Modelling Severe Convective Storm in the US

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Tornado hail is a complex peril which can be a significant source of loss to reinsurance treaties in the Mid-Western US. Some recent published analysis shows both increases in the frequency of these events and the losses themselves.

However, modelling of this peril is extremely challenging, leading to significant discrepancies in loss estimates obtained between commercial tools and loss history. This paper outlines the fundamentals of the peril, some of the challenges associated with modelling it and presents analysis exploring the discrepancies between these. We also discuss the issues associated with individual loss history, the use of market loss statistics and the challenges of using these. Given this analysis, we explain why we still believe a hybrid approach is most appropriate for pricing this peril.