

# RESEARCH REPORT

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NOVEMBER 2011

## Risk & Reform:

A Florida TaxWatch Analysis of Florida's Property Insurance System



Inside the eye of Hurricane Katrina, © NOAA

A Product of the Florida TaxWatch Research Institute, Inc.

*This report was initially released electronically at [www.FloridaTaxWatch.org](http://www.FloridaTaxWatch.org)*

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# Executive Summary

Florida's hurricane insurance financing system relies on a complex, interrelated network of private and quasi-public entities. The combination of these entities subjects Florida taxpayers, insurance companies, charities, and business owners to the uncertainty of potential taxes called assessments. This report analyzes the financing of Florida's hurricane insurance system. It examines the components of the system, and explores their contributions, individually and collectively, to the uncertainty facing Florida policyholders and businesses. It then analyzes some of the existing proposals to reform the state-run Florida Hurricane Catastrophe Fund, and estimates their costs and benefits, as well as their effects on other components of Florida's hurricane insurance system.

## Financing Florida's Hurricane Insurance System

Florida has chosen to finance the insurance system to pay for damage caused by hurricanes after-the-fact (i.e., money is borrowed to pay for the damage after the event has occurred). Under this after-the-fact financing system, policyholders pay an amount for insurance that covers expected yearly losses plus an amount that allows some cash buildup in the funds during non-storm years, but when a hurricane hits (or multiple hurricanes hit) money may have to be borrowed through post-event bonding to pay for the damage.

There are advantages and disadvantages to any funding system. Advocates of after-the-fact funding argue that this approach works well in years when there is no hurricane damage; the funds not spent to transfer risk remain in the hands of policyholders and, if spent, can stimulate Florida's economy. Disadvantages to this approach start with the difficulty of predicting yearly hurricane damage.

Another serious disadvantage to this system is the difficulty of predicting how much money the funding mechanism will be able to borrow, after one or more large hurricanes, to pay for damages. This type of financing mechanism is highly dependent upon borrowing at a time when borrowing might be difficult. A scenario exists in Florida's case where multiple public and quasi-public entities - Citizens Property Insurance Corporation (CPIC), Florida Hurricane Catastrophe Fund (FHCF), Florida Insurance Guaranty Association (FIGA), and the state government - would all be attempting to raise money at the same time by selling bonds to cover losses incurred from hurricane damage. The difficulty of many large entities trying to

borrow money at the same time would be worse if it happens when global liquidity is strained. In that situation, funding a large amount of hurricane damage could be either extremely expensive, or perhaps impossible.

## Assessments and Damages

To finance the cost of damage after-the-fact, Florida policyholders are subject to contingent capital assessments, which are applied to debt incurred from bonding to pay for hurricane damages. Policyholders in Florida, insured by public or private companies, may be assessed a specified percentage of their premium to pay for hurricane damage. If assessments are imposed pursuant to statutory authority, anyone in the state with a property or casualty insurance policy (other than Workers' Compensation and Medical Malpractice policies) must annually pay these assessments, which could last for as long as 30 years. Surviving solvent private insurers may also be subject to further assessments, the costs of which are further borne by policyholders.

Assessments on insurance policies can come from three different quasi-public entities: CPIC, FHCF, and FIGA. While all assessments stem from hurricane damage, not all assessments are the same.

FHCF Emergency Assessments are imposed to repay bonds that were issued to finance claims for hurricane damage, and are collected directly from policyholders.

CPIC has three different types of assessments: CPIC Policyholder Surcharges, Regular Assessments, and Emergency Assessments. CPIC Policyholder Surcharges are assessed directly on CPIC policyholders to repay bonds. CPIC Emergency Assessments serve the same purpose and function the same way as FHCF assessments (i.e., the assessments "pass-through" the insurance company and are charged directly to the policyholder). CPIC's Regular Assessments, however, are billed directly to insurers, who must pay the assessment in full within 30 days, but the insurers are authorized to attempt to recoup these amounts from their policyholders over time.

FIGA Assessments are used to pay claims against insolvent insurance companies (i.e., those companies that do not have enough liquidity to pay their claims) and can be either Regular Assessments, which function like CPIC Regular Assessments in that they are also collected directly from insurance companies who are then authorized to attempt to recoup these amounts from policyholders over time, or Emergency Assessments, which function like FHCF and CPIC Emergency Assessments.

A significant problem with CPIC Regular Assessments and FIGA Regular Assessments

is that they require Florida's property and casualty insurers to provide liquidity to the quasi-government entities interest-free. These mandatory, interest-free loans have the potential to destabilize Florida's private property insurers, who must pay policyholder hurricane losses at the same time they are providing liquidity to CPIC and FIGA. This assessment-based, after-the-fact financing system could be a significant disincentive to private property and casualty insurers locating in Florida.

In the current system, policyholders have a risk of being assessed by any of the three agencies. For a first storm of moderate size, the probability of such assessments is not high, due to the cash accumulated from having no hurricanes since 2005, but the probability is not insignificant. If a large storm does occur and it exhausts cash balances, the probability of being assessed for a 2nd or 3rd storm doubles for each storm in the case of the FHCF, and the probability nears 100 percent for a hurricane of any size in the PLA/CLA and Coastal Accounts of CPIC. Once the cash balances are exhausted, the only 2nd or 3rd storm scenarios that would not trigger assessments would occur if there was only a small amount of insured storm damage, and those claims could be paid by CPIC from premiums as they are received.

## Analysis of Proposals to Reform FHCF

Recent reform proposals have been suggested to limit the risk of assessments from the FHCF; however, each proposal has benefits and costs and they affect the other components of the property insurance system. Each proposal was analyzed using a Monte Carlo simulation to determine the most likely result of policy payment increase within a 90 percent confidence interval, using 10,000 iterations for each stochastic variable. Throughout this analysis, FHCF and CPIC are assumed to be able to fully pay their stated obligations. If the FHCF cannot meet its \$17 billion obligations, by statute it is authorized to pay its obligations on a pro-rata basis. The possible or probable inability of the FHCF to meet its obligations in full (as the FHCF and its principle financial advisor have estimated at \$3.2 billion or more at the time of this paper) could have cascading effects in the interrelated Florida insurance market, potentially causing some private insurers to become insolvent. The potential risks of this type of event should be considered by policymakers as they evaluate proposed reforms.

Each of the analyzed reform proposals modifies exposure of the FHCF by different amounts. The analysis shows that reforms will reduce the probability, frequency, and amount of potential FHCF assessments on the businesses, consumers, charities, auto

owners and others who ultimately pay the FHCF Emergency Assessments, but will increase the total policy costs (i.e., premiums). The chart on the following page shows the approximate increase in policy cost for the median homeowner associated with each reform proposal.

Scenario	Description	Aggregate Increase in Policy Cost	Median Policyowner Cost Increase	Percent Increase in Median Policy Cost
1A	Increase industry retention to \$8B	\$94.65 M	\$19.25/year	1.05%
1B	Increase industry retention to \$8B Decrease FHCF by \$631M	\$135.98 M	\$27.69/year	1.51%
2	Increase FHCF co-pay to 25% Decrease FHCF by \$2.9B	\$ 565.52 M	\$115.11/year	6.27%
3	FHCF reduced to \$12B	\$ 452.50 M	\$92.20/year	5.03%
4	Proposed Legislation	\$ 849.98 M	\$173.04/year	9.44%
5	Increase industry retention by \$3B	\$ 390 M	\$79.37/year	4.33%
6	Increase industry retention by \$5B	\$ 610 M	\$124.28/year	6.78%

Also, modifying the FHCF affects other components of the insurance system. Most importantly, any reduction in exposure for the FHCF increases the net exposure to CPIC, private insurers and reinsurers, FIGA, and the State of Florida.

### A Piece of the Solution

The property and casualty insurance system in Florida is made up of separate pieces: FHCF; CPIC; Private Insurers; FIGA; and the self-insured State of Florida. Policy options to change the way that the FHCF operates need to be addressed in an analytical manner to find the most efficient solution for Florida. Addressing the FHCF, while necessary, only cures one part of the overall financial problem Florida faces with potential hurricane losses. As legislators work to find a long term, comprehensive solution to stabilizing Florida’s insurance market, they must address the concentration of risk in Florida and the potential additional risk to CPIC.

# Section 1: The Current Situation Financing Florida's Property Insurance Market

## The Parts of the Hurricane Funding System

There are several parts of Florida's hurricane funding system that have different roles, but these parts should work together to provide adequate protection to policyholders in Florida. Attempts to analyze the separate parts and modify them, without taking into account their effects on other parts of the system, are unlikely to lead to optimal solutions. Following are descriptions of the differing parts of the Florida hurricane funding system.

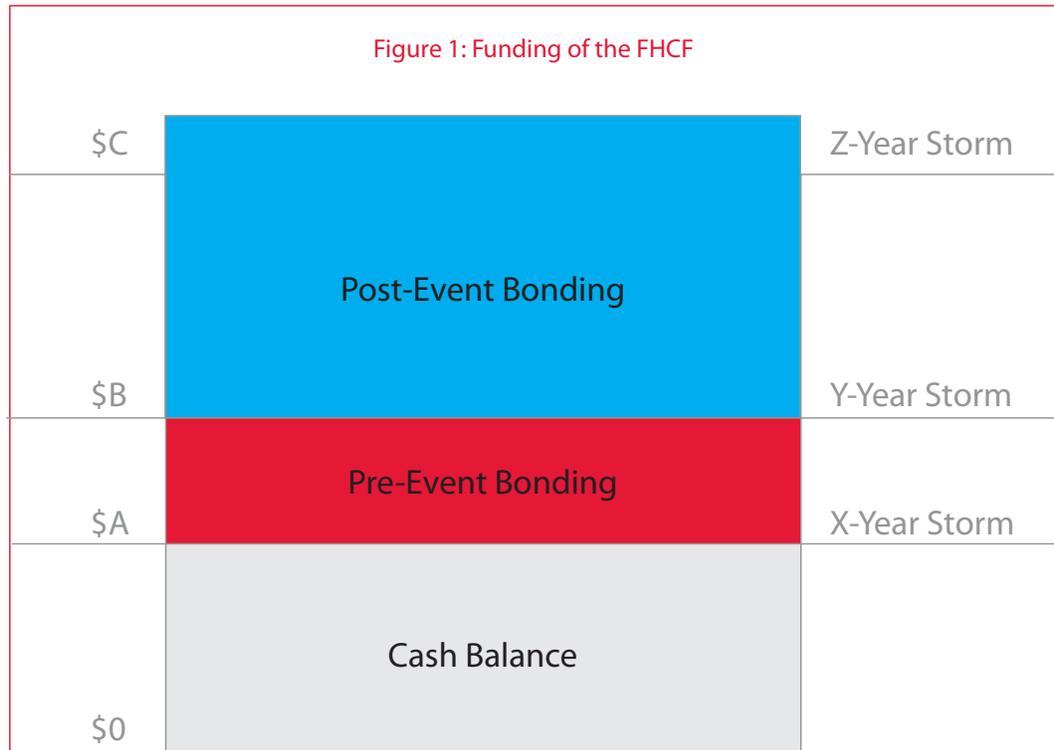
### **FHCF – The Florida Hurricane Catastrophe Fund**

The FHCF is a type of state-run reinsurance program that provides reimbursements to insurers (both CPIC and private insurers) for a portion of their catastrophic hurricane losses. The FHCF was created by the Florida Legislature in 1993 during a special legislative session following Hurricane Andrew.

The FHCF is mandatory reinsurance - every residential property insurer in Florida is required to purchase reinsurance from them. The FHCF was conceived as a "market stabilizer." To stabilize the property insurance market, each year a known amount of reinsurance has been provided at a known price. This reduces the uncertainty for homeowners when their insurance companies are able to have a known amount of reinsurance available. The FHCF is designed to begin paying claims only after a significant amount of "industry retention," something similar to a deductible. Private insurers have a choice of how much coverage they would like to purchase: 45% coverage, 75% coverage, or 90% coverage. In most cases, private insurers have chosen the 90 percent level of FHCF coverage, leaving themselves a 10 percent area of their own exposure called the "co-pay."

The FHCF mandatory coverage has a maximum capacity of \$17 billion. Technically, the FHCF is only required to pay the amount of their assets plus what they can borrow, up to a maximum of \$17 billion. If the FHCF cannot borrow sufficient funds, it pays claims on a pro-rata basis; recent FHCF bonding estimates indicated that the FHCF could be \$3.2 billion short of what is needed to pay claims over the next year. To finance its mandatory coverage, the FHCF typically has three funding layers: cash balances, pre-event bonds,

and post-event bonds. The following chart will aid in describing this process.



In using this type of chart to analyze the FHCF, the left side of the chart shows a scale of insured damage for each part of the FHCF account, from zero at the bottom to higher and higher insured damage amounts. On this chart, one should be able to see that at the amount of \$A of insured damage, the cash balance of the account would be exhausted. Between \$A and \$B, the pre-event bonding amount is used.

Those bonds are typically very short in duration and it would be likely that post-event bonding would be required to pay back pre-event bonds. However, there could be some instances where some amount of pre-event bonding could be paid back from premium income and post-event bonding would not be required. From \$B to \$C in insured damages, you are in the area where post-event bonding would be required. The right-hand scale is an estimate of the probability in number of years (often called the “return time”) for that size storm to occur. To be clear, a storm of \$A of insured damages would be expected to occur once in every X years.

