Climate Risk and Insurance Regulation

- Market Risk Advisory Committee Meeting
- U.S. Commodity Futures Trading Commission
- June 12, 2019

- Dave Jones
- CA Insurance Commissioner, Emeritus
- Director, Climate Risk Initiative
- UC Berkley Law School, Center for Law, Energy and Environment/
- ClimateWorks Foundation
- Senior Director, The Nature Conservancy

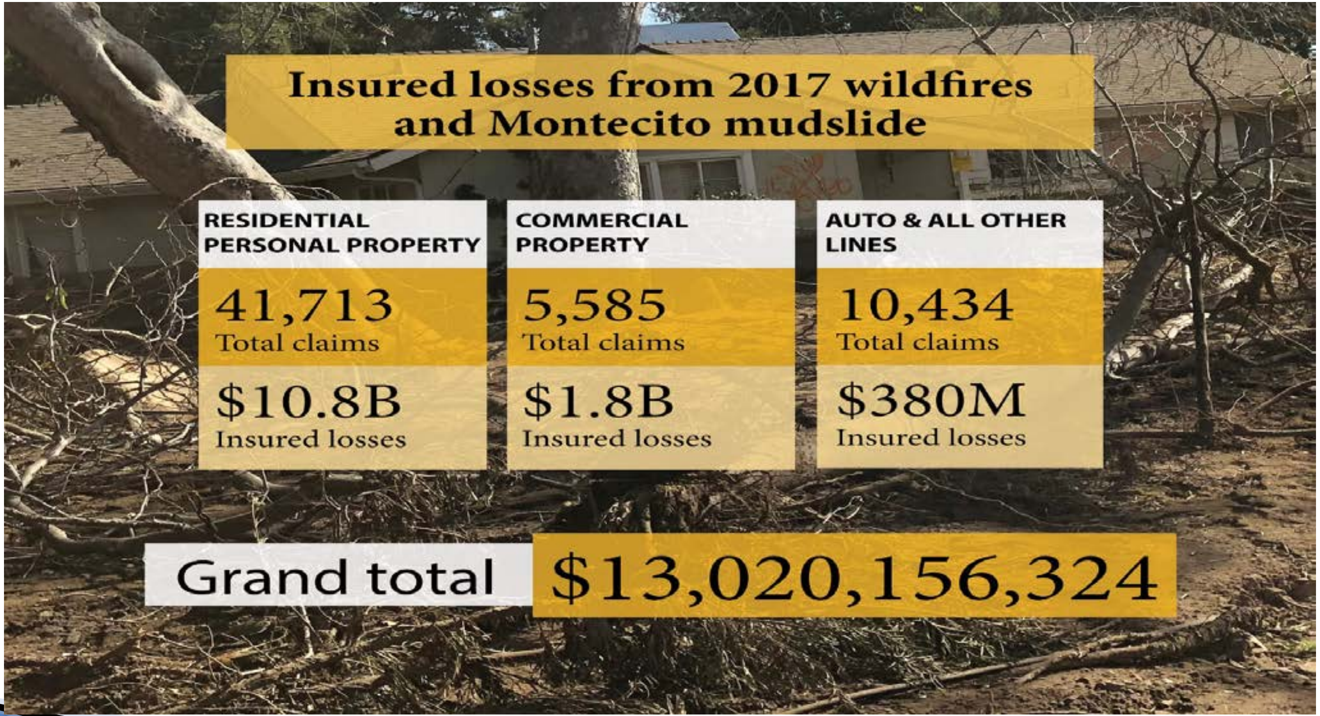
California Insurance Market

- $310 billion a year in insurance premiums.
- Largest insurance market in the United States.
- Fourth largest insurance market in the world.
- Approximately 1300 admitted insurance companies with over $5.5 Trillion in assets

Climate Risks

- Physical
- Transition
- Liability

CA Wildfires 2017: Climate Related Physical Impact



Impact of 2018 CA Wildfires

- Climate Change contributing to wildfires severity/frequency
- 86 lives lost in CampFire 2018
- 14,400 homes destroyed
- $12 Billion in insured losses for 2018 fires
- Small insurance company insolvent due to fire claims
- Pacific Gas and Electric (PG&E) files for Ch. 11 bankruptcy reorganization –$30 Billion potential liability from causing fires

