The Insurance Dilemma: How to Increase the Availability and Use of Catastrophe Insurance After Katrina

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Disasters & the Law: Hurricane Katrina

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As the United States sees more and more property damage result from domestic disasters it quickly becomes apparent that the insurance industry as it exists cannot provide sufficient economic relief from natural disasters. This paper begins with a brief overview of the problem that Katrina has left the Gulf Coast and as a result the rest of the nation. Subsequently Katrina will be compared to other natural catastrophes in terms of economic issues.

The second main portion of this article discusses the problem of catastrophe insurance. Two possibilities for reform are discussed. These are (1) a change to the tax structure that inhibits insurance companies from maintaining the large cash reserves required for catastrophe coverage and (2) a reformation of the National Flood Insurance Program (NFIP).

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I. Introduction

Hurricane Katrina is the single most damaging natural disaster in U.S. history.[2] Bucking a trend over the last century where natural disasters have become less deadly while they cause more damage to property, Katrina "not only damaged far more property than any previous natural disaster, it was also the deadliest natural disaster in the United States since Hurricane San Felipe in 1928."[3] As of March 20, 2006 1,527 people had lost their lives as a result of Katrina.[4]

What Katrina emphasizes most is that the property damage from natural disasters will only continue to rise. Katrina is the first disaster of any kind in America to near $100 billion in property damage alone.[5] Total economic losses have been estimated at anywhere from $125 to $150 billion.[6] This number is significantly higher than the total economic loss from the 9/11 terror attacks ($87 billion) and triple the total estimated economic loss related to Hurricane Andrew ($48.4 billion).[7]

As the United States sees more and more property damage result from domestic disasters it quickly becomes apparent that the insurance industry as it exists cannot provide sufficient economic relief from natural disasters. This paper begins with a brief overview of the problem that Katrina has left the Gulf Coast and as a result the rest of the nation. Subsequently Katrina will be compared to other natural catastrophes in terms of economic issues.

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[2] The White House, The Federal Response to Hurricane Katrina: Lessons Learned 5-9 (2006).
[3] *Id.*
[4] Daniel Farber, Disasters and the Law: Hurricane Katrina and Beyond 17 (Aspen Publishers 2006).
[5] The White House, The Federal Response to Hurricane Katrina: Lessons Learned 5-9 (2006).
[6] Daniel Farber, Disasters and the Law: Hurricane Katrina and Beyond 17 (Aspen Publishers 2006).
[7] *Id.*

The second main portion of this article discusses the problem of catastrophe insurance. Namely, private agencies have failed either by market inefficiency or improper government regulation to provide homeowners with adequate insurance in case of natural disaster. Then two possibilities for reform are discussed. These are (1) a change to the tax structure that prohibits insurance companies from maintaining the large cash reserves required for catastrophe coverage and (2) a reformation of the National Flood Insurance Program (NFIP).

II. Hurricane Katrina's Legal Progeny: The Failure To Prepare

Katrina left 300,000 residents in the Gulf Coast without a home.[8] This was ten times the number of residents left homeless by Hurricane Andrew in 1992.[9] The logistics of dealing with so many people suddenly cast loose is staggering, and after the difficult task of finding temporary shelter for the former residents of New Orleans the new problem soon became how to help people out of what quickly was becoming dire financial straights.

Very few residents in the Gulf Coast had obtained some form of flood coverage. New Orleans had arguably the best flood coverage, with 57% of homeowners participating in the National Flood Insurance Program.[10] While not every resident was in a flood zone, this means that over 40% of homeowners did not have flood insurance in a hurricane prone region. In Mississippi the situation was much more dire. The three

[8] Daniel Farber, Disasters and the Law: Hurricane Katrina and Beyond 17 (Aspen Publishers 2006).
[9] *Id.*
[10] David John, *Providing Flood Insurance Coverage After the Disaster is a Mistake*, (October 19, 2005), http://www.heritage.org/Research/Regulation/wm888.cfm.

coastal counties in Mississippi, Harrison, Jackson and Hancock counties had only 10%, 11% and 23% coverage, respectively.[11] Because the insurance companies integrated flood exclusions into their policies because of the high risk for loss, this means the vast majority of homeowners would receive little to no help from their insurance providers after losing their homes.

