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ENSURING DISASTER: State insurance regulation, coastal development, and hurricanes

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Little can be done to prevent hurricanes, but their impact on society depends greatly on actions taken before, during, and after the event. The insurance industry is one institution that particularly affects societal vulnerability to and recovery from disasters. Insurance spreads risk across a community and provides households and businesses with resources to recover after disaster strikes. Although insurance is based on voluntary, contractual private agreements, many states regulate the industry extensively, guaranteeing coverage to high-risk properties at below market rates.

Intended to ensure affordable coverage and promote economic development in coastal areas, state insurance regulations have actually created more problems than they have solved, namely, inefficient insurance markets and excessive development in high-risk locales.

PERCEIVED PROBLEMS FOR NATURAL DISASTER INSURANCE

Because of the unpredictability of natural disasters and the extensive damage they cause, providing disaster coverage presents particular challenges to the insurance industry. One is the "correlation of losses." For typical insured losses, the chance that any two policy holders suffer a loss in a given year is independent: one person's accident does not increase or decrease the likelihood of another's. When risks are independent, an insurance company can pool risks by issuing a large number of policies. Annual premiums can usually cover losses, and the risk of excessive losses, which might force the insurer into insolvency, is low. In the case of catastrophes, there is a much greater risk of insolvency, due to the extent of losses and number of simultaneous claims.

In response to this increased risk, insurers must accumulate substantially larger reserves or purchase reinsurance (an insurance policy purchased by insurance companies to cover large losses) to pay claims in case of disaster. Either approach naturally raises the premium for disaster insurance.

Ambiguity also increases the cost of disaster insurance. This uncertainty prevents hurricane insurance from being priced like life or car insurance, for which actuaries have millions of prior events to precisely estimate probabilities of loss. In comparison, hurricane risks are uncertain and the inferences for future losses which can be drawn from past events are limited. For example, prior to Hurricane Andrew, experts estimated that the maximum insured loss from a south Florida hurricane would be $10 billion, an amount Andrew easily exceeded. After Andrew, estimates for the worst-case losses for southern Florida increased to $50 billion.[1]

Insurers face ambiguity not only from the severe weather itself, but also in the political and legal sphere. Prior to Hurricane Andrew, South Florida had one of the nation's strictest building codes on the books, and insurance companies considered this when estimating potential costs and setting premiums. Studies after Andrew found that the failure of local governments to enforce the code caused 25 percent of the losses.[2]

Ambiguity forces insurance companies to raise rates, but constitutes a real cost to society, not a market failure. Higher premiums slow development in coastal areas. Reducing that investment now is the prudent and economically efficient response to uncertainty about future losses.[3]

While insurance companies wisely wish to avoid writing policies for poorly specified risks at rates which might prove much too low, politicians often commit government to assume such a risk, in part because they are not personally responsible if losses turn out to be excessive. Politicians benefit by delivering lower rates for high risk policy holders, but they have not eliminated the challenges described above. In fact, the risk to property and lives may be increased, by encouraging investment that would not occur if the market operated unhindered. However, politicians are somewhat shielded from the effects of their policies; a major hurricane may not occur for years, after they have retired from office.

HOW STATES REGULATE INSURANCE

The primary mechanism states use to regulate insurance is an insurance pool or residual market mechanism. Insurance pools were inaugurated in the 1960s, after federal legislation authorizing states to create Fair Access to Insurance Requirements (FAIR) plans. Since 1968, seven states have established special wind or beach pools to cover wind damage from hurricanes and coastal storms. (See table 1.) As of early 2007, over 1.8 million policies with a total liability of over $500 billion were in effect in wind pools.

