

**Testimony of Howard Kunreuther**

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before

The Subcommittee on Economic Growth, Tax and Capital Access of  
the House Small Business Committee on  
“Oversight of the SBA’s Disaster Assistance Program and Examining Changes Proposed  
by H.R. 3042 – The Disaster Loan Fairness Act of 2011.”

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Chairman Walsh, Ranking Member Schrader, and Members of the Subcommittee, I appreciate your inviting me to testify on “Oversight of the SBA’s Disaster Assistance Program and Examining Changes Proposed by H.R. 3042 – The Disaster Loan Fairness Act of 2011.” My name is Howard Kunreuther and I am the James G. Dinan Professor of Decision Sciences and Public Policy at the Wharton School, University of Pennsylvania and co-director of the Wharton Risk Management and Decision Processes Center. The Wharton Risk Center was founded in 1984 and its mission is to examine alternative strategies for dealing with low-probability, high-consequence events (i.e. extreme events) based on an understanding of the decision processes of consumers, firms and public sector agencies.

Since Hurricane Katrina, the Wharton Risk Center has focused on the roles of the public and private sectors in reducing losses from natural disasters and aiding the recovery process following a catastrophic flood, hurricane or earthquake. The Center studied the hurricane and flood risk extensively in a book *At War with the Weather* (MIT Press, 2009, paperback 2011). The Center has also produced a number of papers published in professional journals most recently in *Science* and the National Academy of Sciences’ journal *Issues in Science and Technology*. Over the past several years my colleague Erwann Michel-Kerjan and I have interacted closely with Congressional staff on the future of the National Flood Insurance Program which will form the basis for much of my testimony today. I am submitting for the record the following two papers written with my colleague, Erwann Michel-Kerjan:

Kunreuther, H. and E. Michel-Kerjan (2011). “People Get Ready: Disaster Preparedness” *Issues in Science and Technology* September

Michel-Kerjan, E. and H. Kunreuther (2011). “Redesigning Flood Insurance” *Science* 333(6041):408-409, July 22

My testimony today will focus on the following three questions:

1. Why is the proposed legislation to extend SBA disaster loans at 1 percent to cover both disaster losses and other outstanding debts likely to increase future losses from natural disasters?
2. How can insurance coupled with other policy tools reduce future losses so that the SBA plays a secondary role in providing funds for disaster recovery?
3. How can the National Flood Insurance Program be modified so as to set a tone as to ways that the private and public sector can work together to reduce losses from floods and other natural disasters?

### **Evaluation of H.R. 3042—the Disaster Loan Fairness Act of 2012**

The proposed legislation provides that in any major disaster declared under Section 401 of the Stafford Act, the interest rates for any SBA loan programs will be 1 percent for eligible applicants in the disaster area, with or without credit available elsewhere. The provision appears to cover all SBA loans, not just loans for repairing or replacing losses from disasters.

There are several points to note about this provision. It creates a moral hazard problem by encouraging people to locate their homes and business in hazard-prone areas while at the same time reducing their economic incentive to purchase insurance and invest in mitigation measures prior to a disaster. These residents now know that they will be bailed out should they suffer losses from the next flood or hurricane, so therefore have much less incentive to take protective actions.

The proposed program has the potential of creating a situation in which homeowners and businesses in hazard-prone areas are financially better off after a disaster than they were before the event occurred, by being able to obtain a 1 percent loan to cover their uninsured losses as well as existing debt financed by SBA loans. A hypothetical but illuminating example illustrates this point. Suppose an uninsured business has an existing 20-year \$300,000 SBA loan at a 5 percent annual interest rate and then suffers a loss of \$100,000 to its property and contents from a disaster. Prior to the disaster, the business's annual payment for its SBA loan is \$23,759. Under the proposed legislation, the SBA would provide this business with a \$400,000 loan at an annual rate of 1 percent to cover its damages and existing SBA loans. The total monthly payment for this loan would be \$22,075, which amounts to \$1,684 less per year than what it is currently paying.

### **Role of Insurance and Other Policy Tools to Reduce Future Losses**

Rather than broadening the SBA loan provision in the way the current legislation is proposing, it is more important to design programs that reduce future disaster losses.

