

## Florida's Public Wind Pools: Two Not-So-Residual Markets

Lorilee A. Medders and Jack E. Nicholson\*

### Key Points

- Disaster loss financing in Florida is provided by the state's Citizens Property Insurance Corporation and the Florida Hurricane Catastrophe Fund (which cover wind-related disaster events), along with the private market for residential property insurance.
- Unusually for a market of last resort, Citizens is a dominant insurer in terms of market share, far exceeding the size of residual markets in any other US state.
- The FHCF has a unique reinsurance role: it is a state tax-exempt trust fund in which all insurers writing residential property insurance in the state are required to participate.
- Citizens and the FHCF, because of their size and heavy dependence on debt for funding losses, provide insights and lessons learned for managing the exposure and claims-paying capacity of public insurance entities.
- Experience suggests that the focus should be insurance availability, financial solvency for the system, and market stability rather than maximum affordability.
- When practicable, private market options for enhancing capacity, such as private reinsurance and insurance-linked securities, should be considered.
- The modeling of catastrophic losses on a system-wide basis can be beneficial for understanding how the system is stressed as well as how to avoid "clashes" among entities regarding the issuing and financing of debt for funding large losses.

### 1. Introduction

Florida's experience with public wind pools provides insights as other states' policymakers make financial preparations for catastrophic events. Although Florida is ahead of

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\* Lorilee A. Medders, PhD, Florida State University, Tallahassee, FL and Jack E. Nicholson, PhD, CLU, CPCU, independent consultant, Tallahassee, FL.

This policy brief is derived from a discussion paper prepared for the "Improving Disaster Financing: Evaluating Policy Interventions in Disaster Insurance Markets" workshop held at Resources for the Future on November 29–30, 2016. We would like to thank our sponsors of this project: the American Academy of Actuaries; the American Risk and Insurance Association; Risk Management Solutions; the Society of Actuaries; and XL Catlin.

Read the discussion paper: Medders, Lorilee A., and Jack E. Nicholson. [Florida's State Wind Pools](#). Discussion paper 17-07. Washington, DC: Resources for the Future.

other US states in some of its disaster preparedness and insurance market efforts,<sup>1</sup> legislative and regulatory interventions in its insurance and reinsurance markets have resulted in suppressed property insurance prices and cost shifting from one policyholder to another (via non-risk-based pricing) and from current to future policyholders (via a system of assessments used to finance debt).<sup>2</sup>

This policy brief examines the state of the public finance system for residential property catastrophe risk in Florida and considers implications for potential future costs to Florida policyholders and its citizens.

## **2. Background**

### ***2.1 Exposure***

Florida's modeled probable maximum loss due to insured wind is the highest of any state and greater than that of all states combined from Texas to Maine. The 2016 estimates, at 0.4 percent, 1 percent, and 2 percent probabilities, are \$80.6 billion, \$53.9 billion, and \$36.0 billion, respectively.<sup>3</sup>

In 2012, the estimated insured value of residential and commercial coastal property in states along the Atlantic Ocean and Gulf of Mexico exceeded \$10.6 trillion. The exposure for Florida was \$2.862 trillion, or around 27 percent of the total (Rollins 2013). These high insured property values combined with frequent and intense storms and a rapidly growing population create significant market challenges.

### ***2.2 Insurance Market Problems<sup>4</sup>***

Leading the list of Florida's residential insurance market problems are a housing stock in need of wind improvements, uncertainty in estimation of loss costs, and (re)insurance market volatility. Growth in residential real estate has quickened since the 1960s, yet residential building codes were not updated for wind risk until the 1990s and not until the early 2000's for some portions of the state. As a result, today an estimated 75 percent of the state's housing remains "unmitigated" against wind.

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<sup>1</sup> The strong Florida Residential Building Code and the requirement that residential property insurers use catastrophe loss models to price their risks are two examples of forward-looking state policies.

<sup>2</sup> The issuance of revenue bonds is at the foundation of both organizations' ability to pay claims. At times, both have become highly leveraged, and thus a failure of the financial markets could have had catastrophic consequences for the state.