It was up to the government of Mississippi to either leave those without insurance helpless, or to find a way to provide the billions of dollars needed to rebuild. Several arguments were made that the insurance providers should have to give flood payments. The Mississippi Attorney General Jim Hood filed suit against several insurance companies, claiming unconscionability, ambiguous terms in the policies and violation of public policy, among other claims.[12] However, the policies were explicit; flood coverage was not a part of any homeowner insurance plan offered by major carriers. The economic reasons that went into the insurance companies decision to not provide coverage for catastrophes makes an unconscionability argument difficult. The courts had to find another way to force coverage, or else force states to pay hundreds of millions of dollars in aid to homeowners.

Broussard v. State Farm Fire & Casualty Co. was the Southern District of Mississippi's attempt to force some of the relief onto insurance companies.[13] Companies like State Farm include provisions in their coverage that exclude certain types of damage, often including flood and earthquake damage.[14] Flood damage exclusions are

[11] *Id.*
[12] *Hood v. Mississippi Farm Bureau Insurance*, Complaint, Chancery Court of Hinds County, First Judicial District, Civil Action No. G2005-1642R11 (September 2005).
[13] *Broussard v. State Farm Fire & Cas. Co.*, 2007 U.S. Dist. LEXIS 2611 (S.D. Miss., Jan. 11, 2007).
[14] Defendant's Motion to Dismiss Plaintiff's Complaint, *Lott v. State Farm Fire & Cas. Co.*, No. 1:05-CV-671-LG-RHW (S.D. Miss. 2006). "We do not insure under any coverage for any loss which would not have occurred in the absence of one or more of the following excluded events . . . water damage, meaning

particularly complicated because they exclude water damage *driven by wind*. Obviously in a hurricane with rising waters it becomes difficult to find out if damage was wind damage only, or water damage resulting from wind. In *Broussard* the court had to decide whether exclusion for water damage to a home was applicable when it was unclear whether wind had damaged the property *before* the excluded flood damage.[15] Insurance companies typically have the burden of establishing the existence of an exclusion, and the applicability to a claim.[16] However, "once the insurer shows the application of an exclusion clause, the burden of proof shifts back to the insured because the exception to the exclusion restores coverage for which the insured bears the burden of proof."[17]

State Farm provided "overwhelming" evidence to the trial court that when the flood reached the Broussard home it was sufficient in force and duration to completely destroy the home "regardless of the extent of the preceding wind damage."[18] However in a ruling that has already caused major changes in the issuance of new homeowner policies in Mississippi,[19] the court ruled that not only must State Farm prove that flood damage would have caused destruction of the home, it must also prove that the property had not *already* been damaged by wind.[20]

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flood, surface water, waves, tidal water, tsunami, seiche, overflow of a body of water, or spray from any of these, all whether driven by wind or not." This water damage exclusion is representative of many at issue after Hurricane Katrina.

[15] *Broussard*, 2007 U.S. Dist. LEXIS 2611 at 5.

[16] *See, e.g., Twin City Fire Ins. Co. v. Alfa Mut. Ins. Co.*, 817 So. 2d 687 (Ala. 2001); *Dart Industries, Inc. v. Commercial Union Ins. Co.*, 52 P.3d 79 (Cal. 2002); *Iowa Comprehensive Petroleum Underground Storage Tank Fund Bd. v. Farmland Mut. Ins. Co.*, 568 N.W.2d 815 (Iowa 1997).

[17] 44A Am. Jur. 2d Insurance § 1965 (2007).

[18] *Broussard*, 2007 U.S. Dist. LEXIS 2611 at 5-6.

[19] See U.S. News & World Report, February 26, 2007 at 16 ("State Farm announced that it would no longer offer property insurance to new homeowners in Mississippi, three weeks after settling a lawsuit from more than 600 people whose Katrina-related claims were denied.") These settlements resulted from the ruling in *Broussard*, as State Farm now has a burden of proof that it cannot meet in order to apply the flood exclusion.

[20] *Broussard*, 2007 U.S. Dist. LEXIS 2611 at 6.

This was a major break from traditional insurance law. In effect, the court has shifted the burden of proof to the insurance companies even *after* they have shown the applicability of an exclusion. The effect of *Broussard* will be soon become clear, as the burden of proof required to deny coverage is now almost impossible for State Farm and other homeowner insurance providers in the Gulf Coast region.[21] While many people who had been denied coverage due to a lack of flood insurance have now received aid, it comes at a high price. State Farm has already agreed to pay out $80 million in settlements and at least $50 million in other claims, many of which were not included in the price of the original policies.[22] Insurance companies such as State Farm would rather exit the market entirely than be burdened with payouts that they did not collect premiums for. Homeowners still are not willing to pay higher premiums for flood coverage.