The current situation of the FHCF is that the \$3.5 billion of pre-event liquidity that has been available for recent hurricane seasons will not be fully available for the 2012 hurricane season. The \$3.5 billion “bullet bond” is due in October 2012 and thus might not provide pre-event liquidity for later events of this hurricane season and is unlikely to

provide any liquidity for the 2012 hurricane season. The current situation is shown in the chart above. However, when the pre-event liquidity is no longer available, the area shaded in red denoting pre-event bonding will be enveloped by post-event bonding. One should note that the area shown as “cash” is actually some cash plus short term bonds that can be used to pay claims during this storm season.

One item not shown is an amount of reinsurance provided below the attachment point by the FHCF. This is an estimated \$411 million of reinsurance for the 2011 hurricane season that is supplied to eligible companies by the FHCF, called the “\$10 Million Coverage Option.” It is scheduled to expire prior to the 2012 hurricane season, and therefore is not shown in the charts.

Another feature of the FHCF is the Temporary Increase in Coverage Limit (TICL) that is “on top” of the FHCF. Although it has been as much as \$12 billion, as shown on the chart below, the amount available for purchase has dropped steadily. Under current legislation, that layer is scheduled to disappear after the 2013 hurricane season. For the 2011 year, approximately \$1.14 billion of the available \$6 billion of coverage has been purchased.

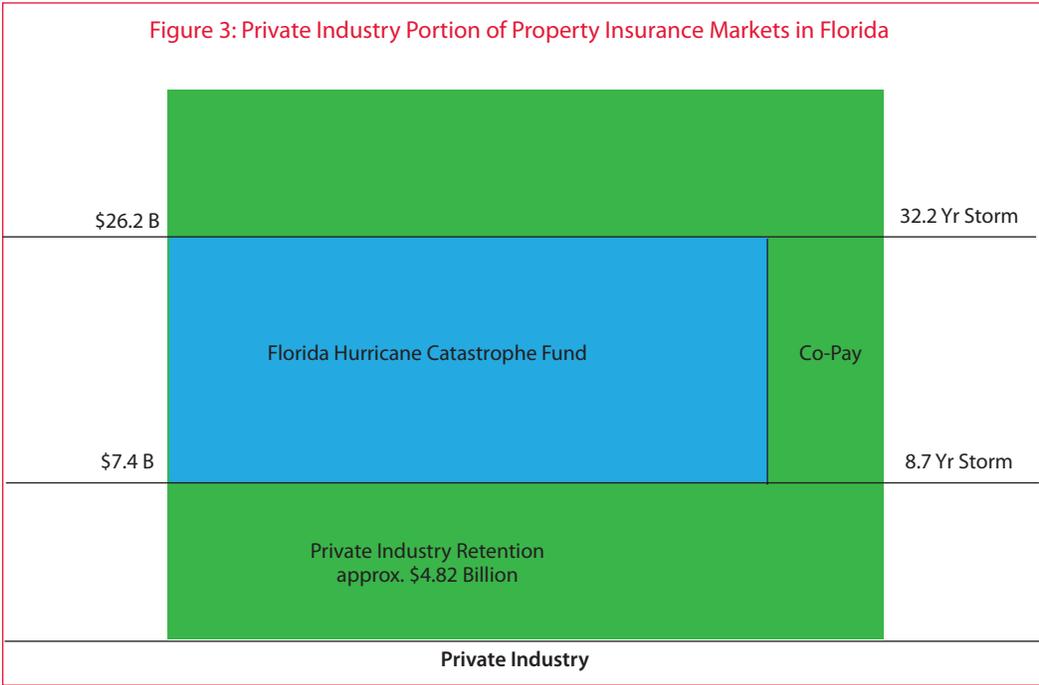


**Private Insurers**

Private insurers are any nongovernment entity that is licensed to write property insurance policies in Florida.

The chart on the following page shows the estimated position of private insurers for the current hurricane season. Private industry retention is approximately \$4.82 billion of the \$7.369 billion industry retention total. The amount of co-pay is approximately \$1.08

billion for FHCF reinsurance. One should note that although the specific point where reinsurance covers the private industry is not shown, most if not all private companies purchase reinsurance to diversify their risk elsewhere. The reinsurers choose risks all over the world that are uncorrelated by geography and by type of risk. For example, a reinsurer may choose to insure California and New Madrid Seismic Zone earthquake loss, European windstorm and earthquake loss, catastrophic earthquake loss in New Zealand, tsunami loss in Japan, and terrorism risk, flood, and other catastrophic risk in other parts of the world, as well as hurricane loss in Florida. Potential losses are unlikely to occur at the same time, so reinsurance premiums from one area of the world would be expected to cover losses in another part of the world.



**CPIC – Citizens Property Insurance Corporation**

CPIC is a nonprofit, tax-exempt, quasi-governmental corporation whose public purpose is to “provide insurance protection to Florida property owners throughout the state.” According to Florida Statutes 627.3517, a CPIC policy can be issued if the premium coverage offered by private insurer for “basic policy including wind coverage” is at least 15 percent greater than the premium for comparable coverage by CPIC. As of October 2011, CPIC had 1.46 million policies extending approximately \$508 billion of property coverage to Floridians in all 67 counties-representing more than 25 percent of the residential exposure in the state. Despite the CPIC’s statewide presence, 58 percent of CPIC policies are concentrated in just five high-risk counties.

**CPIC POLICIES AS OF OCTOBER 2011\***

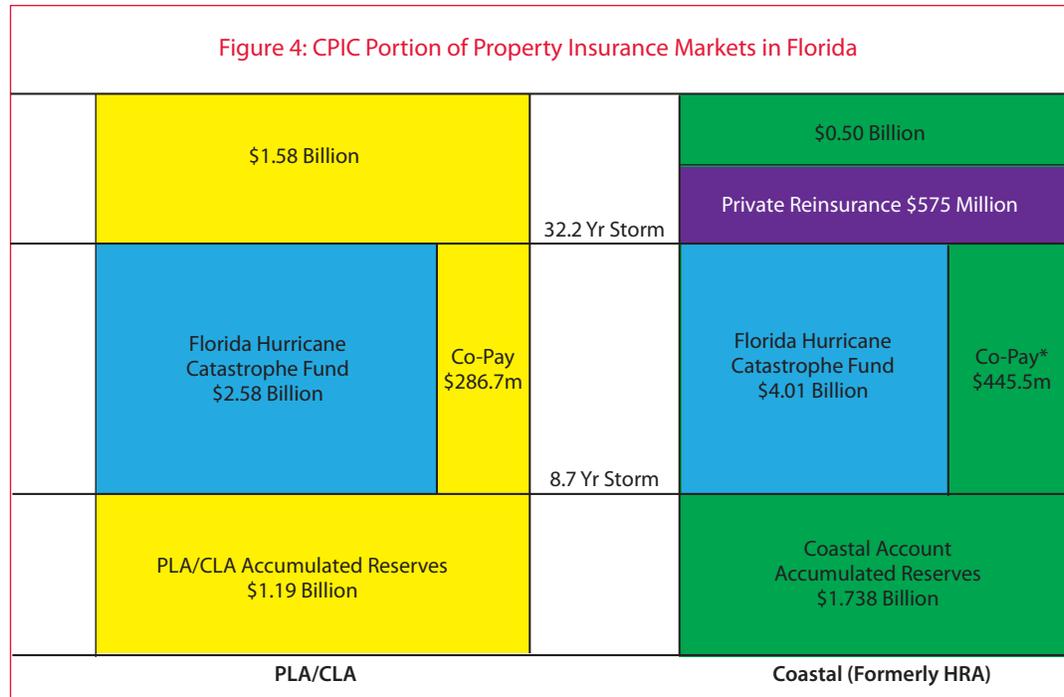
<b>County</b>	<b>Policies</b>	<b>Total Premium</b>	<b>Total Exposure</b>
Miami-Dade	263,412	\$650,224,574	\$81,250,908,828
Broward	212,365	\$504,955,535	\$78,708,049,948
Pinellas	150,249	\$281,085,257	\$48,094,411,318
Palm Beach	145,529	\$365,020,846	\$63,990,740,469
Hillsborough	81,244	\$126,944,317	\$22,596,790,979
Remaining 62 Counties	739,553	\$1,313,038,995	\$246,000,836,452
<b>Total</b>	<b>1,460,672</b>	<b>\$3,034,301,370</b>	<b>\$508,519,969,917</b>

\*Citizens Property Insurance Corporation

CPIC has the statutory authority to apply assessments to cover obligations to policyholders. There are three types of assessments that CPIC can statutorily employ: CPIC Policyholder Surcharges, Regular Assessments, and Emergency Assessments. CPIC Policyholder Surcharges assess CPIC policyholders as much as 15 percent of their premiums for each of three accounts, which are offered based on property location and type (the Commercial Lines Account, Personal Lines Account, and Coastal Account). Therefore, if someone has a policy in all three CPIC accounts, they could be assessed as much as 45 percent. If the amount of assessments collected from CPIC Policyholder Surcharges is not sufficient to cover repayment of bonds, Regular Assessments of up to 6 percent of the premiums per policy (or up to 6 percent of the deficit per account to a maximum of 18 percent) can be implemented for all property and casualty insurance policies issued by private insurers (i.e., all policies except CPIC policies), except Workers' Compensation and medical malpractice policies. If CPIC Policyholder Surcharges and Regular Assessments are insufficient to pay CPIC claims, Emergency Assessments of up to 10 percent of the premiums per policy (or up to 10 percent of the deficit per account to a maximum of 30 percent) can be implemented for all property and casualty insurance policies (i.e., CPIC policies and those issued by private insurers), except Workers' Compensation and medical malpractice policies.

The chart on the following page shows the estimated position of CPIC's differing accounts during the 2011 hurricane season. These are shown separately because the Coastal Account is run separately from the Personal Lines Account (PLA) and Commercial Lines Account (CLA). The pre-event bonding is not shown here, but there is \$900 million available from bonds sold in 2011 for use in the Coastal Account, as well as additional amounts from previous years. That liquidity would be used to pay claims while waiting for reimbursement from the FHCF. One should note that the \$575 million of private

reinsurance on top of the FHCF in the Coastal account is only available for a first storm. It will be available through this hurricane season and would have to be repurchased next year if CPIC chooses to do so.

