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## ANALYSIS OF THE SOUTH CAROLINA COASTAL PROPERTY INSURANCE MARKET

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### ABSTRACT

This paper aims to clarify the debate over property insurance rates and provide a basis for rational discussion of the current situation in South Carolina's property insurance market. The paper examines how property insurance works, how it functions in coastal South Carolina, the business climate surrounding insurance, how insurers determine rates, and the roles of statistical modeling and reinsurance. The paper also examines post-event "assessments"—special taxes imposed after major disasters—and compares South Carolina's system to those of other states.

In general, the paper concludes that South Carolina has insurance regulations that are typical of such regulations elsewhere in the nation, rates squarely in the middle of those in other coastal states, and prices that are reasonable, given the risk. If South Carolina wants to improve its insurance market and reduce rates for consumers, it should work to help homeowners protect their residences against nature's worst and attract more carriers to the state. The bottom line is simple: although it is not perfect, South Carolina's homeowners insurance system is a rational one that serves consumers well.

**H**OMEOWNERS INSURANCE PROVIDES indemnity coverage (typically bundled with a variety of casualty and liability coverages) for damage to residential property. This protects owners from a range of unexpected perils.

In general, insurance is a system that transfers the risk of some future event from insured to insurer, in exchange for the certainty of upfront consideration called the "premium." The premium paid reflects the risk that the insurer agrees to assume, the norm being that greater risks require larger premiums. An insurance policy is a contract that binds the parties to that transfer and sets the terms for the duration of coverage; any premiums, deductibles or copayments; and the size of the indemnity and any declarations or exclusions. Insurance works by pooling a large number of independent and similar risks, on the assumption that damage to all risks within the pool at the same time is very unlikely. This lets insurance companies make profits on some types of coverage even as they pay out mammoth claims for others. The catastrophe risks associated with hurricanes are particularly challenging, because hurricanes strike across very large areas. While a leaky pipe in one house generally doesn't typically correlate with another leaky pipe in the same neighborhood, hurricane damage to one house in a given neighborhood almost certainly *will* correlate with hurricane damage to the other houses in the same neighborhood. This means that, at least at a local level, hurricane damage isn't made significantly cheaper when various risks are grouped together: huge numbers of properties are likely to sustain hurricane damage at the same time. Thus, it needs to be managed across broad pools.

An insurance policy is a promise that imposes an obligation on the insurer to pay the insured for potential losses at some point *in the future*. Hence, states regulate insurance to ensure that insurance companies have at any given time the financial resources necessary to make good on their potential obligations. Premiums set too low for an insurer to pay potential claims when due would render coverage worse than useless.

After having paid their premiums upfront, consumers would be left in a position where their legitimate claims cannot be paid at a time when they need the money. That is why governments in all 50 states and all developed countries take great care to regulate the insurance market for “solvency,” the ability of insurers to pay the future claims of their insureds. Private insurance such as homeowners insurance does the most good for society as a whole when higher-risk consumers pay a higher premium than consumers engaged in lower-risk activities. For example, knowing that a speeding ticket or an accident will likely cause one’s automobile insurance premium to increase provides drivers with an incentive to drive more carefully. Likewise, charging more for people to insure homes in hurricane-prone areas discourages excessive development in places where properties are most likely to be destroyed. Moreover, markets that suppress prices fail to attract potential new entrants and force existing insurers to non-renew existing policies and ultimately withdraw from the market, thus limiting consumer choice. Indeed, such price controls inevitably lead to the exit of insurers from the market, thus causing capacity shortages and availability problems for consumers. In fact, South Carolina experienced this very sort of problem in its automobile insurance market in the 1980s and 1990s before market-based reforms encouraged insurers to re-enter the market.

Most homeowners insurance policies in the United States are of the “all perils” type and cover 16 named hazards, some common (e.g., damage from leaky pipes, fire and wind), some rare (e.g., volcanic eruptions) plus anything else that isn’t specifically excluded. Exclusions typically include nuclear accidents, wars, and, most importantly for coastal homeowners, flooding.<sup>1</sup> Almost all flood insurance nationwide is provided by the federal government’s National Flood Insurance Program, which was originally created because floods, like hurricanes, cause simultaneous damage over significant areas and are thus difficult to insure against. Policies always cover a home’s physical structure; nearly always provide some sort of general liability coverage for accidents that occur on a homeowner’s property; and typically include some coverage for contents as well.<sup>2</sup>

People whose mortgages are securitized or guaranteed through government agencies or the government-sponsored enterprises are always required to purchase homeowners insurance.<sup>3</sup> Purely private lenders almost always also require insurance. Lenders require homeowners insurance because, without it, they would lose the mortgage collateral if a home

were destroyed. Although no law requires homeowners to purchase insurance, most buy it anyway, because homes are, for most people, the largest asset they own. All of these things make such insurance a major public policy concern.

Most homeowners insurance is bought and sold in the “admitted” or “standard” market. Examples of admitted market insurance companies include well-known names like Allstate and Liberty Mutual. Admitted market policies have a few things in common. First, many (not all) admitted market insurance policies use standardized forms, such as the ones prepared by the Insurance Services Offices. Second, carriers participate in and their coverage is backed by state guaranty associations, such as the South Carolina Property and Casualty Insurance Guaranty Association, which will pay at least some portion of claims if an insurer becomes unable to pay its claims. Third, premium rates are subject to regulatory oversight, with the department of insurance retaining authority to withhold approval of rates that do not meet certain standards. Finally, companies must be licensed. In South Carolina’s admitted market, insurers must first qualify for a license to operate in South Carolina and can sell coverage only through employees or agents who must also be licensed to do business in the state. Currently, the overwhelming majority of consumers in the state can easily find multiple admitted market companies willing to sell them coverage. But not everyone can, and that’s where the government plays the largest role.

