

What's Next for Medical Professional Liability Writers?

2014 Casualty Loss Reserve Seminar

September 16th, 2014



GROSS CONSULTING

Overview

- The profit cycle
 - Why it happens
 - Why it is particularly harsh for MPL
 - Where we are now in the cycle
- Surviving the profit cycle
 - New techniques for the reserving actuary



The P&C Profit Cycle

- Soft Market
 - Slow erosion of profitability by loss trend
 - May be accompanied by decreases in rates, but not necessarily
 - Continued reliance on release of prior years' reserves to bolster P&L
 - Eventually inadequate reserves are booked
 - This inadequacy is increased until it can no longer be considered 'reasonable'
- Hard Market
 - Premium increases occur suddenly, and dramatically to redundant levels (in comparison with the long term return requirements) in order to save the company.
 - While reserves are still largely deficient, the reserve hole begins to get filled in from the additional premium
 - With rates at redundant levels, eventually the reserve hole is filled in, and reserves begin to build to redundant levels
- Repeat



Why does the cycle persist?

- Uncertainty in reserves
- Makes possible the inadequacy and redundancy in reserves
- This in turn, drives the need for changes in premium levels
- Once the cycle sets in, it is difficult for a company to fight it, especially when it takes over a decade from peak to peak



Medical Malpractice

- Enough multi-line participants (and reinsurers), that the cycles are synchronized with regard to timing
- The severe nature of medical malpractice claims increases the uncertainty of reserves
- This results in a generally more severe profit cycle than most other lines of business