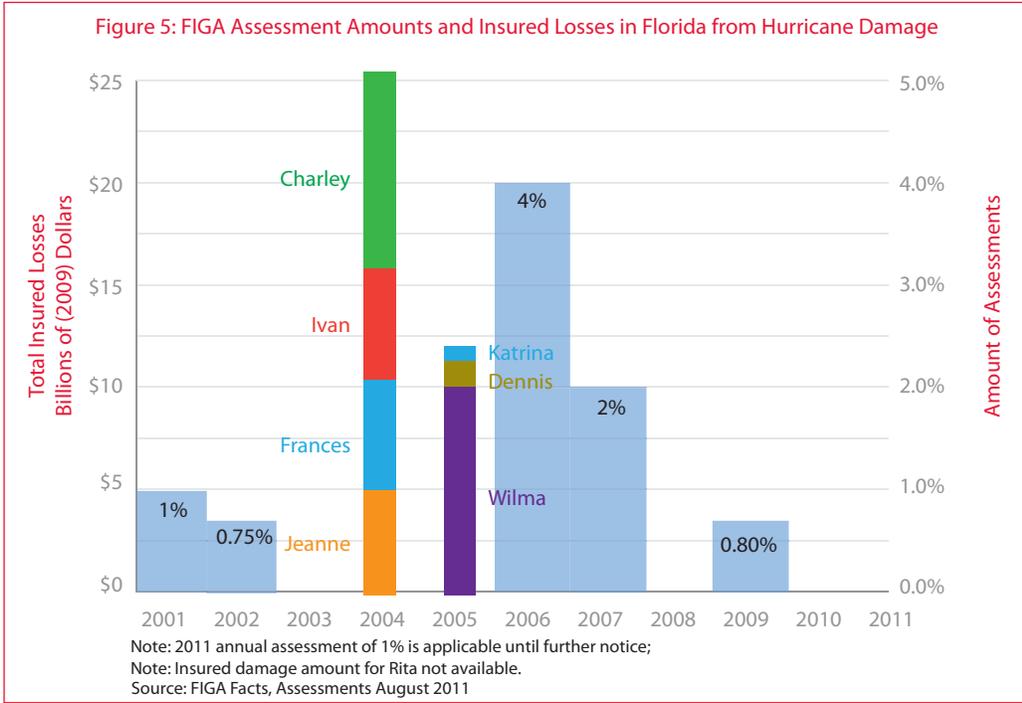


**FIGA (Florida Insurance Guaranty Association)**

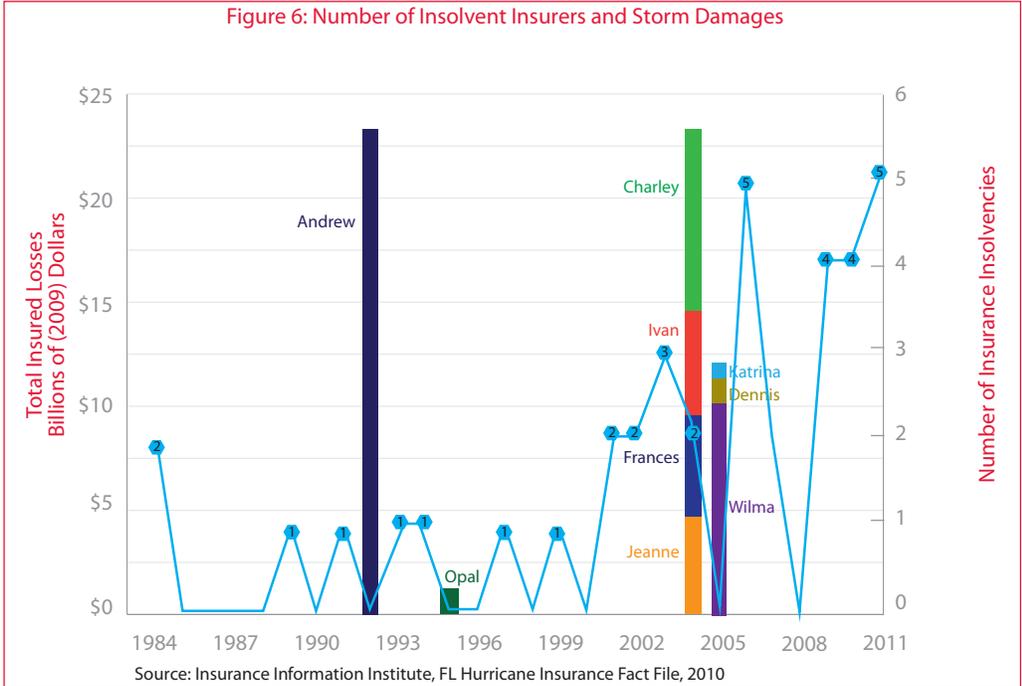
The Florida Insurance Guaranty Association is a nonprofit corporation that was created by the Florida Legislature in 1970 to handle the claims of insolvent property and casualty insurance companies. FIGA services pending claims by or against Florida policyholders of member insurance companies that become insolvent and are ordered to be liquidated by law.

To get money to cover claims, FIGA can assess insurance companies 2 percent of each company’s premium for a Regular Assessment, plus an additional 2 percent for an Emergency Assessment. Once assessments are approved, they must be paid by the insurance companies within approximately 30 days. If FIGA cannot get enough money to cover losses from insolvent insurers this way, FIGA is allowed to combine with a city or county to issue bonds. This has not yet been done, but it is a possibility. This scenario becomes more likely with a large storm or combination of storms that would cause a significant number of insurers to become insolvent.

The graph on the following page shows assessments that FIGA has made in the past, and the coinciding hurricanes that led to insurance company insolvencies.



The graph below shows the number of insurance companies that have become insolvent and have been taken over by FIGA to pay their claims. In addition, the coinciding hurricanes responsible for the damages are shown.



The number of failing insurers should coincide with severe storm seasons, along with assessments by FIGA. However, the figure on the previous page shows that there has not been a significant storm season since 2005, yet at least 13 insurers have become insolvent since 2009. The question now becomes: if insurers are going out of business during a period when there were no hurricanes, what happens if there is a significant storm?

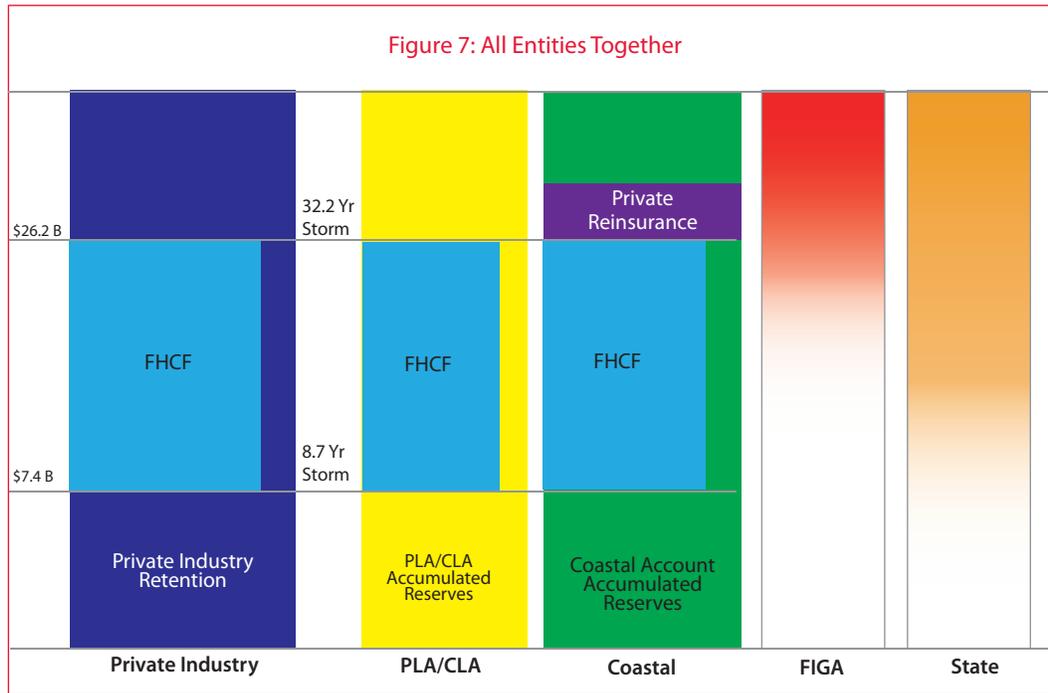
Given the difficulty of predicting how many insurance companies would become insolvent after a large hurricane or multiple hurricanes, FIGA will be shown in our illustration to have increasing probabilities of assessments coinciding with larger hurricanes. No specific storm sizes will be shown for the FIGA and State charts with the combined chart at the end of this section; however, one can surmise that once a hurricane or repeated hurricanes occur, the probabilities of losses to these two entities go up significantly. They are shown as shaded areas of Figure 7.

### **State of Florida**

The state will suffer some unknown percentage of the uninsured damages, depending upon where storms hit and their severity. These damages will include damage to roads, ports, State parks, bridges, and other state property. States depend on FEMA to help cover hurricane damage, but Florida could end up with a significant amount of uncovered damage. If there is not enough money to cover that damage, the State could be forced to bond for the repair costs. Therefore the State can have risk not only to physical infrastructure, but also to its finances if bailouts of one or more of the quasi-public entities are required.

### **Homeowners**

Homeowners and business owners are responsible for their deductibles. Both can face other charges as well. In the case of their insurance company becoming insolvent and FIGA taking over, each business owner faces a limit of \$300,000 and each homeowner faces a limit of \$500,000 for their claims. Each also faces an extra FIGA deductible of \$100. In addition, there is the possibility of having their claims delayed while FIGA is assessing insurance companies and collecting on those assessments. Although not shown in Figure 7, homeowners also bear more risk as storm sizes increase due to these items.



The combination of the parts of the Florida hurricane funding system is shown in the figure above. Note that although cash from FHCf is allocated to the various entities in this chart, this assumes equal proportions of damage to the PLA/CLA and Coastal Accounts and the Private Industry. That may not be the case, and the FHCf cash would be allocated to where the insured claims come from. Note that FIGA and the State of Florida both have significant amounts of exposure.

**One should be able to see that these parts of the Florida insurance system are dependent upon each other. Changing one part of the system, without accounting for the effects on other parts of the system, could lead to non-optimal solutions.**

### How Florida Finances Hurricane Losses

There are two ways to pay for hurricane damage. You can pay in advance or you can wait until storms hit and pay after-the-fact. Florida has chosen to pay after-the-fact. Both systems involve tradeoffs between risk and reward.

### After-the-Fact Financing

If policyholders pay for hurricane damage in advance, they pay significant amounts above what expected non-hurricane policy losses would cost from year to year. If the amounts were enough to cover not only normal years, but also the damages from all hurricanes,

this type of pre-payment would be deemed “actuarially sound.” The extra money is saved and used when hurricanes hit. The advantage of this system is that hurricane losses are planned for and paid without incurring debt and the assessments needed to retire that debt. Although premiums would be higher than the up-front premiums paid by homeowners now, those premiums should be less volatile and without the costs associated with bonding and debt service. If storm damage is correctly predicted, there is no risk of extra costs for policyholders. The disadvantages of this system include that it is impossible to predict hurricane damage on a short-run basis, and difficult to predict on a long-run basis. Self-insuring (for those who are financially able to) potentially lowers the number of policyholders in CPIC or indirectly covered by the FHCF and FIGA, and possibly further concentrates the state’s risk when hurricanes hit. Another disadvantage of this system is that when money beyond certain levels is kept by insurers, it is taxed - leaving less money for paying claims.

If hurricane damage is paid for after-the-fact, as is usually the case in Florida’s current system, policyholders pay an amount for insurance that covers expected yearly losses (other than hurricane losses). When a hurricane hits (or multiple hurricanes hit), money is borrowed to pay for that damage. One feature of this system is that money not spent on transferring risk could be spent by policyholders, and could increase the growth of the state’s economy. However, there are several disadvantages to this approach, including the uncertainty for policyholders in not knowing how much they might be assessed by one or more agencies after significant storms. This uncertainty, especially among business owners who receive little or no benefit from either the FHCF or CPIC, could make the difference in a potential company relocating to Florida versus another state. Another serious disadvantage to this system is the obvious one of trying to predict how much money the funding mechanism could borrow after one or more large hurricanes.

### **Contingent Capital**

The way Florida funds hurricane damage after-the-fact is by the use of contingent capital. Policyholders on most types of property and casualty insurance are implicitly agreeing to pay in the future for hurricane damage, whether they benefit from the quasi-government insurance program or not. Policyholders, insured through private companies or public agencies, will be assessed a specific percentage of their premium to pay for hurricane damage, as mentioned earlier. Whether they realize it or not, policyholders in Florida are currently paying assessments to pay for damage from the 2005 storm season, and will be paying some of those assessments until 2016.

There are differences between how quasi-public insurers, such as CPIC, and private insurers operate within the State's current insurance setup. The biggest difference in how private insurers operate and how quasi-public insurers operate is how much they pay for contingent capital. Private insurers must account for the costs, but public or "quasi-public" insurers do not have to factor in the significant costs of contingent capital.

The agencies such as the CPIC, FHCF, and FIGA have the use of this type of contingent capital at no initially imputed cost to them. But there is a cost of that capital. The assessed consumers and businesses have a significant implied cost of capital that is not reflected in this or any other analysis of which we are aware.

Florida's FHCF has experience with paying market rates for contingent capital. In 2008, when global liquidity was under stress, the FHCF paid Berkshire Hathaway \$224 million for the option to borrow \$4 billion, once a pre-determined level of losses by the FHCF was reached.

Contingent capital is generated by using assessments.

### **Assessments**

Assessments are paid not just by those who have policies on real property; they include those with auto policies and other types of policies as well. In fact, most of the assessments are made on auto policyholders, business owners, non-profits, churches, charities, school boards, and local governments; entities which do not directly benefit from either the FHCF or CPIC, but instead subsidize the homeowners' insurance market.

The reason that persons other than real property owners are required to pay assessments is that this system provides a broader assessment base for repayment of bonds issued by the quasi-public entities. Widening the base of those paying assessments increases both the potential amount of borrowing and it lowers the likely interest rate for that borrowing. With an expanded assessment base, the probability that enough money will be generated to pay back the principal and interest on bonds is increased, thereby lowering the bond interest rate.

Policyholders must pay these assessments, or their policies can be canceled. It is likely that many of the persons paying assessments received no damage from storms. Furthermore, those who move to Florida after assessments have been placed on insurance premium payments are paying for damage but receive little or no benefits for their money.

In addition, because business owners are not covered by the FHCF, and the commercial segment of CPIC is very small, the vast majority of Florida businesses are subject to assessments from these quasi-government programs for which they receive little benefit.

The following sections will estimate the severity and storm sizes that would cause Floridians to be assessed to pay for claims in the case of each property insurance entity.

Assessments can come from three different quasi-public agencies: CPIC, FHCF, and FIGA. However, although all assessments stem from hurricane damage, not all assessments are the same. FHCF Emergency Assessments are imposed to repay bonds that were issued to finance claims for hurricane damage, and are collected directly from policyholders.

