

Climate Risks Are Already Destabilizing Insurance Markets and Threatening Americans' Financial Security

Climate change threatens not only the health of the planet but also Americans' financial well-being. Climate disasters can quickly undermine the value of people's homes, while the broader effects of the climate crisis can disrupt the health of the broader financial sector. One clear example is in the home insurance market, where climate-exacerbated risks from hurricanes and wildfires are making parts of America hard to insure.

Climate change threatens broader financial stability too, both through direct risks to the real estate market, but also through portfolio risks that could impact pensions and mutual funds. Adequately characterizing and valuing these climate risks with better data and analysis can inform decision making and regulations to mitigate climate financial risk. Policymakers should ensure that financial markets integrate climate risks into their decision making and turn away from anti-capitalist efforts to prevent the financial sector from accounting for environmental risk factors.

Climate risks are making parts of America hard to insure and pushing premiums higher.

A potential [climate bubble](#) in real estate is looming because real estate prices in some regions in the United States are overvalued given the unaccounted for financial risks of climate impacts, such as climate-exacerbated wildfires, hurricanes, and sea level rise. This risk is most visible in the market for home insurance, where climate-fueled extreme events, such as fires in [California](#) and [Colorado](#) and hurricanes in [Florida](#) and [Texas](#), are wreaking havoc on these markets. Roughly two out of three American homes are [underinsured](#), meaning that millions of homeowners would face massive financial losses after a natural disaster. As uninsured damages rise, communities will instead use the Federal Emergency Management Agency (FEMA) disaster relief and other public funds to protect families' finances and overall well-being.

[Risks from wildfires are leading insurers to pull out of markets and premiums to skyrocket.](#)

Wildfires have led to enormous [insured damages](#) in recent years, and their risk is also difficult to quantify and price into insurance policies. This risk is [hard](#) to predict because fires can start for a number of reasons and because their risk to peoples' homes at any given time is based on a complicated combination of topography, drought conditions, wind patterns, fuel amounts, and the location of houses among many other factors. This has led insurers to either raise premium costs substantially or [pull out of markets](#) entirely—with several major insurance companies declining to provide coverage in California in the summer of 2023. Californians also saw a [9.9% increase](#) in premiums at renewal from May 2021 to May 2022.

[Risks from hurricanes and flooding are challenging both public and private insurance markets.](#)

More intense hurricanes have also caused widespread damage in Florida and along the east coast with [billion dollar weather](#) and climate disasters in the United States increasing over the

last 40 years. Hurricanes and floods caused [\\$120 billion](#) in insured losses globally in 2022. This has led to large disruptions in the insurance markets on the east coast of the United States, especially in Florida's flawed property reinsurance market. [Reinsurance](#) companies sell insurance policies *for* insurance companies, which insurers need if they have to pay out very large claims that would otherwise drive them out of business. This type of coverage is both essential and expensive in Florida because the state sees so many catastrophic weather events. The cost of reinsurance in Florida has risen 54% from 2019, with much of the cost passed along to families through higher home insurance while the amount of coverage insurers purchased only rose 15%.

Flood risks have led to more than half the insurers in Florida ending up on a [financial health](#) watch list. Reinsurance companies are raising their premiums, which on average [increased 40-70%](#) this hurricane season—a cost that is largely passed on from insurers to homeowners buying coverage. This has led some insurers to leave areas altogether and for insurance premiums for Americans to increase. For example, premiums in Florida are costing on average \$6,000 annually for home insurance policies, four times more than other states. In response to the state's continuing insurance issues, the Senate Budget Committee recently [announced](#) an investigation into Florida's state-backed insurer of last resort given ongoing concerns about its solvency.

This financial risk from [flooding](#) and other storm damage is by no means isolated in just one state. Texas has seen home insurance premiums [jump 22%](#) this year due to a series of billion dollar disasters. [Unpriced flood risk](#) in the U.S. housing market is generally concentrated in counties along the coasts that do not have flood risk disclosure laws, meaning that insurers cannot accurately account for local flood risks. A recent [study](#) found that residential properties with flood risk are overvalued by \$121–237 billion dollars. [Suppressed](#) insurance rates, which do not fully account for climate risks, have contributed substantially to this overvaluation.

