Insurance Information Institute

MANAGING NATURAL DISASTER RISK

What Role Should the Federal Government Play?

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Introduction

The hurricane season of 2005 will surely be remembered for decades to come—not just for the human and economic toll that it extracted on those living in the Gulf Coast and Florida, but also for the profound influence it is likely to have in shaping the public dialogue in this country about how large-scale natural catastrophes should be managed in the post-9/11 era. This dialogue holds the promise of engendering substantive changes in the interconnected web of social, political and economic systems that—through a variety of formal and informal mechanisms—shift, spread, or reduce the myriad risks that pervade life in the 21st century. This year's hurricane season brought with it a degree of destruction and devastation not seen in this country since the late 1920s. Moving forward, how should we, from a societal perspective, shape our collective destiny in light of what has tragically come to pass? How might we do things better the next time around, taking into consideration all of the attendant risks and complexities? Finally, and perhaps most vexing of all, what role should the federal government play in managing natural disaster risk?

In the vigorous public dialogue that has ensued in the wake of Hurricane Katrina, two countervailing viewpoints have emerged concerning how society should pay for mega-catastrophes. Each of these viewpoints proceeds from a particular vantage point and set of beliefs about the role of government in managing and financing natural catastrophe risk. On the one hand, there are those who believe that natural catastrophes are—for reasons outlined below—fundamentally uninsurable and that the federal government should serve as the ultimate risk manager in these instances. Concomitant with this claim is the view that the federal government is in the best position to mitigate large losses (economic and otherwise), in economically efficient ways. On the other hand, there are stakeholders in the debate that believe that the private sector and the free-markets are in the best position to adjudicate and manage these risks for those who choose to insure privately. According to this view, the solution to the insurance dimension of this problem is not more government involvement and regulation, but rather, less. Relaxing regulatory constraints and stringent tax policies will, they argue, stimulate markets to craft creative solutions to the problem of "who pays?" for mega-catastrophes.

In the coming year, these two opposing viewpoints will take center stage in numerous public policy debates seeking workable solutions to how we, as a country, move forward in light of the difficult lessons of Hurricane Katrina. For its part, the U.S. Congress is likely to consider a broad range of proposals—from ways in which specific federal insurance programs like the National Flood Insurance Program can be improved, to potentially sweeping changes in how the nation deals (both ex ante and ex post) with mega-catastrophes, both natural and man-made. While it is, perhaps, too early to speculate as to what this process will yield by way of specific mandates, statutes and potential reorganizations of government, it is clear that change will be an inevitable feature of the institutional arrangements, mechanisms and conceptual schemes that have traditionally governed our thinking about how disaster policy should be formulated and implemented in this country.

The Case for a Federal Natural Catastrophe Program

Arguments in favor of a substantive federal role in the financing of natural disaster risk almost invariably proceed from a rather basic premise: that some risks are simply too large or unpredictable to be insurable within the current institutional, financial and regulatory frameworks that govern private insurance markets in this country. At the heart of these debates is the view that mega-catastrophes may soon exceed the ability and capacity of private insurance markets to deal effectively with incidents of this magnitude.

In the wake of Hurricane Katrina, some insurers and other relevant stakeholders are openly questioning whether natural catastrophes of this magnitude are insurable via the private markets. For example, insurance commissioners in Florida, California and New York have called upon numerous government officials to support the concept of a national catastrophe fund. Among the various plans that are currently being proposed is an amendment to the federal tax code that would allow insurers to set aside reserves that would accumulate on a tax-deferred basis in order to pay for future catastrophic losses; another proposal calls for the creation of so-called personal disaster accounts, which would allow property owners to accumulate savings on a tax-free basis to cover potential future catastrophic losses.[1]