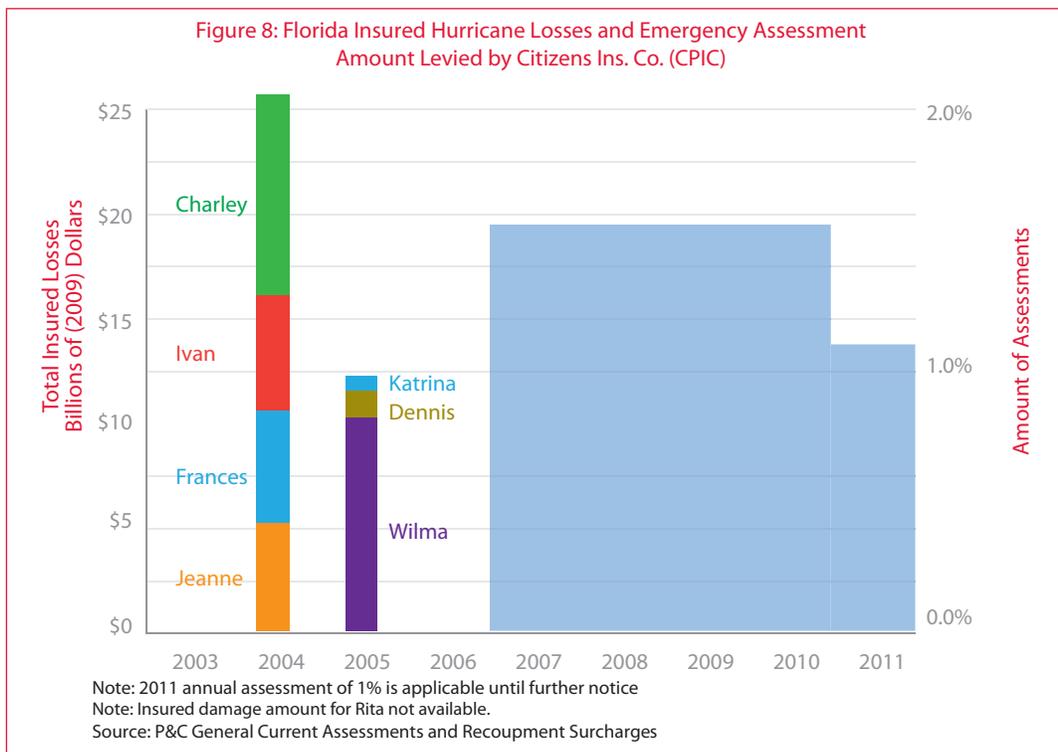
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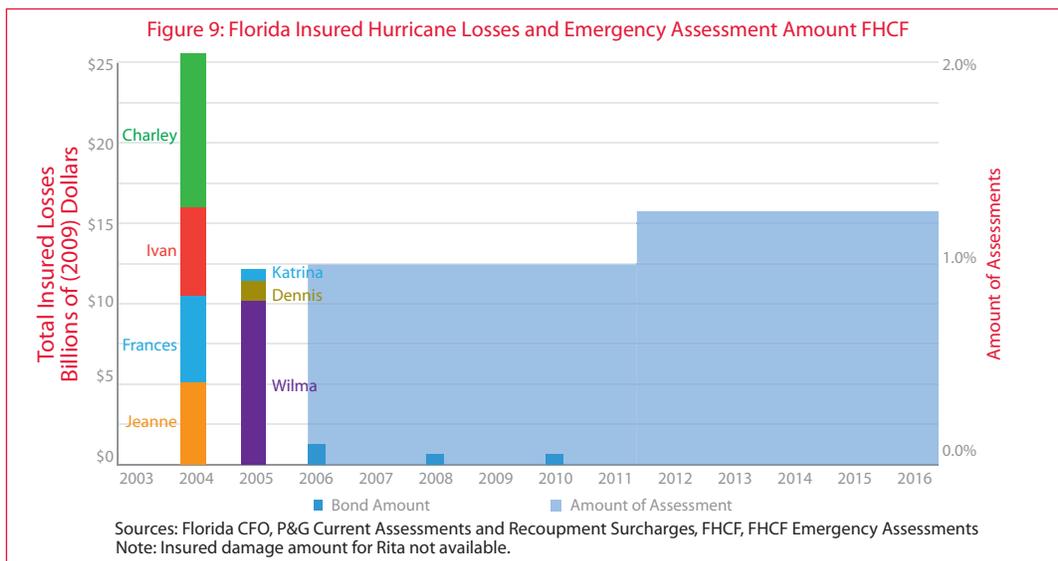
The following graphs show assessments that have been introduced by CPIC, FHCF, and FIGA in the past 10 years along with insured loss amounts in Florida from past hurricanes.

### **Past Assessments**

The graph in Figure 8 shows that CPIC has given assessments of 1.3 percent from 2007 to 2010 which were recently lowered to 1 percent in 2011. These are post-loss assessments and the 1 percent assessment will remain applicable until further notice by the agency.

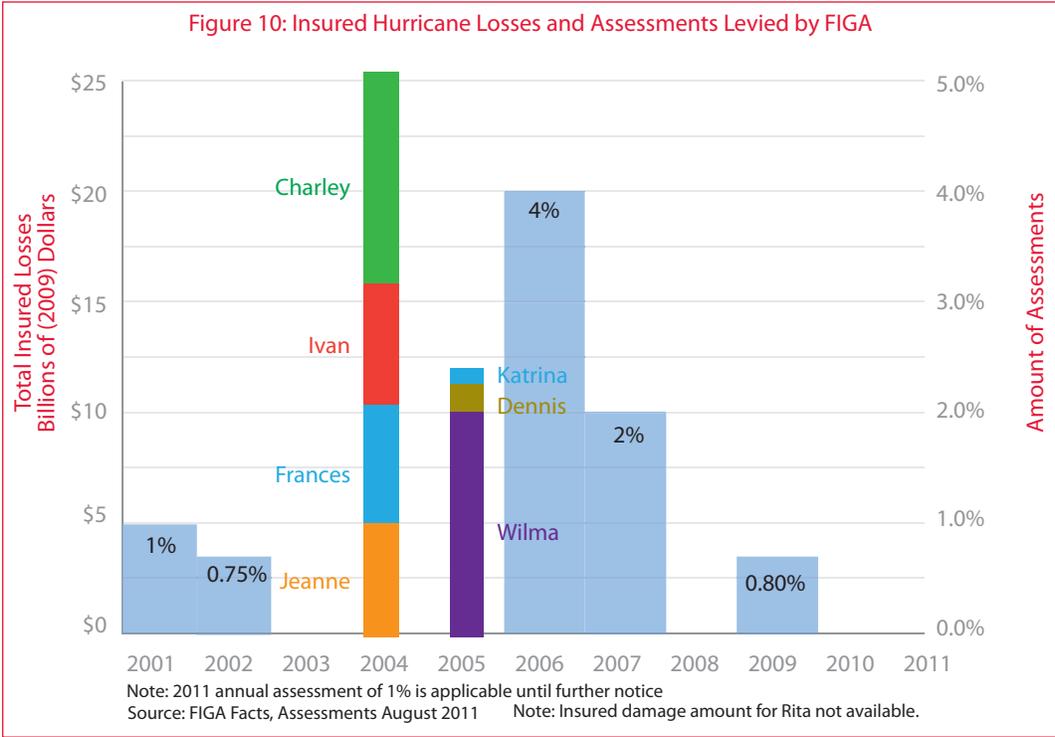


The next graph shows assessments given by FHCF as well as any amount of bonds that were needed to cover losses incurred from the 2004 and 2005 hurricane seasons.



The X-axis scale in the above chart extends to 2016, given this assessment will remain at 1.3 percent until 2016.

The below graph shows the amounts that FIGA has assessed insurers in Florida to cover losses from hurricane losses and other losses stemming from taking over insolvent insurance companies.



While insurers are expected to attempt to recoup these assessments from policyholders, the amount or probability of the FIGA assessment burden that may be passed on to the individual policyholders is uncertain. Insurers may choose not to pass along the full assessment burden for competitive or other reasons. However, with state-run insurers or state-run reinsurers, this probability can be more easily predicted.

**The Current Situation and Probability of Future Assessments**

The following charts highlight the financial agencies of Florida’s hurricane system to determine what size storm would cause enough damage to need bonding. By analyzing this, probabilities can be developed that will indicate the likelihood of being assessed. With each agency, the first storm size and damage amount is assumed to be large enough to use up all available cash on hand. The subsequent 2nd and 3rd storms show where assessments will be made with higher assessments occurring as the storm sizes increase.

The first chart on the next page shows the probability of being assessed by the FHCF from three storms in the most immediate storm year based on the 2011 financial standing of the FHCF.

Figure 11: Probability of Being Assessed by FHCF in One Storm Season						
			Storm 1	Storm 2	Storm 3	
\$26.2 B						
\$15.4 B	Florida Hurricane Catastrophe Fund Post-Event Bonding \$11.3 Billion		Assessments	If FHCF Cash Exhausted - Assessments	Industry Retention Reduced to 1/3 for 3rd Storm - if FHCF Cash Exhausted, Assessments	
\$7.4 B	Cash \$7.2 Billion		FHCF Cash			
\$2.5 B	2011 Industry Retention \$7.37 Billion					
\$0.0						1/3 Industry Retention

The chart shows that if the first storm in hurricane season were a 1 in 17.3 year storm, it would cause enough losses that the available cash in the FHCF would be exhausted. At this point, further damage amounts would require post-event bonding and the assessments that go with that bonding. One should note that the probability of a storm exhausting all of the FHCF cash and potentially requiring \$11.3 billion of post-event bonding (and the associated assessments) is one in 32.2 years. This event is highly probable during the course of an average 30-year mortgage.

With the assumption that the first storm eradicates all the FHCF cash, the FHCF would have to begin bonding at a lesser damage amount in the event of a 2nd storm, specifically a 1 in 8.7 year storm. In the event of a 3rd storm large enough to reach the FHCF level in the same season, only one-third of the industry retention must be reached for the FHCF to begin paying out claims. This makes the probability of bonding, and therefore assessments, on policyholders even more likely. During this 3rd storm scenario where cash has been exhausted, anything substantially larger than a 4.5 year storm would require bonding.

The next two charts show the approximate probability of being assessed by CPIC Personal Line Account and Commercial Line Account (PLA and CLA) and by CPIC Coastal Account (formerly called the High Risk Account - HRA). These accounts are split due to the fact that the Coastal Account is run separately from the PLA/CLA accounts.

**Figure 12: Probability of Being Assessed by Citizens in One Storm Season: PLA/CLA**

		Storm 1	Storm 2	Storm 3
	Cash \$1.58 Billion	35.1 Yr Storm	If PLA/CLA Cash Exhausted - Assessments	If PLA/CLA Cash Exhausted - Assessments
		32.2 Yr Storm		
	Co-Pay* \$286.7m	8.7 Yr Storm		
	Florida Hurricane Catastrophe Fund			
	2011 Accumulated Reserves* \$1.19 Billion			

Note: \* Indicates amounts in CPIC PLA/CLA

This chart shows that if a first storm were to hit, because of the industry retention, FHCF reinsurance, and additional cushion of cash build-up above the reinsurance limit, only a 1 in 35.1 year storm would exhaust available cash in the PLA/CLA accounts within CPIC. However, if a 2nd storm of any size were to hit after the cash was exhausted in the first storm, policyholders of CPIC are at risk for surcharges to cover losses. It should be noted that even policyholders of private insurers are at risk of assessments if losses are great enough.

Finally, we look at the CPIC Coastal Account's probability of assessments. The Coastal Account has purchased single-storm private reinsurance in the amount of \$575 million on top of the FHCF reinsurance, and has a cushion of cash on top of those areas to pay for claims. This puts the probability of being assessed by the Coastal Account starting with a 34.3 year storm damage amount. Again, like the PLA and CLA, if a 2nd storm were to hit after the initial storm wiped out available cash to pay for claims, the probability of being assessed begins with the next hurricane of any size.

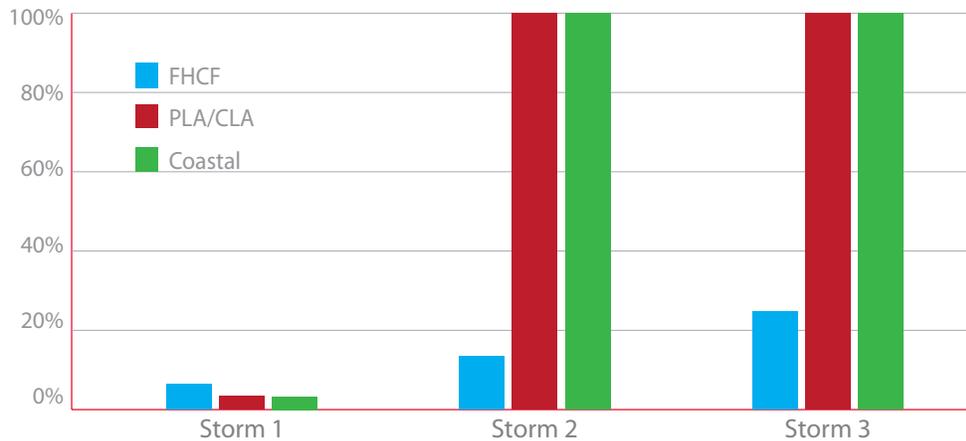
Figure 13: Probability of Being Assessed by Citizens in One Storm Season: Coastal Account

			Storm 1	Storm 2	Storm 3
	\$502.5 Million	34.3 Yr Storm	Assessments	If Coastal Cash Exhausted - Assessments	If Coastal Cash Exhausted - Assessments
		33.1 Yr Storm	Coastal Assets Pay		
		Private Reinsurance for 1st Storm \$575m*	32.2 Yr Storm		
	Florida Hurricane Catastrophe Fund	Co-Pay* \$445.5m			
			8.7 Yr Storm		
	2011 Accumulated Reserves* \$1.74 Billion				

Note: \* Indicates amounts in CPIC Coastal Accounts

For comparability of the chance of being assessed by the CPIC accounts (PLA/CLA and Coastal) and the FHCF (not including possible FIGA assessments) the probability of being assessed by each is put together in a bar graph below. Again, these scenarios assume that the first storm is large enough to produce enough damage to eliminate the cash-on hand, requiring that any subsequent storm damage rely heavily on bonding.

