CS - 11
Severe Convective Storm Modelling

CARE Seminar 2012

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SCOR

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Agenda

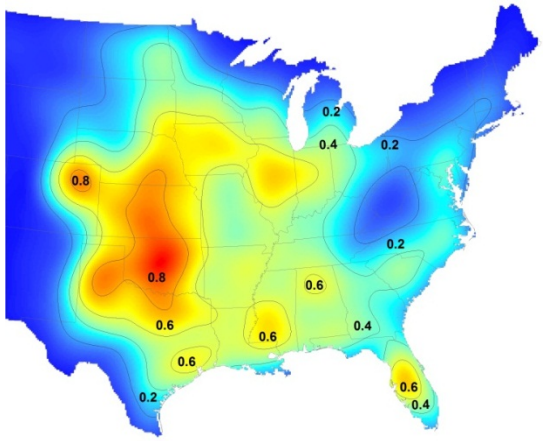
- SCS peril overview
- Model comparison
- Pricing issues

What is Severe Convective Storm?

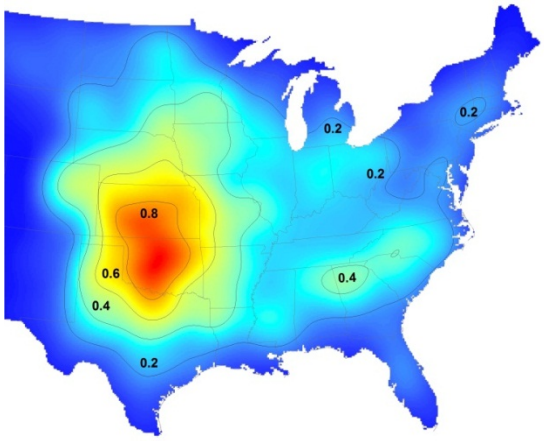
- Straight line winds
  - with wind gust > 58 mph
- Hailstorms
  - with hail > 0.75” diameter (per RMS definition)
  - or with hail > 1’’ diameter (per AIR definition)
- Tornadoes

