Data Variance & Model Consistency

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A reasonable thought…

For each customer find the 5-year loss ratio. Sort them from highest to lowest.

If we were to compare this to actual loss ratios for business sorted by our model predictions, we should see similar results, yes?

This idea relies on there being enough consistent losses across our data.

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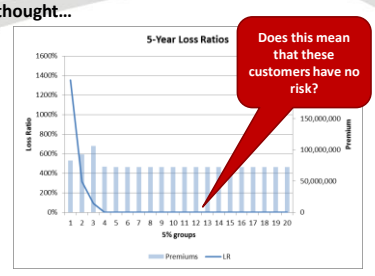
A reasonable thought…

Oops…

This illustrates the low frequency of insurance data.



What we have here is essentially a Gini of one (or rather, a maximized Gini).

3

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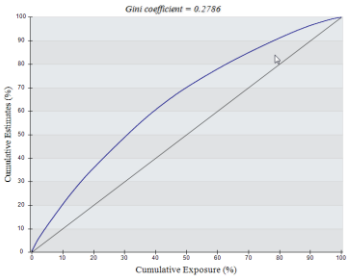
And speaking of the Gini coefficient…

What do typical Gini values tell us about the extreme variance of insurance data?

About the significant difference between modeled and observed?



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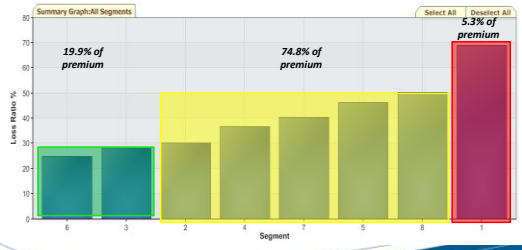
And what does this say about effective models?

This model was used to categorize agents – those who wrote the most green business and those who wrote the mode red.



5

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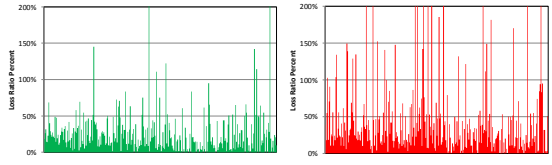
And what does this say about effective models?

These are pictures of the difference between a 30% loss ratio and a 70% loss ratio.



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Questions?

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