<sup>3</sup> These modeled results are based on wind losses only, since flood losses are primarily covered by the National Flood Insurance Program. Projected losses from severe hurricanes in highly populated areas range from \$100 billion to \$250 billion, according to modeling by Risk Management Solutions (<http://www.rms.com/>).

<sup>4</sup> The Florida Catastrophic Storm Risk Management Center (2010b, 2011) provides a detailed treatment of sources of these problems. Medders et al. (2013) describe Florida market problems, interventions, and outcomes.

Further exacerbating the problem of the underlying risk, the inherent uncertainty in loss estimations raises questions about catastrophe loss model verification, sensitivity, and data credibility, and reliability. Even seemingly small differences in model input parameters and their values can result in widely different average annual loss costs and probable maximum losses. Reinsurance, with pricing based largely on these uncertain loss estimates, can be volatile. In 1993 and 2006, reinsurers raised prices sharply due to a shortage of reinsurance capacity, with cascading effects on property insurance availability, especially for individual and commercial residential property owners.

### **2.3 Use of State Insurance Entities**

After Hurricane Andrew in 1992, the Florida Legislature created a statewide residual residential property insurer to provide multi-peril coverage and address the availability problem arising from insufficient reinsurance capacity. The Florida Hurricane Catastrophe Fund (FHCF) was established in 1993 to create additional insurance capacity. Additionally, a moratorium on cancellations and non-renewals was enacted to keep insurers from leaving the state en masse. Citizens Property Insurance Corporation (Citizens) was created in 2002 by combining the Florida Residential Property and Casualty Joint Underwriting Association with the Florida Windstorm Underwriting Association. Citizens, which now operates statewide, offers multi-peril residential insurance policies in one account and coastal residential policies covering only the peril of wind in another account. It is the largest public insurance provider in the country. In 2015 it wrote more than 671,000 policies representing approximately \$150.5 billion insured exposure, down from a high of nearly 1.5 million policies and approximately \$500 billion in exposure in 2012.

The FHCF provides reimbursement for a set portion of a property insurer's hurricane losses above a retention amount. Both Citizens and private insurers writing residential property insurance are required to purchase reimbursement coverage from the FHCF.

Citizens and the FHCF rely on financing with subsidies on a post-loss basis (via policyholder assessments), and expose Florida policyholders to financial risk. The

FHCF is not statutorily required to pay claims beyond its funding ability. Furthermore, both can and have been intentionally expanded at times to ease affordability pressures in the private market.

## **3. Managing the Size**

### **3.1 Stress Test of 2004–05 Storm Seasons and 2006 Private Market Response**

Following the 2004 and 2005 hurricane seasons, in which eight storms slammed Florida and caused more than \$30 billion of insured losses, the private insurance market and Citizens, facing steep increases in their reinsurance prices, raised homeowners insurance prices precipitously in 2006. Following widespread consumer complaints and concerns raised by the

real estate sector, the Florida Legislature in 2007 enacted several strategies to ease the insurance market strain and lower residential property insurance rates.<sup>5</sup>

### **Direct Effect on Citizens**

The legislature rolled back Citizens' homeowners insurance rates to pre-2005 levels in a special legislative session in 2007, froze rates going forward, and encouraged Citizens to compete with the private market by allowing policyholders to purchase Citizens policies without first being rejected by the admitted market.

### **Direct Effect on FHCF**

In the special session, legislators also explicitly expanded FHCF capacity, from less than \$16 billion to more than \$28 billion, and removed the "rapid cash build-up factor"<sup>6</sup> from the pricing of the mandatory FHCF layer. This was an effort to slash homeowners insurance premiums across the state by replacing private reinsurance sold at market prices with much lower priced FHCF coverage.

### **Indirect effects on Citizens and FHCF**

The Florida Office of Insurance Regulation began to require homeowners insurers to use a single loss relativity study (ARA 2002) to set mitigation discounts and also use the "worst house" as the base for mitigation discounts, regardless of whether the "worst house" was the base for initial rates.<sup>7</sup> Exacerbating problems, the state initiated a residential wind mitigation program that resulted in significant insurance discounts but few actual property improvements.<sup>8</sup> These developments increased dependence on the two state entities.

