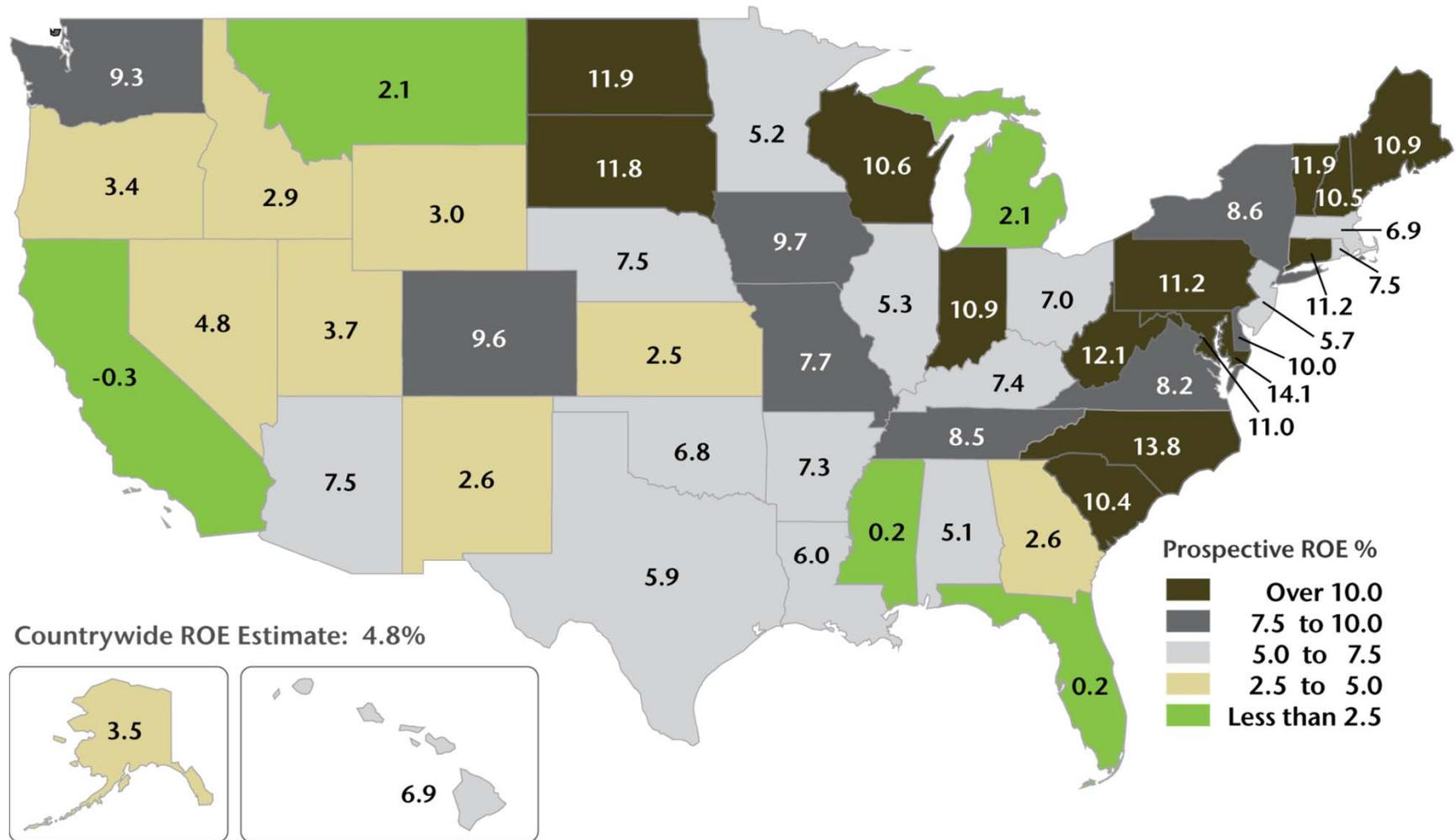


# Federal Reserve Bank of Atlanta

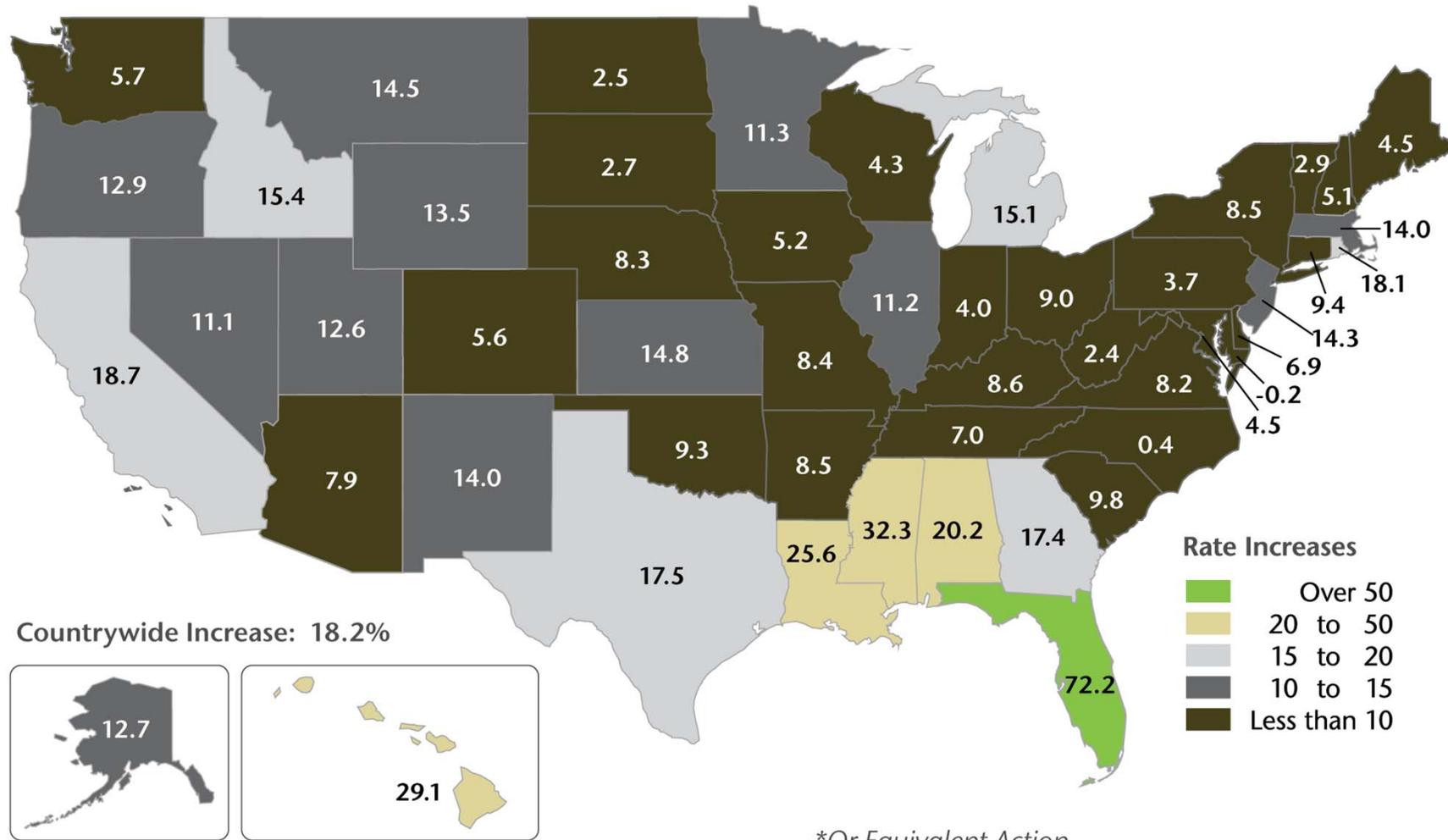
Exploring Impediments to a Real Estate Recovery

