#### Casualty Actuarial Society Antitrust Notice

- The Casualty Actuarial Society is committed to adhering strictly to the letter and spirit of the antitrust laws.
  Seminars conducted under the auspices of the CAS are designed solely to provide a forum for the expression of various points of view on topics described in the programs or agendas for such meetings.
- Under no circumstances shall CAS seminars be used as a means for competing companies or firms to reach any understanding – expressed or implied – that restricts competition or in any way impairs the ability of members to exercise independent business judgment regarding matters affecting competition.
- It is the responsibility of all seminar participants to be aware of antitrust regulations, to prevent any written or verbal discussions that appear to violate these laws, and to adhere in every respect to the CAS antitrust compliance policy.

#### US FLOOD INSURANCE: CURRENT NFIP AND PUBLIC POLICY ISSUES

# Closing the Flood Insurance Gap in the United States

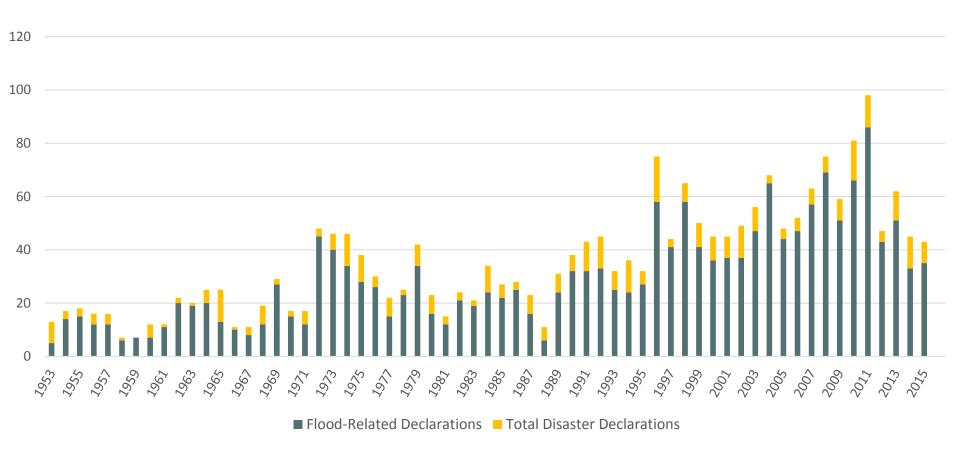
Carolyn Kousky Wharton Risk Center University of Pennsylvania