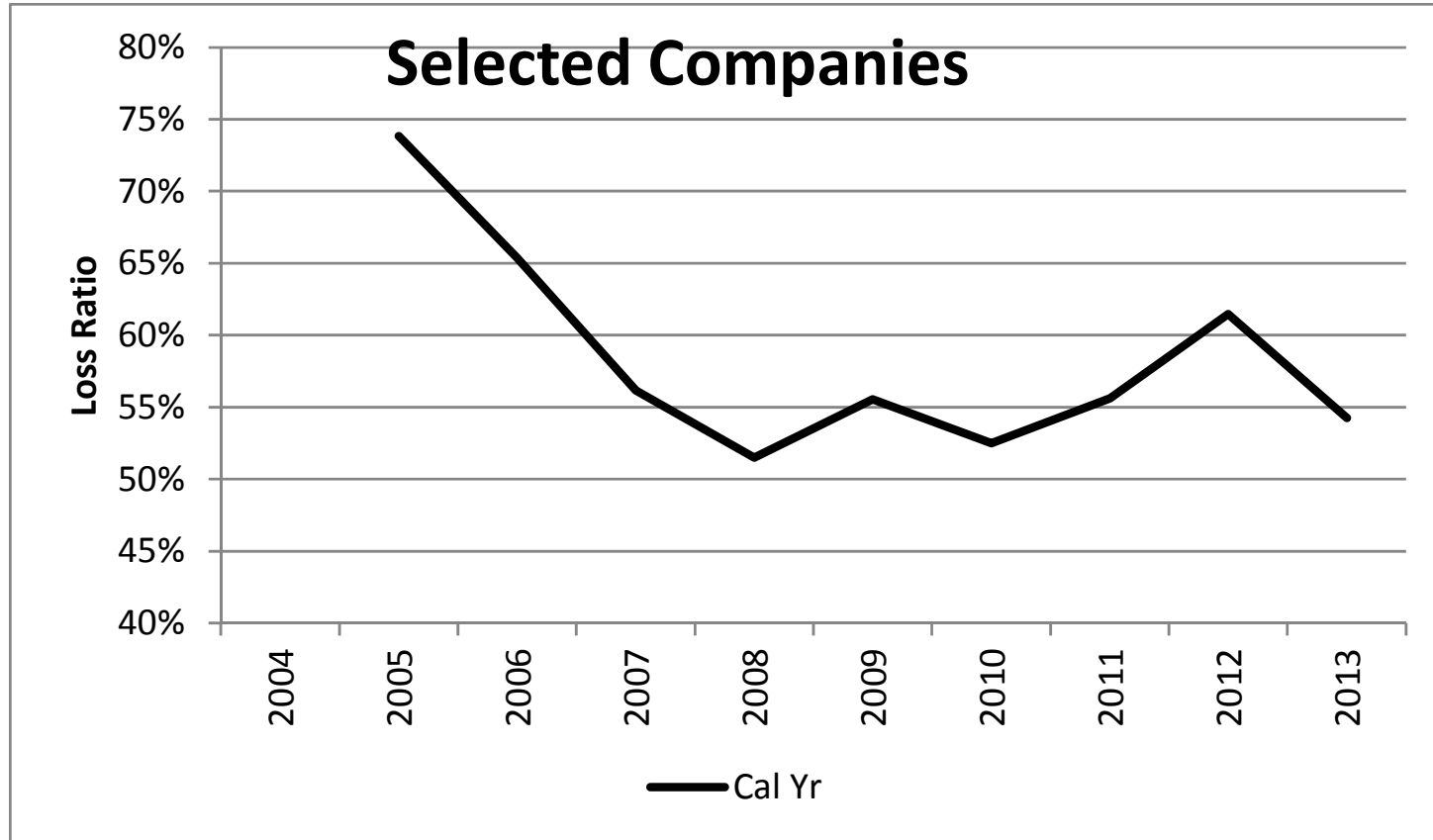
GROSS CONSULTING

Company Level Review

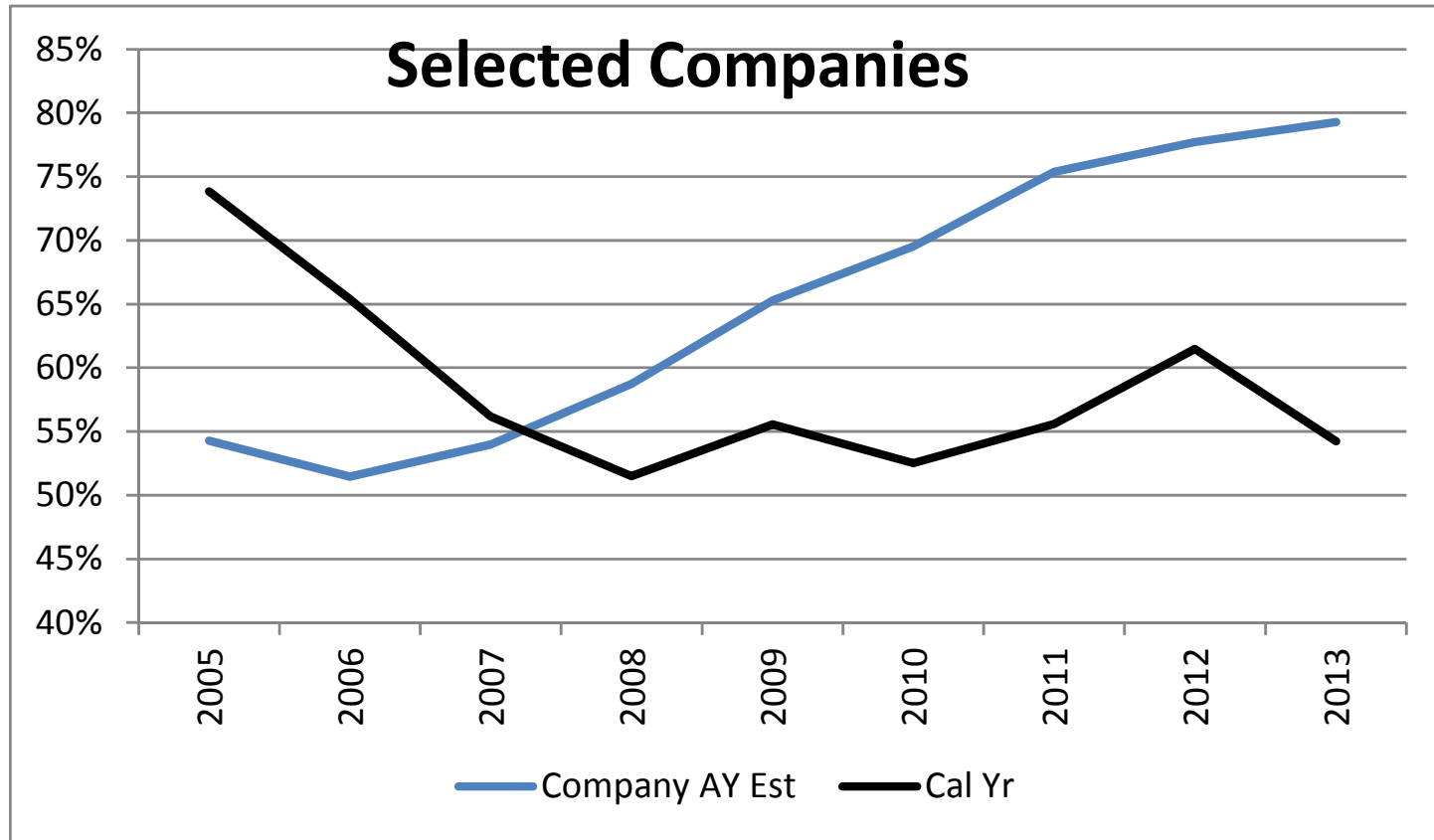
- Analysis of 100 companies' Annual Statements as of Year-End 2013
- Represents roughly 70% of the marketplace
- Independently developed rough estimates of reserve need for each
- Restated history to show the true dynamics of the cycle, and where we are now



