

## **THE PUERTO RICO EXPERIENCE IN PROPERTY CATASTROPHE RISK: A FIFTEEN YEAR OVERVIEW**

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On the island of Puerto Rico, approximately 100 miles in length and 35 miles wide with a population of 4 million people, there is some \$75 billion of insured property. Located in the Caribbean in an area commonly referred to as Hurricane Alley, the island's outline is blurred in maps that plot the tracks of storms over the last century. In addition, the island is riddled with geological faults and situated in an area active with seismic activity, having suffered a severe earthquake in 1918.<sup>1</sup> The combination of these factors, along with the fact that roughly two thirds of insured property is concentrated in the greater San Juan metropolitan area creates, a formidable challenge for insurers and their regulator, the Office of the Commissioner of Insurance.

Insurance for these property values is provided by 152 authorized insurers, of which a handful of 22 domestics write 85% of the \$600 million in property premium.<sup>2</sup> Fueled by premium tax incentives enacted in 1961<sup>3</sup> and strong reinsurance support, primarily from European professional reinsurers, in that span of time the domestics have experienced extraordinary growth, expanding from an insignificant 5% share of the P&C market to their present predominant position.<sup>4</sup> However, the physical realities of the island – size, location and concentration of property – deprive the market of dispersion characteristics essential to successful underwriting of catastrophe property insurance.<sup>5</sup> In addition, the relatively small size of the domestics underscores the imperative need for prudent management of accumulated exposures through reinsurance.<sup>6</sup>

This article will review the experience over the last 15 years, commenting on how this singularly structured market has coped with two windstorm catastrophes and analyzing the regulator's efforts to maintain the market's vitality, attempting to strike a balance between attracting capacity and pricing, that is between availability and affordability. Specific attention will be given to a 1994 statute creating a mandatory catastrophe reserve and its performance in the face of a subsequent hurricane. Finally, there will be commentary on a bill currently pending before the Legislature to amend the mandatory catastrophe reserve statute.

For decades Puerto Rico had seemed blessed as it was spared the onslaught of the most severe storms. In fact, between 1929's San Felipe<sup>7</sup> and 1989's Hugo, no hurricane struck the island and only three storms had any effect at all. In the intervening years strong economic growth and change from an agrarian to a modern economy brought about a sharp increase in insured property values. In turn, the San Felipe catastrophe resulted in a long-running Government policy favoring code regulated construction in steel reinforced concrete such that the post World War II development was of much better quality wind resistant construction. Even in those conditions Hurricane Hugo's glancing blow at the northeast of the island resulted in insured losses of nearly \$1 billion in Puerto Rico alone.<sup>8</sup>

Insurers served Puerto Rico well in Hurricane Hugo's aftermath. The quality of reinsurance and the efficiency of primary insurers' management resulted in claims being paid promptly.<sup>9</sup> Moreover, wise use of reinsurance spared the domestic primary insurers the worst effects of the losses; only one small insurer failed as reinsurers bore an overwhelming proportion of the losses.<sup>10</sup> However, it soon became clear that market conditions had changed and would probably never be the same.

The recurrence of catastrophic losses in the late 1980's<sup>11</sup> caused the withdrawal from the business of a number of reinsurers, accompanied by consolidation in the reinsurance sector, the outcome was a reduction of capacity both in the amount of capital and the sources available. Domestic insurers and the reinsurers that supported them began to exert considerable pressure on Puerto Rico for rate relief,<sup>12</sup> a shorter payback cycle and changes in fundamental underwriting conditions, principally the adoption of percentage deductibles to insulate insurers from first dollar losses. In the face of these hardening conditions Puerto Rico's reinsurance statute proved inadequate because it resulted in a stranglehold as it even further restricted the number of reinsurers with whom the domestics could trade.<sup>13</sup> Then came Hurricane Andrew with its staggering \$17.8 billion in losses and its dramatic demonstration of the global nature of catastrophe reinsurance.