Broussard broke from the majority of insurance cases. The amount of denied coverage from Hurricane Katrina was a public policy disaster that highlighted a critical flaw in the private insurance market. Catastrophes such as Hurricanes Andrew (1992) and Katrina (2005), the Northridge earthquake (1994) and the Midwest floods (1993) affected large numbers of people at once and imposed huge financial losses. Amazingly enough, this is not the first time that the nation has been given a crude insurance wakeup-call. Even prior catastrophes that all showed weakness in the insurance market did nothing to solve this problem in the long term. For an example of a "band-aid" fix to the problem, we look to Hurricane Andrew in 1993.

A. Hurricane Andrew

[21] See note 14.
[22] U.S. News & World Report, February 26, 2007 at 16.

Hurricane Andrew made it clear to insurance companies that to provide coverage for water damage was a quick route to self-destruction. The payouts by Allstate after Andrew, for example, exceeded the $1.9 billion in premiums it had received during the fifty-three previous years.[23] Hurricane Andrew also bankrupted ten of the state's insurers.[24] As a result, in what was called a "survival tactic" by some insurers, insurance companies of all sizes stopped issuing new homeowner policies and even cancelled existing policies.[25] In some cases companies withdrew from the Florida market altogether.[26]

What was fast becoming an exodus of the insurance market quickly became a major concern for Florida. Florida imposed a Moratorium Law in 1993 that halted market exit for Florida insurance carriers.[27] The act and its' "progeny"[28] were only a temporary band-aid fix to the problem. Insurers still could see no profit in remaining in the South Florida insurance market. Finally, after extensive discussion between the Florida Legislature and casualty insurers the Legislature enacted section 215.555, Florida Statutes, creating the Florida Hurricane Catastrophe Trust Fund.[29] The Fund, seeking to "maintain a viable and orderly market for private insurance" requires insurance carriers in the state to pay regular installments into the Fund, which will (in theory) reduce the number of insolvencies that result from a major catastrophe.[30]

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[23] Jonathan B. Butler, Note, *Insurers Under Fire: Assessing the Constitutionality of Florida's Residential Property Insurance Moratorium After Hurricane Andrew*, 22 Fla. St. U.L. Rev. 731, 733 (1995).
[24] *Id.*
[25] *Id.*
[26] *Id.*
[27] Butler, *supra* at 736.
[28] Additional statutes followed that placed restrictions on the number of homeowner policies that an insurer could cancel or nonrenew. These follow up statutes were intended to help "phase out" the Moratorium Law, but were construed so narrowly that they only served to extend its' duration. *Id.* at 739.
[29] Fla. Stat. § 215.555 (2007).
[30] *Id.*

The Fund has yet to be tested. The one thing that is certain is that the Fund is simply an artificial subsidy of a high-risk market, and has done nothing to either induce homeowners to purchase more flood insurance, or create a system that makes for a more stable supply of catastrophe insurance.

B. Northridge Earthquake

It is not only Hurricanes that show serious holes in the dyke of private homeowner insurance. The Northridge Earthquake in 1994 caused $13 billion in damage and resulted in a moratorium eerily similar to that in Florida in 1992.[31] The California Insurance Commissioner created many of the same restrictions that the Florida Legislature had imposed.[32] By January 1995 93% of insurers in California had either severely restricted or eliminated altogether their homeowners coverage.[33] Because of California law they were unable to eliminate only earthquake coverage.[34] In 1996 the California Earthquake Authority (CEA) was created to provide earthquake insurance and create an "opt-out" for private insurers.[35] By paying into the CEA private insurers could avoid the obligation of providing earthquake insurance themselves, and still provide homeowner policies. The goal of this plan is the same as the Florida Fund, namely to create an artificial stopgap to the problem of private catastrophe insurance.