Figure 14: Chance of Being Assessed in Any Given Storm Season Due to Storm Severity



Note: Probability of being assessed after Storm 1 are based on the assumption that cash assets have been exhausted from the first storm

As is shown on the previous page, there is a relatively lower chance of being assessed by any of the CPIC accounts or the FHCF for a first storm. However, if that does occur and it exhausts cash balances, the probability of being assessed for a 2nd or 3rd storm doubles for each storm in the case of the FHCF, and the probability nears 100 percent for a hurricane of any size in the PLA/CLA and Coastal Accounts. The only 2nd or 3rd storm scenario that would not trigger assessments would occur if claims could be paid from premiums as they are received. This higher risk of future assessments remains high in the years following the storm years, until cash balances are replenished.

## The Concentration of Risk

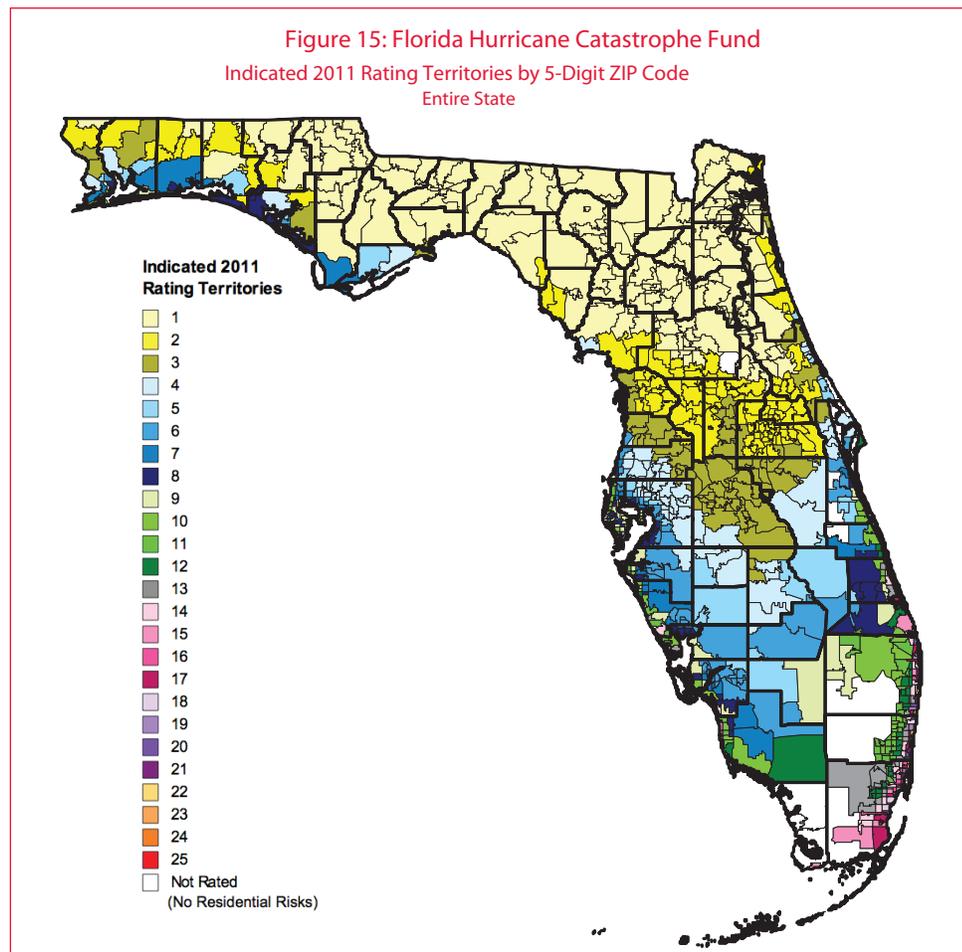
Risk concentration increases the probability of assessments. A feature of Florida's geography is important to the story.

Florida's unique geography gives us almost 1,200 miles of beautiful coastline, but also targets the state as one of the highest risks of natural disaster losses on the planet. One of the tenets of insurance is to diversify risk so that losses are not correlated with each other. Companies that insure risk in Florida should be diversifying risk to other states or countries with lower probabilities of hurricane loss, or laying off risk to those that can.

The fact that some agencies in Florida concentrate so much risk amplifies the likelihood that in the event of a catastrophic storm or storm season, Floridians will be paying large amounts in assessments, whether they originate from CPIC, FHCF, or FIGA.

Realizing that Florida has the most hurricane risk of anywhere in the world, we can also look at the dispersion of risk by comparing areas of the state.

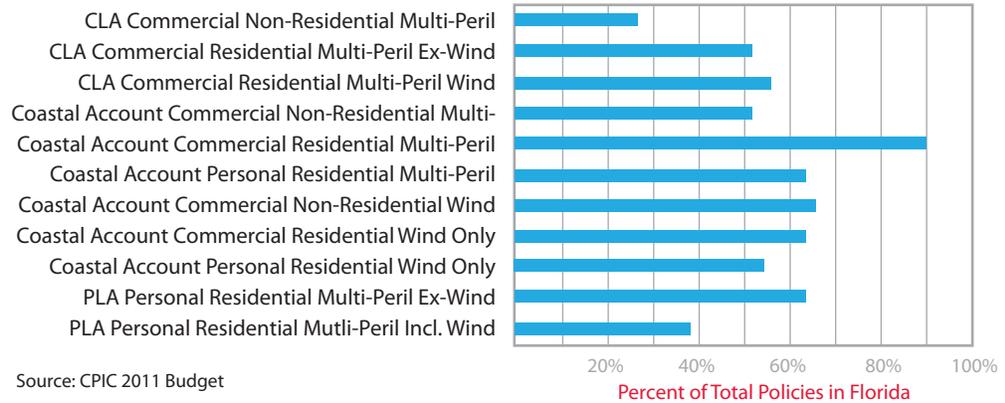
The pink and red shading in the map indicates areas with higher risk of hurricane losses.



Even though the South Florida area is clearly the part of the state with the most risk, a significant portion of CPIC policies are located in this part of the state. Because there is a high concentration of CPIC policy holders in the riskiest part of the state, a large storm in that area could cause major losses to CPIC. This increases the probability that not only CPIC policyholders could receive surcharges of as much as 15 percent per CPIC account, but also those who are covered by private insurers could end up footing the bill to cover those losses by being assessed.

The chart on the following page shows the concentration, by insurance line, of CPIC policies in Broward, Miami-Dade, Palm Beach, and Monroe counties. One can see that in five of the cases, concentrations of more than 60 percent of all CPIC policies of these types are in the four South-Florida counties. This is one reason the Coastal Account's cost for reinsurance is at a higher rate than the estimate used for the entire industry when estimating the cost of potential policy changes in this paper.

Figure 16: CPIC Policies: Southeast Florida Percent of Total Broward, Miami-Dade, Monroe and Palm Beach Counties as of July 31, 2011



Another serious issue that must be addressed is the growth in numbers of CPIC policies. According to the CPIC website, as of October of 2011, the CPIC has 1,460,672 policies in force. This is not only a substantial number of policies, but also all of the \$508.5 billion in exposure (except the approximately 0.1 percent of total exposure that is covered by private reinsurance) is entirely within the state of Florida. A private insurance company would likely not be able to have such a concentration of policies in Florida without substantial amounts of reinsurance plus liquid assets - an amount far in excess of what CPIC has. Although the CPIC reports that it has increasing amounts of cash to pay claims, those figures are not reported on a risk-adjusted basis.

The concentration of risk in CPIC is the largest problem in the Florida property insurance system. Similarly, the FCHC has a risk concentration problem in that it concentrates all of its risk in Florida. Since the FHCF may not be able to pay all its claims, significant reforms need to be considered. These potential reforms to FHCF will have an effect on other parts of the system, especially CPIC. This study will analyze those proposals and evaluate their costs and benefits, including their effects on CPIC.

## Section 2: Analysis of Proposals to Reform FHCF

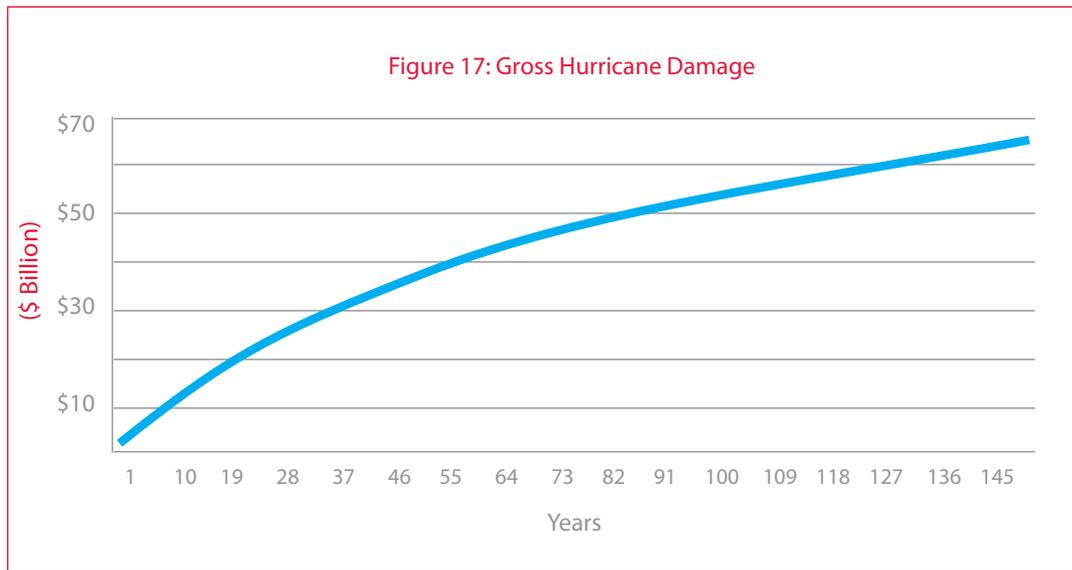
### Analysis of Recent FHCF Reform Proposals

In order to simplify the charts for the following analyses, the cash balances, pre-event bonding balances, and the division of the components of the market (into CPIC, private insurers and private reinsurers) have been taken out and combined as a single market. Once again, the reader should be reminded that for most of the entities in the market, risk does not stop at the top of the chart. Storms of sizes beyond the 100-year scenario (a storm with a 1 percent chance of occurring each year) are certainly possible. The FHCF has limited risk - insuring a certain amount of risk for the premium that it collects. Private reinsurers can have limited risk, as well, depending upon the type of reinsurance that they issue; they can sell limited reinsurance or quota share reinsurance, the latter may make reinsurers subject to uncapped liabilities. Just like the private insurers, all of the parts of CPIC — the Personal Lines Account (PLA), Commercial Lines Account (CLA), and newly-named “Coastal Account”— have risk above the top of the charts.

The following scenarios show expected costs and benefits of recent FHCF reform proposals from differing sources. They are analyzed using a stochastic model, given the uncertainty of insurance and reinsurance rates that exist in the market. All these examples assume that the 90 percent coverage level of the FHCF was purchased by both CPIC and private insurers, although they are currently able to purchase at the 45 percent and 75 percent level of coverage (the majority of insurers purchase FHCF coverage at the 90 percent level). Each scenario also assumes that when the FHCF is reduced, the amount charged to CPIC and private insurers by the FHCF is deducted from the scenario and FHCF rates are not otherwise changed.

Estimates in the following analysis use gross damage numbers from the FHCF 2011 Ratemaking Formula Report. In that report, estimated gross damages are not reported for each year. For example, between 20 years and 70 years, estimates are given for each five-year period. From 70 to 100 years, estimates are given for each ten-year period. Therefore, estimates used in this paper in the years where no estimate existed are linear extrapolations between the two given points. Loss Adjustment Expense (LAE) is not added to these estimates.