Some homeowners, particularly those in areas at high risk of hurricanes, simply can’t find any admitted market carrier willing to write them a policy. This happens because, even in an environment where they generally can determine rates based on the interplay of market forces, some carriers simply do not want to write policies with a very high risk of loss, or they want to reduce their concentration of such policies in a given geographic area. While such policies theoretically offer the greatest potential for profits, they are also risky and companies risk burdening their overall portfolio if a huge number of individual policies had simultaneous losses. And this is a problem because the damage from hurricanes can be so severe: High winds and rising waters are among the most damaging forces of nature around. They can—and do—not only destroy structures (even well built ones) but overflow coastal protections and change the very shape of the land. These losses, as discussed above, correlate with one another, as do losses from some other severe natural disasters such as earthquakes.

The best way to deal with these risks, overall, is to mitigate them: to make the physical environment more resistant to nature’s worst. This can involve very simple activity at the individual level, such as installing storm shutters, as well as society-wide efforts, like planning to keep development out of disaster-prone areas by withdrawing subsidies

1. Insurance Information Institute. “What Types of Disasters are Covered by my Homeowners Insurance,” <http://www.iii.org/articles/what-type-of-disasters-are-covered.html>

2. Ibid.

3. See e.g. Freddie Mac. “Bulletin: Single Family Home Servicer Guide,” October 31, 2012, <http://www.freddiemac.com/sell/guide/bulletins/pdf/bl11223.pdf>



for it. Overall, mitigation efforts, dozens of studies have shown, produce benefits far in excess of their upfront costs.<sup>4</sup> Through its South Carolina Safe Home Program, the South Carolina Insurance Department encourages property mitigation using public and private funds. This is a smart solution that deserves expansion.

But even mitigation can only go so far. No matter what they do, some homeowners will not be able find an admitted market carrier willing to take them on. And, when consumers end up in this situation, they can turn either to the non-admitted market (private companies that specialize in unusual risks and whose rates and coverage aren't regulated in the same ways as admitted market carriers) or to the residual market, so-called because it takes on risks that the private market simply will not write, the risk being so extreme that no amount of premium would be adequate. In South Carolina, the Wind and Hail Underwriting Association, commonly known as the "Wind Pool," serves as the residual market entity for coastal property. The Wind Pool is a government-supported, but privately run association that, since 1971, has included all admitted market insurers in the state.<sup>5</sup> It writes very limited policies that, as its name suggests, cover only

wind, hail, and related perils. It is a self-described "market of last resort" and generally charges higher rates than private carriers would for similar coverage.

Indeed, homeowners with mortgages must typically buy "wrap-around" coverage from an admitted market carrier in addition to the Wind Pool's coverage. According to data that the Wind Pool shared with R Street Institute, about 7.6 percent of the state's total coastal liability and about 2 percent of its overall liability is written through the Wind Pool.<sup>6</sup> This results in a total liability for the plan of about \$15 billion.<sup>7</sup> For the most part, the Wind Pool operates very much like any other small insurance company but, unlike other insurers, it can place special taxes called "assessments" on insurance policyholders throughout the state if it ever runs out of money to pay claims.

### WHAT ISN'T CAUSING HIGH RATES

An objective examination of the evidence shows that, given the evident risk assumed from homeowners, South Carolina's homeowners insurers do not make enormous or

4. See e.g. Federal Emergency Management Agency. "Mitigation Works," [http://www.fema.gov/medialibrary/media\\_records/8606](http://www.fema.gov/medialibrary/media_records/8606)

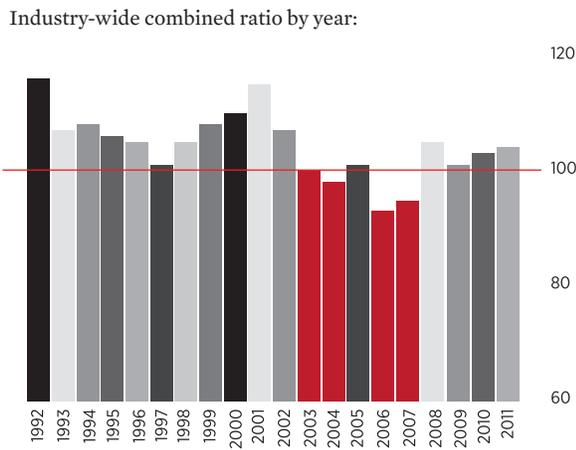
5. South Carolina Wind and Hail Underwritten Association. "About Us," <http://www.scwind.com/about.html>

6. Smitty Harrison. Personal E-mail to the Authors, January 2, 2013.

7. Ibid.

excessive profits: their expected rate of return, as Figure 1 below shows, is not impressive and they are likely to lose money in some years. South Carolina insurers are regulated much like insurers elsewhere in the country. Moreover, recent reforms have moderated rate increases for most consumers. The next few pages will demonstrate that premiums in South Carolina are what they are because of the size of the state's coastal exposure and the significant likelihood of enormous future losses. The unavoidable fact remains that property insurance in South Carolina will always be more expensive compared to states without such large exposures. Quite simply, a state like Utah, that has no significant risk from wind, water, or earthquake will always have less expensive homeowners insurance than one like South Carolina.