- The Insurance Perspective – Discussion of US Earthquake Risk

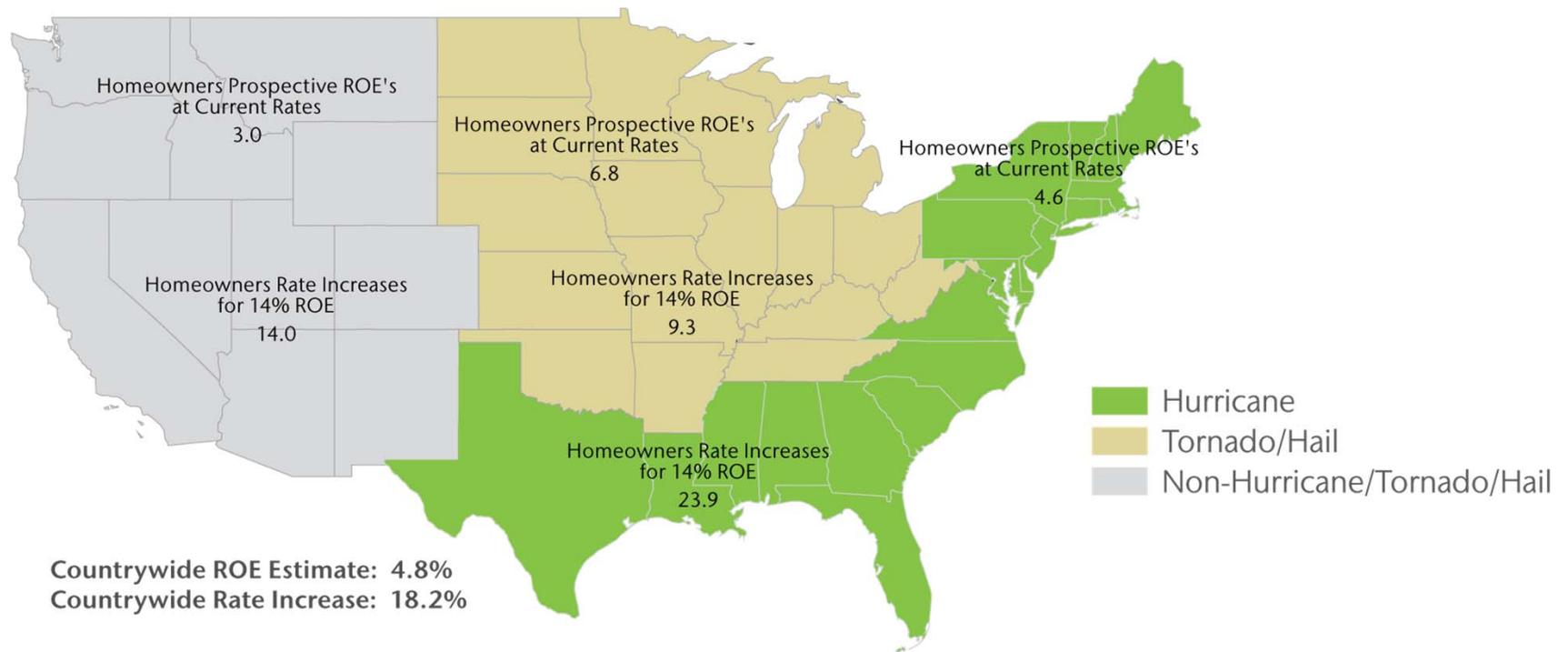
# August 2011 Prospective ROE's At Current Rates