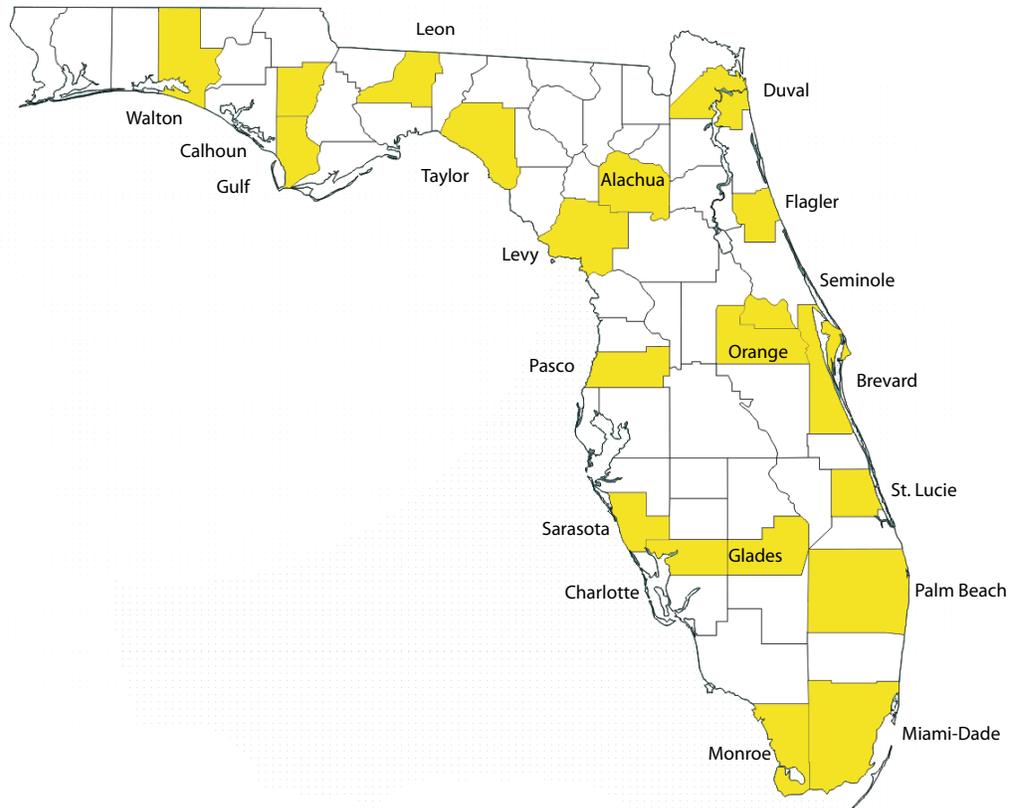
The chart below shows the relationship between gross damage and “storm year” sizes shown on the horizontal axis. To be clear, a 20-year storm would have an estimated \$17.6 billion in gross damages to the FHCF. The probability of that storm happening in any given year is one in twenty, or 5 percent.



## Methodology

In order to develop the median price of a homeowner’s policy for Florida, a sample from 20 counties in Florida was used. These 20 counties are spread throughout the state and represent urban, suburban, and rural counties. The map below highlights in yellow the counties used in rate comparisons:

Figure 18: Counties Used in Analysis



Using an interactive tool available on the Chief Financial Officer of Florida’s website, homeowners’ rates from three homeowners insurance companies were compared in the 20 selected counties throughout Florida shown in the map. The average approved rates used were based on a Florida masonry home built in 1990 with a current replacement value of \$150,000. One should note that this replacement value does not include any land pricing - it only includes the replacement value of the home. This homeowner’s policy has a \$500 non-hurricane deductible, a 2 percent hurricane deductible, and no claims in the past three years. Given the wide range of mitigation possibilities and the possibility that some mitigation discounts do not reflect market rates, premium examples were chosen with no wind mitigation features for this comparison.

To get a range of policy costs, three different size property insurance companies' rates were compared to each other: Tower Hill Preferred, CPIC, and Florida Farm Bureau. Tower Hill Preferred insures over 400,000 homes in Florida and has a market share of 6.7 percent of policies written in the state. CPIC currently insures over 1.46 million policies in the state (ranking number one for market share of policies written). Florida Farm Bureau is representative of insurers who are not within the top 10 writers of homeowners in the state. Given that the Florida Farm Bureau median rates were between the CPIC rates and Tower Hill Preferred rates, the Florida Farm Bureau's median rate for the 20 counties compared in Florida is the rate used as the baseline rate when comparing the effects of recently proposed policies on homeowner's insurance rates in the state. The median rate used for identifying any premium increase is \$1,833 per year. Details of these rates used in this calculation, by county and by company are shown in Appendix 1.

The base homeowners' premium used for the following calculations is \$9 billion for the primary market for each of the years in the analysis. Reinsurance rates have been estimated using information from various industry participants and public sources. One should note that private reinsurance rates, unlike the reinsurance provided by FHCF, vary for different companies according to both the risk profile of their "book" and the financial stability of the company. Therefore, not only are reinsurance rates unknown, they vary from year to year according to the market and according to the underlying policies written by insurers. Reinsurance rates vary according to the financial situation of the insurer purchasing reinsurance. Therefore, for the following calculations, reinsurance rates have been estimated in ranges, rather than as point estimates.

The technique used for the following analysis is a Monte Carlo simulation, where a probability distribution is used for the range of probable reinsurance rates. This is appropriate given the uncertainty in this and most, if not all, other financial markets. In the Monte Carlo simulation each stochastic variable is sampled 10,000 times along its probability distribution function. Each of the ranges for the cost estimates were assumed to be normally distributed with standard deviations that place 90 percent of the range between the low and high estimates, allowing for 5 percent of the values to be above, and 5 percent of the estimates to be below the estimated range. The results reported are mean estimates. The mean, along with the 90 percent confidence intervals, and total are reported in Appendix 2 for each year.

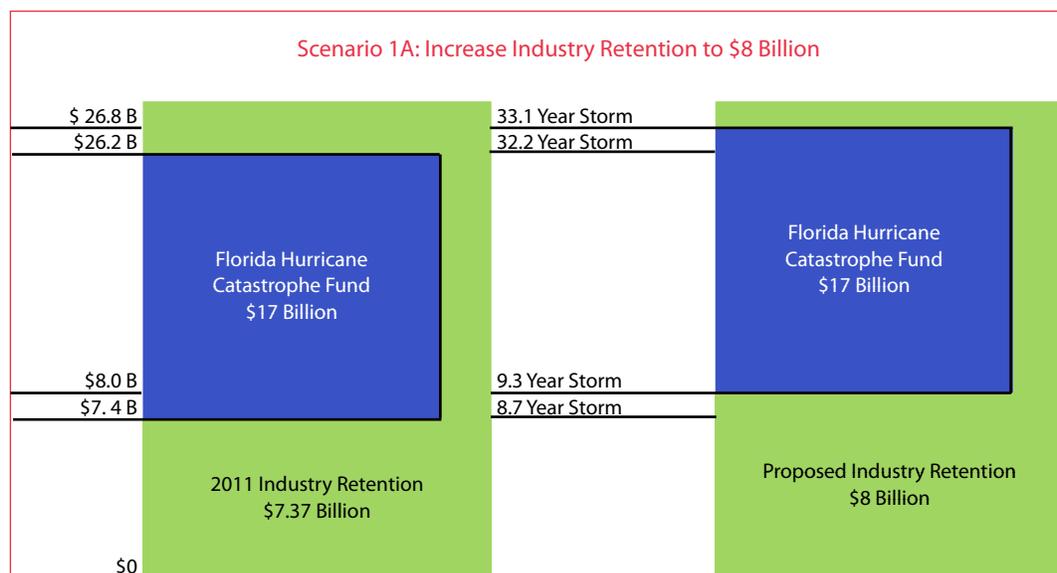
One additional item the reader should note is that the following calculations assume that increases in costs to insurers are transmitted proportionally to homeowners; i.e. a 3 percent increase in insurers' cost is assumed to increase homeowners' premium by 3 percent, however, insurers could for competitive reasons, transmit less than, or more than, their cost increase to homeowners.

## Scenario 1. Increasing aggregate insurer retention to \$8 billion

In 2010, the aggregate industry retention was \$7.142 billion. For the 2011 hurricane season, aggregate industry retention is estimated to be \$7.369 billion. Final figures are not available at the time of this analysis.

One should note that increasing industry retention increases the exposure below the FHCF for private insurers and CPIC. Raising the FHCF attachment point reduces the probability of FHCF having to pay claims, therefore reducing the probability of FHCF exhausting its cash or pre-event bonding proceeds.

The charts in this section will show two scenarios of increasing aggregate insurer retention to \$8 billion. The first scenario shows that only the FHCF attachment point is changed. The 2nd shows that the FHCF attachment point is raised, and the FHCF is reduced by an amount equal to that of the increased industry retention. Assuming no changes to the FHCF other than raising the attachment point, this scenario adds \$631 million of private insurance, CPIC insurance, or reinsurance below the attachment point of the FHCF. In this specific case, adding \$631 million is an 8.56 percent increase in industry retention. Scenario 1A below shows the scenario where there are no changes to the FHCF, only an increase in the attachment point to \$8 billion.



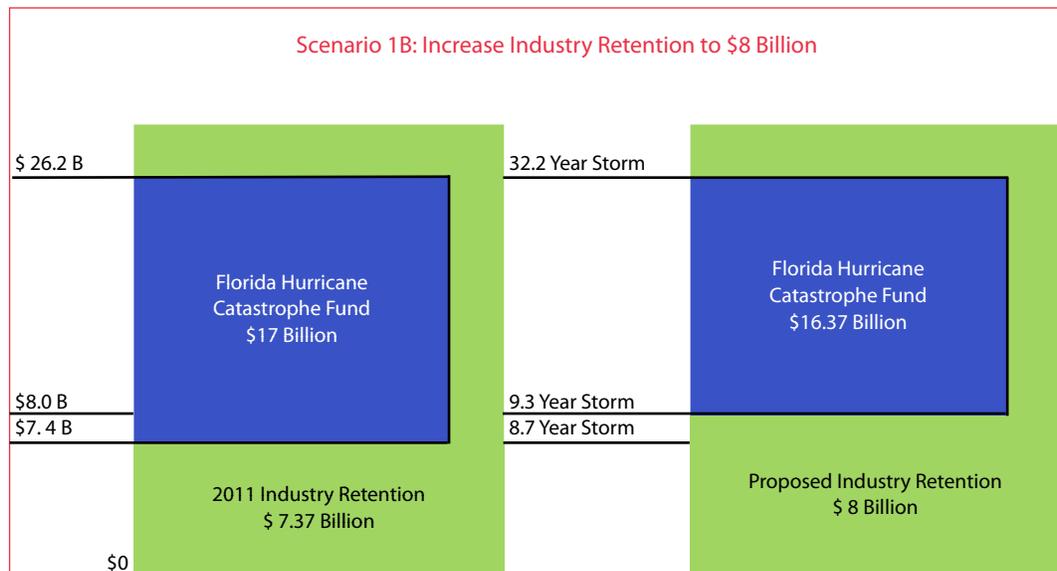
If the FHCF is not changed as shown in the above chart, and FHCF rates are not changed, one would expect the increase of \$631 million in industry retention to be shared by CPIC and the private insurers. Although these estimates are based upon current market share,

actual numbers would be based upon each entity’s insured risk profile. The estimated minimum and maximum at the 90 percent confidence level can be found in Appendix 2.

**Results:**

- Expected increase in premiums by an estimated \$94.65 million. This is a 1.05 percent increase, or approximately \$19.25 per average homeowner per year.
- Does not change FHCF, except slightly lower probability of reaching FHCF.
- Increases industry retention by 8.56 percent.

If the \$631 million increase in industry retention was offset by a reduction in the FHCF, the scenario would be as shown in Scenario 1B below.



In this scenario, the FHCF has been reduced by the amount equal to the proposed industry retention increase of \$631 million. This is actually a more expensive scenario for Florida homeowners, due to the lower-than-market rates charged to CPIC and private insurers by the FHCF.

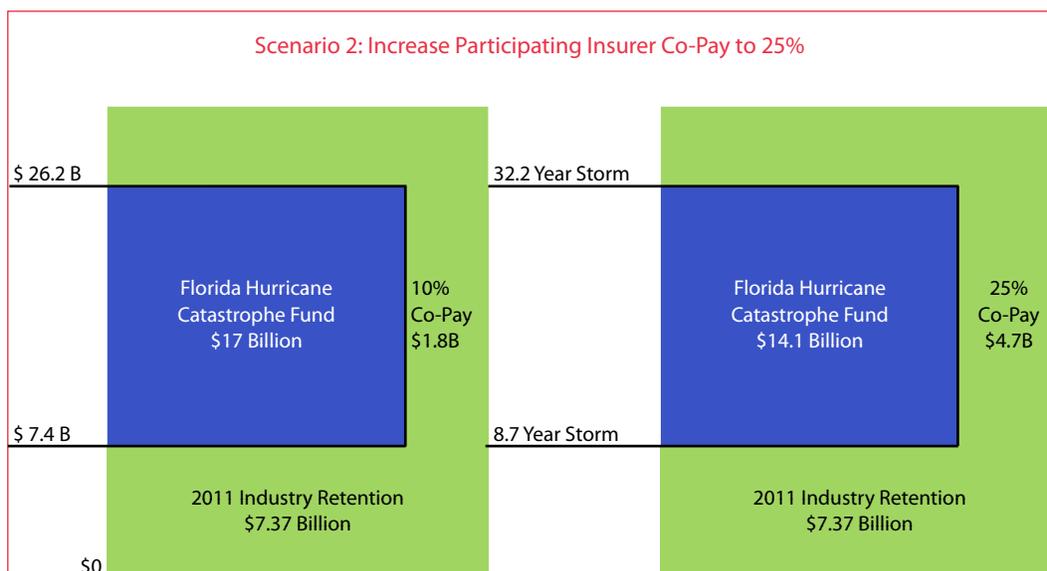
**Results:**

- Expected increase in premiums by an estimated \$135.98 million. This is a 1.51 percent increase, or approximately \$27.69 per average homeowner per year.
- Decreases FHCF by \$631 million, and slightly lowers probability of reaching FHCF attachment point.
- Increases industry retention by 8.56 percent.