Sub-perils are distinct and geographically differentiated

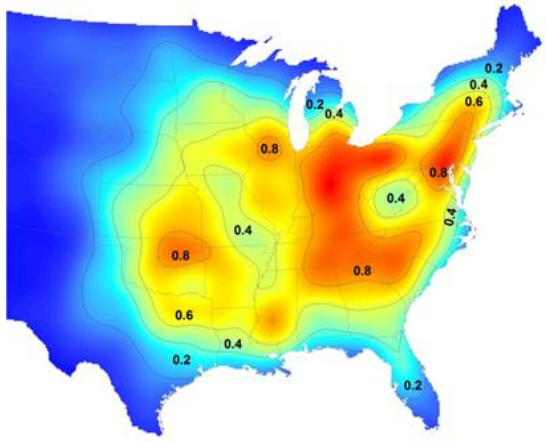
Tornado



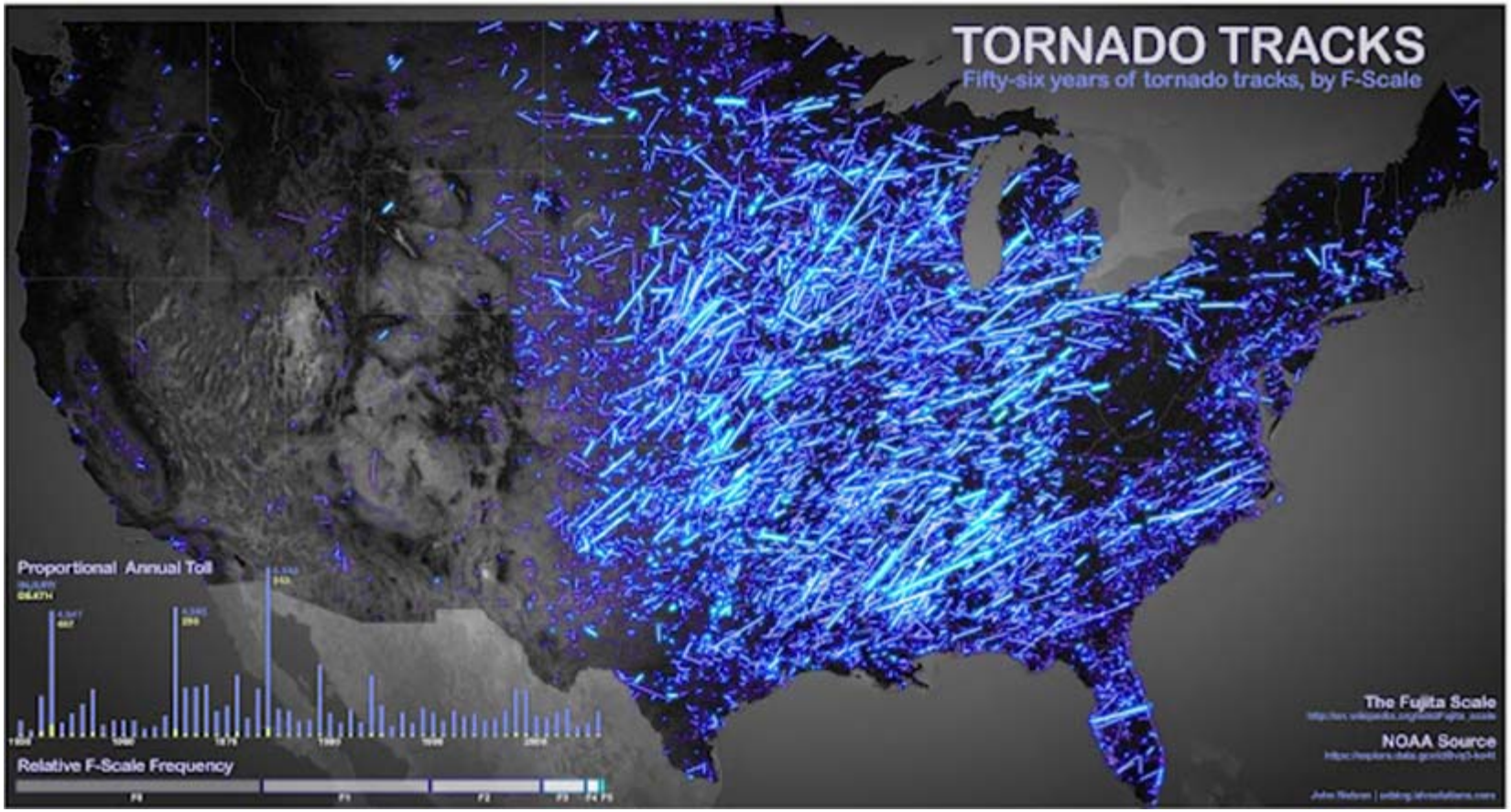
Hail



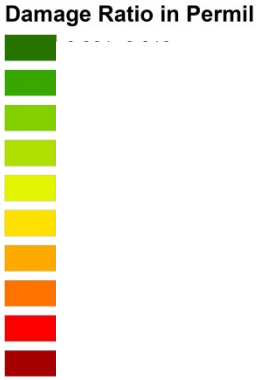
Straight line winds

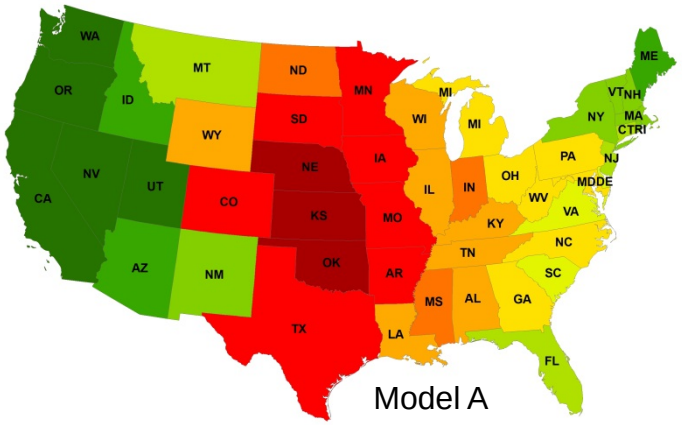


Tornado Tracks – for the Past 56 years