# August 2011 Rate Increases\* For 14% ROE



# August 2011 By Region



# History Of Countrywide Prospective ROE's

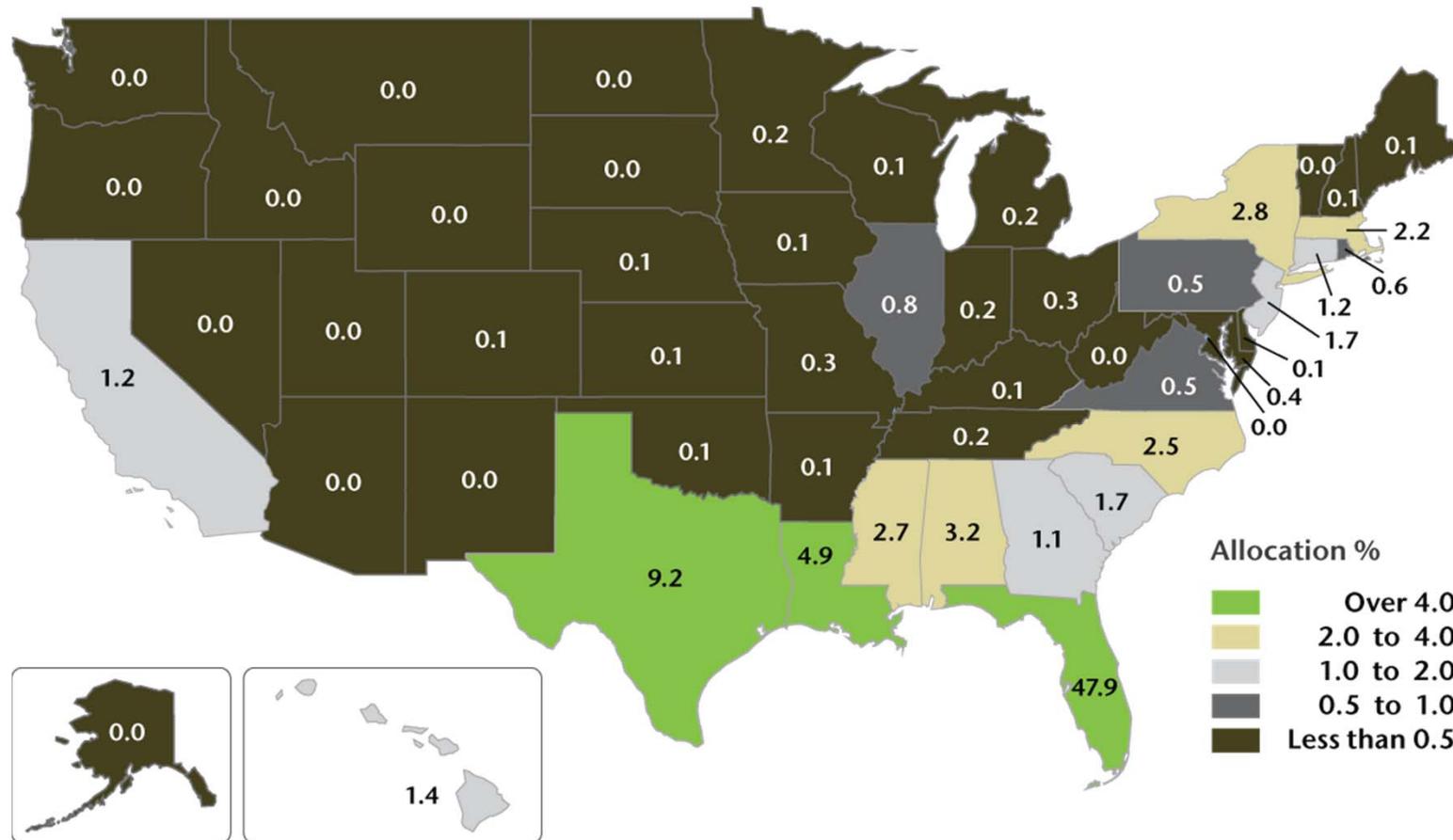


Analysis of Prospective ROE's is updated periodically to reflect A.M. Best capital standards and Aon Benfield's analysis of cost of reinsurance.

Actual ROE's are based on:

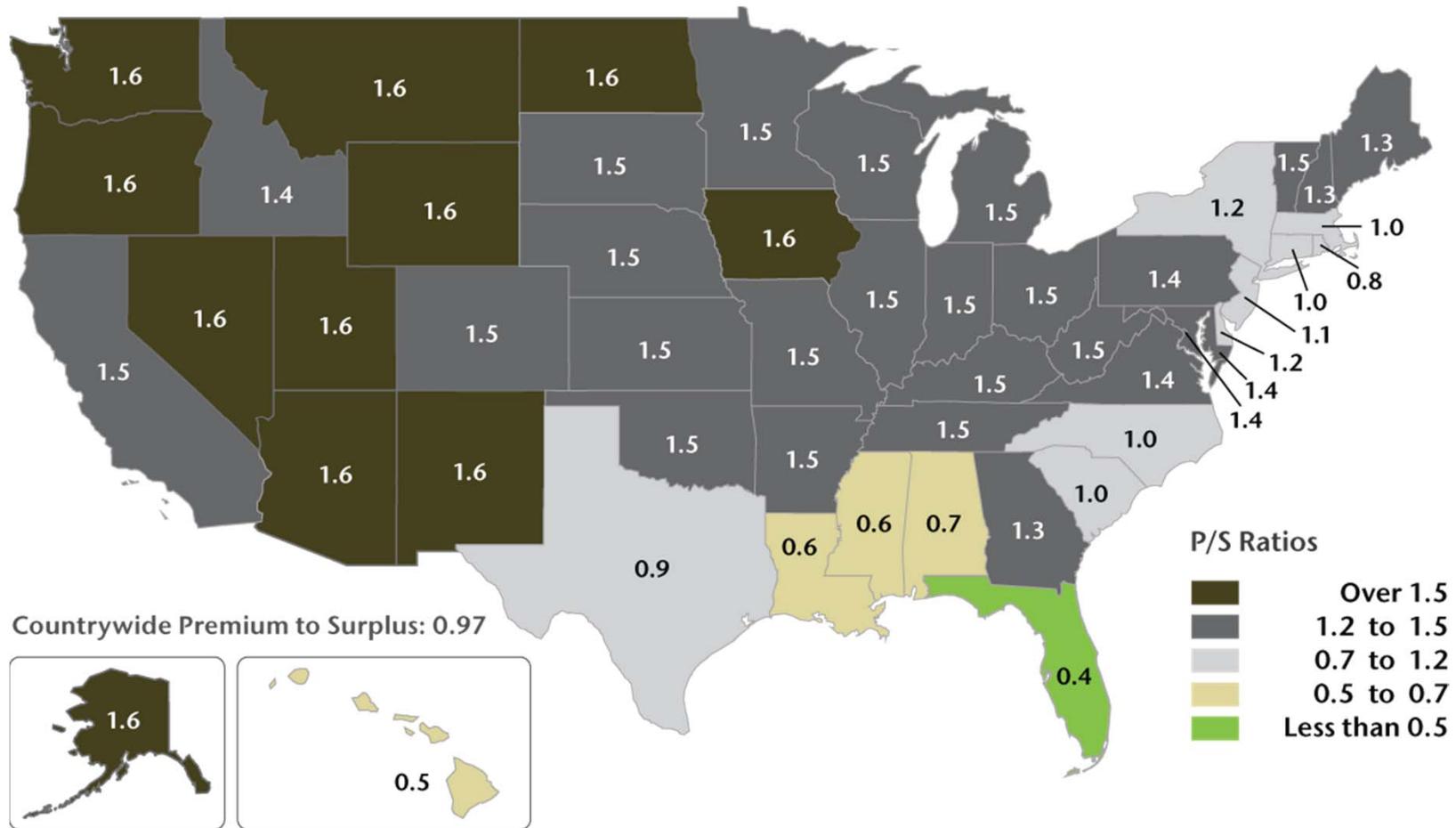
- Loss, LAE and expense ratios, net of reinsurance, are compiled from annual statement data.
- Countrywide premium to surplus ratios from this study.