### **Market Implications**

During the five years after enactment of those strategies, several large residential insurance carriers exited the Florida market, and others experienced reduced profitability attributable to their inability to compete with Citizens. Beginning in 2009, the Legislature allowed Citizens to increase its rates by no more than 10 percent a year. Although large insurers reduced their market share, the market share increased sharply for small domestic carriers, which had a much lower policyholder surplus than the larger foreign insurers whose

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<sup>5</sup> Most of these strategies, though not all, were part of House Bill 1A, passed in the 2007 Special Legislative Session.

<sup>6</sup> The rapid cash buildup factor had just been implemented in 2006 as a strategy to improve the FHCF's cash balance position for claims payment.

<sup>7</sup> Most insurers used an "average house" as the base for rate setting. Thus, for most insurers, being forced to use the "worst house" for discounts meant almost all houses were eligible for hurricane discounts, despite the embedding of credits built into the original baseline rates.

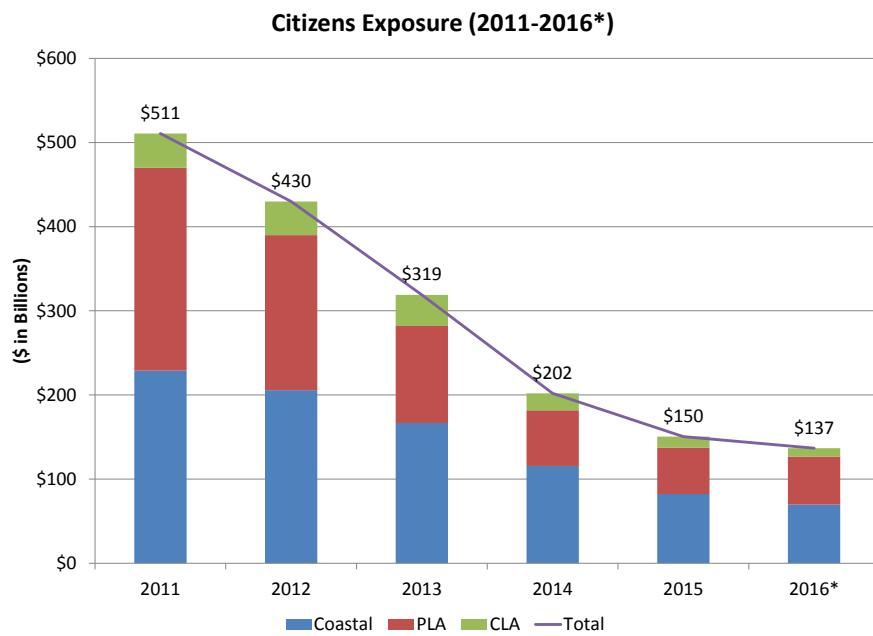
<sup>8</sup> Issues with the My Safe Florida Home program were examined in a report by the Florida Catastrophic Storm Risk Management Center (2010, [www.stormrisk.org](http://www.stormrisk.org)). It was estimated that more than 80 percent of the discounts provided by insurers were erroneous.

business they replaced. The overall policyholders' surplus in the private residential property insurance market decreased sharply as a result of this shift. Citizens became the state's largest residential property insurer.<sup>9</sup> Had a major catastrophic hurricane struck, neither Citizens nor the FHCF would have been able to sufficiently fund their losses.<sup>10</sup>

### **3.2 Recent Stabilization**

Florida learned from its experience with the 2007 legislation and realized the potential consequences for the insurance system, given the Great Recession's effects on the financial markets. Today, Citizens is smaller than it was five years ago, for several reasons. A decade without major hurricanes and an influx of insurance-linked security capital have combined to soften the Florida property reinsurance and primary insurance markets. A vigorous Citizens depopulation program intentionally reduced Citizens' market share.<sup>11</sup> From 2011 through 2016, Citizens' exposure decreased, in terms of total values insured (Figure 1). Nevertheless, Citizens remains large and could repopulate at any time if prices in the private market significantly rise.