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[31] Seema Patel and Sarala Nagala, Public Policy Considerations of Water Damage Exclusions in Hurricane Insurance Policies at 22,
http://128.32.29.133/disasters.php?categoryID=7 (April 16, 2007).
[32] Id.
[33] California Earthquake Authority – History.
http://www.earthquakeauthority.com/index.aspx?id=7&pid=1 (April 19, 2007).
[34] *Id.*
[35] *Id.*

Similar to the Florida plan, the CEA has yet to be tested by a major earthquake. However, the CEA has not received much public support. It seems that by 1997 as many as 50% of homeowners that even had earthquake insurance before Northridge have foregone their coverage rather than utilizing the CEA.[36] These results have not improved. Approximately 13.5% of residential property is covered under the CEA.[37] This highlights the second major problem with catastrophe insurance. Where insurance companies are loath to provide it at all, when there actually *is* available catastrophe insurance, it is so expensive that homeowners adversely select to not purchase any insurance at all.[38] The reasons include a combination of high premiums and an even higher deductible (15%).[39]

C. Hurricane Katrina

Now history has begun to repeat, as the market exodus that resulted from Hurricane Andrew in 1992 and the Northridge Earthquake in 1994 mirrors itself in the Gulf Coast. State Farm, following the *Broussard* case discussed *supra*, declared that it was no longer going to issue new homeowner policies in Mississippi.[40] Other companies, knowing that the government has begun to force flood coverage into policies that were not priced for such a huge payout, will begin to do the same. If State Farm actually

[36] Dwight M. Jaffee and Thomas Russell, *Catastrophe Insurance when Capital is Limited: A Comparison of Public and Private Approaches*, prepared for Pacific Rim Insurance Conference (1997).
[37] 2003 Earthquake Coverage Experience – www.insurance.ca.gov/0250-insurers/0600-data-reports-0100-earthquake-cov-exp-2003-earthquake-coverage-experience.cfm (May 25, 2007).
[38] Adverse selection is an economic inefficiency where actors do not see the true costs of their actions. In this case, homeowners underestimate the damage an earthquake could cause, the likelihood of a major earthquake, or both.
[39] *Jaffee* at 21.
[40] U.S. News & World Report, February 26, 2007 at 16.

begins to cancel policies instead of just not issuing new ones, the problem could quickly become dire just in time for the next hurricane season.

Faced with insurers leaving and few other options to provide support for residents, the leaders of the Gulf Coast states have to keep a private insurance market available. The likely next step will be a governmental estoppel to market exodus. Similar to the Moratorium Law in Florida, which only was a stopgap measure; a market block in Mississippi is only a temporary band-aid to the problem of catastrophe insurance.

States and the Federal Government have to change how the country deals with insurance. Catastrophe insurance must be dealt with as an individual market problem that requires unique solutions. There are two main avenues. Either the government helps private carriers provide the insurance more effectively, or the government takes on the task and provides meaningful coverage on its own. The two possibilities are largely incompatible, and so a choice has to be made, and made quickly.

III. Exclusion Policies: Economic Problems of Catastrophe Insurance

Insurance providers, for rather obvious reasons, are risk adverse companies. To be able to accurately predict their costs into the future insurance companies spread their policies among as many people and locations as possible – reducing the risk that one low probability high cost event will occur that could drive a company into insolvency. Claims that result from individualized accidents such as fires, automobile accidents and theft spread out among the large number of other policies. This lets an insurance company make a fairly predictable profit from year to year.

Catastrophes such as earthquakes, floods and other large-scale natural disasters affect too many people at the same time for the current insurance system to function efficiently.[41] When a large number of unconnected risk types are put together then insurance companies can reliably predict the yearly disaster rates.[42] When the risks of policyholders are linked together, such as in cases of flooding, then insurance firms have to pool an "exceedingly large" group of policies.[43] The only way that a private insurance carrier can be justified in offering a policy with this level of risk is to charge a much higher premium on policies, or purchase insurance themselves.

The market of secondary insurance, commonly called "reinsurance", is an important development in catastrophe insurance. When a particular insurance firm is unable to find a large enough "pool" of risks in an area then they may sell hurricane insurance, and then turn themselves to purchasing reinsurance against the catastrophe.[44] This allows insurance companies to spread their risk and at the same time provide insurance that homeowners need to face particular risk.

A second type of risk protection that insurance companies have begun to employ is "securitization", where insurance providers market "catastrophe bonds" in financial markets.[45] Market investors like this type of investment because the risk of a major disaster is unrelated to market risks, allowing them to diversify their own risks. This type of investment is only just now starting to take off.[46] According to experts, there is some

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[41] David L. Brumbaugh and Rawle O. King, *Tax Deductions for Catastrophic Risk Insurance Reserves: Explanation and Economic Analysis*, CRS Report for Congress at 2 (September, 2005).
[42] *Id.*
[43] *Id.*
[44] *Id.*
[45] *Id.* at 3.
[46] *A survey of international banking: Les fleurs du mal*, Economist, May 19, 2007 at 71 ("Catastrophe bonds which offer protection against severe environmental shocks have been under discussion for at least a decade . . . but have only recently started to take off."