**FIGURE 1: COMBINED RATIOS FOR THE PROPERTY AND CASUALTY INSURANCE INDUSTRY BY YEAR**



*NOTES: The key measure of an insurance company's performance is its "combined ratio" the ratio of how much it spends paying claims and administering its operations relative to how much it collects in premiums from consumers. A combined ratio of 100 means that a company collects in premiums exactly what it spends to operate and pay claims whereas a combined ratio of 95 would reflect that the industry, as a whole, has five cents of underwriting profit for every dollar it collects. A combined ratio of 110, likewise, would mean that a company spends 10 percent more on paying claims and running operations than it collects in premiums. A company with a combined ratio over 100 may still be able to make money by investing its premium dollars.*

*SOURCE: Keefe, Bruyette and Woods, A.M. Best*

It is important to emphasize that homeowners insurance is not a particularly lucrative business. While there are major insurers that focus almost entirely on life insurance (Principal Financial Group, New York Life) and auto insurance (GEICO, Progressive), no large national insurers write *only* homeowners insurance. The reason for this is simple: in the long-term, it simply isn't profitable. Long-term trend data compiled by the National Association of Insurance Commissioners shows that, over any given ten-year period, insurers will take in about as much in premiums as they pay out in

claims.<sup>8</sup> Even in the most profitable of times, homeowners insurance is not a very good stand-alone business.

In South Carolina, in fact, the past quarter century has seen a *negative* "return on net worth" (the typical measure of overall profitability) for insurers operating in the state as Figure 2 below shows. While insurers have made decent returns in recent years, these are more than outweighed by enormous losses in the years when major hurricanes have hit. Another major hurricane strike—which, as this paper discusses below, is likely to happen—would likely wipe out all of these recent profits and more. Writing homeowners insurance in South Carolina, in short, is not a very good business.

Of course, insurers aren't charities, so they do have reasons for writing homeowners insurance. The fact that amounts paid out in claims are roughly equal to the total amount collected doesn't mean that profits are impossible. Insurers can profit by investing premiums, primarily in high-grade corporate and government bonds. Because insurers are limited to relatively conservative investment strategies, however, the current environment of low-interest rates makes these investment returns exceptionally low by historical standards.<sup>9</sup>

Selling homeowners insurance also provides an opening for some companies to sell more lucrative products like automobile insurance, life insurance, and investment products. Moreover, roughly half of all homeowners insurers are "mutual" companies that do not have stockholders. Instead, they operate for the mutual benefit of their customers (called "members").<sup>10</sup> While mutual companies are businesses that pay taxes and seek to make money, they do not have to meet the quarter-to-quarter expectations of shareholders and capital markets with respect to returns on capital and, hence, can often rely on "membership" growth more than on the profitability of a line of business such as homeowners insurance. This means that many are perfectly happy to grow even if the growth isn't hugely profitable.

The market for homeowners insurance in South Carolina demonstrates healthy competition and there is no evidence of any systemic or collusive "price gouging." Using statutory insurance data from the National Association of Insurance Commissioners, R Street calculated the market-wide Herfindahl-Hirschman Index or HHI (a measure of market

8. Note that the reference is to gross premiums collected over the ten-year period, without any accounting for the expenses of operating over that period of time or for annual profits or losses over that period

9. Ernst and Young. "Soft market conditions and low investment returns will challenge US property-casualty insurers in 2011, Ernst & Young predicts," <http://www.ey.com/US/en/Newsroom/News-releases/Soft-market-conditions-and-low-investment-returns-will-challenge-US-property-casualty-insurers-in-2011>

10. National Association of Mutual Insurance Companies. "NAMIC at a Glance," <http://www.namic.org/>

**FIGURE 2: HOMEOWNERS INSURANCE (MULTI-PERIL) RETURN ON NET WORTH (SOUTH CAROLINA)**

YEAR	RETURN (PERCENT)
1987	8
1988	6.1
1989	-509.9
1990	-20.2
1991	3.8
1992	17.2
1993	6.2
1994	11.9
1995	15.8
1996	16.3
1997	21.3
1998	12
1999	-2.6
2000	-7
2001	18.8
2002	16
2003	25.4
2004	26.8
2005	32.8
2006	31.4
2007	31.6
2008	15.9
2009	16.5
2010	8.2
Average	-8.2375

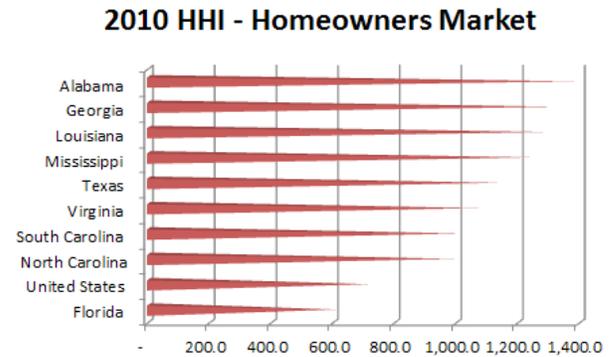
SOURCE: South Carolina Insurance News Service

concentrations used by economists and based on the market share of the 50 largest companies) of the state’s homeowners insurance market as 1,018.<sup>11</sup> Under the guidelines the Federal Trade Commission uses to determine if a company is a monopoly, this means that the market is “un-concentrated,” although it is somewhat more concentrated than the homeowners insurance market in the nation as a whole.<sup>12</sup> The market is also less concentrated than those in many other hurricane-prone states, as Figure 3 shows.

11. Calculations by the authors based on data from the National Association of Insurance Commissioners. For national comparisons see Ray Lehmann. “2012 Insurance Regulation Report Card,” R Street, June 4, 2012, <http://rstreet.org/policy-study/2012-insurance-regulation-report-card/>

12. Federal Trade Commission. “Horizontal Merger Guidelines, 2010” <http://www.justice.gov/atr/public/guidelines/hmg-2010.html>

**FIGURE 3: HHI FOR HURRICANE-EXPOSED STATES AND THE UNITED STATES AS A WHOLE**



NOTE: Florida has a lower-than-average HHI because most large, nationally known carriers have stopped writing new policies in the state, leaving smaller Florida-focused carriers to pick up the slack. This means that consumers in Florida do not have nearly as many choices as the HHI suggests.