For a small, concentrated, domestic-dominated market like Puerto Rico with its high sensitivity to reinsurance, what little latitude there may have been in responding to the demands of the changing global market was literally blown away by Andrew.<sup>14</sup> As a result, a dwellings and homeowners rate increase of 47%, a similar one for commercial property and the percentage deductible filings were approved by the regulator.<sup>15</sup> In addition, in an effort to inject some flexibility to the domestic insurers' reinsurance arrangements, a regulation was adopted allowing contracts with unauthorized reinsurers.<sup>16</sup> Even these measures proved insufficient to attract the needed capacity with negative effects on construction and the real estate market. A chronic situation became critical in 1933 as a leading reinsurer announced further reductions consistent with its refusal to support quota share contracts. Part of the problem resided in the rating organization's approach to rate making, which was based on experience trending and did not fully take into account the cost of excess of loss reinsurance. To partially offset this shortcoming and spur the market, the regulator invited insurers to file for dwellings rate deviations as a function of the cost of their catastrophic reinsurance.<sup>17</sup> This resulted in further rate increases for dwellings and homeowners ranging from +51% to +143%.

Although this array of measures contributed to maintaining the market's needed agility for dwellings and homeowners insurance, another very important line was severely restricted. High rise apartment buildings, particularly ocean front, found it very difficult to obtain coverage.<sup>18</sup> It became commonplace for these properties to experience severe difficulties in obtaining coverage and when available at increases of three and four times their pre-Hugo premiums.

This atmosphere of uncertainty and instability paved the way for a public outcry. Although the measures adopted by the regulator in large measure succeeded in the short term in securing availability,<sup>19</sup> they were hardly palatable and it was clear that alternatives for the longer term needed to be explored. This set the stage for adoption of a concept that had been under consideration for some time: a mandatory catastrophe insurance reserve.

Enacted in 1994, Act 73 added chapter 25 to the Insurance Code and established a mandatory catastrophe reserve for domestic insurers.<sup>20</sup> Its salient feature is the creation of a reserve in the domestic insurer's financial statement. The reserve is computed annually as a function of gross direct premiums (net only of return premiums) from policies providing coverage for catastrophic risks; initially the statute sets this proportion at 10% of gross direct premiums. Annually, the funding of the reserve is required into a trust and the trustee must invest in eligible assets whose values are not affected by a catastrophe. Assets in the reserve shall be increased annually until its total equals four times the annual average of gross direct premiums for the preceding three years, in effect *ad infinitum*. Accounting treatment of the reserve is guided by a provision that determines that the reserve shall form part of the insurer's liabilities in the nature of an unpaid loss. As a result of such accounting treatment, the statute specifically provides the reserve shall be deductible as a loss in determining the insurer's net taxable income; consistent with this tax approach, investment income earned by the reserve's trust assets is also tax free. The Act makes further provision for draws from the reserve in the event of a catastrophe and also includes accessory provisions in the event an insurer withdraws from the business.

In the prevailing environment the mandatory catastrophe reserve was touted as a mid and long term solution to both availability and affordability of catastrophe risk insurance. In this respect the declaration of purposes in the Act reveals that it seeks to make domestic insurers less dependent on reinsurers so that rates will be less affected by the price demands of the global reinsurance market.<sup>21</sup> This ideal, according to the statute's drafters, would be attained by having domestic insurers purchase catastrophic reinsurance only in excess of their catastrophe reserve. It left unresolved, however, the issue of pricing; that is, how was an insurer to be compensated for exposing the assets in its catastrophe reserve trust? Finally, and as further indication of important concerns left unresolved, the Legislature delegated to the Office of the Commissioner the determination of how the catastrophic reserve would be presented on the domestic insurers' annual statement so that their ratings would not be negatively affected.