agreement that capital markets have been "slow to deliver to the insurance industry."[47] One possible reason for this lethargic acceptance of "cat-bonds" is that there is no natural investor in them. Investing in catastrophe risk requires extensive knowledge about the reinsurance market and specific catastrophe risk exposures that few investors possess.[48] Without active investors the market will continue to flounder. Both the above types of risk protection can be effective measures for allowing a private insurance solution. However it seems that even with these types of answers the pool of catastrophe insurance is one that insurance companies increasingly refuse to dive into. Indeed, they are jumping out of the pool at an ever-increasing rate.[49]

The insurance market excludes flood damage and earthquake damage largely because they are unable to retain the large cash reserves required to pay out coverage. Aside from the above concerns, many of which are simply unavoidable, there are two clearly identifiable, government created problems which if rectified could to a large extent solve the insurance dilemma. These are the tax barriers that block insurance companies from maintaining the large cash reserves required to pay out on policies following a disaster like Katrina, and the fear that the government will impose another Moratorium on new policies.

A. Inability To Hold Cash Reserves for Catastrophes

[47] CRS Report at 3.
[48] Fin. Mkt. Trends, 2004 WLNR 18243544 at 89, October 2004.
[49] Allstate has joined other insurance companies in refusing to issue new homeowner policies—this time in Florida—and is also refusing to renew existing Florida plans. *Hurricane Ahead, But Lower Insurance*, BusinessWeek, May 14, 2007 at 68.

Reinsurance and catastrophe bonds clearly are not a panacea to the insurance dilemma. If they were, more than 10% in some counties in Mississippi would have had flood insurance prior to Katrina. The fact is insurance companies still do not offer catastrophe insurance to residents in high-risk areas. Another major obstacle to giving incentive to provide catastrophe insurance is the tax restrictions on holding large cash reserves. This tax situation apparently has "discouraged insurers from accumulating assets specifically to pay for future catastrophe losses and has limited the industry's ability to increase its capacity to underwrite catastrophe risks."[50]

Government taxes on unused funds make it too costly to maintain a reserve. As it stands any insurer income above annual expenses is considered profit, including cash set aside for future expenses.[51] This profit is then taxed as income. In addition domestic accounting principles do not allow insurers to record a loss from future catastrophe losses.[52] As a result insurers are discouraged from setting aside funds to use for future catastrophic events.[53]

B. Market Exodus and State Moratoriums on Coverage

Hurricane Andrew and the Northridge Earthquake show that state government will likely continue the trend of enforcing the payout of exclusions. Especially when the exclusions are so sweeping, even if justified, governments will be under intense public pressure to make insurance companies liable for what many regard as unfair business

[50] CRS Report at 3. *See also* Scott E. Harrington and Greg Niehaus, "Government Insurance, Tax Policy, and the Affordability and Availability of Catastrophe Insurance," *Journal of Insurance Regulation*, Summer 2001, at 594.
[51] CRS Report at 3.
[52] *Id.*
[53] *Id.*

practice. The simple fact is that insurance companies are not designed to handle this kind of incident, yet the public sees insurance as a panacea. The combination proves deadly for insurance providers after major disasters, and that will repeat itself in the Gulf Coast.

State Farm has already begun the exodus in Mississippi.[54] As state courts across the Gulf Coast begin to find ways to provide aid to the hundreds of thousands without any form of flood coverage it will become increasingly difficult for insurance companies to remain solvent, let alone profitable, in the area. Similar to California after Northridge, the Gulf Coast will have very little flood coverage in the private market in the years to come.

IV. Possible Solutions to the Insurance Dilemma

It is up to the courts such as the *Broussard* court to chart the course for victims of Katrina. Yet there is an opportunity for lasting insurance reform before the next major natural disaster. Among the proposed plans for domestic insurance reform there is the possibility of changing how the Internal Revenue Service regards cash reserves held by insurance companies. The second alternative analyzed here would be a significant overhaul of the National Flood Insurance Program, currently the government's main attempt to provide flood insurance outside the private sector. For the most part, these two possible solutions are not complementary. Rather, we face a choice of trying to promote private sector flood insurance with changes to the tax code, or promote government action and reform the National Flood Insurance Program (NFIP).

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[54] See note 18, *supra*.