Insurance Regulation and Climate Risk

- NAIC Climate Risk Disclosure Survey 2011-18
- Climate Risk Carbon Initiative 2016-2018
- Task Force on Climate Related Financial Disclosures (TCFD) Recommendations 2017
- Founded Sustainable Insurance Forum 2017
- 2 Degree Scenario Analysis: Insurer Investment Portfolios 2018

NAIC Climate Risk Disclosure Survey

- Developed by National Association of Insurance Commissioners (NAIC) in 2010.
- How are insurers addressing climate risk in underwriting, reserving and business operations?
- Lead states (CA, NY, WA, NM, CT) administer annually since 2011.
- Insurers with $100 Million+ in premiums surveyed.
- Surveying 1000 insurers = Over 70% of U.S. insurance market.
- Results made public on CA Dept. of Insurance searchable website

NAIC Climate Risk Disclosure Survey Results

- 61% of insurers have climate change risk management policy
- 69% of insurers consider impact of climate change on investment portfolio
- 60% of insurers altered investment strategy in response to climate risk considerations
- Insurers more focused on underwriting risk but much less focused on climate risk to investments

Transition Risk to Fossil Fuel Investments

- Market forces: Decline in prices per kilowatt hour for renewable energy.
- Regulatory measures at local, state, and national levels that reduce use of fossil fuels
- Paris Agreement
- Coal losses already a reality.
  - Dow Jones U.S. Coal Index dropped 92.9% from 2011 to 2017.
  - CalPERS/CalSTRS lose $840 Million
  - 42 US coal companies bankrupt.
  - Global insurers divesting.
  - Banks decline lending to coal

CA Insurance Commissioner Climate Risk Carbon Initiative: 2016 – Present

- Climate Change ”Transition Risk” poses financial risk to investments in oil, gas, coal, and utilities.
- Objective: Increase insurers’ consideration of climate risk to investments in oil, gas, coal and utilities
- Objective: Increase regulators’ understanding of insurers’ investments in oil, gas, coal and utilities and exposure to transition risk