SOURCE: National Association of Insurance Commissioners data

States with significant hurricane risks generally have more concentrated markets than those in the country as a whole, because some insurers do not want to take the risk of paying for the mammoth, simultaneous claims that result from hurricanes.

This means that South Carolina’s consumers, including coastal residents, have no shortage of financially sound and solvent companies willing to sell them homeowners insurance. Although the mere existence of multiple players in a market doesn’t, by itself, prove that prices are reasonable, it makes true “price gouging” by insurers very difficult, if not impossible. New carriers have also continued to enter South Carolina at a significant rate. Indeed, since major reforms of the market passed in 2007, 18 new companies have entered the state to write homeowners insurance, with at least four new carriers arriving in 2012 alone.<sup>13</sup> All other things being equal, having more companies enter the state’s insurance market will result in more competition. While the amount of competition is only one factor in setting prices, it almost always will tend to moderate price increases as companies compete for business.

The regulatory system that oversees insurance in South Carolina is typical of the country as whole. There’s no evidence that the state has “very weak regulations” on property insurance, as some media accounts have claimed.<sup>14</sup> Although “strength” is relative, South Carolina’s system, relative to other states, is unexceptional. A national comparison bears

13. South Carolina Department of Insurance. [www.scdoi.org](http://www.scdoi.org)

14. Tony Bartelme. “S.C. has ‘very weak regulations’ on property insurance.” June 21, 2012, <http://www.postandcourier.com/article/20120621/PC16/120629813/1209/sc-has-very-weak-regulations-on-property-insurance>

**FIGURE 4: HOW INSURANCE IS REGULATED AND PROVIDED BY SOUTH CAROLINA AND NEARBY STATES**

State	Wind Pool/Beach Plan	State-Run insurer of Last Resort	Rate Regulation Method	State Run Reinsurer?	Credit Scores Allowed in rate making?
Florida	No	Yes	Prior approval with insurers filing individually; <i>de facto</i> state made rates and use and file.	Yes	Yes
Georgia	Yes	No	File and use	No	Yes
Louisiana	No	Yes	Prior approval with individual filing and and file and use	No	Yes
North Carolina	Yes	No	Prior approval via a rate bureau	No	Yes
Mississippi	Yes	No	Prior approval with individual filing	No	Yes
<b>South Carolina</b>	<b>Yes</b>	<b>No</b>	<b>File and use</b>	<b>No</b>	<b>Yes</b>
Virginia	Yes	No	File and use	No	Yes

*NOTES: A wind pool/beach plan is a limited purpose insurer that focuses on writing wind only coverage. A "state run insurer of last resort" writes full-scale policies in direct competition with the private market.*

*A state-run reinsurer, something that for property insurance exists only in Florida, is a state-run entity that sells reinsurance to the private market.*

*A "prior approval" rate filing system is one where companies must receive approval from insurance regulators before charging a given rate. A "file and use" system is one where insurers can file their rates and then these rates are deemed approved after a certain amount of time, unless regulators specifically reject them. Florida has both prior approval and, because its state-run insurer competes directly with the private market for almost all property insurance policies, also sets rates itself.*

*SOURCES: NAIC, R Street, Insurance Information Institute*

this out: South Carolina’s primary method of regulating insurance rates—known in the industry as a “file and use” system—is essentially the same in 23 other states.<sup>15</sup> This system also includes “flex bands” under which small changes in rates to reflect inflation and obvious increases in costs do not require enormous paperwork on the part of insurers. It is important to note that the existence of “flex bands” does *not* allow for “automatic” rate increases or even fundamentally change the nature of the system. It simply means that smaller changes—up or down—in insurance rates require less paperwork on the part of insurers than do bigger ones. Insurance regulators can and do disapprove rate changes within flex bands. This type of system exists in at least 31 other states for at least some types of property and casualty insurance. For *all* rate filings, state regulators retain the power to disapprove rates, just as they do in 49 other states. Figure 4 compares South Carolina to nearby states.

South Carolina, like 46 other states, allows insurers to use policyholders’ credit scores to determine rates.<sup>16</sup> This practice tends to reduce overall premiums and, in study after study, has been held to be generally beneficial to consumers insofar as they allow insurers to lower rates on people who are reasonably good risks, while raising them on those who are poor risks.<sup>17</sup> Furthermore, while rates have generally risen in recent years—as they have in all coastal states—the evidence seems to indicate that rates in South Carolina have

not climbed at a particularly rapid rate. Overall, they have increased only slightly more quickly than inflation and at a *slower* rate than those in adjoining states.

Furthermore, the 2007 reforms that the insurance industry and free market organizations generally supported cannot reasonably be held responsible for increases in rates.<sup>18</sup> On the contrary, “free market” reforms have tended to slow the pace of rate increases: following the package of reforms that the state Legislature passed and then Gov. Mark Sanford signed in 2007, rates went up an average of 4.25 percent a year (about 1.5 percent faster than average inflation). This isn’t trivial, particularly in a slow economy, but it represents a definite slowing in the pace. In the four years *prior* to the reforms, rates rose an average of 10 percent a year, or about 7 percent faster than inflation. In short, free market reforms correlate with rates increasing at a *slower* pace.