A. Tax Deductible Cash Reserves for Insurance Companies

In essence, the tax-deduction proposals that have been presented as legislation allow insurance companies to create “policyholder disaster protection funds” which could only be used to pay for catastrophic losses.[55] The two most popular attempts at this reform differ in some respects[56] but would have the same end effects. The advantages the plan could offer include an overall increase in insurance provided in high-risk areas, a reduction in other forms of federal aid, and a reduced flow of capital to offshore foreign reinsurance firms.

This reduction in federal aid could offset losses in federal tax revenue. With higher participation rates in private insurance plans the tax dollars spent on federal aid after catastrophes would be lessened. Currently, when insurance companies or the NFIP fail to provide the coverage needed in an area it results in federal aid in both direct expenditure and federal loans such as the Small Business Administration (SBA) disaster loan.[57] By changing the tax structure there would be a reduced tax income because of the new tax-exempt status of the reserves. However this hopefully would be offset by the decrease in costs of both expenditure and the SBA loans.

Another advantage to a change in the tax structure would be a reduced outflow of insurance dollars overseas to the major European reinsurance agencies. By reducing the need for reinsurers the government would allow insurance companies to manage their own risk more efficiently and keep money inside the U.S.

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[55] *Id.* at 5.
[56] In particular, the proposal brought forth by the National Association of Insurance Commissioners (NAIC) would make the reserves mandatory, while the H.R. 2668 would not. In addition the NAIC proposal has a dollar target for the industry set at $40 billion after 20 years, while the H.R. 2668 does not. *Id.*
[57] *A Guide To The Disaster Declaration Process and Federal Disaster Assistance*, (2004), http://www.fema.gov/rrr/dec_guid.shtm.

The advantages of a change in the tax code are questionable at best. While there may be a reduced outflow of dollars, it is not clear that changing the tax structure would eliminate or even reduce the need for reinsurance. Insurance companies would still want to diversify their risk. While they would no longer be paying tax on a cash reserve, they still would have the same problems with catastrophe insurance that existed before the change. Namely that customers do not buy catastrophe insurance at rates high enough to give insurance companies a profit. While rates would decrease from the levels currently available (if any are in a market), residents still do not have the market vision needed to accurately measure their risk. As such, they undervalue the benefit and overprice the cost of disaster insurance.

Another criticism involves the question of whether there is actually market inefficiency with regards to lack of catastrophe insurance and the use of reinsurance by insurance agencies.[58] The theory of tax reformation is based on the assumption that there are inefficiencies with regards to reinsurance coverage by overseas agencies. If this is *not* the case, and instead there are other factors blocking the provision of catastrophe insurance then a tax change would have little effect, except that it would mean billions in lost tax revenue. Critics of the tax changes argue that these market failures are small or nonexistent.[59]

Government action in the wake of disasters is another reason that tax changes may have a smaller effect than anticipated.[60] Because residents know that the federal government will provide aid after disasters they are less likely to purchase insurance,

[58] Brumbaugh, *supra*, at 8.
[59] Catastrophe Insurance, Capital Markets, and Uninsurable Risks, *Journal of Risk and Insurance*, vol. 64, Jun. 1997, p.206
[60] Brumbaugh, *supra*, at 9.

especially at the premiums that private insurers would charge. As a result, even when insurance companies *would* offer insurance, residents would not purchase it at a price that would equal the risk residents face at the hands of hurricanes and other disasters.

In the end, the effectiveness of tax incentives depends on the elasticity of the market.[61] In most circumstances the more competitive the market is the more likely the tax deduction would expand the use of catastrophe insurance. If insurance companies have a significant degree of control over the market then the changes would be minimal.[62] In particular, if the market failures exist then the benefits are uncertain. Economists are debating even the existence of these failures, and so the benefits of a major change to the tax scheme is fraught with risk.[63]

B. Reformation of the National Flood Insurance Plan

The National Flood Insurance Plan is an independent government project designed to provide flood insurance for people in high-risk flood areas.[64] First created in 1968, the NFIP is supposed to reduce the amount of federal aid required after a disaster by providing insurance plans to residents.[65] The second goal of the NFIP is to shape how communities are designed in flood-zones, in order to reduce the overall economic loss after a flood.[66] This is accomplished through community requirements, forcing