[Climate risks create significant affordability concerns for lower-income families.](#)

That said, better accounting for these risks can create incentives for people to drop coverage altogether. As the National Flood Insurance Program (NFIP) has rolled out a [new pricing](#) system that better reflects [existing flood risk](#), the resulting increased premiums [caused](#) 9% of those previously covered to drop their coverage altogether. This sensitivity to premium costs reflects the difficulty of balancing accurate insurance pricing and affordable coverage.

[Low-income](#) and formerly [red-lined](#) area homeowners in flood-prone areas are especially exposed to these issues, as they stand to lose substantial amounts of equity due to unpriced climate risk in the housing market. These risks to peoples' finances are especially worrisome because oftentimes people do not know that their home or one they are looking to move into is at risk of flooding damage due to lack of [disclosure](#) requirements.

As more areas become uninsurable, families will face rising financial burdens.

Uninsurable areas have real world impacts on Americans' personal and financial well-being. For instance, the impact of losing all one's belongings to a climate-fueled extreme event (e.g., wildfires, floods, etc.) without insurance can be severe. Over [fifty percent](#) of losses in the United States were not insured in recent years, leading to large costs and damages that fall on individuals. Households with insurance are 85% less likely to report [high financial burdens](#) three weeks after a disaster and 82% less likely to report these burdens one year after disaster. Nearly a quarter of American consumers have [no emergency savings](#) to cover expenses in the event that their property is uninsurable or that insurance payouts take time to be processed. [Black and Hispanic households](#) are also less likely to have these savings, and what savings they do have are lower than other groups.

Local governments also face substantial risks.

Climate impacts, such as more destructive wildfires and hurricanes, lead to new and often [unexpected expenditures](#) for municipal governments. Erosion from heavy rain, which the [National Climate Assessment](#) showed grew in the Northeast by 70% between 1958 and 2010, can lead to increased road and bridge [maintenance and repairs](#). This damage can cause major transit disruptions, like what occurred after the recent deadly floods in [New York](#). Heatwaves, and the wildfires that sometimes accompany them, can force local governments to open cooling centers or other emergency shelters. These disasters can increase other energy expenditures for local governments, decrease [labor force participation](#) and income, and harm the broader economy while harming public health and increasing mortality.

This heat stress can also lead to communities paying more to borrow on the [municipal bond market](#). Heat-related damages equal to 1% of GDP annually are associated with 15 basis points (0.15 percentage point) higher borrowing costs compared to municipalities not exposed to these damages. This can make it harder for local governments to invest in their communities and provide basic services. A 2022 study showed that [California wildfires](#) between 1990 and 2015 had a substantial negative effect on municipal budgets and caused a long-term increase in local government spending. Local governments may also suffer substantial [decreases in revenue](#) from property taxes when homeowners move away from climate disaster-prone areas, or if better data on climate risks leads to falling local property values.

Climate risks to the broader financial sector are large, but opportunities also exist.

As climate change reshapes the economy and the world transitions away from fossil fuels, many companies and investment funds will be stuck with so-called “**stranded assets**” like coal-fired power plants or oil rigs that have lost their financial value. Utility companies forced to bear the losses incurred by holding these assets would likely raise electricity prices for families to cover their losses. One recent study found that the total [lost profits](#) from stranded assets could total more than \$1.4 trillion globally. The majority of those lost profits are concentrated in the financial sector, with a net present value of over \$438 billion in potential losses due to stranded assets.

Individual investors are particularly at risk, as the same study estimated that [86%](#) of potentially stranded assets in the United States are ultimately owned by these investors. The threat to pension funds in particular is a threat not just to the financial system, but to the retirement savings of all Americans. This climate bubble would also hit the banking and financial sectors. For example, wildfire risk could lead to as much as [\\$337 billion](#) in lost real estate value with downstream impacts on property tax revenue and school funding.