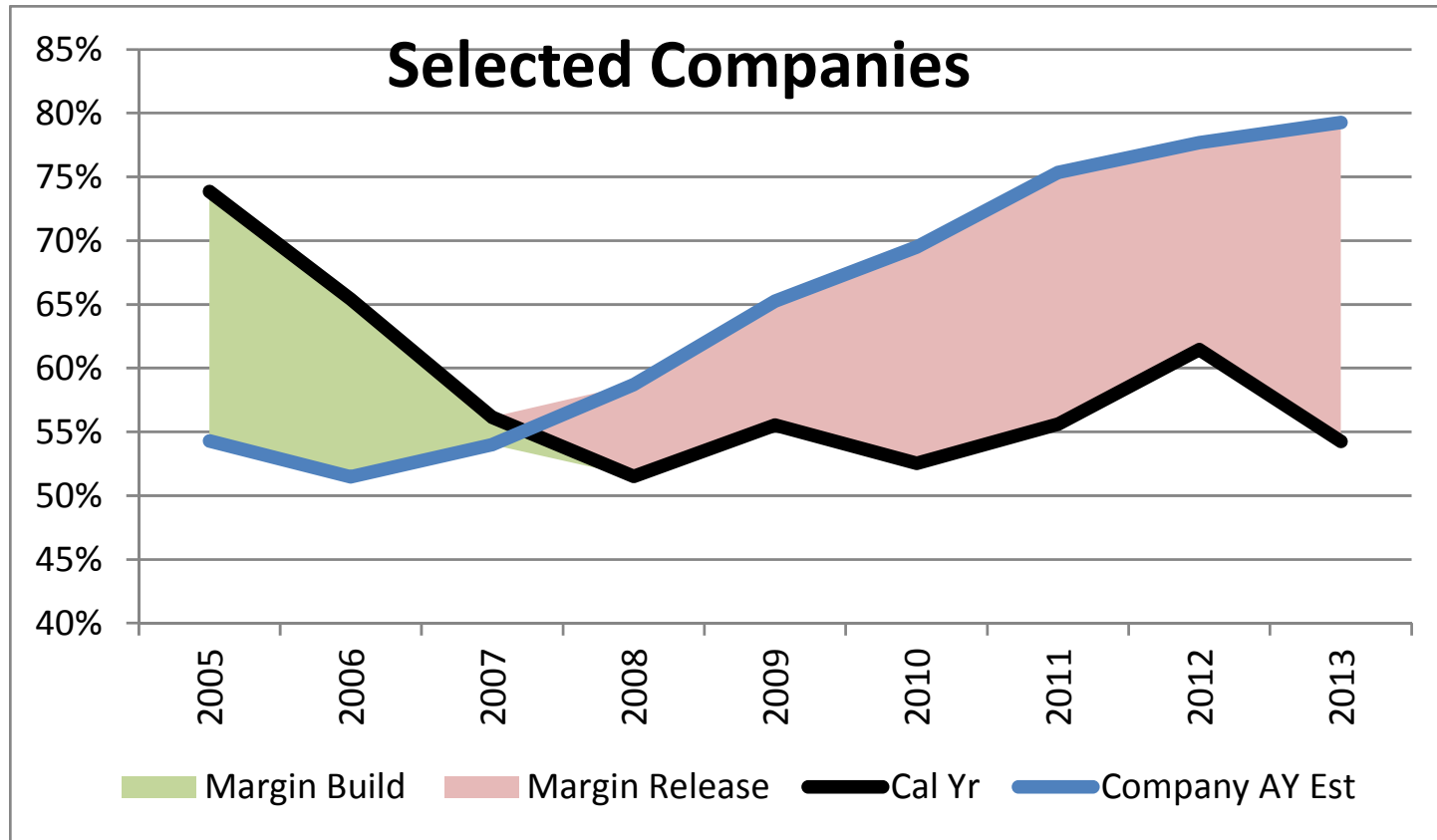
GROSS CONSULTING



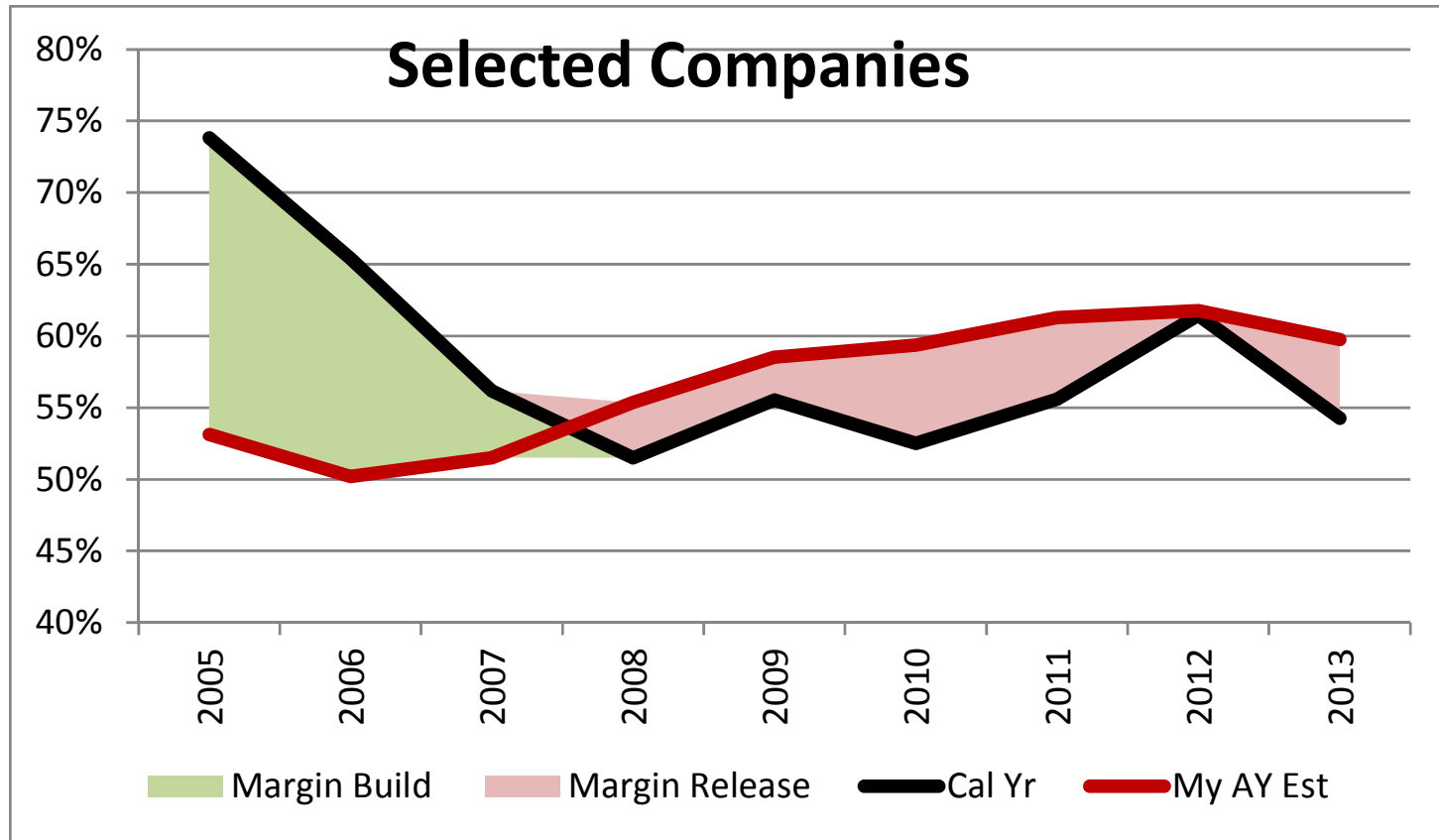
GROSS CONSULTING



GROSS CONSULTING



GROSS CONSULTING



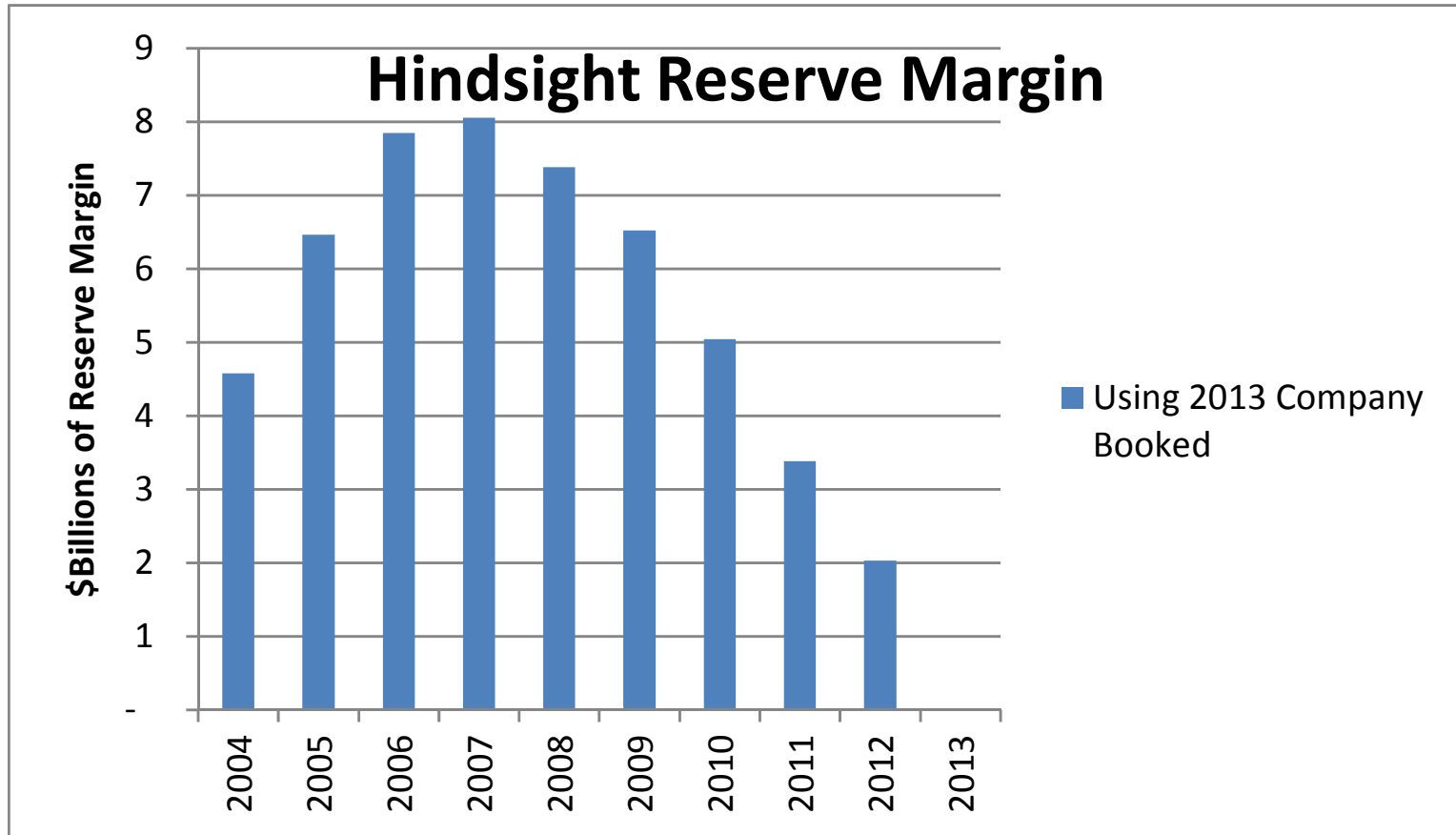
GROSS CONSULTING

Hindsight View of Reserve Margin

- NAIC Annual Statement Schedule P – Part 2 provides the information
- Using the most current view of a Company's results by year, past reserve levels are indicated as being inadequate or redundant