That said, overall rates in South Carolina are slightly higher than those in the country as a whole, but lower than most other states with significant hurricane risk. South Carolina homeowners pay an average premium of \$909 a year for homeowners insurance. This is more than people in North Carolina (\$757) and Virginia (\$753) but less than those in Florida (\$1,544), Texas (\$1,560) or New York (\$1,044).<sup>19</sup>

15. Lehmann, 2012, 12.

16. Ibid.

17. Federal Trade Commission. “Credit Based Insurance Scores: Impacts on Consumers of Automobile Insurance: A Report to Congress of the Federal Trade Commission.” July, 2007. [http://www.ftc.gov/os/2007/07/P044804FACTA\\_Report\\_Credit-Based\\_Insurance\\_Scores.pdf](http://www.ftc.gov/os/2007/07/P044804FACTA_Report_Credit-Based_Insurance_Scores.pdf)

18. Eli Lehrer. “Baby Steps in the Right Direction: South Carolina’s Omnibus Coastal Insurance Reform Legislation,” The Competitive Enterprise Institute, October 2007, [http://www.mitigationleadership.com/hrmlf/pdf/SC\\_Omnibus\\_Coastal\\_Insurance\\_Reform\\_Legislation.pdf](http://www.mitigationleadership.com/hrmlf/pdf/SC_Omnibus_Coastal_Insurance_Reform_Legislation.pdf)

19. Insurance Information Institute. “Average Premium for Homeowners and Renters Insurance by State” [http://www.iii.org/facts\\_statistics/homeowners-and-renters-insurance.html](http://www.iii.org/facts_statistics/homeowners-and-renters-insurance.html)



Furthermore, according to data compiled by the website [homeinsurance.com](http://homeinsurance.com), rates extended to consumers are actually falling statewide in South Carolina (by 1.3 percent in 2012) even as they rise in most of the rest of the country.<sup>20</sup> While it's realistic to think that current policies might continue to reduce rates slowly over time, there's little to suggest that rates could ever be drastically lower in the short term.

**FIGURE 5: AVERAGE PROPERTY INSURANCE QUOTES BY STATE, SOUTHEASTERN STATES, EARLY 2013**



*NOTE: Because roughly half of Florida residents shopping for new insurance in coastal areas cannot find private companies willing to take on their policies, actual rates extended to Florida homeowners are generally higher than this data indicate.*

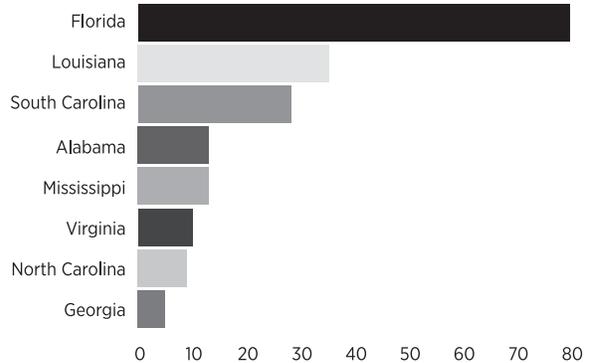
*SOURCE: Homeinsurance.com*

South Carolina property insurance will probably never be cheaper than the national average for one simple reason: the state's large hurricane risks. Not only is it located in a hurricane-prone part of the world (the Southeast United States) but South Carolina is one of the country's most hurricane-prone states. While states like New York and Florida have more coastal property that could potentially be at risk from a major storm—coastal exposure, in industry terms—South Carolina has far more exposure than the states in its immediate vicinity. Since 1970, hurricanes have affected South Carolina an average of once every 6.8 years. Most of these hurricanes do not make a direct perpendicular landfall on

20. Homeinsurance.com. "Largest Rate Decreases, 2012," <http://homeinsurance.com/rates-in-your-state/>

South Carolina but, instead, pass by. (The two worst hurricanes, 1989's Hugo and 1959's Gracie, however, did make direct landfall.) Of all states in the Southeast, indeed, the state's total exposure to hurricanes is the third highest. Many policies have exacerbated these risks for South Carolina, including reasonably lax statewide building codes historically, destruction of wetlands (which protect inland areas from hurricane-related storm surge) and the disappearance of barrier islands.

**FIGURE 6: PERCENTAGE OF COASTAL EXPOSURE BY STATE, SOUTHEASTERN STATES**



*SOURCE: AIR Worldwide*

All-in-all, the South Carolina insurance market is stable, has ample competition, and serves consumers moderately well. Its regulation is typical of regulation elsewhere in the country. Rates are higher than the national average largely because hurricane risk is high. That said, many state residents and political leaders have voiced strong opinions about the system and these opinions need to be addressed. Addressing them, in turn, requires an examination of how homeowners insurance rates are made in South Carolina.

### MAKING INSURANCE RATES: WHY PAST EXPERIENCE ISN'T THE (COMPLETE) ANSWER

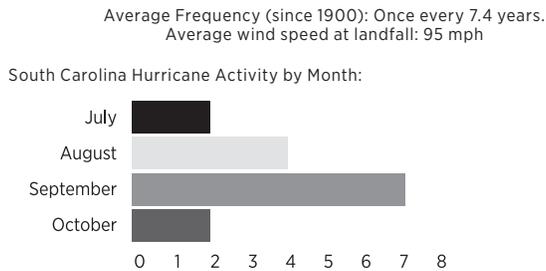
Homeowners insurance companies determine rates on the basis of expected future losses. These expectations are informed—but not determined—by insurers' past experiences. Using past data alone is insufficient, as insurers need to take into account both the best available future forecasts and the cost of the capital they will need to pay likely claims.