**FIGURE 1. DECREASE IN CITIZENS PROPERTY INSURANCE CORPORATION'S EXPOSURE, 2011–16**



<sup>10</sup> For example, during 2008, the FHCF purchased a put option at a cost of \$224 million requiring Berkshire Hathaway to purchase \$4 billion of its post-event bonds at a 6.5 percent interest rate, with a \$16 billion FHCF hurricane loss as the triggering event. Given that all the resources of the FHCF added up to only \$13.1 billion, including the \$4 billion put option, it could not have honored the nearly \$28 billion capacity it had sold to participating insurers.

<sup>11</sup> The state began to depopulate Citizens in 2011 (at which time its personal residential policy count alone had exceeded 1.4 million), and in 2013–14 Florida aggressively pursued depopulation through a policy clearinghouse.

Additionally, 2009 legislation put Citizens on an incremental path to actuarially sound rates, and the Office of Insurance Regulation now allows insurers to base rates and credits on loss relativity studies other than ARA (2002, 2008), thereby “righting” the mitigation discounts over time (Citizens now uses AIR Worldwide relativities). Furthermore, by statute, Citizens’ maximum coverage limit per policy is being decreased annually, from \$2 million in 2013 to \$700,000 by 2017, such that owners of high-value homes will not be 100 percent indemnified by Citizens.

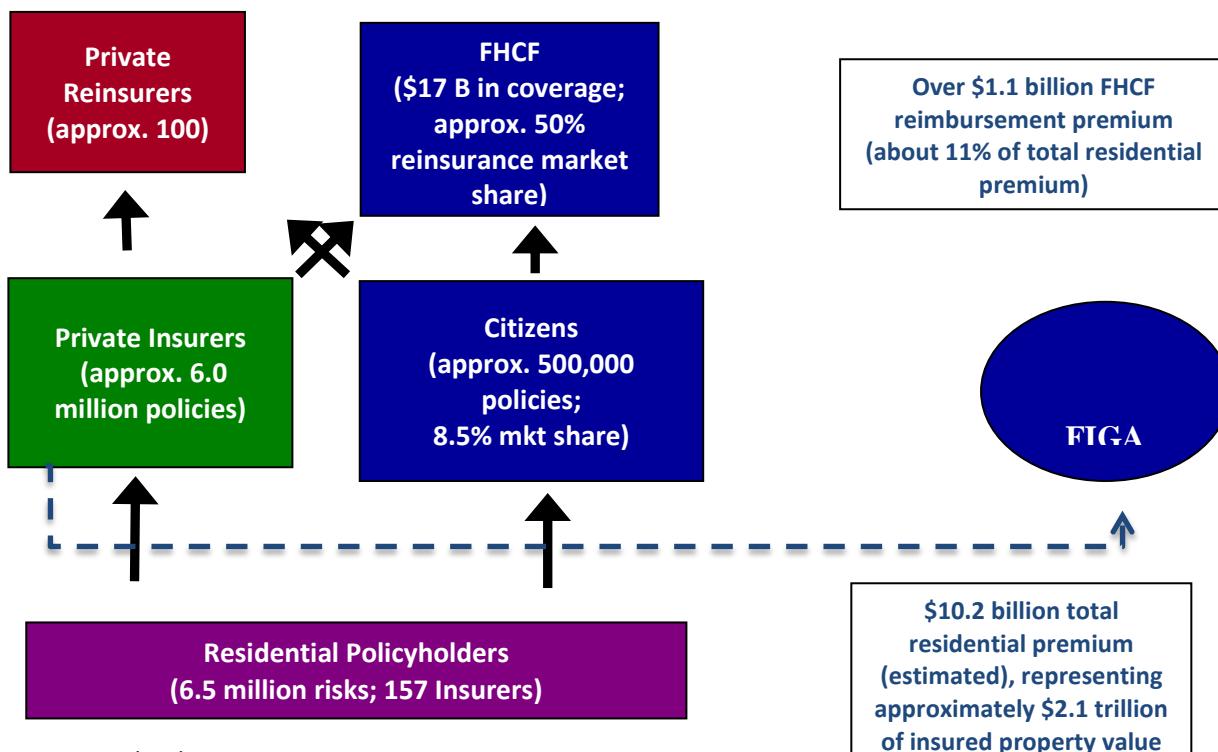
The FHCF has also benefited from 10 years without a land falling hurricane. Its reliance on debt for an initial season event has been greatly reduced because its cash balance grew to \$13.8 billion in 2016. Given the favorable risk transfer market conditions, both entities are now in a position to take advantage of private reinsurance options, easing their reliance on bonding funded with policyholder assessments.