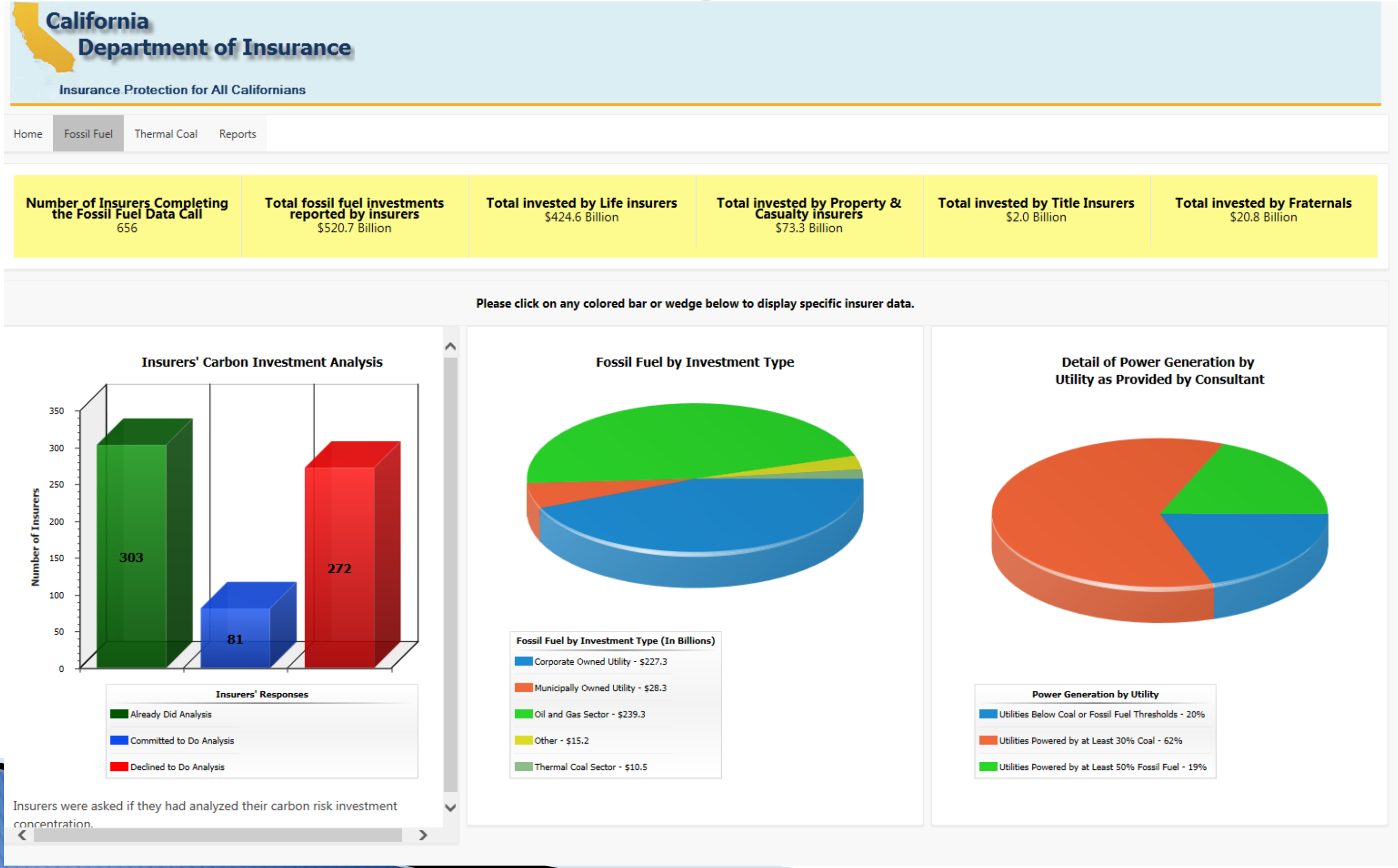
Climate Risk Carbon Initiative 2016

- Fossil Fuel Holdings Disclosure Requirement
  - 670 insurers with $100+ million of U.S. premiums.
  - Required insurers to report/disclose oil, gas, coal and utility investments.
  - Results made public in searchable database
- Thermal Coal Divestment Request
  - All 1300 insurers.
  - Divest from thermal coal investments.
  - Pledge to refrain from future thermal coal investments.
  - Voluntary.
  - Public disclosure.