## Scenario 2. Increasing participating insurer co-pay from a minimum of 10% to a minimum of 25% over a three-year period

In this scenario, for 2013, the maximum available coverage percentage is 85 percent; in 2014 it becomes 80 percent; in 2015 it becomes 75 percent.

To estimate the cost of private insurance and reinsurance adding on this \$2.9 billion of risk in this scenario, an estimate of each 5 percent “slice” of the FHCF co-pay has been derived from known and estimated reinsurance rates. Each year’s estimate is calculated and shown in Appendix 2.



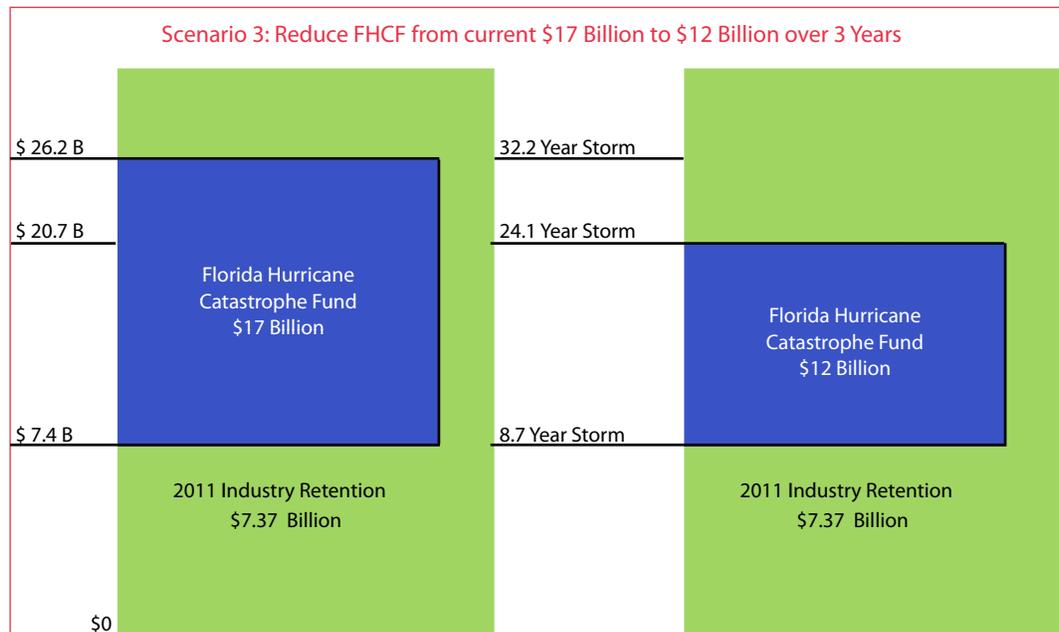
One can see that now the co-pay into FHCF has increased from approximately \$1.8 billion to \$4.7 billion - an increase of approximately \$2.9 billion. Also the FHCF has decreased in size, from \$17 billion to \$14.1 billion - a decrease of the same \$2.9 billion. Yearly costs are expected to be approximately \$133 million, for each of the three years.

### Results:

- Expected total increase of \$399.19 million over the three-year period. This is an expected 4.43 percent increase, or approximately \$81.30 per average homeowner over the three-year period.
- Decreases the FHCF to \$14.1 billion.
- Private Industry and CPIC have more co-pay area risk - approximately an additional \$2.9 billion.

### Scenario 3. Reducing the FHCF mandatory coverage layer over three years from \$17 billion to \$12 billion

In this scenario the mandatory limit of the FHCF is gradually reduced over three years. The limit is reduced to \$15.5 billion in 2013, \$14 billion in 2014, and finally \$12 billion by 2015. Scenario 3 below shows the current situation versus the completed reduction to \$12 billion in 2015.



For any given amount of cash and pre-event bonding, the total post-event bonding requirements would be decreased by \$5 billion. Estimates by the FHCF put the amount of post-event bonding capacity at \$12 billion during the May 2011 bond estimating period; those estimates covered from \$4 billion to \$23 billion. During the October 2011 meeting, the overall estimating bonding capacity was lowered to \$8 billion. The proposal of lowering the FHCF to a total of \$12 billion increases the probability that the required amount of post-event bonding could actually be achieved, especially if, as discussed in the earlier parts of this paper, one or more CPIC accounts, FIGA or the state were bonding at the same time.

#### Results:

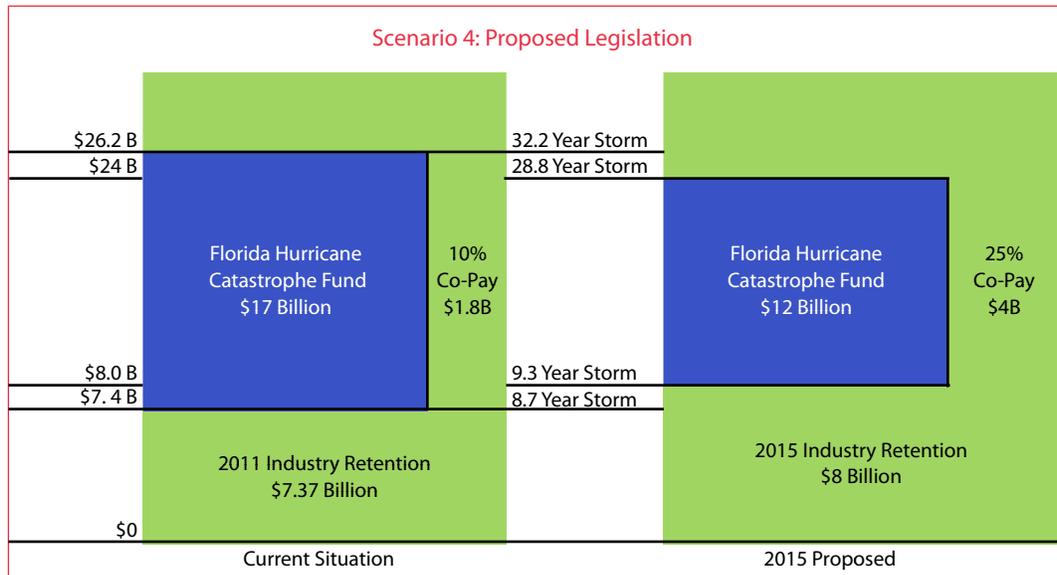
- Expected cost in each year: 2013 - \$110.75 million (1.23 percent); 2014 - \$130.75 million (1.45 percent); 2015 - \$211 million (2.34 percent). Total expected costs of \$452.50 million. This is a 5.02 percent total increase, or approximately \$90.55 per average homeowner over the three-year period.
- CPIC and private industry exposure increases on top of the FHCF, which is now

lower and therefore in a higher probability range.

- FHCF exposure decreases to \$12 billion.
- Probabilities of FHCF obtaining necessary post-event bonding increases due to lower amount needed.

**Scenario 4. Proposed legislation. A combination of: increasing industry retention to \$8 billion, reducing FHCF from \$17 billion to \$12 billion, and increasing co-pay to a minimum of 25 percent over a three-year period**

This scenario combines the main elements of a proposal that is currently being considered for legislation, although the proposed increased cash build-up factor is not included in this analysis. In this scenario during the first year, these three things happen: there is an increase in industry retention to \$8 billion, the FHCF is lowered from \$17 billion to \$15.5 billion, and the co-pay is increased to a minimum of 15 percent. During year two, the FHCF is lowered to \$14 billion and the co-pay is increased to a minimum of 20 percent. During the third year, the FHCF is reduced to \$12 billion and the co-pay is increased to a minimum of 25 percent.



Scenario 4 above shows the scenario of the current situation that would remain through the 2012 hurricane season. The first changes would occur during the 2013 hurricane season. Although we have analyzed similar scenarios separately earlier, this analysis will put them together. The chart on the next page shows changes, by year, to the parts of the Florida insurance system.

Year	Industry Retention	FHCF	Co-Pay	% Increase in Premium
2013	+ \$631 Million	-\$ 1.5 B	+\$0.935 B	3.71%
2014	0	-\$ 1.5 B	+\$0.765 B	2.62%
2015	0	-\$ 2.0 B	+\$0.5 B	3.11%
Total	+ \$631 Million	-\$ 5.0 B	+\$2.2 B	9.44%

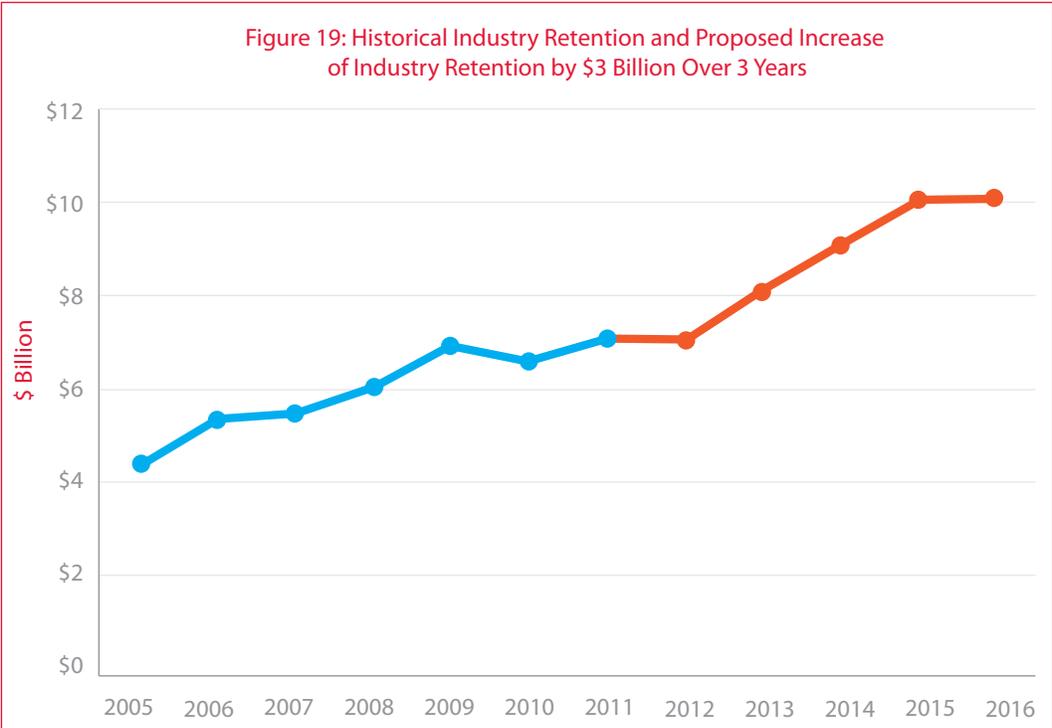
These estimates will be a little different from the previous scenarios, due to the difference in co-pay amount. Each year, the co-pay is on a smaller area, therefore the absolute amount of co-pay is different from the more simple analyses above.

### Results:

- Expected increase in premium: 2013 - \$334.10 million; 2014 - \$236.05 million; 2015 - \$279.82 million. Total expected increase in premium of \$849.98 million over three-year period. This is an expected total premium increase of 9.44 percent, or \$173.04 for an average policyholder over a three-year period.
- Decreases exposure of FHCF from \$17 billion to \$12 billion, increasing probability of being able to bond post-event to pay claims.
- Slightly lower probability of reaching attachment point of FHCF, reducing likelihood of hitting FHCF from once in 8.7 years to once in 9.3 years.
- Increases private industry and CPIC exposure below FHCF, in co-pay area and above FHCF.

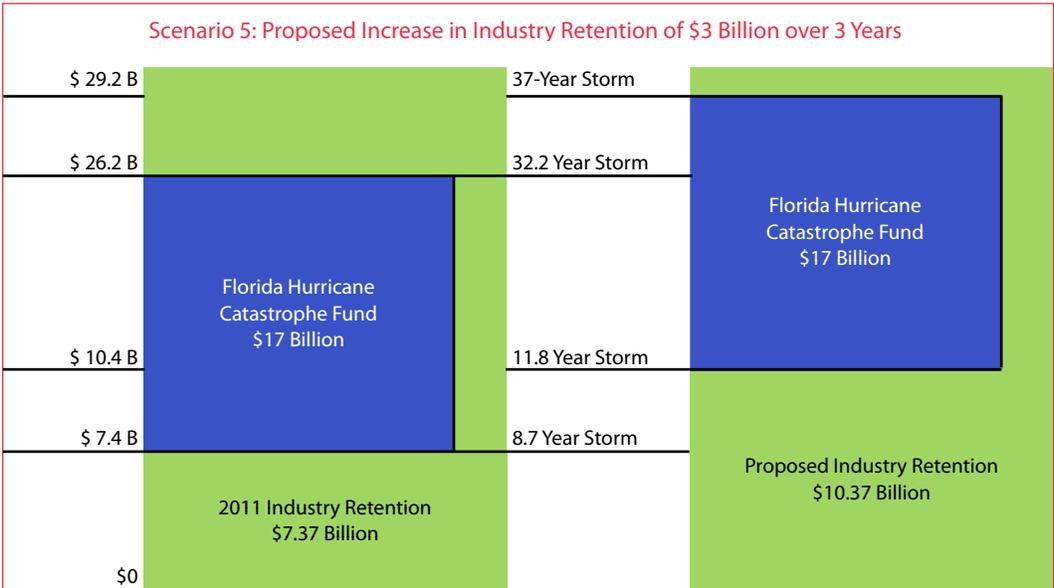
### Scenario 5. Increase aggregate insurer retention by \$3 billion over three years

This scenario would increase the aggregate insurer retention from the current \$7.4 billion to \$10.4 billion. This is, in effect, a continuation of what has happened in most years since 2005 - an increase in industry retention. The chart below shows the amount the industry retention has increased annually since 2005, along with proposed industry retention increases. This scenario raises the attachment point of the FHCF. By signaling a steady increase for each year (\$1 billion per year) of industry retention, CPIC and the private insurers and private reinsurers would more likely be able to make a smooth transition, if the proposed changes are taken into effect.