It's important to insurers that South Carolina has seen hurricanes make landfall in the past—at least 14 in the 20th Century alone, and one since 2000.<sup>21</sup> Likewise, the fact that several hurricanes have done very significant damage to the state helps inform insurers about how to set rates. But the data about past experience is necessarily limited. Hurricanes

21. South Carolina Department of Natural Resources, South Carolina State Climatology Office. "Hurricanes and Tropical Storms Affecting South Carolina," [http://www.dnr.sc.gov/climate/sco/Tropics/hurricane\\_tracks\\_affecting\\_sc.php](http://www.dnr.sc.gov/climate/sco/Tropics/hurricane_tracks_affecting_sc.php)

could not be systematically tracked before true global weather satellite networks went online in the late 1960s, so exact counts of storms before that period do not exist. Furthermore, in the period since World War II, three hurricanes – in 1954, 1959 and 1989 – have done significant damage in South Carolina.<sup>22</sup> Since weather is notoriously difficult to project—TV weather forecasters get it wrong all the time—trying to get anything out of this non-pattern doesn’t tell one much.

**FIGURE 7: FACTS ABOUT HURRICANES IN SOUTH CAROLINA**



SOURCE: South Carolina Department of Natural Resources

Even if one could establish a pattern of hurricanes and know for certain that a certain number of hurricanes would hit the state each decade, simply looking at past losses wouldn’t be that useful. Development patterns change and cities grow. For example, Horry County—the single most windstorm-exposed county in the state—has seen its population increase from 23,364 in the 1900 census to 226,229 in the 2010 census; an increase of more than 1,000 percent.<sup>23</sup> (Most of the growth has come since 1970.) Likewise, raw dollar figures for past hurricanes are not that useful unless they are adjusted for inflation. The last major hurricane to hit the state, 1989’s Hurricane Hugo, resulted in \$4.8 billion in damage, but would cost almost \$7 billion today.<sup>24</sup>

In addition, weather patterns change over time: a variety of factors—including human activity (particularly carbon emissions)—and multi-decadal climate oscillations resulting from *el nino* and *la nina* also impact the number, frequency and severity of storms. In short, past experience alone simply cannot determine what rates should be in the future, and using past data to make claims about appropriate rate levels in the present is an inherently flawed technique. In short, past “averages” alone are not an effective predictive indicator of what insurance rates should be: the process of setting rates requires a lot more data.

## MODELING: MAKING (EDUCATED) PREDICTIONS ABOUT THE FUTURE.

To take all relevant factors into account, and try to bring together the best data as to what might happen in the future, insurers and the reinsurers they work with use “catastrophe models.” These models, complex computer programs, attempt to present the entire range of event types that *could* theoretically happen in a particular area. Since the actual number of potential events (hurricanes in South Carolina) is essentially infinite, the model exists to try to provide an answer to which events are likely in the future. This is important because it is very difficult to predict where precisely a hurricane will strike even once the hurricane has already formed.

An example can explain how this works in practice. A very simple model—simpler than one that insurance companies would actually use—might draw together data about how increasing hurricane wind speeds result in more damage to homes along the South Carolina coast. Based on observations around the world, satellite data, and computer models of climate systems, modelers might determine that minor storms with winds under 20 miles per hour would typically result in a few or no claims but that, as winds approached “tropical depression” categorization (38 miles per hour) insurance claims and thus costs to insurers would increase rapidly. The modelers might then input other potential variables—barometric pressure, ocean surface temperature, storm activity elsewhere in the world—that are known to impact wind speed along South Carolina. They then would run millions of simulations to allow for a wide variety of interactions of the different variables. Based on this, the modelers might then determine that it was likely that new construction in a particular area and generally warming ocean surface temperatures had increased the chances of winds over 38 miles per hour and thus the chances of significant damage. This would, in turn, be used to determine rates to cover future events.

Like any other technique, modeling has its limits. Most importantly, while models can offer a range of potential outcomes and assign relative probabilities to each, they do not offer psychic insights into the future. Thus, a model that predicts that the chances of a storm doing a certain amount of damage to South Carolina are greater than they have been in the past isn’t necessarily *wrong* if South Carolina dodges the odds and doesn’t sustain major storm damage.

That said, insurance companies that use models would not benefit from systemically overestimating risk. An insurer whose model continually *overestimated* risk would charge rates that are too high, and it would find itself priced out of the market by competitors whose models estimated the risks correctly.

22. South Carolina State Climatology Office. “Notable South Carolina Hurricanes,” [http://www.dnr.sc.gov/climate/sco/Tropics/hurricanes\\_affecting\\_sc.php](http://www.dnr.sc.gov/climate/sco/Tropics/hurricanes_affecting_sc.php)

23. SCIWAY.com “Hory County South Carolina, Population Changes, 1900-2005,” <http://www.sciway.net/data/county-population/horry.html>

24. South Carolina State Climatology Office, *Supra*.

## PAYING CLAIMS

Once they decide both whether to insure a particular risk and how much to charge, insurance companies need to make sure they can pay the claims they receive. Insurers set aside money, called “reserves,” for losses they have already been incurred; litigation that might result from claims (including disputes about which expenses should be paid by the National Flood Insurance Program and which by private insurers); as well as for the cost of sending out claims adjusters and other “loss adjustment expenses.” Indeed, insurers are prevented from reserving for catastrophic events under current accounting and tax rules in the United States. This only exacerbates pricing for catastrophes and ultimately paying the claims that arise.

Reserves, which are marked as a liability on an insurer’s balance sheet, are established for each line of business an insurer writes. They also are adjusted over time. As time goes on, if reserves were set too high, an insurer is allowed to “release” them, moving them to the asset side of the balance sheet (the amount by which an insurer’s assets exceed its liabilities is called its “surplus”), where they may be used to support new business or simply returned to policyholders or shareholders. In other cases, an insurer may find its reserves were inadequate, particularly if it experiences a catastrophe loss, and it will have to contribute more money to “strengthen” its reserves or dip into its surplus to pay claims.