# Homeowners Allocation Of Capital For Retained Catastrophe Risk



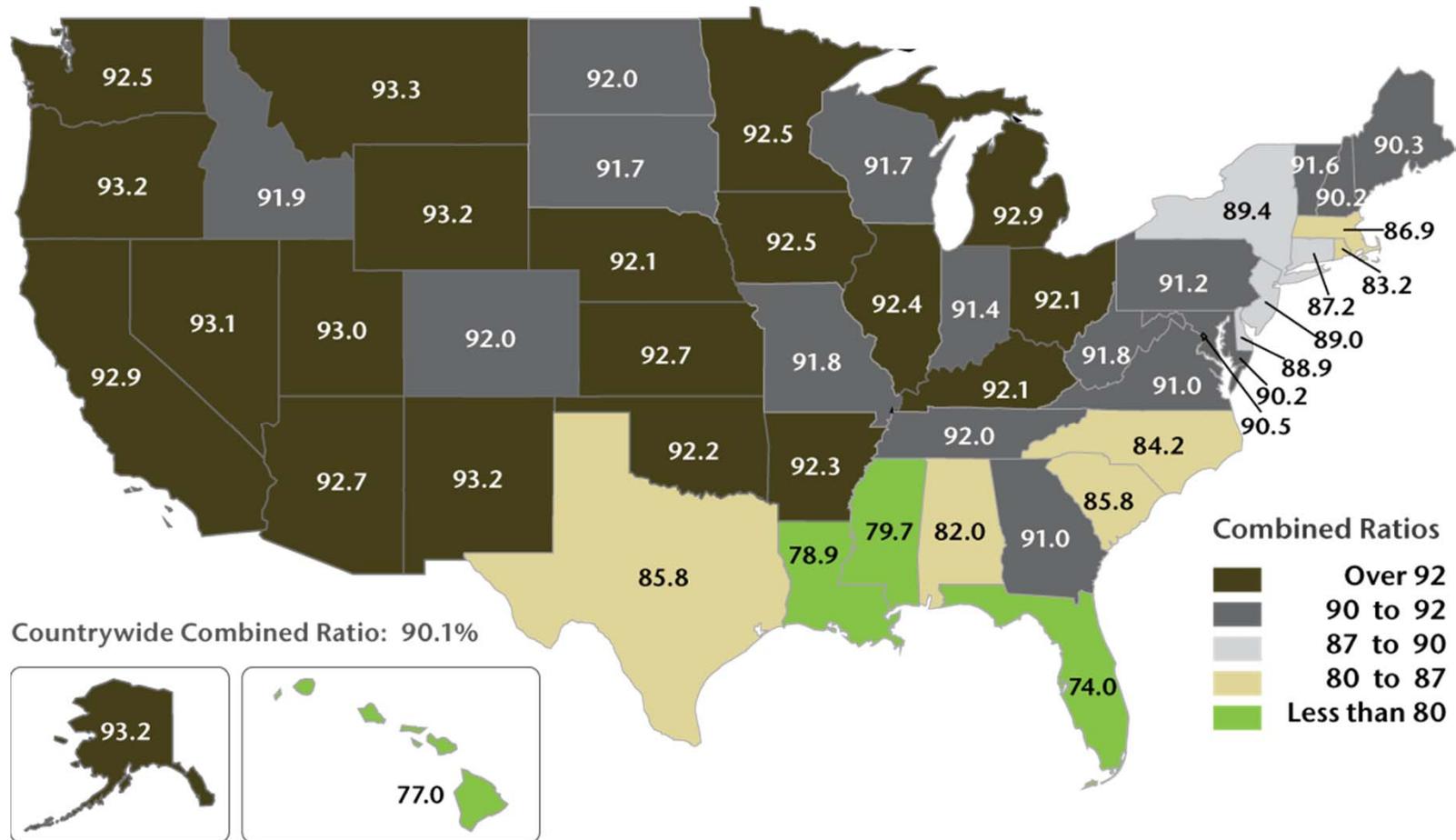
Companies need to explicitly recognize and allocate capital requirements of retained catastrophe risk. The percentages on this map represent how a countrywide company might allocate catastrophe related capital. These percentages recognize the benefit to capital requirements from state sponsored reinsurance plans. Specific companies will vary from this depending on their own geographic distribution. Earthquake shake risk is excluded from this study as this peril is the subject of separate rate filings specifically for earthquake shake. Capital requirements for non-catastrophe risk must also be funded and are typically allocated in proportion to premium or expected loss.

# Homeowners Premium To Surplus Ratios



An intermediate step in funding of capital requirements is to express capital requirements by state in proportion to premium. This facilitates development of profit provisions for ratemaking to fund the cost of capital.

# Homeowners Combined Ratios To Fund A 14% Return On Allocated Capital



The percentages are examples of combined ratios necessary to fund allocated capital by state including allocation of capital for retained catastrophe risk. The percentages would be target ratios for profit provisions in rate filings. These are for a sample countrywide company only, and will vary among individual companies in relation to state distribution of premiums, capital adequacy standards, target return on capital, allocation methodologies and other considerations.