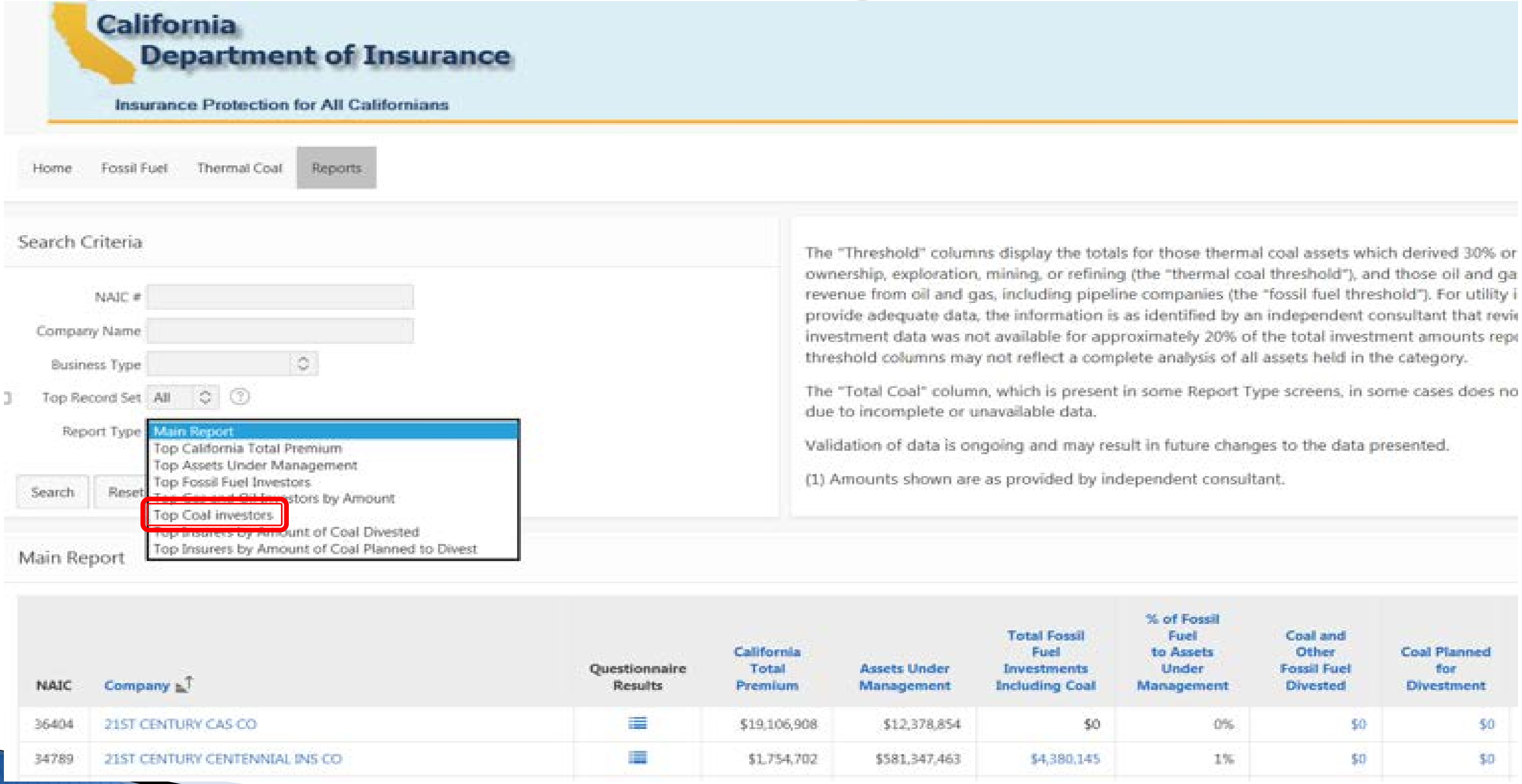
Climate Risk Carbon Initiative Sector Wide Results

- $555 Billion in fossil fuel related investments.
- $21.4 Billion invested in thermal coal enterprises.
- $4 Billion thermal coal and fossil fuel investments divested.
- Additional $944 Million of thermal coal investments committed to be divested.
- 670 insurers divested some or all or had no coal holdings
- 325 insurers said will refrain from future coal investments

Results in User-Friendly Format & Drill Down



Reports Tab – Search Capabilities



Task Force on Climate-related Financial Disclosures (TCFD)

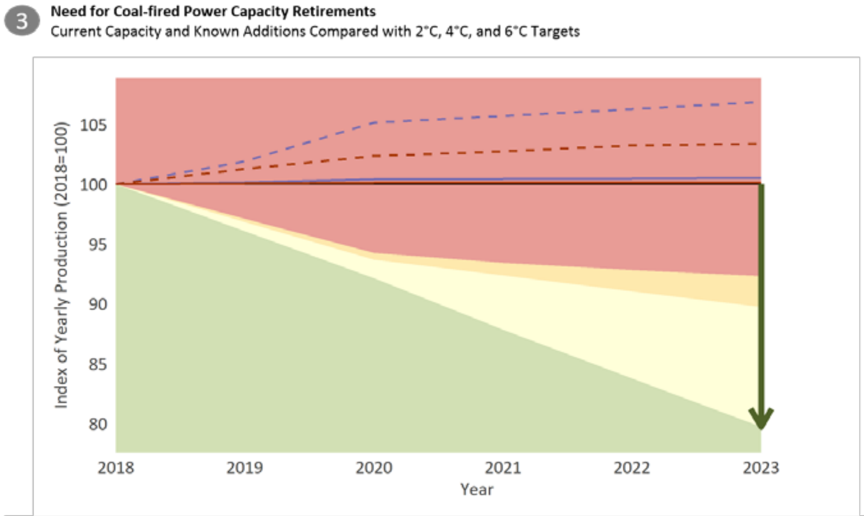
- G-20 Financial Stability Board created TCFD
- TCFD led by private sector
- TCFD Report provides framework for corporations to assess and report their climate related risks and risk management strategies
- Governance, Strategy, Risk Management, Metrics/Targets
- Climate risk disclosures should be made in annual financial filings
- Investors, including insurers, should undertake climate risk scenario analysis of investment portfolios