Insurance can play a central role in this regard by doing three things. First, if priced correctly, insurance provides a signal of the risk individuals and firms face in their current location. Second, insurance can encourage property owners in hazard-prone areas

to invest in mitigation measures by providing them with premium reductions to reflect the expected reduction in losses from future disasters. Third, insurance supports economic resiliency: following a disaster, insured individuals and firms can make a claim to obtain funds to help pay for the loss caused by the catastrophe rather than being forced to rely on their own resources or federal disaster assistance.

For insurance to play this role in combination with other programs involving the public and private sectors, it is important that the following two guiding principles<sup>1</sup> be adhered to:

***Principle 1: Premiums should reflect risk.*** Insurance premiums should be based on risk in order to provide signals to individuals about the hazards they face and to encourage them to engage in cost-effective mitigation measures that reduce their vulnerability to catastrophes. Risk-based premiums should also reflect the cost of capital that insurers must integrate into their pricing in order to meet solvency requirements from rating agencies and insurance regulators, and to also assure adequate return to their investors.

Risk-based premiums will provide a clear signal of likely damage to those currently residing in hazard-prone areas as well as those considering locating there. Risk-based premiums also enable insurers to provide discounts to homeowners and businesses that invest in cost-effective mitigation measures. If insurance premiums are not risk-based, insurers are unlikely to offer any premium discounts for those who adopt mitigation measures. In fact, they often prefer not to offer coverage to these property owners because it will be a losing proposition in the long run.

***Principle 2: Equity and affordability issues should be addressed.*** This principle reflects a concern for some residents in high-hazard areas who will be faced with large premium increases based on Principle 1. However, any special treatment given to homeowners currently residing in hazard-prone areas (e.g., low-income uninsured or inadequately insured homeowners) should be funded through an insurance voucher, not through premium subsidies (as is often done today).

The provision of insurance vouchers applies only to needy individuals who currently reside in a hazard-prone area. Those deciding to move into the area in the future should be charged premiums that reflect the risk. Providing individuals with financial assistance to purchase insurance would serve to encourage development in hazard-prone areas and exacerbate the potential for catastrophic losses from future disasters.

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<sup>1</sup> Kunreuther, H., and E. Michel-Kerjan (2011), *At War with the Weather: Managing Large-Scale Risks in a New Era of Catastrophes*. MIT Press. Paperback edition.

## **Modify the National Flood Insurance Program (NFIP)**

The tendency of individuals to invest only in measures that pay off quickly, coupled with budgetary constraints, deters those residing in hazard-prone areas from investing in protective measures. To address this issue in the context of flood damage, my colleague Erwann Michel Kerjan and I have recommended that the NFIP be modified in the following five ways when it comes up for reform between now and May 30, 2012.<sup>2</sup>

**1. *Multi-year insurance tied to property.*** When individuals or businesses purchase a piece of property, they should have an opportunity to purchase a multi-year insurance contract (for example, 5 years) at a fixed annual premium that reflects the risk. At the end of the multi-year contract, the premium could be revised to reflect changes in the risk (higher or lower).

**2. *Insurance vouchers for those needing special treatment.*** We recommend a new program to address issues of equity and affordability to complement the strategy of risk-based premiums for all. Property owners currently residing in a risky area who require special treatment (such as low-income residents, and those whose premiums increase significantly as a result of updated more accurate flood maps) would receive an insurance voucher from the Federal Emergency Management Agency (FEMA) or the U.S. Department of Housing and Urban Development (HUD) as part of its budget or through special appropriation.

This program would be similar to the Supplemental Nutrition Assistance Program (“food stamps”) and the Low Income Home Energy Assistance Program, which in the United States enables millions of low-income households to meet their food and home heating needs every year. The size of the insurance voucher will be determined through a means-test in much the way that distribution of food stamps is determined today.

**3. *Required insurance.*** Since individuals tend to treat insurance as an “investment” (where they expect some return) rather than as protective mechanism, and in light of the large number of individuals who do not have coverage today, we see wisdom in making insurance coverage a requirement for all property located in hazard-prone areas. Currently, it is a requirement only for homeowners with a federally-backed mortgage, but even in these instances, several years after purchasing a policy, many homeowners let their flood insurance lapse, and the banks never forced them to renew their coverage.