The above chart shows the path over time. Scenario 5 indicates the before and after effects of changing only the industry retention, but keeping the FHCF the same size, and not changing the co-pay.

The chart below shows that the probability of hitting the FHCF attachment point increases from once in 8.7 years, to once in 11.8 years. It also raises the FHCF exhaustion point from an estimated once in 32.2 years to an estimated once in 37 years.



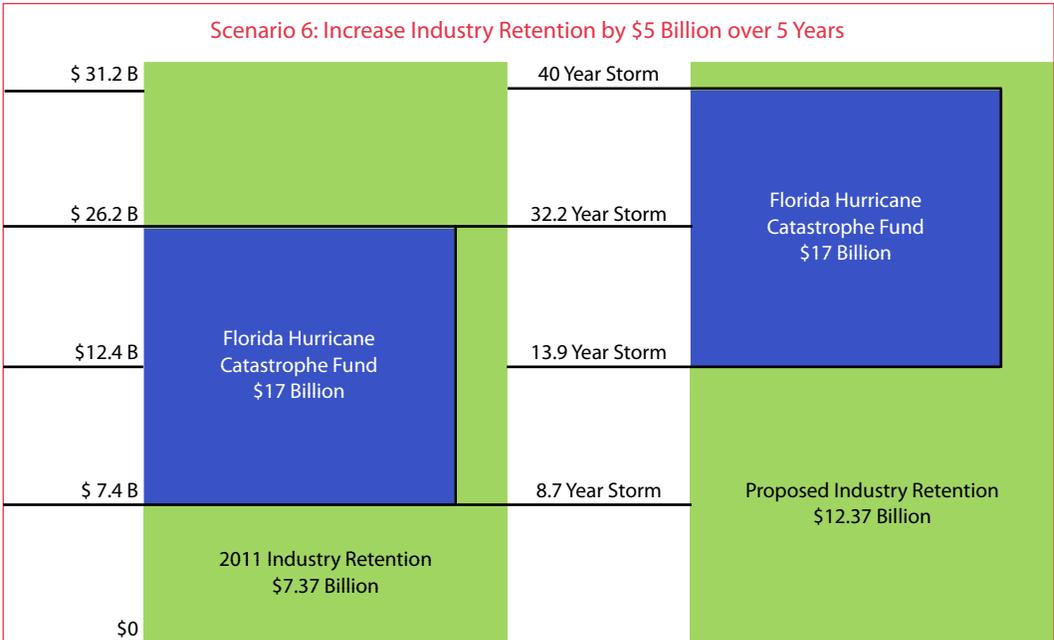
Although the size of the FHCF is still the same, this scenario effectively pushed up the FHCF so that it has lower “probability” exposure. In other words, there is less probability of the attachment point being reached, and therefore a lower probability of exhausting the cash balances and having to bond post-event and assess policyholders.

**Results:**

- Expected increase in premiums by year: year 1 - \$150 million (1.67 percent); year 2 - \$125 million (1.39 percent); year 3 - \$115 million (1.28 percent). Total expected increase of \$390 million over 3-year period. This is a 4.34 percent increase, or approximately \$79.55 per average homeowner over the 3-year period.
- Increased exposure below the FHCF for private industry and CPIC.
- Decreased probability of any storm reaching FHCF attachment point.
- FHCF size unchanged.

**Scenario 6. Increase aggregate insurer retention by \$5 billion over five years**

This last scenario increases insurer retention by \$1 billion each year for five years. This will increase the industry retention, and FHCF attachment point from the current \$7.4 billion to \$12.4 billion.



This scenario will increase risk in the private industry and CPIC and reduce the probability risk, but not the size of the FHCF. Private insurers and the CPIC would assume more exposure below the FHCF and an offsetting amount above the FHCF.

**Results:**

- Expected increase in premiums by year: year 1 - \$150 million (1.67 percent); year 2 - \$125 million (1.39 percent); year 3 - \$115 million (1.28 percent); year 4 - \$110 million (1.22 percent); year 5 - \$110 million (1.22 percent). The total over five years is estimated to be \$610 million, a 6.78 total percent increase, or approximately \$124.28 per average homeowner over the five-year period.
- FHCF unchanged in size.
- Increased exposure of CPIC and private industry below FHCF, with offsetting decrease above FHCF.
- Probability of reaching FHCF attachment point goes from once every 8.7 years to once every 13.9 years.

## Section 3: Conclusion

The State of Florida has chosen to fund the insurance system to pay for hurricane damage after-the-fact, a policy decision which has both positive and negative consequences. A consequence of this system is that state-run entities – CPIC and FHCF—are given the statutory authority to cover hurricane losses by mandating assessments upon both their policyholders and those who have any private property and casualty insurance policy. A consequence of these assessments could be that private insurers become insolvent, which then becomes a financial burden on FIGA, and possibly to solvent private insurers in the state. A devastating hurricane season could trigger this domino effect and ultimately be very expensive to all Florida policy holders (other than workers’ compensation and medical malpractice).

An examination of the current system clearly shows that reforms are needed to better protect those who reside in Florida from risk of severe financial pressure from hurricane losses.

Recent reform proposals have been suggested to limit the risk of assessments from the FHCF; however, each proposal has benefits and costs and they affect the other components of the property insurance system. Throughout this analysis, FHCF and CPIC are assumed to be able to fully pay their stated obligations. If the FHCF cannot meet its \$17 billion obligations—at the time of this paper, the FHCF officially estimates that it cannot—by statute it is authorized to pay its obligations on a pro-rata basis. The possible or probable inability of the FHCF to meet its obligations in full could have cascading effects in the interrelated Florida insurance market, potentially causing some private insurers to become insolvent. The potential risks of this type of event should be considered by policymakers as they evaluate proposed reforms.

This analysis shows the effects of various proposed changes that could be enacted by the Legislature to increase the probability that the FHCF can meet its payment obligations. Each of the analyzed reform proposals modifies exposure of the FHCF by different amounts. The analysis shows that reforms will reduce the probability, frequency, and amount of potential FHCF assessments on the businesses, consumers, charities, auto owners and others who ultimately pay the FHCF Emergency Assessments, but will increase the total policy costs (i.e., premiums). The chart on the following page shows the approximate increase in policy cost for the median homeowner associated with each reform proposal.

Scenario	Description	Aggregate Increase in Policy Cost	Median Policyowner Cost Increase	Percent Increase in Median Policy Cost
1A	Increase industry retention to \$8B	\$94.65 M	\$19.25/year	1.05%
1B	Increase industry retention to \$8B Decrease FHCF by \$631M	\$135.98 M	\$27.69/year	1.51%
2	Increase FHCF co-pay to 25% Decrease FHCF by \$2.9B	\$ 399.19 M	\$81.30/year	4.43%
3	FHCF reduced to \$12B	\$ 452.50 M	\$92.20/year	5.03%
4	Proposed Legislation	\$ 849.98 M	\$173.04/year	9.44%
5	Increase industry retention by \$3B	\$ 390 M	\$79.37/year	4.33%
6	Increase industry retention by \$5B	\$ 610 M	\$124.28/year	6.78%

\* Amounts in columns are not intended to be summed. Each row shows estimates based on that individual proposal.

In addition to the cost increases, modifying the FHCF affects other components of the insurance system. Most importantly, any reduction in exposure for the FHCF increases the net exposure to CPIC, private insurers and reinsurers, FIGA, and the State of Florida.

Each of the analyzed proposals for FHCF reform has different costs and benefits. Some proposals have a lesser immediate financial burden on policyholders, but also do not reduce probability of FCHC Assessments as much as others.

Moreover, FHCF reform proposals that reduce the risk of FHCF Assessments will affect other components of the system, most importantly by potentially increasing the risk of assessments in CPIC and FIGA. Furthermore, limiting the amount of FHCF exposure transfers risk to the remaining components of the system.

**Addressing the FHCF only cures one issue of the overall solvency problem Florida faces with potential hurricane loss. Policy options to change the way that the FHCF operates need to be addressed in an analytical manner to find the most efficient solution for Florida. As Legislators work to find a long term, comprehensive solution to stabilizing Florida’s insurance market, they must address the concentration of risk in Florida and the potential additional risk to CPIC. Any systemic reforms should be market-based to encourage private capital to return to Florida and reduce taxpayer liability.**

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# Appendix 1: Homeowner's Insurance Rates

## Comparison of Homeowners Insurance Rates with No Wind Mitigation

County	Insurance Company		
	Tower Hill Preferred	CPIC	Florida Farm Bureau
Monroe	\$3,607	\$5,696	\$5,240
Miami-Dade	\$3,981	\$5,214	\$4,038
Sarasota	\$2,141	\$2,326	\$2,745
Walton	\$1,667	\$2,809	\$2,021
Gulf	\$1,758	\$2,882	\$2,305
Taylor	\$1,342	\$1,688	\$1,327
Levy	\$1,030	\$1,493	\$1,570
Flagler	\$956	\$1,491	\$1,667
Duval	\$1,078	\$1,082	\$1,193
St. Lucie	\$2,090	\$4,346	\$2,723
Palm Beach	\$3,086	\$3,757	\$3,817
Pasco	\$1,559	\$3,191	\$1,808
Orange	\$996	\$1,542	\$1,223
Leon	\$925	\$1,011	\$968
Alachua	\$794	\$1,138	\$1,207
Seminole	\$966	\$1,540	\$1,275
Glades	\$1,088	\$1,950	\$1,858
Charlotte	\$2,355	\$2,403	\$2,529
Brevard	\$1,731	\$2,440	\$2,085
Calhoun	\$1,253	\$1,267	\$1,204
Median	\$1,451	\$2,138	\$1,833
Mean	\$1,720	\$2,463	\$2,140

The average approved rates listed on this page are for the following structure:

Built in 1990, Florida masonry home, with a current replacement value of \$150,000, a \$500 non-hurricane deductible, a 2 percent hurricane deductible, and no claims in the past 3 years. Premium examples are shown with no wind mitigation features.

Source: <http://www.shopandcomparerates.com/HOCompareRates.htm> April, 2011

# Appendix 2: Stochastic Model Results

10,000 Iterations for Each Stochastic Variable

Name	Mean	5%	95%
<b>Scenario 1A - Total</b>	<b>94.65</b>	<b>81.17</b>	<b>107.89</b>
<b>Scenario 1B - Total</b>	<b>135.98</b>	<b>126.51</b>	<b>145.44</b>
Scenario 2 - Year 1	133.52	118.97	148.07
Scenario 2 - Year 2	133.52	118.96	148.07
Scenario 2 - Year 3	132.14	117.74	146.54
<b>Scenario 2 - Total</b>	<b>399.19</b>	<b>373.69</b>	<b>425.04</b>
Scenario 3 - Year 1	110.75	99.63	121.95
Scenario 3 - Year 2	130.75	119.49	142.04
Scenario 3 - Year 3	211.00	196.71	225.08
<b>Scenario 3 - Total</b>	<b>452.50</b>	<b>429.96</b>	<b>474.98</b>
Scenario 4 - Year 1	334.10	311.78	356.59
Scenario 4 - Year 2	236.05	220.26	252.07
Scenario 4 - Year 3	279.82	263.95	296.23
<b>Scenario 4 - Total</b>	<b>849.98</b>	<b>817.65</b>	<b>882.32</b>
Scenario 5 - Year 1	150.00	135.00	165.00
Scenario 5 - Year 2	125.00	114.99	135.00
Scenario 5 - Year 3	115.00	105.00	125.00
<b>Scenario 5 - Total</b>	<b>390.00</b>	<b>369.38</b>	<b>410.64</b>
Scenario 6 - Year 1	150.00	134.99	165.00
Scenario 6 - Year 2	125.00	114.99	135.00
Scenario 6 - Year 3	115.00	104.99	125.00
Scenario 6 - Year 4	110.00	100.00	120.00
Scenario 6 - Year 5	110.00	100.00	120.00
<b>Scenario 6 - Total</b>	<b>610.00</b>	<b>585.17</b>	<b>634.56</b>

Output Results Performed by Jerry Parrish, Ph.D. Sunday, October 23, 2011 3:57pm

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Florida TaxWatch's research recommends productivity enhancements and explains the statewide impact of economic and tax and spend policies and practices on citizens and businesses. Florida TaxWatch has worked diligently and effectively to help state government shape responsible fiscal and public policy that adds value and benefit to taxpayers.

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