Table 1
STATE WIND AND BEACH POOLS

STATE	CURRENT NAME	YEAR ESTABLISHED	POLICIES IN FORCE	TOTAL LIABILITY
Alabama	Alabama Insurance Underwriting Association	1970	7,499	$1.313 Billion
Florida	Citizens Property Insurance Corporation	1970	1,298,922	$408.8 Billion
Louisiana	Louisiana Citizens	1968	129,203	$21.13 Billion
Mississippi	Mississippi Underwriting Association	1987	30,962	$5.370 Billion
North Carolina	NC Insurance Underwriting Association	1969	141,843	$57.27 Billion
South Carolina	SC Wind and Hail Underwriting Association	1970	30,091	$12.17 Billion
Texas	Texas Windstorm Insurance Association	1971	160,281	$50.23 Billion

Wind pools offer subsidized coverage to high-risk properties, relying on assessments imposed on all insurance contracts in the state to cover the losses of a major hurricane. All licensed insurance companies in the state are required to be "members" of the insurance pool. Assessments are typically applied as a percentage of the premiums in the state written by the company, i.e., a company with a five percent market share will pay five percent of the assessments. Insurance companies cannot avoid exposure from high-risk areas simply by not writing or renewing policies there. The only way to avoid assessments is to exit the state entirely or at least avoid the assessable lines of business.

State guaranty funds are another regulatory tool. Guaranty funds pay claims on the policies of insolvent insurance companies (similar to deposit insurance for banks), providing another subsidy for high hurricane risk properties.[4] Since 1978, state guaranty funds have imposed over $11 billion in assessments to cover claims of insolvent insurers.[5] Guaranty funds reduce the consumer's incentive to consider financial soundness of insurance companies and perhaps pay extra for coverage from a highly rated company.

Sometimes insurance rates in a pool may be greater than "market" rates of private insurers, but this does not mean they are not subsidized. Often, rates in the voluntary market are regulated and could be below market levels themselves. Assessments levied after major hurricanes demonstrate that wind pools charge below market premiums.

Table 2

COASTAL COUNTIES VS. STATES, INCOME AND HOUSING

	COASTAL COUNTY VARIABLES				STATE VARIABLES			
	PCPI	MEDIAN HOUSE PRICE	% $500K HOUSES	% $1 MILLION HOUSES	PCPI	MEDIAN HOUSE PRICE	% $500K HOUSES	% 1 MILLION HOUSES
ALABAMA	18,126	91,300	1.37	0.30	18,189	85,100	0.98	0.21
CONNECTICUT	30,536	208,800	10.79	3.00	28,766	166,900	7.15	1.91
DELAWARE	20,328	122,400	2.32	0.55	23,305	130,400	1.26	0.23
FLORIDA	22,264	114,500	2.64	0.67	21,557	105,500	2.24	0.56
GEORGIA	20,466	97,200	2.90	0.64	21,154	111,200	1.88	0.32
LOUISIANA	17,326	90,300	1.25	0.18	16,912	85,000	0.84	0.15
MAINE	21,484	119,100	1.80	0.33	19,533	98,700	1.09	0.21
MARYLAND	22,505	121,500	1.20	0.26	25,614	146,000	2.75	0.40
MASSACHUSETTS	25,666	197,000	5.83	0.95	25,952	185,700	5.59	0.85
MISSISSIPPI	17,899	85,300	0.61	0.20	15,853	71,400	0.50	0.17
NEW HAMPSHIRE	26,656	164,900	2.39	0.33	23,844	133,300	1.23	0.18
NEW JERSEY	26,279	162,800	2.69	0.43	27,006	170,800	4.69	0.70
NEW YORK	22,230	216,100	6.27	1.13	23,389	148,700	4.10	0.83
NORTH CAROLINA	19,574	116,400	2.52	0.45	20,307	108,300	1.50	0.25
RHODE ISLAND	26,041	160,800	3.82	0.78	21,688	133,000	1.77	0.34
SOUTH CAROLINA	20,484	129,600	5.11	1.20	18,795	94,900	1.65	0.39
TEXAS	16,808	68,555	0.39	0.10	19,617	82,500	1.24	0.26
VIRGINIA	20,528	109,000	1.36	0.21	23,975	125,400	2.12	0.27

Consider Florida and Louisiana. Florida was struck by three hurricanes in 2005 after four powerful hurricanes struck in 2004. The Florida Citizens pool imposed a $163 million Regular Assessment for 2005 and an Emergency Assessment for 2005 of $888 million, to be collected via a 1.4 percent charge on assessable premiums annually for ten years. Additionally, the state legislature appropriated $715 million to assist the company.