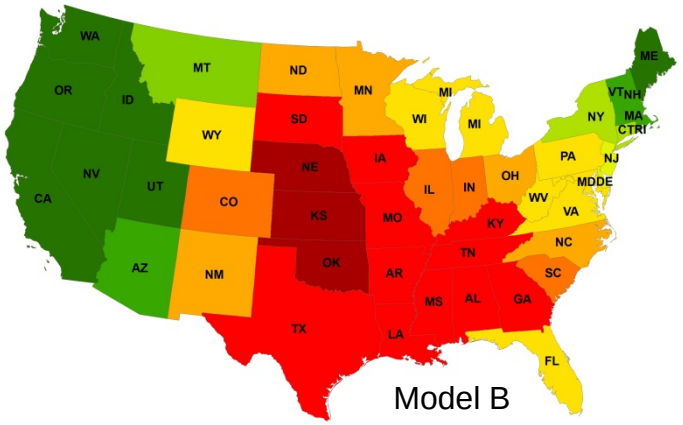


Model Comparisons - at a macro-level

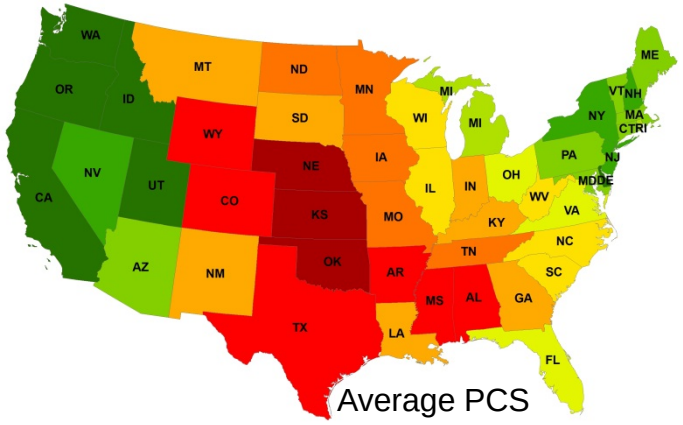




Model A



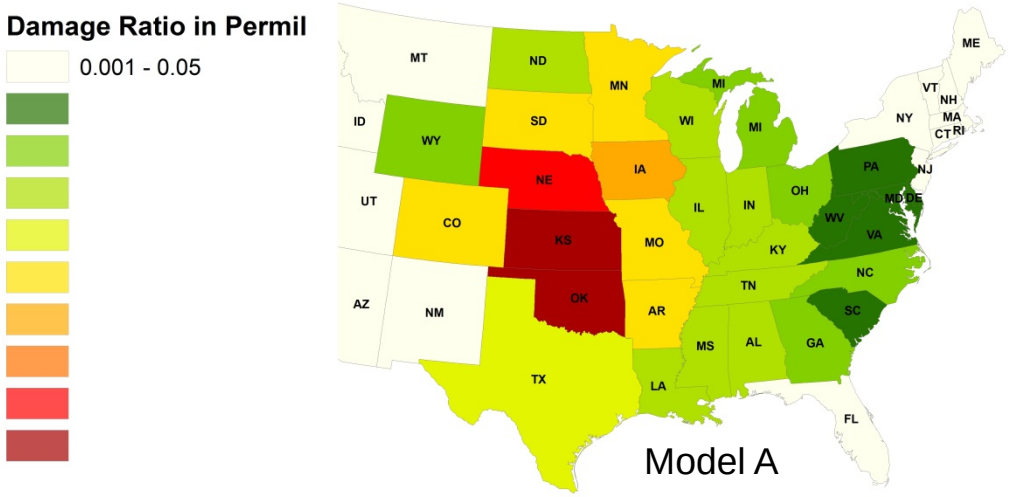
Model B

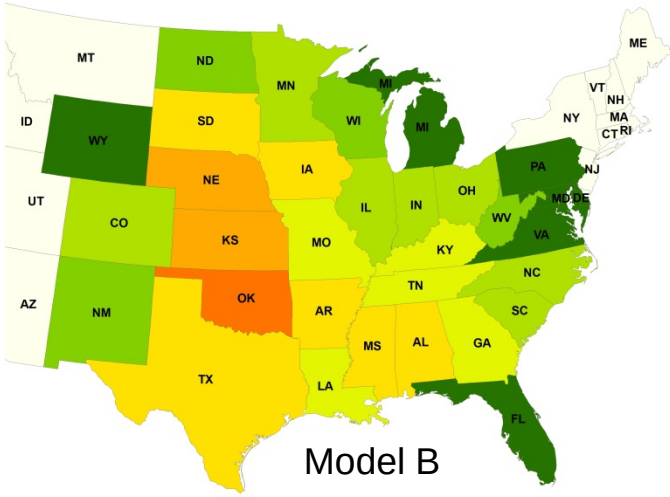


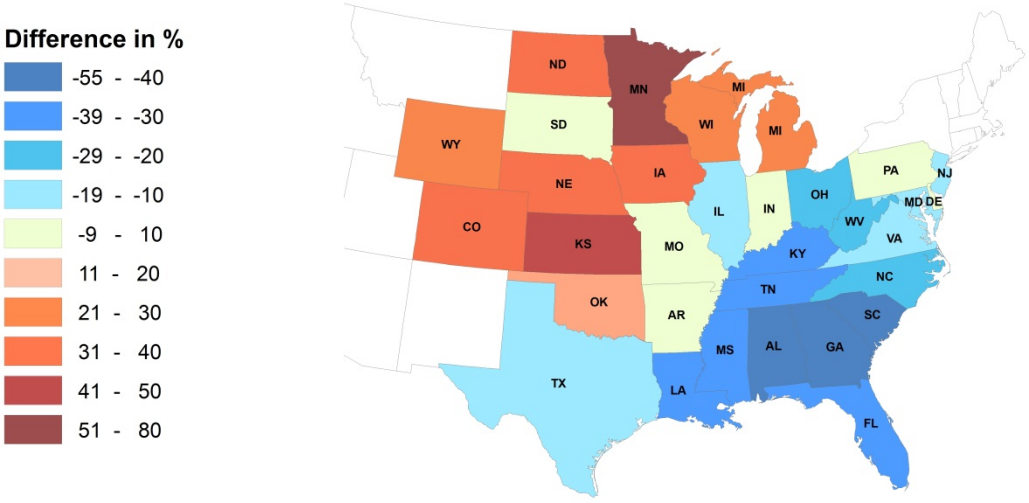
Average PCS