## Why Don't Earthquake Prone Regions Seem to Reflect Higher Risk?

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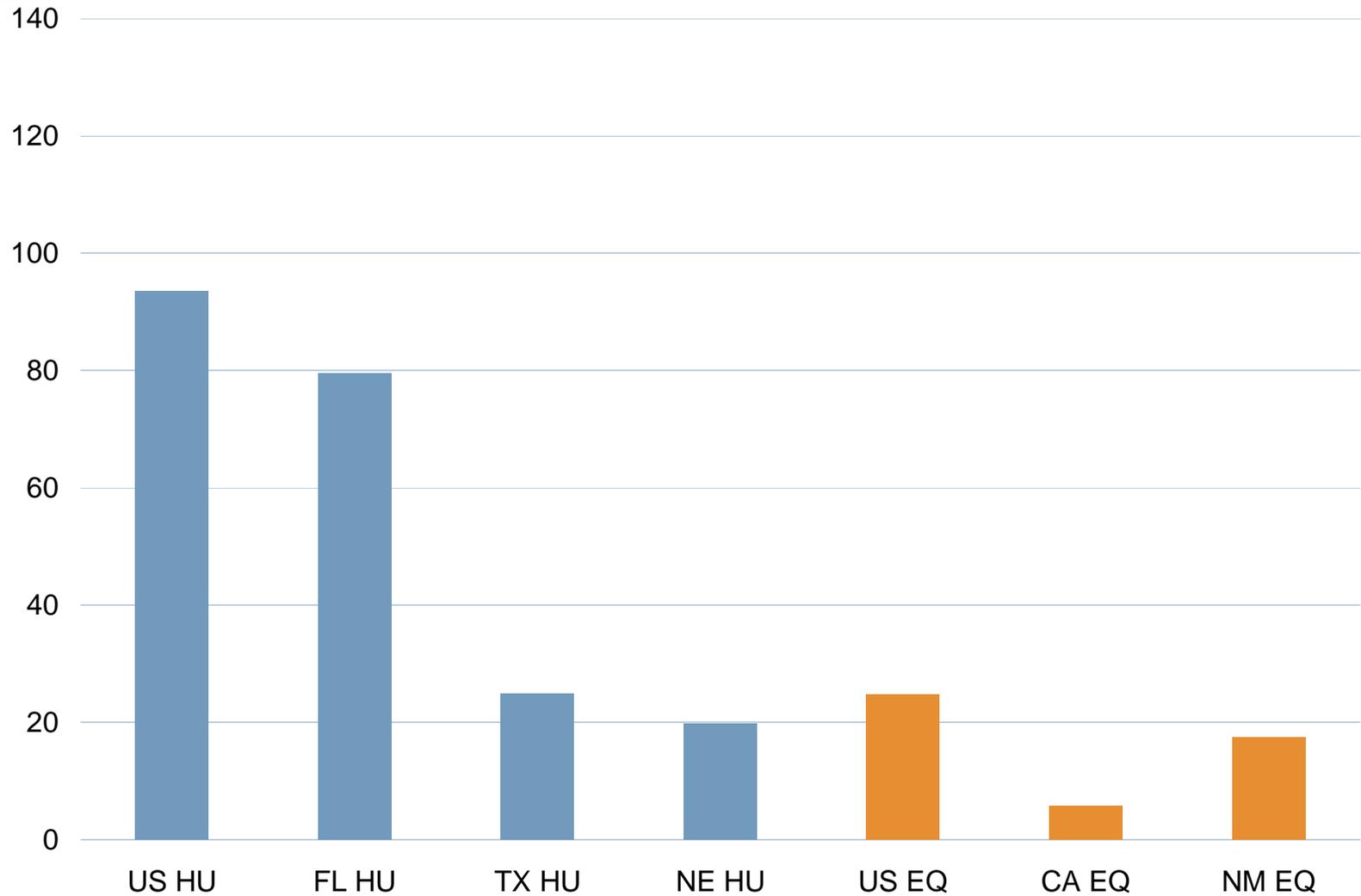
- Who is currently the largest holder of insurable U.S. earthquake exposure?
- Answer: U.S. Taxpayer
- How? Fannie Mae and Freddie Mac hold the risk

## How Have Fannie and Freddie Altered the U.S. Insurance Market?

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- Massively
- To gain a loan, homeowners are required to have insurance for:
  - Windstorm
  - Hail
  - Explosion
  - Civil commotion
  - Riot
  - Aircraft and vehicle
  - Smoke
  - Vandalism
  - Malicious Mischief
  - Theft
  - Glass
- Not required to have Earthquake insurance
- This federal policy is the reason hurricane is the most significant insured natural peril rather than earthquake

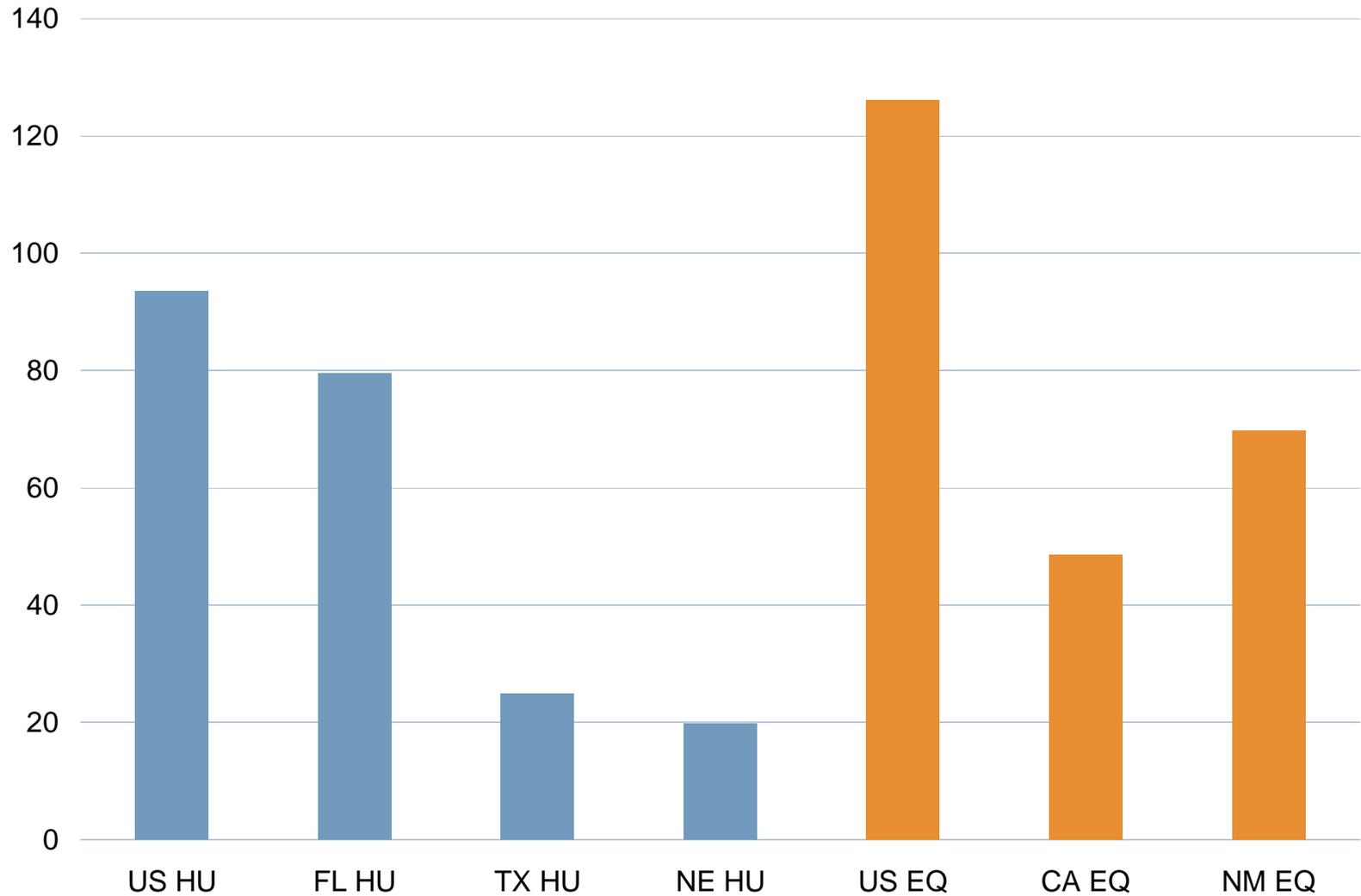
## What is the Insurance Market for US Natural Catastrophes?



