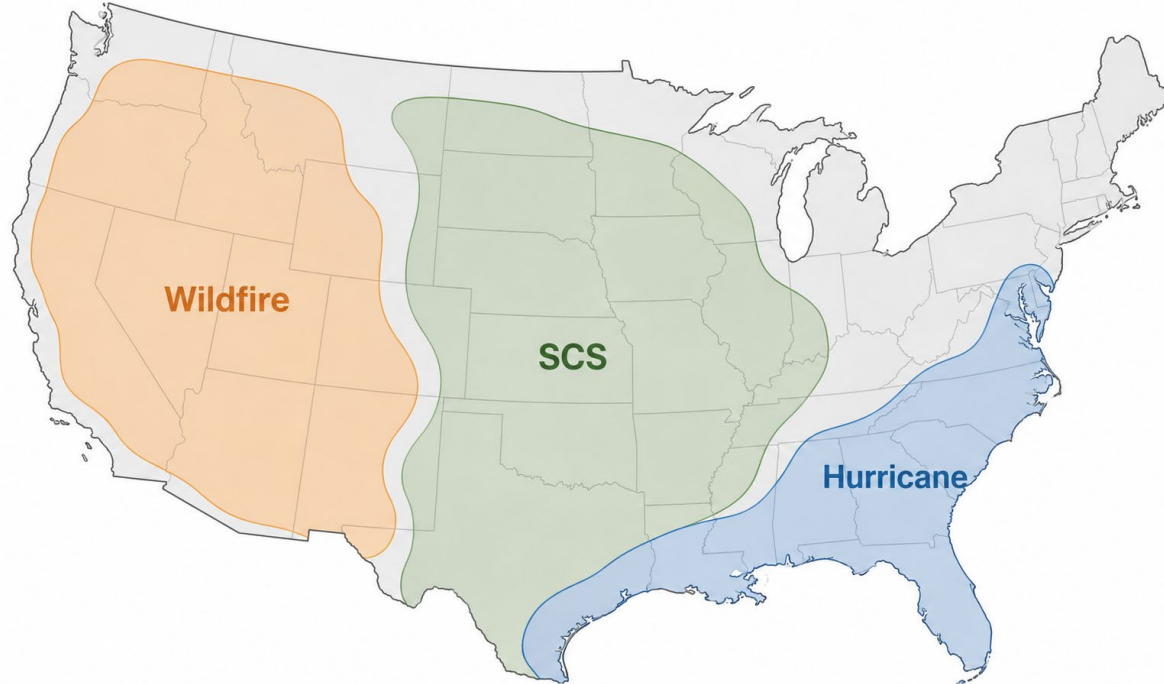
Important caveat

Capacity withdrawal also reflects reinsurance,
models, capital, and litigation

**Interpretation: residual-market expansion correlates with rate friction, but
rate suppression is not the only driver.**

Peril geography matters

Before moving to cross-state spillovers, it helps to separate the major CAT perils.