Damage 1975 -2011

… Modelling appears consistent

However…

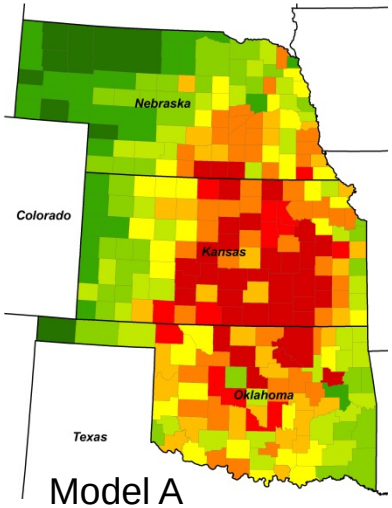

Damage Ratio in Permil
0.001 - 0.05
Model A


Model B

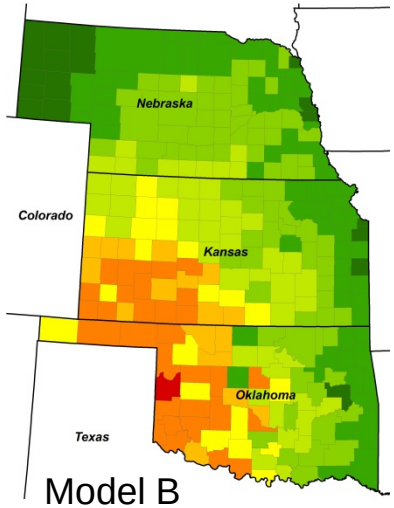

Difference in %
-55 - -40
-39 - -30
-29 - -20
-19 - -10
-9 - 10
11 - 20
21 - 30
31 - 40
41 - 50
51 - 80