In 2006, Louisiana issued $978 million in bonds to allow Louisiana Citizens Insurance to cover its deficit, with the bonds to be paid for from a 2006 Emergency Assessment of 3.6 percent of premiums in the state for as many years as necessary to retire the bonds. Louisianans far removed from the coast will be paying assessments on their homeowners' insurance for at least the next decade as a result of losses from Katrina and Rita.

THE EFFECTS OF DISASTER INSURANCE REGULATIONS

Maintaining affordable insurance for homeowners and businesses is a stated goal for most wind pools. However, it is important to consider who benefits from subsidized insurance.

Coastal counties cannot be generalized as economically destitute areas of the states, since, in eight of the 18 coastal states, the coastal counties have higher income than the state overall. In five states where coastal income is lower, the difference is less than $1,000. In 12 states the median house price is higher in the coastal counties, with a difference of over 20 percent in several states. The median house price tops $150,000 in the coastal counties of six states. And in 15 states, the percentage of $500,000 or $1 million homes exceeds the state as a whole. Texas is the one state where coastal counties are notably poorer than the state as a whole. (See table 2.)

Subsidizing property insurance reduces the cost of living and encourages economic development. But economic development on hurricane-exposed coasts, as opposed to further inland, entails added costs from hurricane damage. If they had to pay the full cost of insurance for locating near the coast, individuals and businesses would make more efficient choices. As it is, insurance pools allow coastal residents to

shift some costs to their fellow citizens. This is unfair because those who did not assume the risk of living or investing on the beachfront are forced to pay some of the costs when disasters occur. When hurricane losses cannot be shifted to others, only those who value a coast location more than the extra costs will assume the risk of hurricane damage.

CONCLUSION

The costs of state-run insurance pools are easy to see—rates do not cover full insurance costs and low-risk policy holders (and possibly state and federal taxpayers) end up footing the bill under post-disaster assessments.[6] State insurance regulations not only create an inefficient insurance system, but more importantly, they produce an environment in which more people are putting themselves in the path of hurricanes.

Policy change is necessary to rectify, or at least reduce, the ill effects of these problems. The best change would be to eliminate wind pools, but at the very least, substantial improvements could be made, such as the following:

1. Halt the creation or expansion of wind pools; in order to prevent excessive development. Phase out existing subsidies and pools over time.

2. Provide low income residents tax credits or means-tested insurance vouchers as premiums rise to market levels. Allowing a market price to prevail and subsidizing coverage for the poorest households is less costly and disruptive than subsidizing all insurance.

3. States should be required to purchase reinsurance or issue catastrophe bonds to cover potential excess losses. Either option would force a current expenditure in state governments and oblige politicians who create or expand pools to bear some of the cost. This would also limit the magnitude of potentially crippling assessments on insurance companies following a major hurricane.

4. Offer actuarially justified discounts for mitigation measures. Premium discounts are a way to encourage mitigation whenever it will reduce expected damage by more than the cost.

Legislative and regulatory changes could reform a system that is costly, inefficient, and unfair. The difficult rebuilding process in New Orleans is a good reminder that change is the first step to avoiding future disasters on the scale of Hurricane Katrina.

ENDNOTES

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3. Kenneth J. Arrow and Robert C. Lind, "Uncertainty and the Evaluation of Public Investment Decisions," *American Economic Review*, 60(3) (1970): 364-378
4. Kenneth J. Meier, "The Politics of Insurance Regulation," *Journal of Risk and Insurance* 58, no. 4 (1991): 700–713.
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6. Scott E. Harrington, "Rethinking Disaster Policy after Hurricane Katrina," in *On Risk and Disaster*, ed. R. J. Daniels, D. F. Kettl, and H. Kunreuther (Philadelphia: University of Pennsylvania Press, 2006), 203–221.

TO FIND OUT MORE ABOUT HOW TO REFORM INSURANCE PRACTICES IN HURRICANE PRONE AREAS, READ *ENSURING DISASTER: STATE INSURANCE REGULATION, COASTAL DEVELOPMENT, AND HURRICANES*, NUMBER 14 IN THE MERCATUS POLICY SERIES.

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