Wind Hail Insurance Market Incentives Study

Executive Summary

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Texas A&M University of Galveston (TAMUG) was contracted by the Texas Department of Insurance (TDI) to conduct a study of market incentives for writing windstorm and hail insurance in the 14 first tier coastal counties of Texas and parts of Harris County. The study was conducted in accordance with Texas Insurance Code Section 2210.015.

Broadly, the study included a voluntary survey of insurers, aggregate analyses of homeowners insurance market performance, and analyses of state residual market mechanisms. Highlights of the study and its results are summarized below.

Insurer Survey

The voluntary survey consisted of two stages: online surveys of residential and commercial property insurers; and interviews of selected insurers for deeper understanding about significant aspects identified in the first stage.

Preliminary Analysis – State of the Homeowners Insurance Market
TAMUG performed an analysis of homeowners insurance market dynamics in the Texas coastal area, using company-specific secondary data from 2010-2020 with the aim of profiling companies by their exposure growth patterns. The analysis helped ensure that companies selected for interviews were a good representation of the market. Key summaries are below:

- The number of private companies writing homeowners policies has been increasing steadily in all coastal territories (Tier 1, Tier 2, and parts of Harris County outside Tier 1).
    - 249 companies corresponding to 99 groups have written at some point during this decade.
    - On average, 149 (of which 138 provided wind and hail coverage) companies wrote homeowners insurance in Tier 1; 154 wrote in Tier 2; and 155 wrote in Harris County.
- The total amount of inflation-adjusted homeowners exposure, premiums, and policies written that included wind and hail coverage have all been trending upward, thereby **indicating overall expansion of the private insurance market** from 2010 to 2020.
    - Exposure increased an estimated 45% in all coastal territories and 88% in Tier 1.
    - Policy counts and premiums in Tier 1 rose approximately 53% and 54%, respectively.
    - Using company specific data, we estimated that the overall upward trend of policy counts and premiums was not statistically significant. This **indicates that that the market expansion was likely driven by the increasing number of companies, rather than by the growth within a company on average**.
- At the company-level, there were significant fluctuations in exposure in Tier 1.
    - We identified 41 insurers that wrote policies with wind and hail coverage throughout 2010-2020. **TWIA depopulation does not seem to have affected these companies' market share; rather, the depopulated risks are being picked up by new companies entering the market.**
    - Only eight insurers wrote wind-only policies for the voluntary market.

    - Overall, among insurers that wrote policies with wind and hail coverage, 52% experienced long-term decline (from 2010 to 2020) in exposure in Tier 1 while the rest collectively experienced explosive growth.

Survey Administration
The voluntary survey was widely distributed. Fifty-five residential insurers and 45 commercial property insurers responded. Of the residential insurers, 53% wrote policies with wind and hail in Tier 1, 18% wrote in Tier 1 without wind and hail, and 29% did not write in Tier 1 at all. Of the commercial insurers, 33% wrote policies with wind and hail in Tier 1, 22% wrote in Tier 1 without wind and hail, and 47% did not write in Tier 1 at all.

Survey Results: Homeowners Market Incentives for Writing Wind and Hail in Tier 1
- Insurers writing homeowners policies in Tier 1, on average, selected more incentives options than insurers not writing in Tier 1.
- The three most selected incentives were:
    - The insurer charging rates that it believes are actuarially sound in Tier 1
    - Reduce reinsurance costs or improve accessibility to reinsurance
    - Create a statutory backstop to reinsure wind/hail losses above a specified amount
- The proportion of insurers preferring those three incentives options was significantly higher for the insurers writing in Tier 1 compared to the insurers not writing in Tier 1.
- A significantly higher proportion of insurers not writing in Tier 1 indicated that "[t]here does not exist an incentive(s) that will prompt us to write windstorm/hail insurance," compared to those insurers who wrote in Tier 1.
- If their preferred incentives existed, insurers currently writing wind and hail would increase Tier 1 exposure by 25%, on average.

Survey Results: Incentives for the Commercial Market
- The four most selected incentives were:
    - Improve and enforce building codes, standards, and construction requirements
    - The insurer charging rates that it believes are actuarially sound in Tier 1
    - Mandate higher deductibles / Expand use of wind/hail deductibles
    - Fewer or no restrictions on underwriting guidelines
- 53% of insurers indicated that "There does not exist an incentive(s) that will prompt us to write windstorm/hail insurance".
- If their preferred incentives existed, insurers that write wind and hail in Tier 1 indicated they would increase Tier 1 exposure by 17%, on average.

Survey Results: General Concerns
Companies identified concerns that prompted them to make market adjustments in the past, including:
- Expected loss and loss adjustment expenses
- (In)ability to compete with TWIA rates
- Reinsurance accessibility and cost
- Volatility of wind and hail risk

Commercial property insurers also noted changes in their expertise in underwriting and claims.

Survey Results: Mandatory Writing or Increased Assessments

Insurers were asked to indicate whether certain scenarios would change how much they write in Tier 1 or in Texas. The hypothetical scenarios were:

1. All insurers required to write a proportionate share of wind and hail insurance in Tier 1 in order to write property insurance in Texas
2. Wind and hail coverage required in every Tier 1 property policy
3. Increasing the amount of funding TWIA receives through assessments

Homeowners insurers:

- Scenario 1 - Overall, the responses indicated not much change would be expected
- Scenarios 2 and 3 - Would prompt reductions and complete exits from Tier 1 and Texas.

