

Prepared for Impact

Are governments ready for the new fiscal realities of extreme events?

BY THAO PHAM AND MANUELA SASOT

An extreme event is a time and place in which weather, climate, or environmental conditions—such as temperature, precipitation, drought, or flooding—fall outside a certain threshold, typically within the upper or lower 5 to 10 percent of historical measurements.¹ Extreme events can create fiscal shocks that increasingly test the resilience of governments' budgets.

In recent decades, natural disasters have severely impacted state economies across the United States. Southern California wildfires caused \$250 billion in damages; Hurricane Milton, \$85 billion; and Hurricane Helene, \$120 billion. In 2024 alone, 27 extreme events resulted in more than \$1 billion in losses each, affecting structures, infrastructure, and agriculture, with lasting economic consequences.²

Catastrophic events often overwhelm the immediate capacity of local governments, requiring state governments

to step in to coordinate large-scale response, recovery efforts, repair infrastructure, and manage intergovernmental transfers. Through sound budgeting and financial management practices, state policymakers can better prepare for, respond to, and recover from these shocks. But how exactly do extreme events affect public finances? And how can states properly prepare for and respond to such extreme circumstances?

Fiscal impact

Government revenues. Natural disasters negatively affect government revenues by reducing citizens' incomes, employment, and business activity, thereby shrinking tax bases. Destruction of physical capital and disrupted production lower output and tax collections, particularly property taxes, which made up about 30 percent of U.S. local government revenue in 2021, according to the U.S. Census Bureau. Property damage often leads to steep, immediate declines in these revenues.

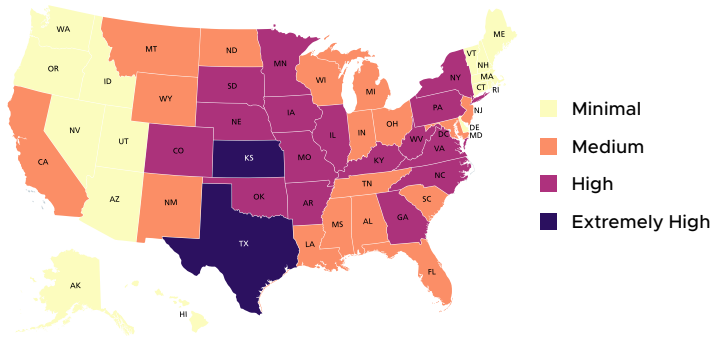
Over the longer term, though, recovery and rebuilding can stimulate growth. Some studies, such as one from the Federal Reserve Bank of San Francisco, find that while disasters initially depress employment and income, these effects can reverse as reconstruction boosts jobs, wages, and property values. The fiscal impact, therefore, varies by context, depending on local economic resilience, tax structures, and post-disaster policy responses.

Government expenditures. Extreme disasters almost always drive up government spending as authorities respond to emergencies, rebuild infrastructure, and assist affected populations. This often forces the reallocation of funds, delaying or canceling other projects and potentially weakening long-term fiscal health. Local governments frequently face lasting financial strain after major disasters, according to the National Bureau of Economic Research (NBER), with revenues,



With an estimated \$160 billion in damage, Hurricane Harvey was one of the costliest natural disasters in U.S. history.

EXHIBIT 1 | Disaster Vulnerability Map Across the United States



Where the extreme events are

Exhibit 1 shows the disaster vulnerability map across the United States, using NOAA data from 1990 to 2025. States classified as having a “minimal” level reported fewer than approximately 20,000 disasters during this period. The classification thresholds for “medium” and “high” levels are 40,000 and 80,000 disasters over 35 years, respectively. States with more than 80,000 disasters in this timeframe fall under the “extremely high” vulnerability category.

All U.S. states face natural disasters, but some are hit more frequently. The State of Texas, with 137,725 events, and the State of Kansas, with 80,987 events, saw the most. The most common event types include hail, thunderstorm winds, droughts, and floods. The NOAA recorded more than 1.7 million events across more than 40 categories during this period.

expenditures, and debt levels declining for years—especially in lower-income or minority communities with limited fiscal resilience.

Of course, the fiscal impact varies. Some disasters spur increased spending on social safety nets, such as unemployment insurance or public health programs, while others lead to higher medium-term revenues and expenditures from reconstruction,

the NBER explains. Still, overall fiscal balances often remain negative as recovery costs exceed gains.

At the federal level, the Federal Emergency Management Agency (FEMA) Community Disaster Loan (CDL) program provides up to \$5 million in forgivable loans to help local governments maintain essential services after presidentially declared disasters, stabilizing finances during recovery.

Generally, states that maintain both rainy day funds and disaster relief funds are better equipped to manage financial challenges, offering greater resilience and adaptability in extreme situations.

Are rainy day funds and disaster relief funds sufficient?

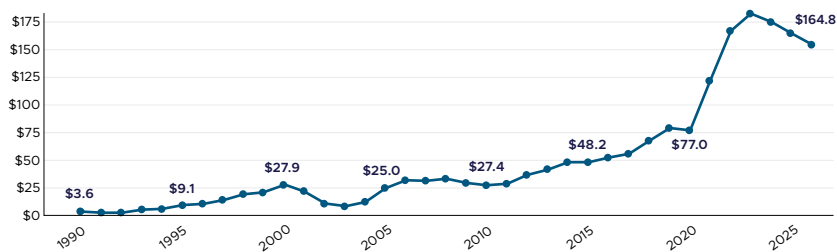
Rainy day funds (RDFs)—formally known as budget stabilization funds—are reserves set aside by U.S. state and local governments to cushion the fiscal impact of economic downturns, revenue volatility, or emergencies. These funds are a critical mechanism for promoting fiscal discipline and ensuring the continuity of public services during times of financial stress.