Data from the Department of Housing and Urban Development (HUD) reveal that 41 percent of damaged homes from the 2005 hurricanes were uninsured or underinsured. Of the 60,196 owner-occupied homes with severe wind damage from these hurricanes, 23,000 did not have insurance against wind loss.<sup>3</sup> We recently undertook an analysis of

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<sup>2</sup>Kunreuther, H. and E. Michel-Kerjan (2011). “Congressional Testimony A Proposal to Make America More Resilient to Natural Disasters and Reduce the Federal Government’s Financial Liability” Hearing before the Senate Appropriations Subcommittee on Financial Services and General Government on: “Federal Disaster Assistance Budgeting: Are We Weather-Ready?” July 28.

<sup>3</sup> U.S. Government Accountability Office (GAO) (2007), *Natural Disasters: Public Policy Options for Changing the Federal Role in Natural Catastrophe Insurance*, Washington, DC: GAO, November. GAO-08-7.

all new flood insurance policies issued by the National Flood Insurance Program (NFIP) over the period January 1, 2001 to 31 December 2009 and found that the median length of time before these new policies lapsed is three to four years. On average, only 74 percent of new policies were still in force one year after they were purchased; after five years, only 36 percent were still in place. The lapse rate is still high after correcting for migration and does not vary much across flood zones.<sup>4</sup>

**4. Multi-year loans for mitigation.** To encourage adoption of loss reduction measures, state or federal government or commercial banks could issue property improvement loans so as to spread the costs over time. For instance, a property owner may be reluctant to incur an upfront cost of \$1,500 for making his home more disaster resistant but would be willing to pay the \$145 annual cost of a 20-year loan (calculated here at a high 10% annual interest rate). Those who undertake these mitigation measures would receive a premium reduction to reflect lower losses even if one has an insurance voucher. In many cases, the reduction in the insurance premium will be greater than the loan cost, making this investment financially attractive.

**5. Well-enforced building codes.** Given the reluctance of property owners to invest in mitigation measures voluntarily, building codes should be designed to reduce future disaster losses and be well-enforced through third party inspections or audits.

### **Lessons from an Energy Efficiency Program**

The Property Assessed Clean Energy (PACE) program<sup>5</sup> that has been adopted by 27 states for promoting energy efficiency has the following features that can provide insights into designing the voucher program as discussed above.

**1. Multi-year financing.** Interested property owners opt-in to receive financing for improvements that is repaid through an assessment on their property taxes for up to 20 years. PACE financing spreads the cost of energy improvements over the expected life of these measures and allows for the repayment obligation to transfer automatically to the next property owner if the property is sold.

**2. Annual savings.** Because basic energy efficiency measures can cut energy costs by up to 35 percent, annual energy savings will typically exceed the cost of PACE assessments. The upfront cost barrier actually turns into improved cash flow for owners in much the same way that the reduction of annual insurance premiums could exceed the annual loan costs.

**3. Transfer to new property owner.** Like all property-based assessments, PACE assessments stay with a property upon sale, until they are fully repaid by future owners who continue to benefit from the improvement measures.

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<sup>4</sup> Michel-Kerjan, E. S. Lemoine de Forges and H. Kunreuther (in press). "Policy Tenure under the National Flood Insurance Program." *Risk Analysis: An International Journal*.

<sup>5</sup> Pilot PACE Financing Programs. <http://www1.eere.energy.gov/wip/pace.html>

### **We Need to Act Now**

Our country has entered a new era of catastrophes. Our exposure is growing and the damage from disasters over the next few years is likely to be more devastating than what we have experienced during this past decade. When the next catastrophe occurs, the federal government will very likely come to the rescue, again. If the public sector's response to recent disasters is an indicator of their future behavior, new spending records will be set with respect to federal assistance.

In order to avoid this outcome we recommend that the appropriate government bodies undertake an economic analysis of the benefits and costs of the proposed multi-year insurance-risk reduction loan program in relation to the current system of private and public insurance and federal disaster assistance.