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[61] David L. Brumbaugh and Rawle O. King, *Tax Deductions for Catastrophic Risk Insurance Reserves: Explanation and Economic Analysis,* CRS Report for Congress at 10 (September, 2005).
[62] *Id.*
[63] *Id.*
[64] *About Flood Insurance* (2006), http://www.fema.gov/nfip/whonfip.shtm.
[65] *Id.*
[66] *Id.*

neighborhoods and counties to establish certain safeguards and practices before receiving flood insurance.[67]

For a community to become an NFIP participant it must follow NFIP regulations on zoning, building codes and other safeguards. Largely because of these changes it has been estimated that buildings following NFIP standards cost approximately 80% less per year in flood damage.[68] This reduction can lead to a savings of almost $1 billion in mitigated flood losses per year.[69]

The two main criticisms of the NFIP are that it cannot charge higher rates to pay off payouts from previous years and that participation rates are low. For some reason homeowners fail in disaster after disaster to acquire adequate insurance, even when federal aid is available. The National Flood Insurance Program already provides flood coverage to high-risk areas at subsidized rates.[70] Why then do homeowners not see the benefits of this insurance?

Convincing people in high-risk areas to purchase insurance has been a problem for decades. Currently, participation in the NFIP is dangerously low[71]. The reasons for this are unclear, but it has been hypothesized that residents simply lack the ability to accurately estimate the risks of catastrophe where they live.[72]

The NFIP also must be able to charge rates commensurate with the risks in the communities covered. Subsidizing insurance plans only serves to give homeowners further incentive to live in flood-prone areas.

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[67] *Id.*
[68] *Id.*
[69] *Id.*
[70] *Oversight and Management of the National Flood Insurance Program, Statement of William Jenkins, Jr.* (October 2005), Federal Emergency Management Agency.
[71] See note 11.
[72] See David John, *Providing Flood Insurance Coverage After the Disaster is a Mistake*, (October 19, 2005), *supra*.

A reformation of the plan would have to contain several key changes, which are outlined below. First, the NFIP would have to charge an accurate price for policies, and not subsidize high-risk policyholders. Second, the enforcement of mandatory flood insurance in high-risk areas must be strictly enforced.

1. Raising Rates to Accurately Reflect Risk, and to Pay Off NFIP Loans

Currently, the NFIP operates on a yearly budget that balances premiums with payouts.[73] Unfortunately this is particularly ill suited to catastrophes, where in one year the payouts will greatly exceed premiums. Exacerbating the issue, the NFIP is not allowed to raise premiums to pay for past payouts, instead taking out loans from the federal government.[74] Because there is no way for it to pay these loans back, the government eventually is forced to forgive these loans, in the end costing taxpayers hundreds of millions of dollars. For example in 2004 the NFIP was swamped with claims resulting from the particularly intense hurricane season.[75] The $1.8 billion in claims was far in excess of premiums received that year, and the NFIP had to borrow almost $300 million from the U.S. Treasury Department.[76]

The reason for such a large shortfall is a combination of having to charge rates controlled by the government and the lack of effective enforcement. Both these problems

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[73] John Herke, *Teething Pains at Age 25: Developing Meaningful Enforcement of the National Flood Insurance Program*, 7 Tul. Envtl. L.J. 165 (1993).
[74] *Id.*
[75] *Oversight and Management of the National Flood Insurance Program, Statement of William Jenkins, Jr.*, (October 2005), Federal Emergency Management Agency.
[76] *Id.*

must be dealt with in order to make the NFIP a stable and effective flood insurance instrument.

The only way that the NFIP can truly become the solution to flood insurance is to be able to charge rates representative of the payouts it has and is expected to pay. In order to do this two things must happen. First, the NFIP regulations prohibiting it from making a "profit" in non-catastrophe years must be relaxed. Allowing the NFIP to charge premiums representative of both past and future risk of disaster will allow the NFIP to both reduce its reliance on federal loans and increase the chances that the NFIP will remain solvent after a disaster.

Raising premiums would not hurt participation rates in volunteer areas, according to a RAND study on how to increase enrollment.[77] A moderate (25% or less) increase in premiums would not hurt participation rates, even when the plan is not mandatory.[78] This is likely because those that cannot truly afford flood insurance are receiving federal aid from other sources, and not taking advantage of subsidized premiums.[79]

Using this data, it seems that subsidizing the homes that are already in the NFIP program is inefficient. These homes can already afford the NIFP without aid. In a way similar to car insurance, it is clear that everyone benefits by being compelled to participate in a program such as the NFIP. It now remains to find a way to enforce that requirement.