Climate Risk Scenario Analysis of Insurer Portfolios

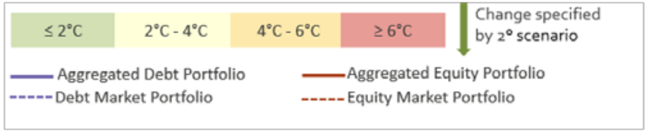
- Engaged 2 Degrees Investing Initiative to perform scenario analysis of insurers’ investment portfolios
- Analyzed 670 insurers with $100M+ premium annually
- $4.25 Trillion in assets
- Analysis of each portfolio relative to transition to low carbon economy consistent with limiting global warming to 1.5 and 2 Degrees Celsius
- Most recent scenario analysis (1.1.2019) included both physical and transition risks to investments

Scenario Analysis

- Aggregate results published online.
- Individual insurer reports sent to top 100 insurance companies (by investment portfolio) and those with thermal coal exposure beyond the 95th percentile.



The graph above shows that the electric utilities of the aggregated fixed-income and equity portfolios of California insurers with over $100 million in premiums should massively retire coal-fired power plants to be aligned with the IEA 2°C scenario. Note that this is a measure of "locked-in" capacity, not a capacity forecast. When taken into account, announced retirements lead to a 2 to 3% reduction of the installed capacity for insurers' equity and bond portfolios over the period, when a minimum of 20% would be required to meet the target of the 2°C scenario.



Note that for simplicity the trajectory of the debt and equity portfolios for a given technology are plotted here on the same graph, against a background defined by the trajectories of the 2°C, 4°C, and 6°C scenarios for the *fixed-income* portfolio. Because the regional distribution of assets differ between the aggregated fixed-income and equity portfolios, their 2°C, 4°C, and 6°C targets - and therefore background shading for the graphs below - technically differ as well. However, for the aggregated portfolios this difference is slight and does not impact the overall alignment results, and so for simplicity of visualization, both the equity and fixed-income portfolios are shown here against a background defined for *fixed-income*.

Scenario Analysis Results: Insurers Sector Wide

- Thermal coal investments are very misaligned with 2 Degree scenario.
- Automobile sector (gas burning) investments are not aligned with 2 Degree scenario.
- Oil production investments are not aligned with 2 Degree scenario.
- Gas production investments are aligned with 2 Degree scenario.
- Under investment in renewable energy sector as compared to investment consistent with 2 Degree Scenario

Sustainable Insurance Forum (SIF)

- Founded 2017
- Founding Chair
- 25 Insurance Regulators from across the globe
- Develop/Share Best Practices on Addressing Climate Risk from Supervisory Standpoint
- Joint Working Paper on Best Practices 2018
- Endorsed TCFD Recommendations
- Surveying Insurers on Take Up of TCFD (2019)

Network for Greening the Financial System (NGFS)

- 34 Central Banks & Bank Supervisors
- Best Practices for Climate Risk and Bank Supervision
  - Macro
  - Micro
  - Credit Enhancement for Green Investment (?)
- Action Plan April 2019

UNEP Financial Initiative Report:Changing Course

- 1.5 Degree: 13.6% of portfolio value at risk (transition)
- Value Loss of $10.7 Trillion
- Utilities, Transportation, Ag, Mining & Petroleum Greatest Risk
- Green Profits at 2 Degrees: $2.1 Trillion
- More Risk/Loss if Governments Delay Action

Conclusion

- Climate Change Poses Material Risks to Financial Sector
- Disclosure Increasing In Financial Sector (TCFD)
- Financial Regulators Increasing Requirements
- Investors Demanding Disclosure/Divestment
- Inevitable Policy Response Poses Greatest Risk of Loss
- Regulators Should Engage on Micro & Macro Risks