Soon after the Act's adoption, the expressed intent of having a domestic purchase catastrophic reinsurance only in excess of its catastrophe reserve became a point of contention. As hurricanes Luis and Marilyn barreled through "hurricane alley" on successive weeks in September 1995, both barely sparing Puerto Rico catastrophic losses, the hazardousness of that approach became manifest. Domestic insurers began pressing for relaxation of various norms, questioning the wisdom of a policy that forced them to expose more than their judgment suggested was prudent. For

a business based on principles of large numbers and dispersion of risks, the notion of a required disproportionately large exposure seemed a fundamental contradiction in terms. Moreover, as the catastrophic reinsurance market began to show signs of softening, the question of pricing also gained importance: why expose the full catastrophe reserve when it is more cost effective to purchase reinsurance protection for it? As the regulator assimilated the shock of hurricanes Luis and Marilyn's "what if?" and the catastrophic reinsurance market continued to soften, these issues remained unresolved.

And then came Georges. Hurricane Georges struck the island in September 1998. Its track confirmed that a single storm could involve the entire island. Even with its barely 100 MPH winds it also made evident the ease with which losses add up, causing in excess of \$1 billion in insured losses. Georges' principal legacy, however, was the public outcry over application of the percentage deductibles.<sup>22</sup> Eventually the Legislature would timidly address this issue.<sup>23</sup> Another interesting offshoot of this storm was the performance of the catastrophe reserve. Of the \$133 million collectively reserved by the domestics, only \$20 million was drawn down from the trusts to satisfy the storm's losses. Evidently insurers had not heeded the statute's statement of purposes and in the absence of a regulatory mandate arranged their catastrophic reinsurance programs with retentions lower than their reserves.<sup>24</sup>

Again reinsurers absorbed a large proportion of the losses. Although this spared depletion of the catastrophe reserve, it soon became evident that the mechanism is producing some unexpected and negative effects. The aggregate amount of the reserve has experienced steady growth, from \$55 million in 1995 to \$225 million in 2002. However, the catastrophe reserve statute's unrelenting requirement of annual funding as a function of gross premiums has had the collateral effect of stunting surplus growth; for the same seven-year period the domestics' collective surplus increased only 15.8%. This development is further reflected when the reserve is considered as a percentage of surplus. It has steadily increased and at present is nearly at 30%. As a result many of the domestic insurers have seen their capacity to write other lines curtailed.<sup>25</sup> Under the circumstances the Commissioner reduced for 2002 the catastrophe reserve's funding requirement from 10% to 2.5% of gross premiums.<sup>26</sup>

Evidently the catastrophe reserve statute needs surgery. It has not served its stated purpose of reducing domestics' reliance on reinsurance support and although the objective of strengthening reserves is praiseworthy it can not come at the expense of impairing other lines. At present there is pending before the Legislature House Bill 3108.

#### *Endnotes*

1. As a condition of financing, the standard mortgage requires the mortgagee to provide for windstorm, earthquake and extended coverage.
2. These domestic insurers generally write only in Puerto Rico, with a handful also in the Virgin Islands and only recently in Florida.
3. See Act 129 of June 28, 1961, which added article 7.021 of the Puerto Rico Insurance Code ("the Code"), 26 LPRA 702a. The legislative reasoning behind the incentives was that encouraging the development of domestic insurers would facilitate closer supervision of those underwriting the premium to the ultimate benefit of the public. The track record bears this out; insolvencies of Puerto Rico domestics have been relatively few.
4. Among the domestics some are of local entrepreneurial capital while the others are subsidiaries of European or US insurance groups.
5. 1929's Huracán San Felipe, a strong category 5 storm which registered winds in excess of 150 miles per hour, was only the most severe of a number of these natural phenomena to have affected the entire island.
6. As a group the 22 P&C domestics have \$825 million in capital and surplus. The four largest and their respective capital and surplus are: Universal Insurance Company (\$108 million), Cooperativa de Seguros Múltiples (\$186 million), MAPFRE Puerto Rican and American Insurance Company (\$123 million) and American International Insurance Company of Puerto Rico (\$92 million).

