Agenda

- Blue Water hull
- Rock star non appearance
- Travel
- Equine
- Non standard auto
- General aviation
- Crop hail

What do I mean by multivariate analysis?

- Building a model which helps predict the future value for a metric using more than one variable.
- Here …mostly generalised linear modelling of new data
One way analysis

• “The way a child looks at things.” Deputy Active Underwriter

Blue Water Hull

• Persistence pays
• Trying and seeing works
• New found belief in data
• Changed UW decision making

Rock Star Non appearance

• Quick, insightful and effective
• UW sponsorship key
• Data design
• Patience
• Simple analysis of new data
• Changed UW decision making
Travel

- Quick
- Insightful
- Analysis by cause of loss for first time
- Analysis of frequency and severity

Equine

- Pre-bind GLM on a prospective risk
- Quick
- Effective
- Persuasive
- Equine knowledge essential

General Aviation

- Slow
- Insightful
- Data design mistakes
- Always craving better data
- Ultimately very valuable
Non standard auto

- Unanalysed data
- Quick
- Immediate findings

Crop Hall

- Use of geographic data
- Unexpected findings
- Quick

What works?

- Modelling frequency and severity separately
- Modelling different causes of loss separately
- Understanding correlations between variables
- Exploring the marginal impact of variables
- Extending the data to create new variables
- Re-grouping and re-banding the variable values and levels for the purpose
- Dialogue with underwriters at a meaningful level
What multivariate analysis is NOT?

• Fitting a sophisticated statistical model to data
• Something you need thousands of claims to do
• All about statistical significance
• A long expensive process
• Finding the best fit without understanding what real world process you are modelling
• More dangerous than a one way analysis

Summary

• Interesting
• Revealing
• Quick
• Easy
• Valuable

One way analysis

• “The way a child looks at things.” Deputy Active Underwriter