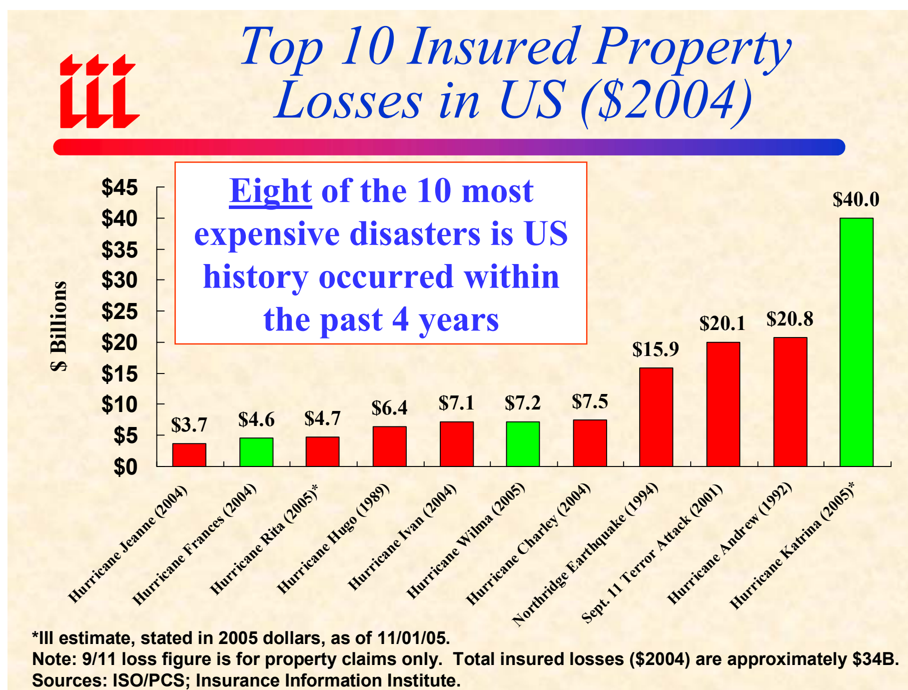
Most of the proposals envisage a three-layer plan: (i) Policies sold by individual insurance companies; (ii) State or regional catastrophe pools that provide reinsurance; and (iii) A national mega-catastrophe fund that provides a federal backstop for large-scale insured losses. A meeting of numerous state insurance commissioners, lawmakers, insurance industry representatives and public policy specialists was recently held in San Francisco to discuss such a proposal. For its part, the U.S. House of Representatives has introduced two bills, the Homeowners Insurance Availability Act of 2005 (H.R.846) and the Homeowners Insurance Protection Act of 2005 (H.R. 4366), both of which would create federal catastrophe reinsurance programs. Under H.R. 846, the Treasury would auction so-called excess-of-loss reinsurance contracts—a type of reinsurance that provides coverage above specified levels of loss, while under H.R. 4366 the Treasury would be authorized to sell reinsurance contracts directly to eligible state catastrophe funds.

Another reason that is often cited for expanding and enhancing the role of the federal government in financing natural catastrophe risk is that the federal government is, of course, already involved in numerous federal insurance programs, two of which deal specifically with natural disasters: The Federal Crop Insurance Program and the National Flood Insurance Program. These two programs are subsidized by the terms stipulated in their authorizing statutes and, at present, participation in the programs is voluntary. Programs such as these are often criticized for the inherent difficulties in assessing the government's true risk exposure and in setting premiums commensurate with that exposure. Moreover, organizations such as the National Association of Insurance Commissioners have argued that requiring homeowners to purchase multiple insurance contracts to protect their property is both cumbersome and inefficient.

Taking careful note of the increase in both the frequency and severity of hurricanes reaching landfall in recent years, an important concern going forward is that mega-catastrophes like Hurricane Katrina may seriously challenge the industry's ability to appraise and price these risks

[1] The provision for tax-deferred reserving is incorporated with the Policyholder Disaster Protection Act of 2005 (H.R. 2668).

reliably. Even a cursory look at some of the relevant statistics gives cause for concern. For example, as the figure below illustrates, eight of the ten most expensive disasters in U.S. history have occurred within the past four years.



Going forward, regulatory constraints may not allow insurers to charge actuarially sound rates that reflect the increased levels of risk. Moreover, the price and availability of private reinsurance is volatile. For these and a host of other reasons, the 2005 hurricane season has given risk managers within the property/casualty insurance and reinsurance industries much to consider. With many of the exposure predictions and projected loss estimates made prior to this year's hurricane season proving, in hindsight, to be grossly in error, catastrophe models have come under considerable criticism and scrutiny. Indeed, going forward, many insurers and reinsurers are openly questioning their confidence in these models. As one exasperated insurance CEO recently exclaimed, "They just don't know what they're talking about; they say these events are 1-in-100, 1-in-250, 1-in-1000, or maybe it's 1-in-1,000,000, but they have no idea."[2] Many within the industry fear that the risk assessment component of the insurance underwriting process may grow increasingly complex and unmanageable, as the coming decades may be marked by hurricane activity levels that well exceed recent historical baselines. Difficult questions and complex scientific debates concerning the manner and degree to which global climate change is responsible for these emerging weather patterns will surely complicate matters even further.

The Case Against a Federal Natural Catastrophe Program

Most of the reticence on the part of insurers to back the idea of a federal backstop for large natural catastrophes stems, at a basic level, from a firmly-rooted laissez-faire mindset as to how insurance markets should operate in the global economy. They believe that increased federal

[2] "Catastrophe Model Angst Grows After Gulf Devastation," BestWire, A.M. Best Company, October 31, 2005.

involvement and regulatory authority in these markets is something to be avoided, because such actions hold the potential to, in effect, crowd out private insurance and reinsurance markets, and to stifle innovation within these markets. In this context, it is often argued that the relationship between price and risk assumed is diminished, as federal insurance programs are rarely actuarially sound.