Furthermore…

Damage Ratio in Permil



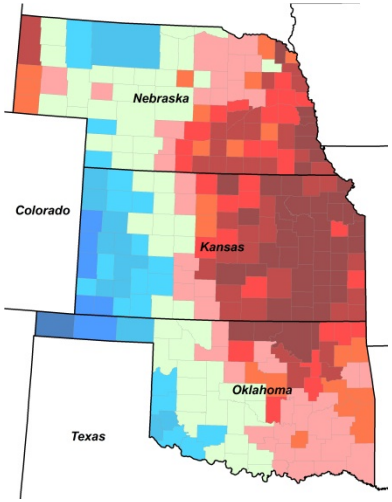
Model A



Model B

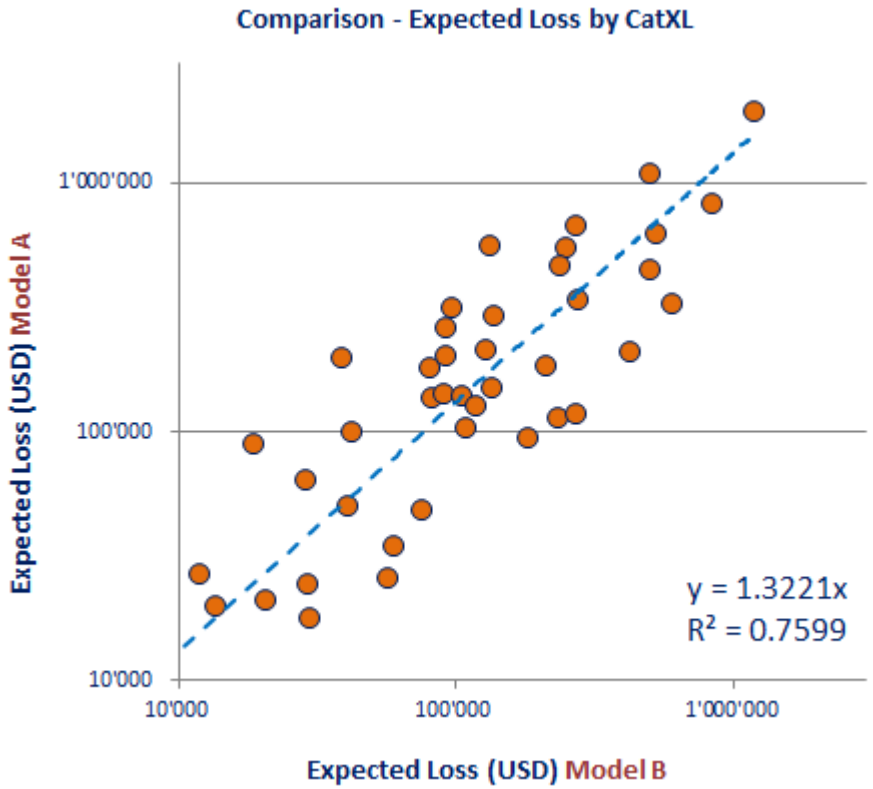
Difference in %

-46 - -40
-39 - -30
-29 - -20
-19 - -10
-9 - 10
11 - 20
21 - 30
31 - 40
41 - 50
51 - 80



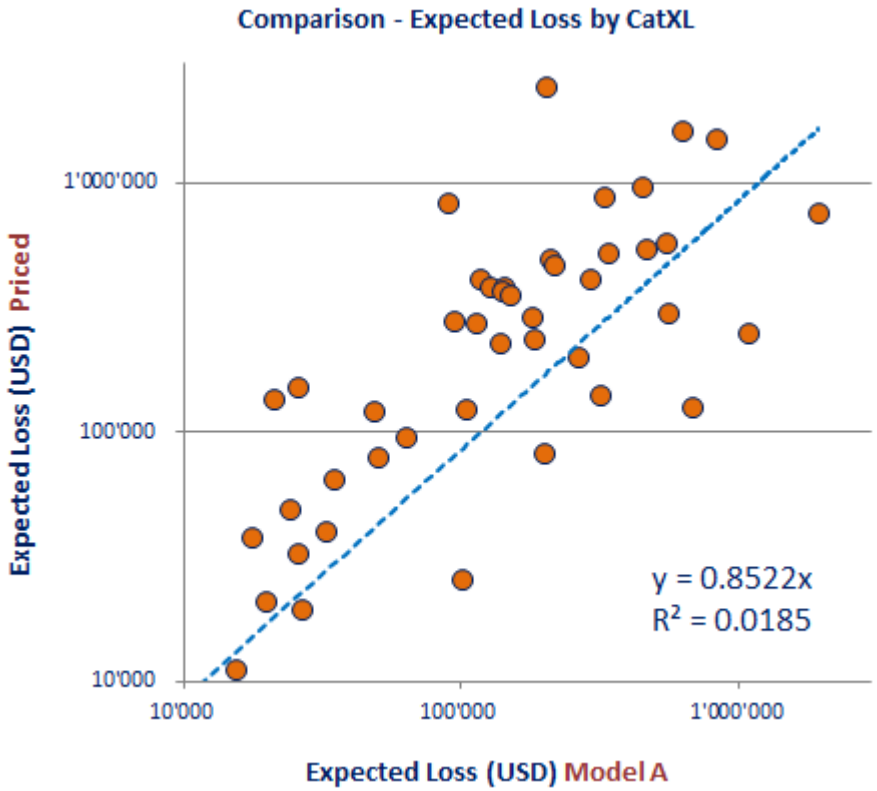
When modelling for individual cedants…

- Little consistency observed by CATXL layer expected loss, based on vendor model
- Modelled losses tend to be higher for one model, but random component is huge



Pricing must be customized for individual cedants

- For CatXL layers the expected losses used for pricing tend to exceed the vendor model results (this is true across layers and cedants)



Severe Convective Storm – to model or not to model?