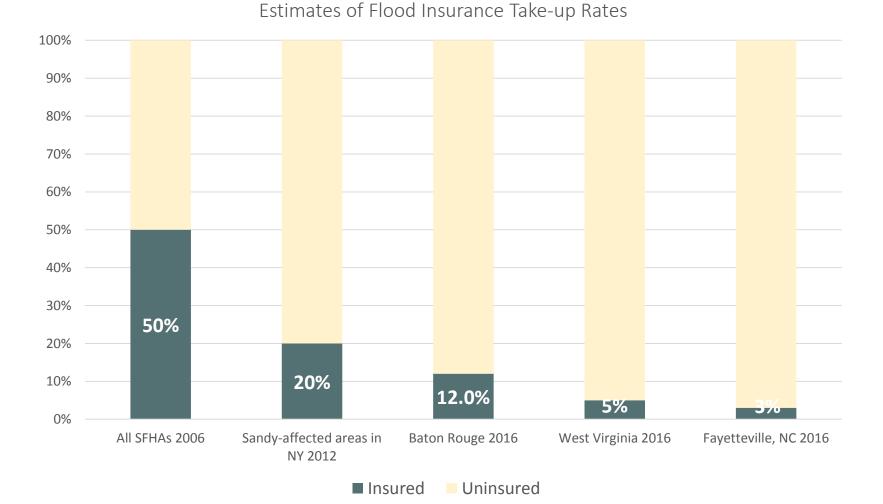
CAS Seminar on Reinsurance Ju

June 5, 2017

#### Flood related disaster declarations



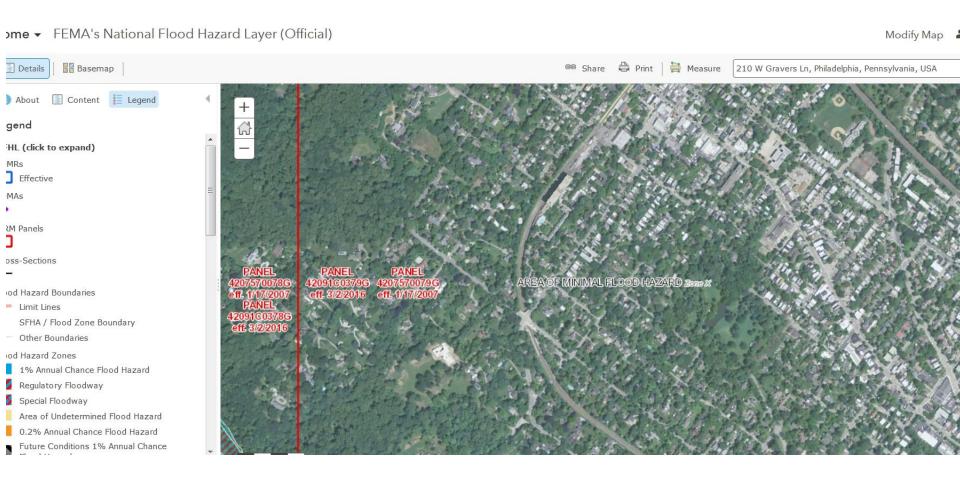
## Flood insurance gap



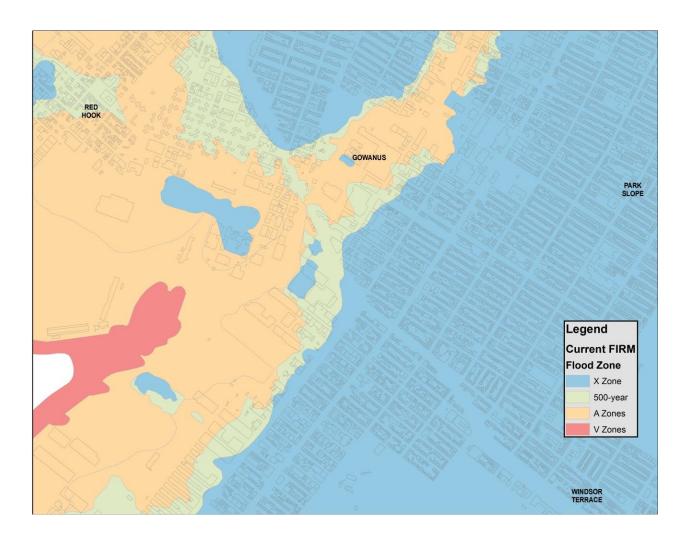
## Drivers of the gap

- Lack of information on risk
- Lack of understanding of insurance
- Heuristics & biases
- Price

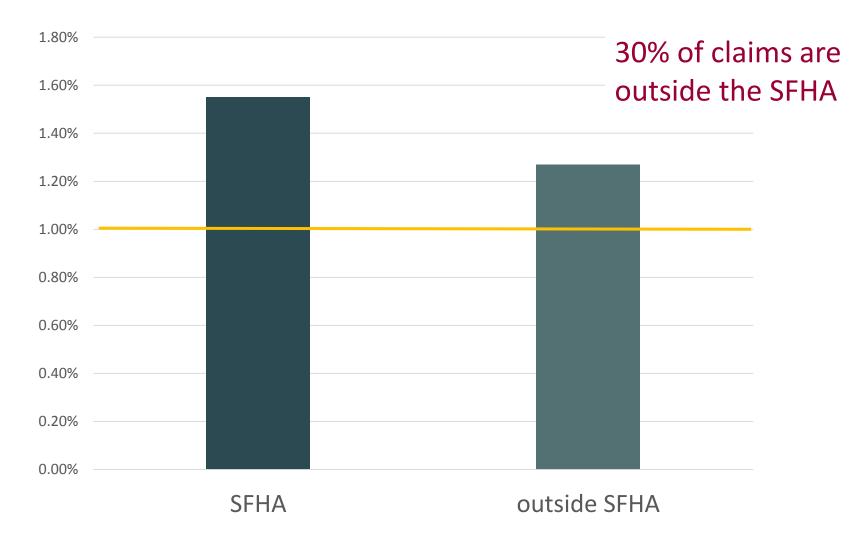
#### What is my flood risk?



#### The risk communication – in/out



#### But claims are not limited to SFHA



Kousky, C., and E. Michel-Kerjan. 2015. "Examining Flood Insurance Claims In The United States: Six Key Findings" Journal of Risk and Insurance.