Wildfire

California and WUI stress

Hurricane

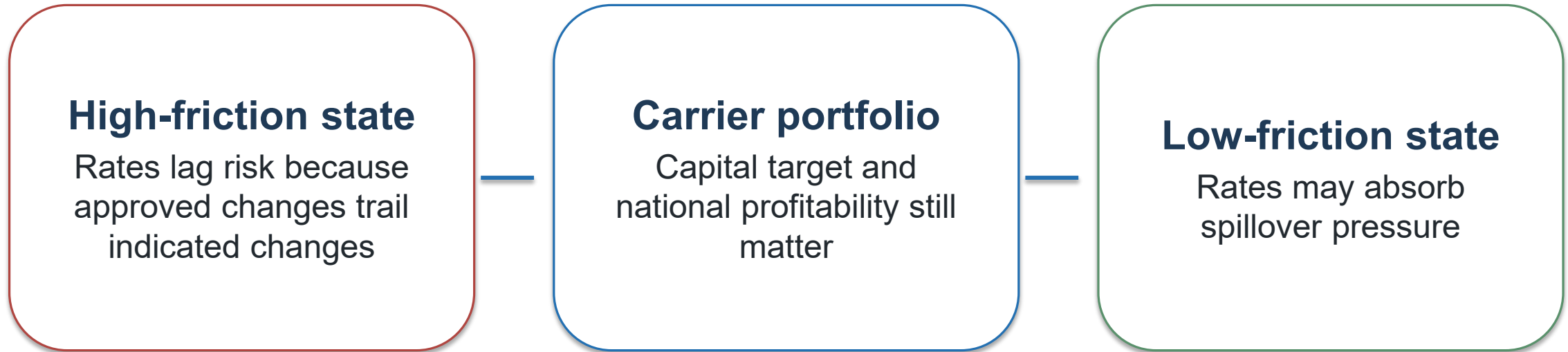
Florida, Gulf, Atlantic coast

SCS

Plains, Midwest, expanding footprint

Claim 2: Cross-state carrier portfolios

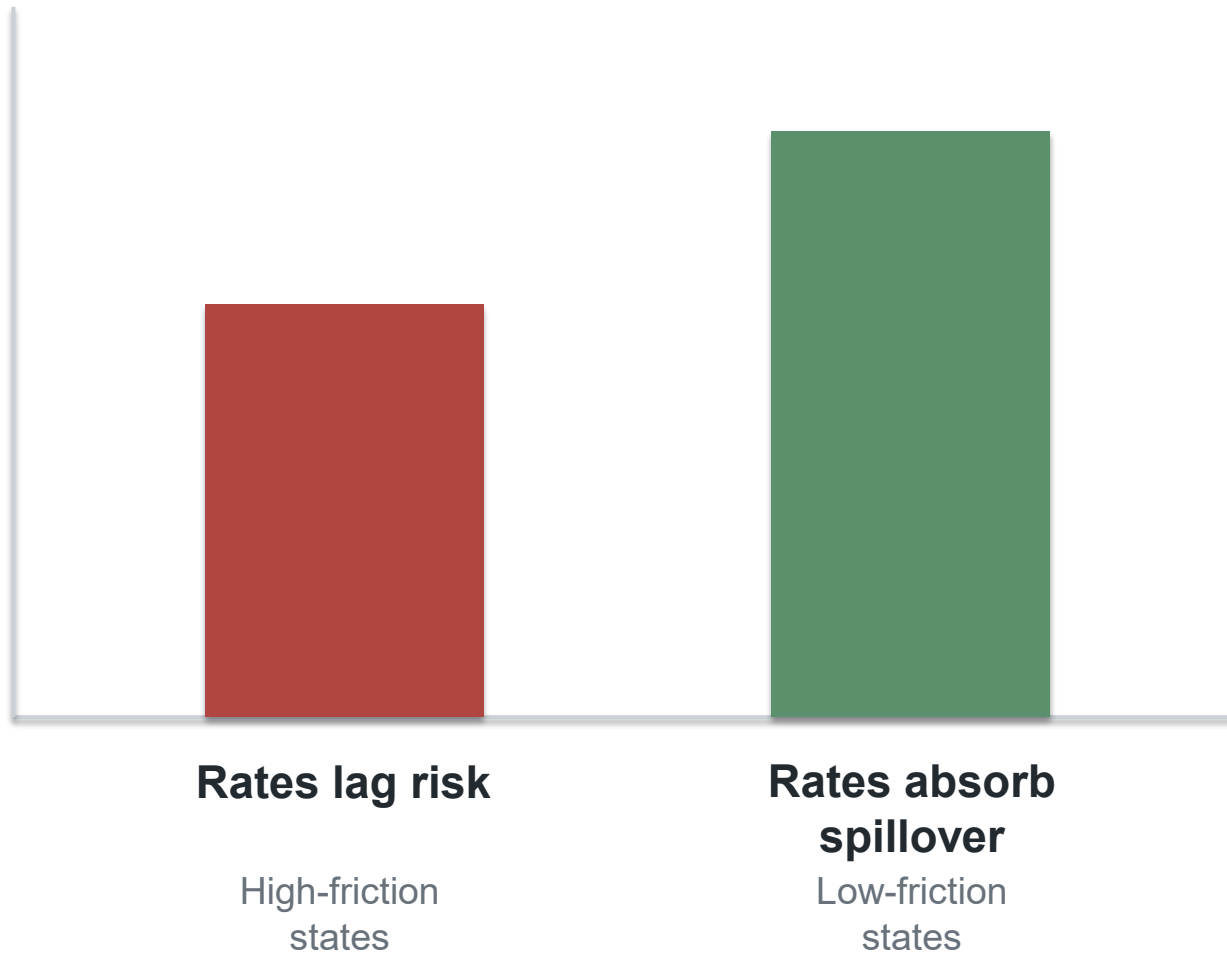
This claim is harder to observe directly, so the evidence is inferential.



The empirical question is where the cost ultimately shows up.

Claim 2: High-friction vs. low-friction states

Oh, Sen, and Tenekedjieva find asymmetric spillovers across regulatory environments.



Asymmetric pattern

Losses in constrained states raise rates elsewhere

Persistent increases

Rate decreases are typically rare

Claim 2: Market exits are the pressure-release valve

When cross-state absorption is no longer sustainable, availability changes.

Signs of Market Pressure

- Carriers reduce writings: stopping new business, non-renewed policies
- Market withdrawals
- Insolvencies
- Residual Market Growth

Interpretation

Market exit is the endpoint when rate friction and capital pressure collide

Sustained underpricing leads to an insurance availability problem.

Claim 3: Federal programs shape homeowners decisions

Flood is excluded from standard homeowners coverage, so federal policy fills part of the gap.



The result is potential explicit subsidy (NFIP) and implicit subsidy (post-event aid), with real effects on insurance take-up.

SCS is the counterexample worth studying

Severe Convective Storm markets have absorbed pressure differently.

Rates adjust

Many SCS-exposed states allow rate increases to reflect loss trend

Coverage narrows

ACV roofs, percentage deductibles, and matching limits shift cost

Markets function

Capacity remains broader than in high-friction CAT states

The trade-off is not cost-free: homeowners pay more, retain more risk, or both.

The core trade-off

Different regulatory choices change how visible the cost becomes.

Affordability today

Premium relief, but more pressure on capacity

Availability tomorrow

Adequacy supports private capacity

Transition zone

Form changes, residual-market pressure, or rate actions

The policy question is how to balance affordability, adequacy, and market availability over time.

Implications for practitioners

The mechanisms show up in everyday actuarial and advisory work.

Ratemaking

CAT models, climate trend,
and filing support carry more
weight

Capital / reserves

Residual assessments and
reinsurance terms matter
more

Strategy

State selection increasingly
turns on regulatory
predictability

The actuarial profession can clarify how costs move and what trade-offs each choice creates.

Closing

The debate is clearer once the mechanisms are separated.

Strongest evidence

NFIP and residual-market assessments

Most debated

Cross-state carrier spillovers

Open question

How far SCS markets can absorb trend

Mechanisms matter more than labels

Costs move through rates, coverage, availability, or public programs.

Sources

Selected sources supporting the presentation.

Primary empirical paper

Oh, Sen & Tenekedjieva (2022), Federal Reserve FEDS 2022-064

Federal flood / disaster aid

CBO, GAO, FEMA Risk Rating 2.0 materials

Industry context

Aon, Swiss Re sigma, NAIC, CAS / Academy climate resources

Questions?