7. So named after the centuries long Spanish tradition of naming natural phenomena for the saint's feast day on which the event occurred.
8. Hugo subsequently struck South Carolina causing significant damage and bringing total losses to \$5.5 billion, unprecedented until 1992's Andrew. Hugo confirmed that the same storm could cause catastrophic damage in both the Caribbean and the East Coast, forcing reinsurers to reassess their estimates of accumulated values and probable maximum losses.
9. Article 27.162 of the Code requires claims to be resolved within 90 days.
10. The typical excess of loss catastrophe program was arranged so that the primary domestic cedent retained only \$1 million.
11. 1988 Hurricane Gilbert, 1989 Hurricane Hugo, Piper Alpha platform and 1990 European winter storms.
12. For property insurance Puerto Rico is an approved rates market. *See generally* Chapter 12 of the Code, 26 LPRA 1201 et seq. and specifically article 12.050(1), 26 LPRA 1205(1), which requires authorized insurers to subscribe to the services of a rating organization.
13. *See* article 4.120(1) of the Code, 26 LPRA 412(1), which permits a domestic insurer to cede reinsurance only with an authorized reinsurer.
14. Iniki's contemporary piling on effect cannot be ignored.
15. Although the approved filing contemplates options of a flat sum \$250, 1%, 2% or 5% of sum insured deductible, 2% quickly became the standard set by lead reinsurers in their contracts with the domestic cedents.
16. *See* Rule 64 of the Code's Regulations. It adopted a "white list" of eligible unauthorized reinsurers. This Rule was subsequently repealed although its mechanism remains in effect via Normative Letter N-E-11-62-93.
17. *See* Circular Letter C-7-1321-93.
18. Hugo had painfully evidenced ocean front high rises' much greater fragility when compared to dwellings. High rise apartment buildings produced approximately one third of that storm's losses.
19. Ocean front high rise buildings continue today to be very difficult accounts to service. On a densely populated small island, the cost of land is very high. To address this reality the Government for decades has encouraged high density development. To find that these structures are subject to insurance availability and rate volatility issues presents a very serious problem for policy makers.
20. *See* Chapter 25 of the Code, 26 LPRA 2501 et seq.
21. *See* article 25.010 of the Code, 26 LPRA 2501.
22. In this respect Georges was the worst storm for application of these deductibles: a not very severe event that involved the entire island, affected wide sectors of the public and through the prevailing 2% deductible had insureds retaining most of the losses. Application of the percentage deductibles to residential high rise buildings was especially onerous on insureds.
23. *See* Act 273 of August 18, 1999 adding article 27.081 to the Code making it an unfair practice for an insurer to refuse to offer flat sum minimum deductibles. The provisos added to the article make the prohibition against the practice ineffective.
24. Curiously the regulator did not take issue with this practice and, instead, focused enforcement on disputes over application of the deductibles, generally siding with insureds' arguments that the deductible wording was

ambiguous. In fact, the sole official regulatory pronouncement on the catastrophe reserve after Georges was the adoption in October 1999 of Rule 72 of the Code Regulations. Article 5 of this Rule requires the domestic insurer to expose its mandatory catastrophe reserve in two, three or four events and permits its catastrophe reinsurance program to protect only the excess. Significantly, article 5(D) provides that an insurer deciding to expose its reserve in two events must acquire catastrophic reinsurance for a third event. Further in the same vein, article 7(B) requires purchase of catastrophic reinsurance for a fourth event. This formulation, contemplating exposition of less than the whole of the reserve and purchase of additional protection, was evidently inspired by the Hurricane Luis and Marilyn scares of 1995, *supra*.

25. Examination reports of at least two domestics reveal that they have exceeded statutory premium to surplus underwriting ratios. *See* article 4.150 of the Code, 26 LPRA 415.

26. *See* Normative Letter N-E-1-20-2003.■

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