Source: Data Impact Forecasting, Analysis by Aon Benfield

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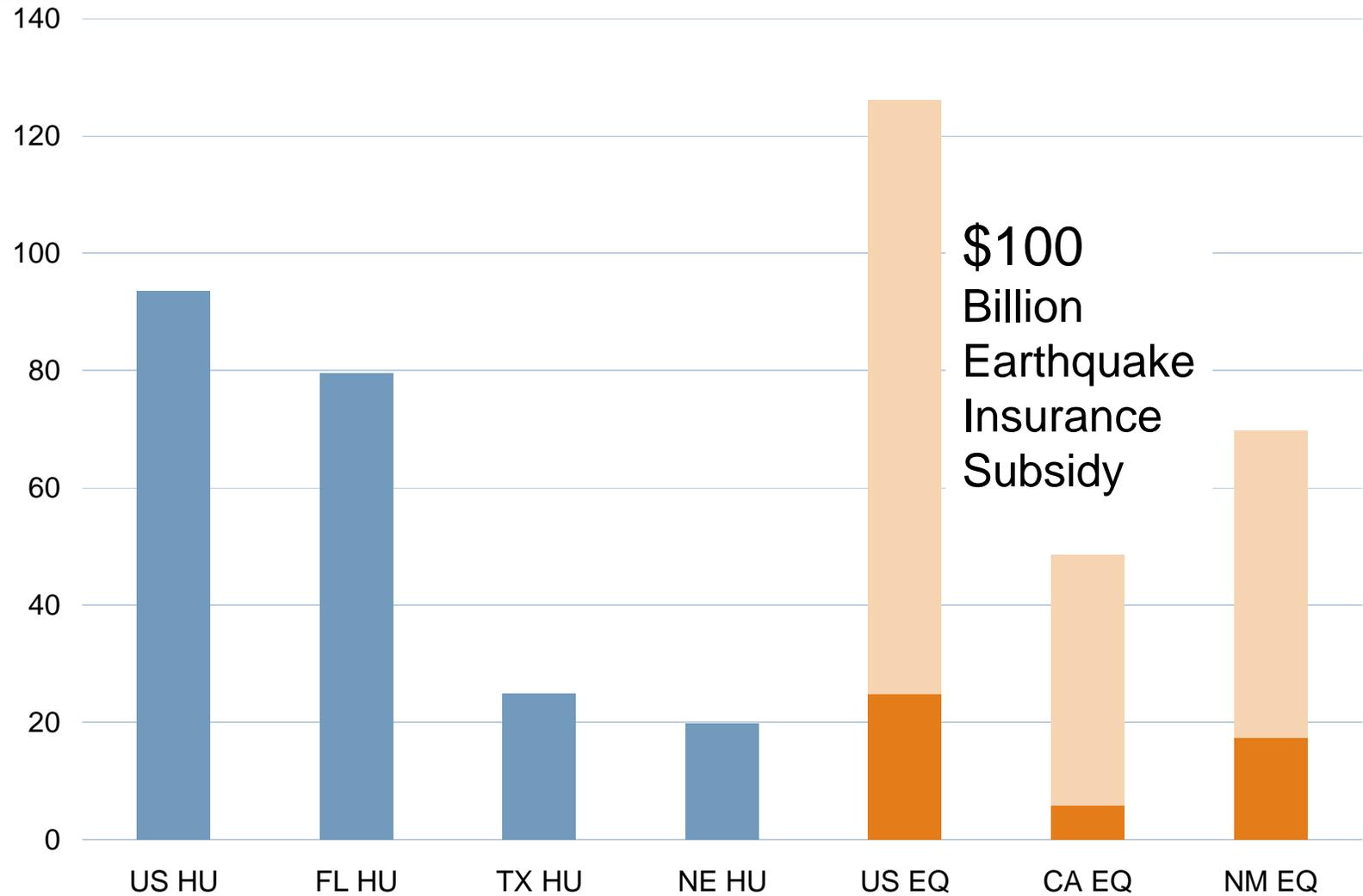
## What Would it be if Fannie and Freddie Required EQ Insurance?



Source: Data Impact Forecasting, Analysis by Aon Benfield

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## The Fannie and Freddie Insurance Subsidy

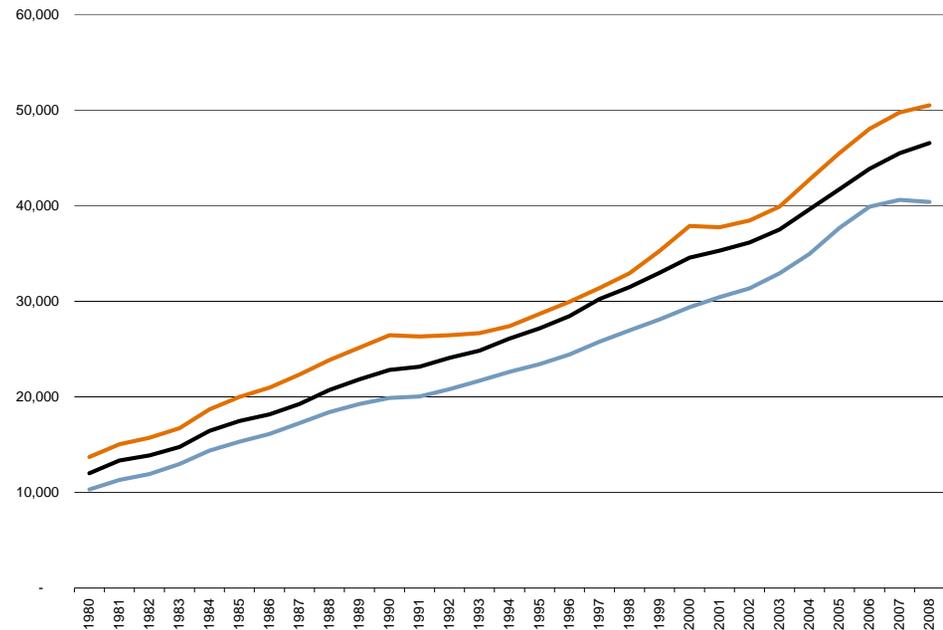


Source: Data Impact Forecasting, Analysis by Aon Benfield

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# Why is the Take-Up Rate for California Earthquake Insurance So Low?