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[77] Dixon, Lloyd, et al., RAND Infrastructure, Safety, and Environment, and Institute for Civil Justice, *The National Flood Insurance Program's Market Penetration Rate: Estimates and Policy Implications* (2006) at 23.
[78] *Id.*
[79] *Id.*

2. Increasing Mandatory Enrollment, and Promoting Effective Enforcement

In order to increase enrollment, NFIP would have to become mandatory in designated "flood zones" or a nationwide requirement.[80] This is already the case in areas known as "repeat loss properties" in areas such as the Mississippi River Basin and areas vulnerable to hurricanes.[81] Unfortunately it seems that while it may be "required" to purchase NFIP coverage in these areas, residents have either deliberately avoided purchasing coverage or have reneged on their policies after following mandatory purchasing guidelines. Currently there is no sufficient enforcement mechanism in place to allow residents to put themselves in danger. A new plan is needed.

Linking mortgages with NFIP membership is an efficient way of ensuring participation. If residents are unable to acquire a mortgage without showing proof of NFIP membership then they will purchase the insurance. If they cannot afford the insurance, then it is clear they should not be living in such a high-risk area outside their price range. While the value of the house may be low, residents must be compelled to realize the true costs of living a in a dangerous area.

Future enforcement of the mortgage/NFIP mechanism would be crucial. As it stands it is relatively easy for a resident to obtain "required" coverage, and then stop making payments without suffering any penalty from withdrawing from the NFIP. The government should impose penalties on mortgage companies that allow mortgages to remain outstanding when residents have defaulted on NFIP payments. A requirement of

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[80] John Herke, *Teething Pains at Age 25: Developing Meaningful Enforcement of the National Flood Insurance Program.* 7 Tul. Envtl. L.J. 165 (1993).
[81] *Id.* at 166.

showing proof of payments to NFIP while making mortgage payments would be sufficient.

Linking mortgage payments and NFIP payments requires involvement in both the private and public sectors. First the government has to give mortgage companies incentive to enforce the requirement. While it would seem simple to only allow lenders to make loans if they encourage NFIP enrollment, this is insufficient for a number of reasons. First mortgage companies have no financial benefit in the plan. Second, mortgage companies have no incentive to keep residents making payments after the mortgage is issued.

Step one is to give mortgage companies a financial incentive. One possibility is to create a system where the NFIP collects payments for mortgages *and* NFIP payments. Then the NFIP would payout to the mortgage companies. All costs would in theory be dealt with by the NFIP; mortgage companies would suffer no loss this way. Also it may even create a more efficient system for mortgage lenders to keep track of and collect payments.

This also deals with the second issue, making payments continue into the future. The majority of homeowners have to make mortgage payments; the small portions that do not have a mortgage have a much greater incentive to insure their homes through other means. This way while the government is expanding the mandatory aspect of NFIP they are at the same time ensuring that people will actually participate.

The NFIP is a balanced budget plan, and requires the ability to pay back loans through increased premiums after a claim has been paid. The only way the NFIP will be able to raise premiums and still ensure participation is to require participation by residents.

V. Conclusion

Because the two solutions outlined above work against, rather than for, each other, the government should choose a course of action that strengthens one while letting the other dissipate. If the tax changes are implemented, the NFIP should be disbanded in lieu of a more efficient private market solution. However, if the government wants to support the NFIP and provide for broader application and enforcement of the Plan, then the tax changes would only cost the government money and provide little additional benefit.

The reforms to the National Flood Insurance Program would be a fairly simple and clear-cut solution to flood coverage as compared to the tax changes. By forcing participation by high-risk residents and then enforcing that participation the overall economic loss by residents is reduced, and it avoids the problem of residents failing to foresee the risk in their behaviors. Enforcing the NFIP provisions against mortgage companies instead of residents is an effective way of ensuring compliance. These companies will not allow an outstanding mortgage when that resident is not a participant of the NFIP if they suffer the liability for any resulting loss.

Tax changes, on the other hand, are much more complicated and prone to failure than a reform of the NFIP. Any change to the tax structure is extremely complicated, with infinite butterfly effect impacts throughout the economy. In addition, the benefits are much more tenuous. Economists disagree on whether the private sector would actually provide better insurance after a tax change. Furthermore, the private insurance market would still be leery of remaining in the insurance market for catastrophe coverage when the government may impose a moratorium or force coverage that was outside the policy. With so many market failures in regards to catastrophe insurance, perhaps it is better to let the government take over.

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