Similarly, disaster relief funds (DRFs) are essential financial resources, particularly allocated to assist communities affected by natural or human-made disasters such as floods, hurricanes, and wildfires. These funds can be administered by federal agencies like FEMA, but also by state and local governments, which often maintain independent emergency funds and response programs. RDFs are utilized to support a wide range of services, including emergency shelter, food, medical care, infrastructure repair, and long-term recovery efforts.

Typically, both RDFs and DRFs are built up during periods of economic growth through budget surpluses or statutorily mandated transfers. States adopt diverse rules regarding fund caps, deposit mechanisms, and withdrawal conditions. For example, some states limit withdrawals to periods of revenue decline, while others allow broader use during declared emergencies.³ Similarly, states can have either or both types of funds.

During extreme events—such as natural disasters, pandemics, or large-scale economic shocks—RDFs and DRFs play a vital role in government response. For instance, during the COVID-19 crisis, 28 states utilized their

EXHIBIT 2 | RDFs Balance, 1990 to 2025



* Source: National Association of State Budget Officers, 2025

stabilization funds to offset revenue losses and finance urgent expenditures.⁴ Similarly, states have used these funds in the aftermath of hurricanes, wildfires, and other disasters to avoid drastic cuts and maintain critical infrastructure and services.

Put simply, RDFs or DRFs are reserves built up to use during times of economic downturns or extreme events that incur unexpected costs. Well-designed RDFs or DRFs can enhance the government's fiscal resilience and flexibility. They not only provide a financial buffer during downturns but also enable a timely and effective response to emergencies, contributing to long-term economic stability.

RDFs and DRFs in the U.S.

All 50 states and the District of Columbia have established forms of RDFs, and 43 states have DRFs. Generally, states that maintain both types of funds are better equipped to manage financial challenges, offering greater resilience and adaptability in extreme situations. The available data suggest that states possess a comprehensive understanding of potential budgetary risks and have developed robust response strategies.

Over time, RDF balances have risen substantially, reflecting a growing emphasis on building fiscal reserves to prepare for economic downturns and unexpected crises (see Exhibit 2). The rapid recent growth highlights states' strengthened fiscal positions, supported by robust revenue collections and more cautious budgeting strategies.

A closer look at the most vulnerable states

As mentioned earlier, certain U.S. states are more vulnerable to certain disasters. All these states have both RDFs and DRFs, suggesting that they are cautious about the risks and mindful of their possible plan of action. Only four of them have historically used either of those funds to respond directly to disasters, which highlights a key vulnerability: Despite high exposure to natural disasters, most states have not mobilized these dedicated funds for disaster relief.

Texas stands out, having expended about \$214 million from its RDF between 1990 and 2016, while the State of Missouri used roughly \$125 million for storm and housing relief.



Governments that combine prudent fiscal reserves with adaptive governance frameworks can better withstand the fiscal shocks of emerging extreme events.

The states of Illinois and Virginia made more recent allocations in 2024 for storm recovery and the creation of new disaster assistance funds, respectively. The remaining states, which are equally at risk—particularly those with tens of thousands of recorded disasters—show no record of activating these funds, suggesting potential gaps in fiscal responsiveness or disaster preparedness policies.

Key lessons and insights for governments

The growing frequency and severity of extreme events—whether natural disasters or economic downturns—underscores the urgent need for governments to strengthen fiscal resilience and adaptive capacity. These

events not only strain state budgets through direct damage and emergency expenditures, but they also erode revenue bases and disrupt long-term economic stability. The experiences of highly vulnerable states such as Texas, Oklahoma, and Kansas demonstrate that sustained exposure to disasters can both challenge and catalyze fiscal innovation, particularly in the creation and management of financial buffers.

Proactive fiscal planning matters.

Establishing and maintaining well-capitalized RDFs and DRFs provides states with critical flexibility to respond rapidly and effectively without jeopardizing essential services. The growing balances of RDFs nationwide highlight an increasing recognition of their value as a fiscal safeguard.

Integration of funds enhances resilience. States with both RDFs and DRFs are better positioned to manage concurrent shocks. Coordination between these funds ensures both immediate response capacity and sustained recovery support.

Equity and inclusion in recovery. Extreme events often exacerbate socio-economic disparities. Governments should prioritize equitable allocation of relief resources, ensuring that low-income and marginalized communities are not disproportionately affected by delayed responses or funding shortfalls.

Institutional learning and adaptability. Governments that learn from past disasters—by tracking fund usage, reviewing fiscal impacts, and revising statutory rules—should be in a better position to build institutional memory and improve future preparedness.

In essence, fiscal resilience is as much about strategy as it is about savings. Governments that combine prudent fiscal reserves with adaptive governance frameworks can better withstand the fiscal shocks of emerging extreme events—protecting both economic stability and community well-being in an increasingly unpredictable future. ■

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¹ Herring, D. (2020, October 29). *What is an "extreme event"?* Is there evidence that global warming has caused or contributed to any particular extreme event? NOAA Climate.gov. <https://www.climate.gov/news-features/climate-qa/what-extreme-event-there-evidence-global-warming-has-caused-or-contributed>

² Smith, A. B. (2025, January 10). *2024: An active year of U.S. billion-dollar weather and climate disasters.* NOAA Climate.gov. <https://www.climate.gov/news-features/blogs/beyond-data/2024-active-year-us-billion-dollar-weather-and-climate-disasters>

³ National Association of State Budget Officers (NASBO). (2020). *Budget processes in the states.* Retrieved from <https://www.nasbo.org>

⁴ Pew Charitable Trusts. (2021). *States' rainy day funds were critical during COVID-19 crisis.* <https://www.pewtrusts.org>