- Reason given:
  - No real coverage available
  - CEA policy is too expensive
  - CEA policy does not cover my equity
  - I don't have any equity left anyway...
  - If everyone had to buy cover, nobody could afford to live here
  
- Real reason
  - **They don't have to**
  - The insurance is not required
- California GDP per person
  - Never been lower than U.S.
    - Annually 4 to 16% higher
  - Never been lower than Florida
    - Annually 20 to 33% higher



Source: Data U.S. Census Bureau, Analysis by Aon Benfield

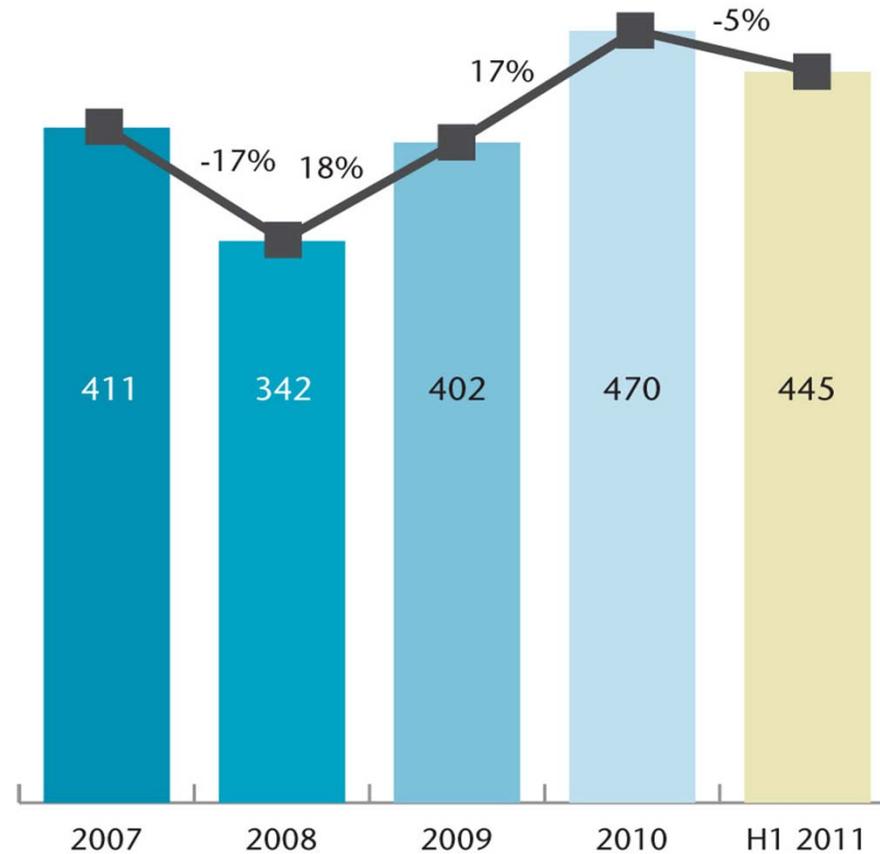
## Homeowner Needs

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- Banks provide loans that do not reflect the relative risks even now
  - Earthquake risk on non-conforming loans is not priced
  - Earthquake insurance is not required
  - In substance, earthquake insurance is free from banks
- Investors understand that they are taking earthquake risk for no charge
  - Largely relying upon rating agencies
  - Uncomfortable with highlighting the risk
  - In the end rationalize the earthquake risk because they still like the asset class
  - In substance, earthquake reinsurance is free from investors in MBS
- This shouldn't last, but it may – chance for insurers to join and serve homeowners
- Forgiveness of the principal post event – catastrophe loan
  - Slightly higher interest rate for contingent loan forgiveness
  - Insurers are more credible than banks at assessing catastrophe risks
  - Insurers like banks can service, package and resell mortgages
- Protect homeowner's equity
- Insurance with replacement home option – while home national inventory in catastrophe regions remains materially overbuilt

## Is There Enough Reinsurance Capital to Absorb Earthquake Risk?

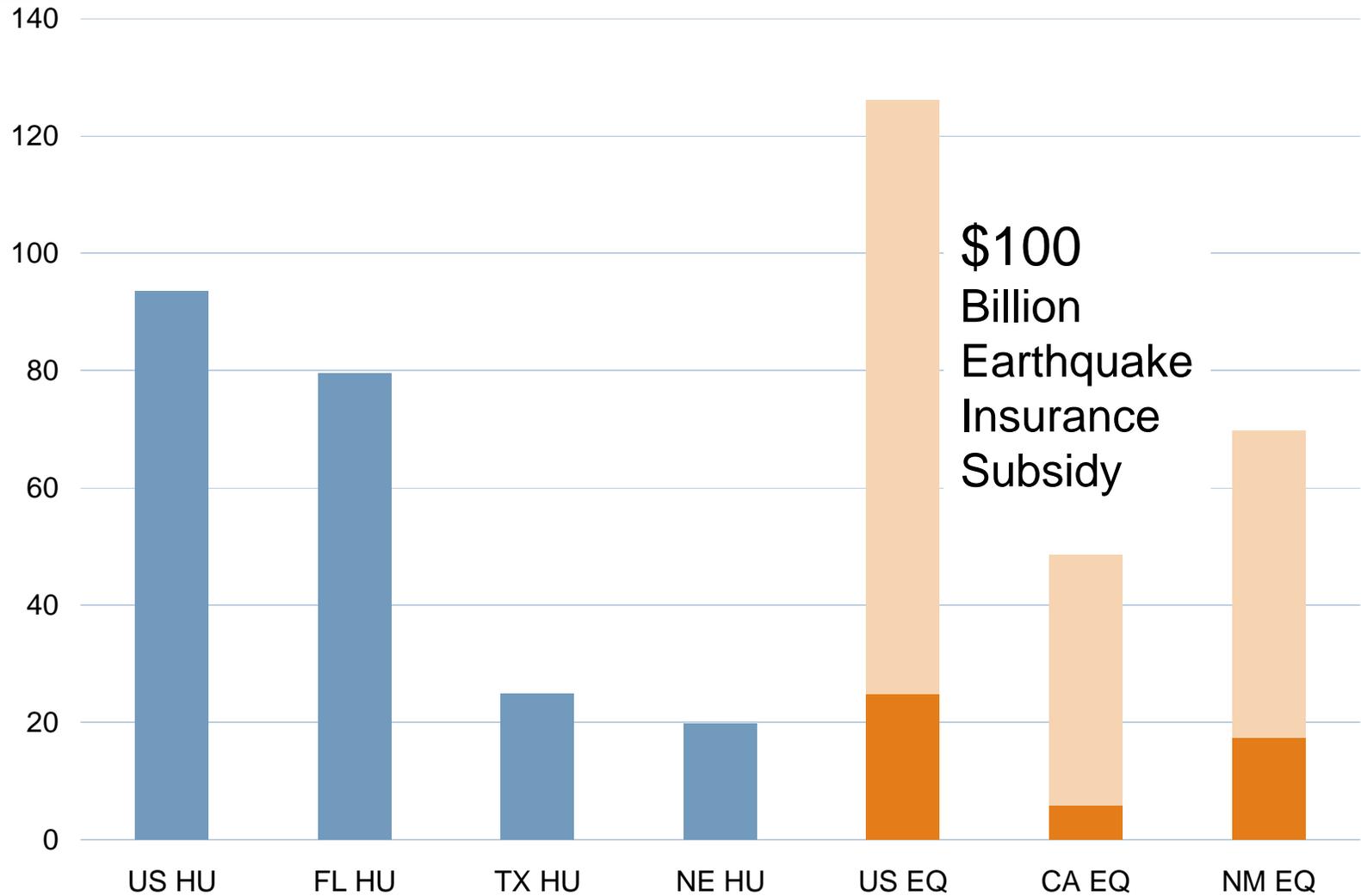
- Yes – despite difficult Q1 2011 catastrophes, reinsurer capital remains at near record levels
  - Reinsurer capital is more than likely going to end the year higher than it started
  - Capacity remains adequate to supply the current needs of insurers



