







## Definitions

**Aggregate Loss Estimate:** The most basic output of a catastrophe model is the estimate of losses for every simulated event. Losses presented on an aggregate basis include estimated total losses from all events in any given year. In contrast, an “occurrence basis” reflects the losses from the largest single event in any given year. The aggregate loss estimates do not include a provision for loss adjustment expenses. TWIA staff would recommend adding an amount equal to 15% of the estimated aggregate losses to represent the estimated loss adjustment expenses. Loss adjustment expenses represent costs associated with investigating and settling claims.

**Aggregate Exceedance Probability:** Aggregate exceedance probability represents the probability of the total losses from all events in any given year meeting or exceeding a given threshold.

**Average Annual Loss (AAL):** The AAL is the expected value of losses to be experienced in any given year. It is equal to the sum of all simulated event losses multiplied by the probability of each of those events. Average annual losses are also calculated by dividing the total losses for all simulated storms by the number of simulated years in the computer simulation.

**Demand Surge:** Demand surge estimates the degree to which losses are escalated by a combination of economic, social, and operational conditions that follow a given event. Demand surge accounts for three separate mechanisms of escalation arising from (1) increase in the costs of building materials and labor costs as demand exceeds supply, (2) cost inflation due to the difficulties in fully adjusting claims following a catastrophic event, and (3) under certain extreme scenarios, coverage and loss expansion due to a complex collection of factors such as containment failures, evacuation effects, and systemic economic downturns in selected urban areas.

**Gross Basis:** Gross basis refers to the total losses before any recoveries from reinsurance or other funding mechanisms.

**Near Term vs. Long Term (Historical) Event Set:** Hurricanes in the Atlantic basin are known to follow multidecadal periods of heightened or diminished activity in terms of frequency of events, intensity, and landfall frequency. To account for these frequency changes, catastrophe model vendors provide alternative event catalogs or rates set alongside the long-term mean. Near-term or medium-term rates represent the five-year, medium-term outlook of North Atlantic hurricane activity. Long-term rates represent the event rates that are consistent with the long-term historical average.

**Return Period:** The return period is simply the inverse of the exceedance probability. For example, a 1% exceedance probability is equal to a 100-year return period. The return period term can be misleading by implying a period of time that would be expected to pass between events of that magnitude, when in reality they are representative of the probability of meeting or exceeding that level of loss in any given year.

**Risk Count:** Risk count refers to the number of individual structures insured. Some policies may cover more than one structure.

**Storm Surge:** Storm surge refers to the damage caused by rising ocean water levels along coastlines affected by a hurricane that can cause widespread flooding. Losses from storm surge and other forms of flooding are not covered by TWIA policies.