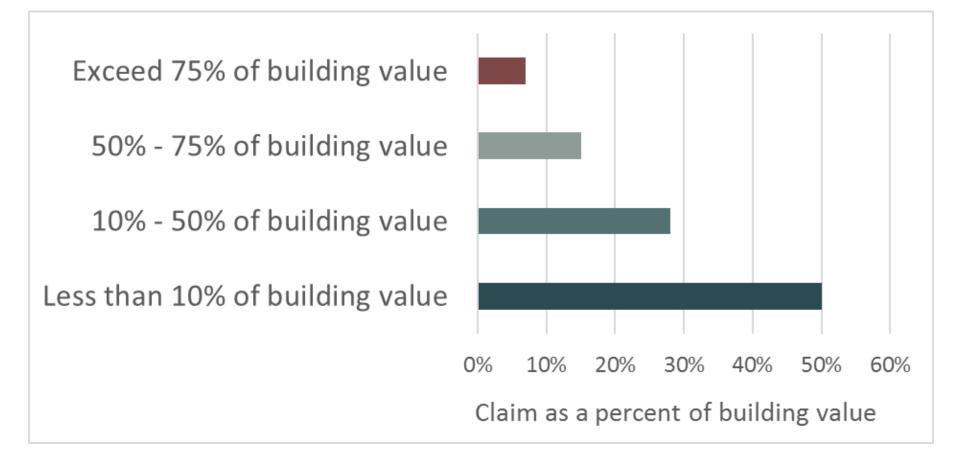
We tend to focus on probability

Little understanding of possible damage

- Median claim: \$13,000
- Mean claim: \$34,500
- 99<sup>th</sup> percentile: \$310,240

1980-2012; 2012USD; single-family homes

### Claims as a % of building value



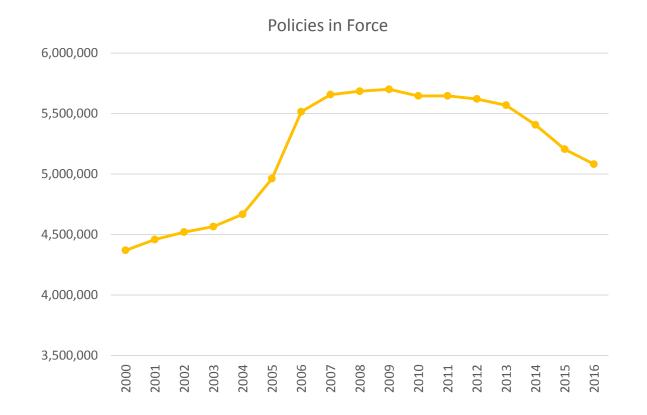
Kousky, C., and E. Michel-Kerjan. 2015. "Examining Flood Insurance Claims In The United States: Six Key Findings" Journal of Risk and Insurance.

#### The value proposition of insurance

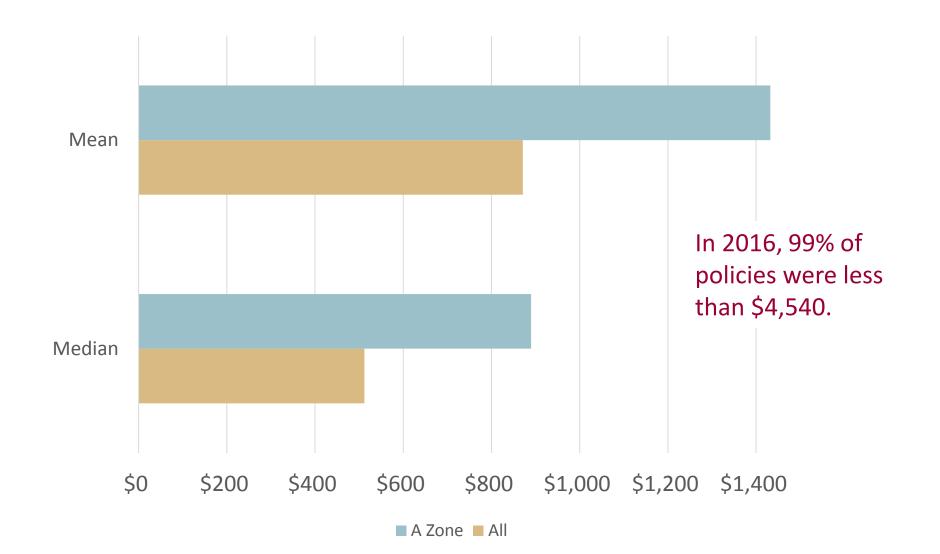
- My home flooded last week. Can I buy insurance for it now?
- I haven't gotten anything back on my insurance yet. I'm going to cancel it.
- This is never going to happen to me.