In some cases, insurers may need to supplement their reserves with loans or letters of credit from banks or investors, to provide “liquidity” over a short term.

When it comes to paying for major catastrophes like hurricanes and earthquakes, property insurers seek to limit their exposure and concentrations to any one type of risk and any one geographic area. They may also choose to transfer some of that risk to other insurance companies. For this, they use reinsurance, or insurance for insurance companies. In much the same way individual consumers purchase insurance, “primary” insurers that deal directly with consumers can buy coverage from reinsurers. Reinsurers may reinsure each contract separately, or they may agree to a treaty reinsuring a whole block of business. Sometimes the reinsurer picks up a percentage of the losses suffered, or sometimes it will pick up all losses above a certain threshold, or it may be a combination of those structures. Reinsurance is available for a premium and the premium ultimately paid by the consumer reflects the cost of such reinsurance. It is fair to say that without reinsurance, there would be no insurance. Because reinsurance markets are international, furthermore, no regulator can (or would) try to control the prices. Thus, reinsurance premiums fluctuate with supply and demand.

Even reinsurance capacity, however, is limited at any given point in time and no insurance company can ever count on adequate reinsurance being available at an affordable price

from year to year, as capacity and pricing of reinsurance is based on the worldwide exposures that reinsurers typically cover. In other words, catastrophic events in places like Japan, China and Europe, can and do have a significant impact on the pricing of insurance for coastal customers in South Carolina. Sometimes, a new special purpose reinsurer can be established, using money borrowed from investors, to take on risks from one or more primary insurers. These “alternative risk transfer” vehicles have been growing in popularity in recent years, and one of the most popular forms is what is called a “catastrophe bond.” Investors purchase bonds from the new reinsurer that agree to pay a relatively high level of interest, but stand to lose both that interest and potentially principle if a catastrophe occurs on which the special purpose reinsurer must pay claims. The coverage offered through these catastrophe bond vehicles can be tied to a particular loss, an industry-wide loss or a specific natural event.<sup>25</sup>

Every insurer has specific business interests and ways to decide its own capitalization and reinsurance mix, as well as weigh the costs and benefits to the company. The costs of all of these business decisions, however, will most certainly be reflected in consumer rates.

## ASSESSMENT RISK IN SOUTH CAROLINA AND AROUND THE COUNTRY

As this paper discusses above, insurance companies that get their rates “wrong” and fail to bring in enough in premiums to pay the claims they incur pose a significant risk to the public and to the insurance market as a whole. They can become insolvent and it may be necessary for a guaranty fund to step in and pay claims to their policyholders, generally financed by laying special taxes called “assessments” on other insurance companies, who pass those costs on to their policyholders. But guaranty funds are not the only entities that are empowered to assess insurance companies. Residual market entities like the Wind Pool may do so as well. In some places, the potential size of these assessments can be as large, or larger, than insurance premiums themselves.

In Florida, in 2009, assessments from a storm that exhausted all of the state’s reserves could have topped \$1,500 per household per year for a decade or more.<sup>26</sup> Under Florida’s system, even non-homeowners who had automobile or other insurance would have to pay these assessments. This amounts to “paying later” for initially lower rates (still among the highest in the country), and consumers—for obvious reasons—should be wary of any system that asks them to “pay later.”

25. See e.g. RMS inc. “Cat Bonds Demystified,” [http://www.rms.com/Publications/Cat\\_Bonds\\_Demystified.pdf](http://www.rms.com/Publications/Cat_Bonds_Demystified.pdf)

26. John Hallman and Eli Lehrer. “Make Florida More Hurricane Resistant,” The Miami Herald, September 28, 2009, <http://fredkarlinsky.org/news.php?category=Insurance+Industry+News+Headlines&headline=Miami+Herald%3A++Make+Florida+more+hurricane-resistant>

Two major factors—public policy and forces of nature—can trigger assessments. In South Carolina, the single-largest risk factor for current assessments is the risk of hurricanes that cause serious damage to the state. Indeed, when a sufficiently large hurricane hits *any* state, it becomes likely that at least some insurance companies will end up defaulting or that some residual market mechanism will assess policyholders.

But public policy can also result in assessments. For instance, states may fail to exercise proper oversight of insurers or to deter insurer insolvencies. In states with very large residual markets, the overall risk of assessment increases for the obvious reason that the larger the residual market's exposure, the more frequently it will be unable to meet its obligations. As such, it's possible to gauge assessment risk for most states in the Southeast by looking at the various factors that lead to lesser (or greater) assessment risks.

To determine this risk, R Street analyzed four variables and evaluated most of them on a scale of 1 to 4 points as described below. Two variables—coastal percentage and residual market size—were given triple weight because they determine the potential size of assessments far more than other factors.