## 4. Risky Management Implications

### 4.1 Current Exposure Posed by the System

Florida’s system for disaster finance has never failed the state or its taxpayers, but it is precariously constructed and has morphed numerous times in multiple ways since the last major land falling hurricane in 2005. Figure 2 depicts today’s basic relationships and capacity in the Florida residential property insurance marketplace.

**FIGURE 2. FLORIDA RESIDENTIAL PROPERTY INSURANCE MARKETPLACE, OCTOBER 2016**



FIGA = Florida Insurance Guaranty Association.

Sources: Florida Office of Insurance Regulation, FHCF, Citizens, Aon Benfield.

Although Citizens is substantially smaller than it was five years ago, it remains the largest state plan in the country and holds a sizable 8.5 percent policy market share in Florida. FHCF reimbursement premiums represent approximately 11 percent of the Florida residential property insurance premium and around 50 percent of the reinsurance marketplace. The approximately 6 million policies insured by the private market are predominately written by small, Florida domestic carriers with limited capitalization. Importantly, the Florida Insurance Guaranty Association (FIGA), a third public insurance financing entity, carries the burden of paying claims due to any private insurer failures, and thus the state is exposed to the risk of its inability to finance losses stemming from insurer insolvencies as well.

#### **4.2 Implications for the Future**

Despite its recent stabilization, the system for residential property insurance in Florida is structured in such a way that the state and its taxpayers remain at risk.

**Cascading effects of storms.** If a major storm threatened the financial viability of residential property insurers in the marketplace, a public burden would fall on FIGA to pay claims, and Citizens' policy count is likely to rise again, barring interventions to preclude such an effect.

**Disconnect from the private reinsurance market.** Even with added capital, capacity, and competition for the reinsurance market, the FHCF remains a relatively inexpensive source of reinsurance for primary carriers. Rates are required by law to be actuarially indicated, but insurers with higher exposure are allocated more coverage and are priced higher due only to the exposure difference. Since books of insurance business varies across the state, highly exposed weakly capitalized insurers may be able to disproportionately benefit from the FHCF. Arguably, the design of the FHCF and its vulnerabilities may inadvertently impact the solvency risk of some insurers more than others.

**Substantial assessment risk.** According to recent estimates by the Florida Financial Services Commission (2016a, 2016b), it would take a 250-year event (0.4 percent likelihood) for Citizens to suffer a financial shortfall in excess of \$2.8 billion, with an estimated annual assessment of \$122 million. If a large hurricane were to erode the FHCF's resources, the season immediately following would require reliance on as much as \$15.8 billion in revenue bonds, twice the amount of debt that the FHCF currently estimates it can raise. Insurers may be forced to replace FHCF coverage with much more expensive private reinsurance, which could cause residential property rates to spike. If insurers cannot afford to replace the coverage, they would be forced to cancel and not renew coverage, creating a surge in Citizens' policy count.

**Clash issues between entities.** A type of "clash financing" situation could arise following a single large hurricane or series of severe storms. Citizens, the FHCF, and FIGA have similarly large and interrelated assessment bases for the funding of post-event bonds, and simultaneous attempts to access the debt markets could result in competition for limited funds.

### **5 Recommendations**

For governments considering creation of public insuring entities or modifications to existing entities, this policy brief offers three broadly applicable insights for easing market pressures while minimizing the financial risk to residents.

- Focus on insurance availability, financial solvency, and market stability. Resist political pressure to promote affordability at the expense of inadequate rates.
- Allow the purchase of private reinsurance and other risk transfer products (such as catastrophe bonds) when such products can be structured beneficially and their purchase does not crowd out risk transfer capacity for private insurers.
- Model catastrophe losses on a system-wide, dynamic basis to determine the effects so that potential clashes between public (or even private) market programs can be evaluated.

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