#### Price elasticity

 Estimates tend to find demand to be fairly inelastic, but few reliable estimates



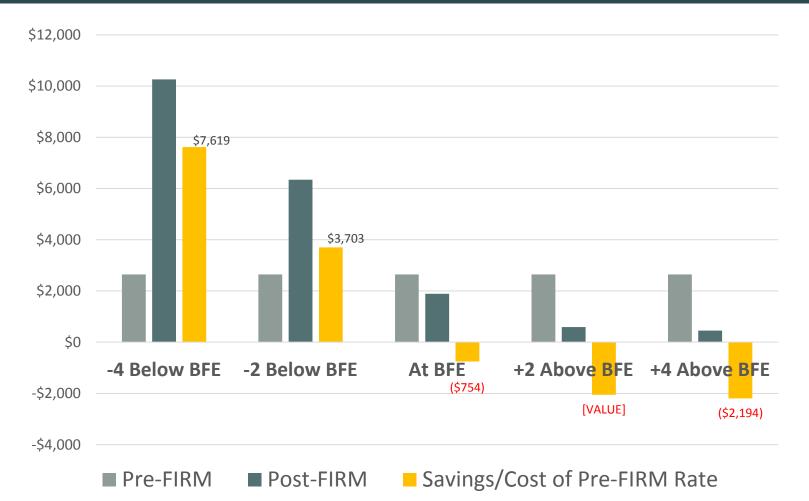
#### 2016 premiums



#### Reasonable / affordable

- Early pricing discounts to encourage participation
- Price and purchase:
  - Is it affordable?
  - Is it worth it?
- To what extent is price perceived as a risk signal?
- To what extent do changes in price alter incentives for location and/or mitigation investments?

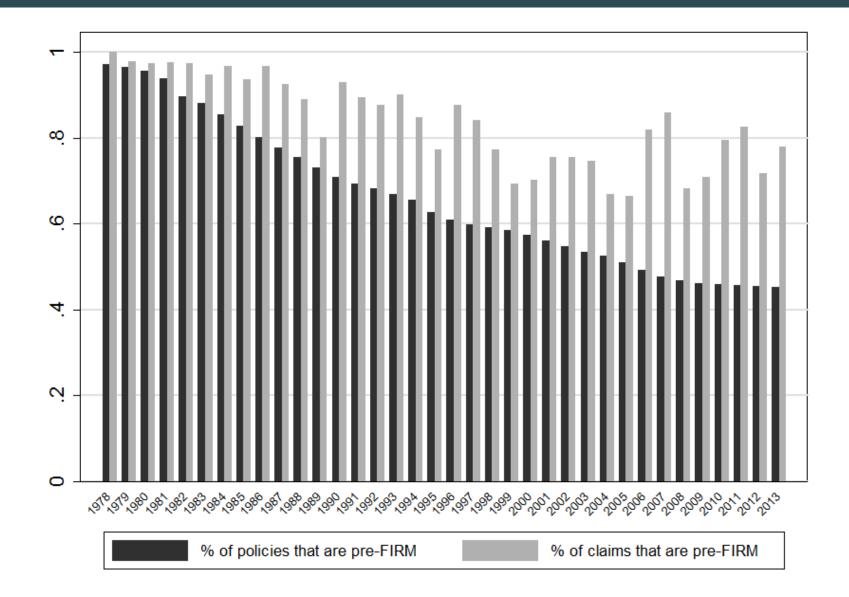
### Pre/Post Firm Premiums



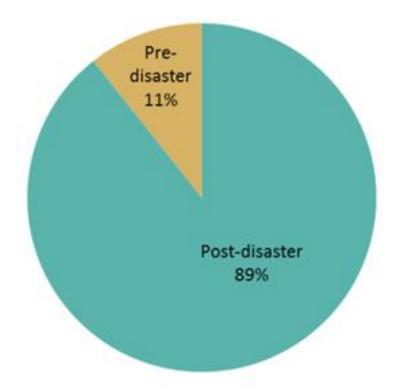
Note: Rates are calculated for a single-family home in the AE zone with one floor, no basement, \$250,000 of building coverage and the minimum deductible. Rates do not include any CRS discount. They do include the ICC coverage premium, the 15% reserve fund assessment, the \$25 HFIAA surcharge, and the \$50 federal policy fee.

Kousky, C., B. Lingle, and L. Shabman. 2017. "The Pricing of Flood Insurance" Journal of Extreme Events.

#### Pre-FIRM



#### Public mitigation funding



#### FEMA Spending on Flood Mitigation; 2002-2014

Kousky, C., and L. Shabman. 2017. "Federal Funding for Flood Risk Reduction in the US: Pre- or Post-Disaster?" Water Economics and Policy.

### NFIP policy reforms

- Affordability and Consumer Costs
- Private Market Development and Consumer Choice
- **Reform Flood Mapping**
- **Enhance NFIP Mitigation**
- Strengthen Taxpayer Protections
- Implement Claims Processing Reforms

## Thank you!

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