Source: Individual Company Reports, Aon Benfield Analytics

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## Is the \$100b Subsidy Too Large for Reinsurers to Absorb?



Source: Data Impact Forecasting, Analysis by Aon Benfield

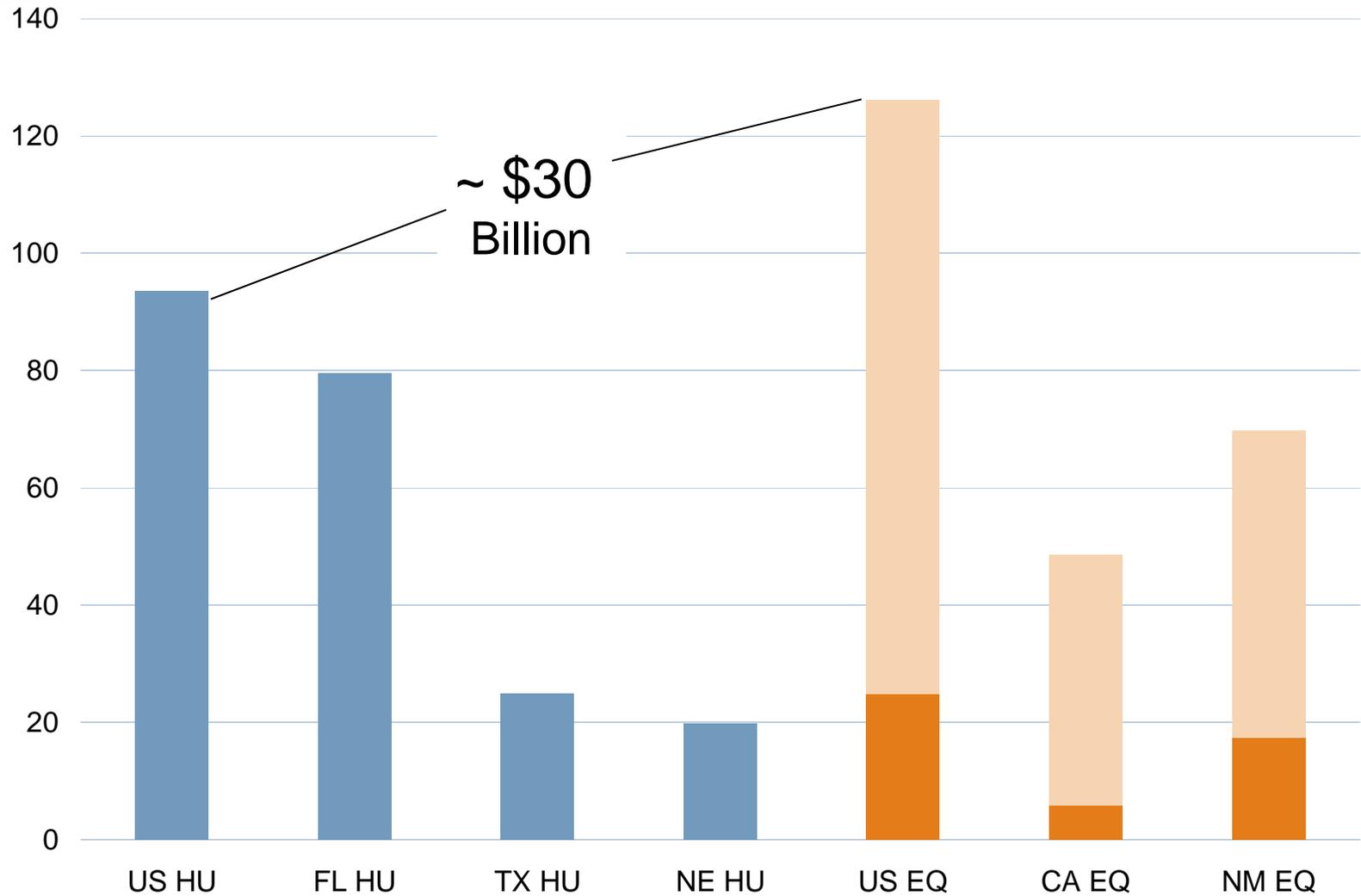
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## Is the \$100b Subsidy Too Large for Reinsurers to Absorb?

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- No
  - Due to the diversification of their exposures, reinsurers will **NOT** have to allocate \$100b of capital to absorb the earthquake exposure
  - Many metrics are used to evaluate reinsurer capital adequacy
    - Economic capital models / Individual Capital Assessments
    - Regulatory models
    - Rating agency models
  - For the reinsurance industry, the most significant constraint on underwriting catastrophe exposure is the A.M. Best model, referred to as Best's Capital Adequacy Ratio ("BCAR")
    - BCAR capital charge for catastrophe exposure has many dynamics, but is largely calculated as the losses that would result, after reinsurance / retrocessional recoveries, reinstatement premiums and statutory tax rate, from:
      - ♦ 1 in 250 (0.4% probability) Earthquake event
      - ♦ 1 in 100 (1.0% probability) Hurricane event
      - ♦ 1 in 100 (1.0% probability) Other modeled catastrophe event (e.g., Flood, Brush Fire, Tornado Hail)
    - The additional capital required to underwrite earthquake risk is the delta between the current U.S. hurricane peak and the potential further U.S. earthquake peak

# Required Reinsurer Capital is Significantly Less than Taxpayer Subsidy



Source: Data Impact Forecasting, Analysis by Aon Benfield

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# Questions & Answers

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