The incorporation of environmental, social, and governance (ESG) goals into investing strategies can help to mitigate the risks to investors from climate change. Simultaneously, ESG goals meet the demands of investors seeking a more environmentally-friendly way to invest while also giving them a way to financially benefit from the transition away from fossil fuels. At the beginning of 2022, more than \$8.4 trillion were invested in [sustainable assets](#), around 13% of all assets being managed professionally. Companies themselves are now working to quantify climate risks like any other threat to their business, with one 2018 report finding that 215 of the world's largest companies estimate a collective nearly [\\$1 trillion](#) in climate risks to their operations. Recent efforts to stifle ESG investing from conservatives, in addition to ignoring potential investor preferences for sustainable investments, can be viewed as [anti-capitalist](#) because they force companies to ignore climate risks when firms alone should decide how to allocate capital among their investments.

Better data and analysis can inform climate financial risk mitigation.

Alongside reducing greenhouse gas emissions and investing in clean energy and climate adaptation, massive risk estimation and reduction are needed to reduce the potential human and financial consequences from extreme events and other climate impacts.

[Economic modelling should be updated to better incorporate climate risks.](#)

Data and analysis to target these interventions are essential, and [better models](#) of how climate affects different parts of the economy are sorely needed to inform this decision-making. Current [economic approaches](#) used to model financial shocks struggle to factor in a range of climate risks, or how these risks can compound when multiple climate effects occur at the same time. For example, when [Hurricane Katrina](#) hit, the city had modeled that the pumps used to drain the city and protect the power grid would hold, but they did not take into account that the personnel necessary to manage the pumps would need to evacuate. Another paradigm disruption is that some insurers project that after 4 degrees of warming, private property underground like basements will be [uninsurable](#) due to climate-exacerbated flooding.

This and other potential major economy-wide changes need to be accounted for in models of a climate-changed economy—it is **no longer business as usual**. Two federal agencies (the National Oceanic and Atmospheric Administration and the National Science Foundation) are working together to address this by creating a [research center](#) to bring climate science to the insurance industry. While future climate projections—which are now being used more in financial decision making—better characterize future risks than historical data, they were not [originally](#) created as inputs for such fine scale uses around financial decision making. New

models created by the [private sector](#) to model climate risk represent important steps forward, but it is important that these tools are subject to oversight, data validation, and user training to prevent adverse impacts and errors. To help establish more science-informed decisions throughout the financial sector, companies and governments should invest in more workforce development and communication training at the [interface](#) of climate, data science, and economics.

[Innovations in insurance and risk-sharing can better guard against financial risks.](#)

There are also several innovative tools to help address these issues using new forms of insurance and risk sharing. [Parametric insurance](#) represents a useful opportunity to cushion the financial blows posed by climate disasters. These insurance products guarantee a [set payout](#) when a specific event occurs instead of paying out actual expenses, which greatly increases the speed of claim payments and allows people to repair and get back to their lives quickly. They can also be multiyear or seasonal policies.

Other recent innovations include [community-based](#) catastrophe insurance, climate adaptation as a service, intermediaries for climate investment, and public climate [risk pooling](#) to distribute risk. Community-based catastrophe insurance is a way for a community institution to help members access and afford insurance. Climate adaptation as a service allows for longer-term financing of adaptation projects where investors are paid back over time with interest. Intermediaries can help match asset owners who can or want to invest in climate efforts with climate adaptation needs.

Congress and federal agencies can also play a role by updating their protocols that can allow for better collaboration and foster innovation. Congress can direct FEMA to collaborate with insurance industry experts to support the creation of a private all-hazards insurance program that would cover all natural hazards, be available for purchase directly from insurers, and meet the federal mandatory purchase requirements for flood insurance and disaster recovery programs.

[Artificial Intelligence \(AI\) can improve risk modelling and help reduce the damage from climate disasters.](#)

AI presents an opportunity to bring together vast quantities of data with climate scenarios and improved risk equations, and some reinsurance companies are starting to use AI tools to better model climate financial risks. For example, [AI](#) is being used to more precisely quantify wildfire risk so that insurance rates do not need to all rise in at-risk areas but can instead be tailored to better reflect on-the-ground risks. AI can also be part of the solution to [fight wildfires](#) before they get out of control by identifying wildfires quickly before people may be able to see them and by being part of an early-warning predictive system.

Conclusion

While climate change presents large risks to Americans' finances and the broader economy, opportunities exist to invest in ways that benefit people and the environment. Innovations in insurance, risk sharing, and AI are also providing exciting ways to safeguard U.S. assets into the future.