Commercial property insurers:

- Scenario 1 - Would prompt reductions and complete exits from Tier 1 and Texas.
- Scenarios 2 and 3 - Overall, the responses indicated not much change would be expected

Survey Results: TWIA and its Depopulation Programs

- While a majority of those that responded to the questions on TWIA did not perceive TWIA as a competitor, a majority also thought TWIA rates were inadequate and not higher than market rates.
- Companies that perceived TWIA as a competitor all wrote homeowners or commercial property policies with wind and hail coverage in Tier 1.
- Many respondents did not know what TWIA's rates were.
- Most respondents indicated that there should not be changes in the TWIA assessment formula.
- Only one respondent (a homeowner insurer) participated in a TWIA depopulation program – the assumption reinsurance program.
- Comments on specific improvements to the depopulation programs related to adequate pricing, segmentation of risks in Tier 1, an assessment recoupment opportunity, and a formalized inspection process for wind mitigation.

Interview Results

Surveys were followed by interviews with 11 selected residential (7) and commercial (4) property insurers. Discussion topics broadly covered: (a) Underwriting philosophy in Texas; (b) Challenges in the Texas insurance market; (c) Insurance incentives in the Texas insurance market; and (d) Reasons for long-term company success. Findings are summarized below.

- Building codes and "poor" construction regulations were indicated as number one challenge in Texas. Insurers cannot reliably verify the quality of structural improvements and repairs because there are no certification requirements for repair companies in Texas.
- Environmental issues such as the 2021 winter storm, climate change, and increase in frequency and severity in catastrophic wind and hail events were another major concern across all insurers.
- Small residential carriers indicated an inability to compete with larger, national companies.
- All companies indicated rising reinsurance cost as another challenge.
- Residential property insurers attributed long term success to the regulatory environment in Texas.

- Commercial property insurers attributed their long-term success to improved modeling and geographic diversification.

Overall, commercial property insurers tend to take a conservative approach to writing new risks in coastal areas in response to estimated risk and reinsurance costs. In the residential market, large, national companies with diversified risk portfolios and sophisticated risk rating abilities at the individual property level appear better poised to underwrite policies with wind and hail coverage in Tier 1.

Aggregate ZIP Code Level Analyses

Statistical analyses of aggregate (ZIP code level) private market homeowners insurance policies with wind and hail coverage were performed. The objective was to understand how private insurance uptake correlates with ZIP code level socioeconomic, demographic, and hazard risk factors. Key findings of statistical regression results are summarized below:

- Policy uptake, exposure, and premiums, on average, increase in large ZIP codes as well as ZIP codes with a higher per capita income, percentage of females, or population educated with a bachelor's degree or higher.
- Demand for private insurance increases with recent hurricanes and storms.
- Insurance uptake is lower in ZIP codes with higher poverty and unemployment rates, and it declines in ZIP codes with high proportions of mobile homes (proxy for structurally poor-quality housing stock).
- More federally-funded hazard mitigation activities are associated with lower exposure and premiums per policy holders.

Similar relationships were found when analyzing the sample of only Tier 1 ZIP codes.

Analyses of Residual Market Mechanisms

State-level residual market mechanisms (RMM) in selected Atlantic and Gulf of Mexico states were reviewed for recent legislative and operational developments. Statistical analyses were performed to understand the dynamic evolution of RMMs in response to damaging storms and hail incidents, changes in economic and market forces, and depopulation efforts. In addition, interviews were performed with state regulators.

Summary of RMM Findings

- Windstorm and beach plan exposures and policy counts were found to be significantly lower in states with depopulation programs (FL, TX, LA) in the period 2013-2020 relative to states that lagged behind in terms of their depopulation advancements.
- Increasing frequencies of major landfalling hurricanes were associated with declining exposures (both total exposure and the exposure per policyholder) and rising premiums in a subsequent year.
- RMM total value of exposure and policy counts were found to rise with the growth of new building permits and the value of single-family development in coastal areas.

- RMM policy counts and exposure values increased in states with high unemployment rates while premiums declined, thereby supporting affordability considerations of RMM plans.
- The states in which RMMs experienced financial distress had higher policy counts, greater exposure to loss and higher total premiums, on average. Considering reverse causation – financial distress, in turn, depends on policy counts, exposure and premium – these effects should be taken with caution.
- Limited empirical evidence indicated that with a longer inactive period between major hurricanes, the RMM exposure grew and subsequently average premiums declined, suggesting likely risk adjustment of state residual programs during low storm activity periods.

Summary of Interviews with State Insurance Regulators
Interviews were conducted with coastal states besides Texas to understand how they manage residual insurance markets. Questions focused residual market history, depopulation efforts, and preparations for future conditions. Five states agreed to participate. A summary of interview findings is below:

- State regulators unanimously highlighted the impact of catastrophic storms on their residual insurance markets. In general, there is an influx of policies into residual and surplus markets following catastrophic losses as smaller companies withdraw or reduce their portfolios within the impacted area.
- Although most states expressed intentions to depopulate their residual markets, regulators generally attribute the total number of policies to the overall state of the market and recent catastrophic losses. In general, regulators feel that their residual markets are working as they should in times of need.
- Four of the five states maintain their residual market premiums above the local average market rate.
- Each state highlighted the importance of improved building codes (particularly roof designs) in reducing risk.
- Some concerns regarding future conditions centered around age of construction, slow implementation of newer building standards, and financial risk management through surplus and reinsurance.
- Some other successful depopulation strategies included assessments for not writing policies within the coastal areas, regulating deductibles and nonrenewal clauses, and maintaining an accurate policy database for efficient depopulation.

[A copy of the entire final report is available on the TDI website.]