**Percentage Coastal:** Using data provided by AIR Worldwide, in Figure 6 above, R Street evaluated the percentage of coastal risk for Southeastern states. We scored states as follows:

More than 50 percent coastal risk: 12  
25-49 percent coastal: 8  
10-24 percent coastal: 4  
Less than 10 percent coastal: 0

**Top Vulnerable Areas:** Percentage of coastal risk tells only part of the story: some coastal areas may have enormous insured value but have reasonably little chance of being hit. Some states have more exceptionally vulnerable areas than others. To determine this, R Street used data compiled by the International Hurricane Research Center at Florida International University ranking the ten most hurricane vulnerable areas in the country.<sup>27</sup> They were scored as follows:

More than 3 areas on the FIU list: 4  
3 areas: 3  
2 areas: 2  
1 area: 1  
No areas: 0

**Residual Market Size:** Residual property insurance mar-

kets like Florida's Citizens Property Insurance Corp. and the Wind Pool in South Carolina pose the single greatest assessment risk to state residents. All residual markets have the ability to levy special taxes that ultimately get paid by most residents of a state. (Sometimes these assessments are levied on insurers rather than on consumers directly.) A larger residual market, by itself, means that the risk of a large assessment is greater. We ranked states using data from the Property Insurance Plans Service Office in terms of their market share as of 2011 (the most recent data available); fractions were rounded to the closest whole number.<sup>28</sup>

More than 10 percent: 12  
5-10 percent: 8  
2-4 percent: 4  
Less than 2 percent: 0

**Examinations:** All states have a duty to oversee the solvency of insurers operating within their borders. In general, states are expected to examine companies' finances and market conduct at least every five years. States that fail to do so run the risk of failing to protect consumers from insurers that cannot pay their claims. This, in turn, increases the risk of guaranty fund assessments. States that fail to complete frequent exams are at greater risk of having insolvencies that cost consumers money. To measure this variable, R Street used National Association of Insurance Commissioners data about such examinations as compiled on our own 2012 insurance report card and scored it as follows<sup>29</sup>:

Examined less than 80 percent of companies  
once every five years: 4  
Examined 80 to 99 percent of companies  
once every five years: 3  
Completed exams all companies at least  
once every five years: 2  
Examined companies, on average more than  
once every five years: 0

**Scoring:** R Street then computed final scores for each state based on these metrics and summed the scores. This resulted in four different labels:

Aggregate score 0-9: Low risk of assessment  
Aggregate score 10-20: Moderate risk of assessment  
Aggregate score more than 20: High risk of assessment

The chart shows that, while South Carolina residents may pay relatively high homeowners insurance rates, they face a fairly low risk of assessments in the future. Insofar as

27. Stephen Letherman and Natalie Defraene. "10 Most Hurricane Vulnerable Areas," International Hurricane Research Center/Florida International University, [http://www.ihc.fiu.edu/media/docs/10\\_Most\\_Hurricane\\_Vulnerable\\_Areas.pdf](http://www.ihc.fiu.edu/media/docs/10_Most_Hurricane_Vulnerable_Areas.pdf)

28. Property Insurance Plans Service Office. "FAIR and Beach Plan Underwriting Results and Market Penetration Report, 2011," 2012, 10.

29. R.J. Lehmann. "2012 Insurance Regulation Report Card," R Street, June 2012, <http://www.rstreet.org/policy-study/2012-insurance-regulation-report-card/>

**FIGURE 8: ASSESSMENT RISK OF HURRICANE-PRONE STATES**

State	Percentage Coastal	Top Vulnerable Areas	Residual Market Size	Examinations	Score	Assessment Risk
Florida	12	4	12	3	31	High
Louisiana	8	1	8	2	19	Moderate
Texas	8	0	8	0	16	Moderate
Mississippi	4	1	4	1	10	Moderate
South Carolina	8	0	0	1	9	Low
Alabama	4	0	0	3	7	Low
North Carolina	0	2	4	1	7	Low
Virginia	4	0	0	0	4	Low
Georgia	0	0	0	2	2	Low

SOURCE: R Street Institute, AIR Worldwide, PIPSO, Florida International University

South Carolina residents run an assessment risk, it is largely because the state is heavily exposed along the coast; not because of any public policy.

## CONCLUSIONS

South Carolina’s insurance system is not perfect. Many residents are justifiably concerned about relatively high rates they pay for coastal coverage. But an analysis of the data and comparison with that of other states does lead observers to several conclusions:

1. South Carolina’s insurance regulations are not “very weak” and, in fact, are typical of those elsewhere in the country.
2. Rates that South Carolina residents pay are typical of those paid by people in other hurricane-exposed states and are declining.
3. South Carolina’s hurricane exposure is very high relative to other states. This explains the current rate levels. Rates are commensurate with the risk.
4. The market in South Carolina is sufficiently competitive that “price gouging” does not seem to be taking place. Returns on investment for the insurance industry, likewise, are not impressive.
5. South Carolina is doing a reasonably good job attracting new insurance carriers to the market; doing more of the same may serve to reduce rates for some customers.

South Carolina’s existing insurance regulatory system is already serving to reduce customers’ quoted rates modestly. If it wants to do more to help consumers, the Legislature should consider doing two major things.

First, it should consider enhancing policies that attract insurers

to the state. New insurers are already deciding to set up shop in South Carolina and this, as much as anything else, explains recent downticks in insurance rates. More insurers might come if the Legislature works to ease paperwork burdens.

Second, the state’s existing South Carolina Safe Home program—which encourages and helps individuals to strengthen their properties against nature’s worst—offers the best public policy solution for most residents of modest means concerned about high insurance rates.<sup>30</sup> Installing roof tie-downs, storm shutters and other mitigation measures can make communities stronger and safer against nature’s worst. The Legislature should continue funding the program and look for ways to enhance it over time.

In the end, South Carolina policymakers must remember that risk factors—not public policy—are the main thing that determines insurance rates. Although a wide variety of proposed reforms may deserve consideration, the current system appears to work moderately well. Competition is ample and, in the past year, rates have fallen modestly. This is good for consumers and good for the state. Laws can only do so much. They will never be able to reduce the risk of hurricanes striking the state. South Carolina should trust the market and work to improve its functioning; taking other action could do grave damage to a relatively successful insurance system.

30. South Carolina Department of Insurance. “SC Safe Home,” <http://scsafehome.sc.gov/Pages/default.aspx>

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