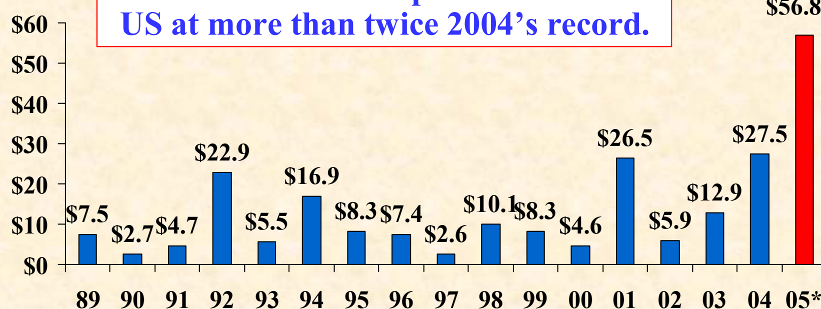
With regard, then, to natural catastrophe risk, the fundamental belief is that this class of risk is, indeed, insurable in the free markets. Perhaps the truest measure of the veracity of this claim is that the free markets have, thus far, performed well under especially trying conditions. The global insurance industry has experienced unprecedented disasters over the past four years: the tragedy of September 11th, at that time the most significant insurance catastrophe in history; record tornadoes and wildfires in 2003; four major hurricanes in Florida in 2004. Hurricane Katrina is expected to cost the insurance industry at least $34.4 billion, according to estimates by ISO's Property Claims Services, but more of the cost will be borne by reinsurers than in previous years.

Wall Street analysts expect the insurance industry to be able to pay Katrina claims without any significant weakening of its overall financial strength. Standard & Poor's has stated that, for most of the companies that the ratings agency follows, Katrina will depress earnings for several years. Catastrophe reinsurers will be the most severely impacted segment of the industry, and prices for property catastrophe reinsurance will likely increase significantly due to heightened expectations concerning the frequency and severity of natural disasters worldwide.

Clearly, the industry has responded well during this unprecedented period, demonstrating both its financial resilience and its commitment to individual and corporate customers. Financial results for the property/casualty insurance industry continue to be battered by record catastrophe losses (as shown in the figure below). Adjusting for the impacts of these losses, however, reveals a solid underlying performance. "Normal" catastrophe loss activity in 2005 would have produced a return on equity (ROE) of roughly 15 percent, the best since the late 1980s (compared to an estimated 9 percent inclusive of those losses). Likewise, the 2005 combined ratio would have come in below 95 for the first time in decades, compared with an estimated actual combined ratio of 104.[3] It is important to note, then, that while record catastrophe losses have proved financially painful to insurers, they have not proved to be solvency-threatening events.

[3] The *combined ratio* is a measure of premium income to losses and associated claim expenses paid.

U.S. Insured Catastrophe Losses *($ Billions)*



*As of 6/30/05 plus $920 in insured for Hurricane Dennis in July, $40 billion (est.) for Hurricane Katrina in August, $800 million (AIR est.) for Hurricane Ophelia in Sept., $4.7B for Hurr. Rita & $7.2B for Wilma.
Note: 2001 figure includes $20.3B for 9/11 losses reported through 12/31/01. Includes only business and personal property claims, business interruption and auto claims.
Source: Property Claims Service/ISO; Insurance Information Institute

Going forward, challenges will exist within the industry in rebuilding confidence in the CAT models that play such an important role in the underwriting process, and in incorporating these models (and the key decision inputs they provide) into broader enterprise risk management frameworks and processes. For its part, the industry will need to rethink the role of CAT models in the underwriting process, and decision-makers will need to become more critical consumers of this technology, moving away from the current passive reliance on model outputs.

Moving Beyond the Potential Impasse

Regardless of where specific industry stakeholders stand on the continuum of viewpoints outlined above, there are areas where they may find some basis for agreement and common ground. Most stakeholders will agree, for example, that a key responsibility for P/C insurers is to play their important and substantial role in the overall risk mitigation process. In the case of large-scale natural disasters, it is important for federal, state and local officials to understand and appreciate the role that insurance plays in both minimizing loss and expediting recovery.

In order to move beyond the potential impasse in which the industry could find itself with regard to these issues, what is needed is an earnest attempt on the part of the public and private spheres to look for areas where government can facilitate market-enhancing opportunities and more efficient private-sector coordination. Practical proposals to this end will include such activities as the encouragement of various loss mitigation strategies, including strong building codes and improved land-use planning. Going forward, the challenge remains one of finding workable means and mechanisms by which to align incentives in ways that jointly enhance social welfare and the market. The two activities do not necessarily need to be viewed as being mutually exclusive.