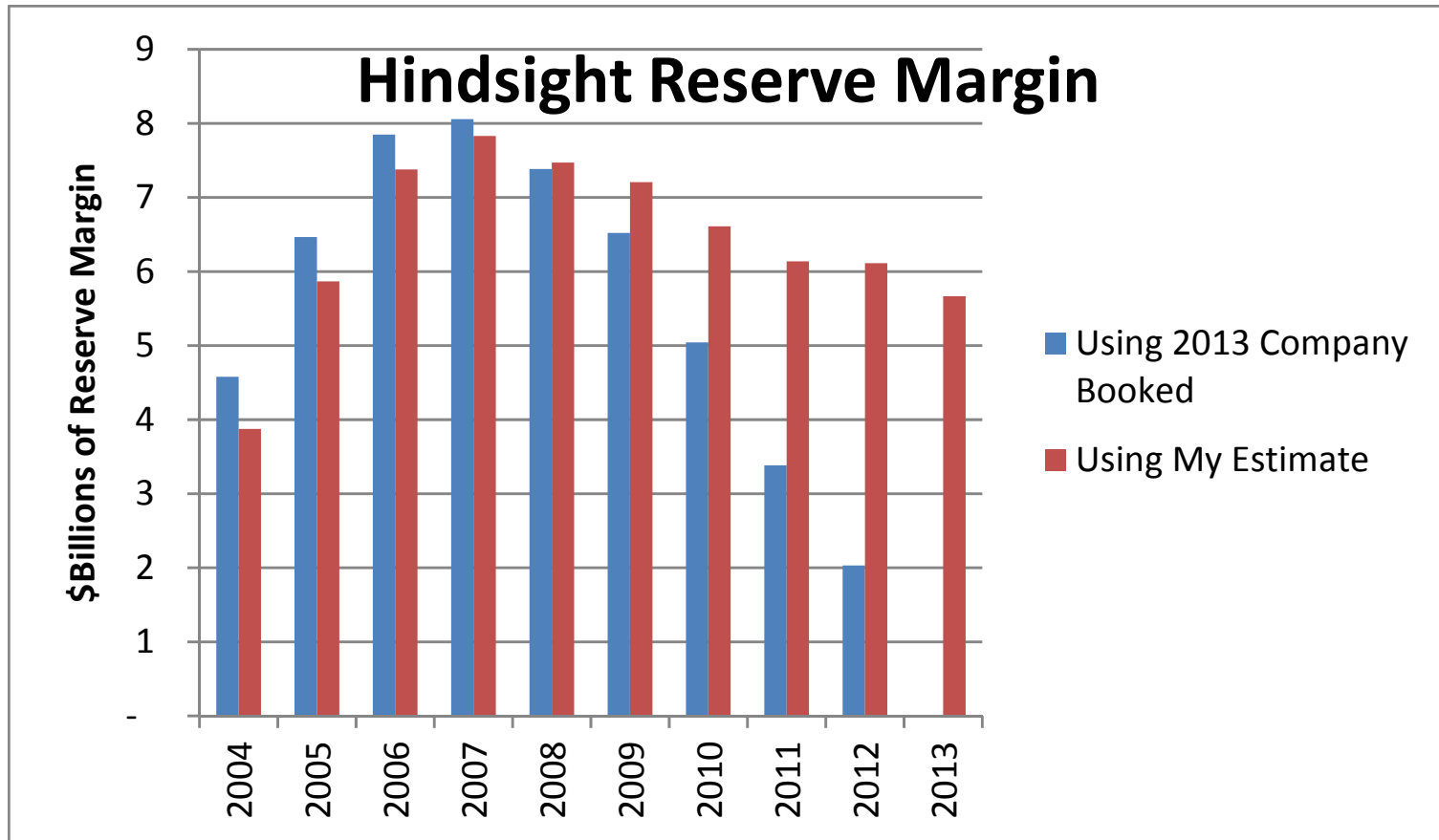


Indicated Reserve Margin for Selected Companies

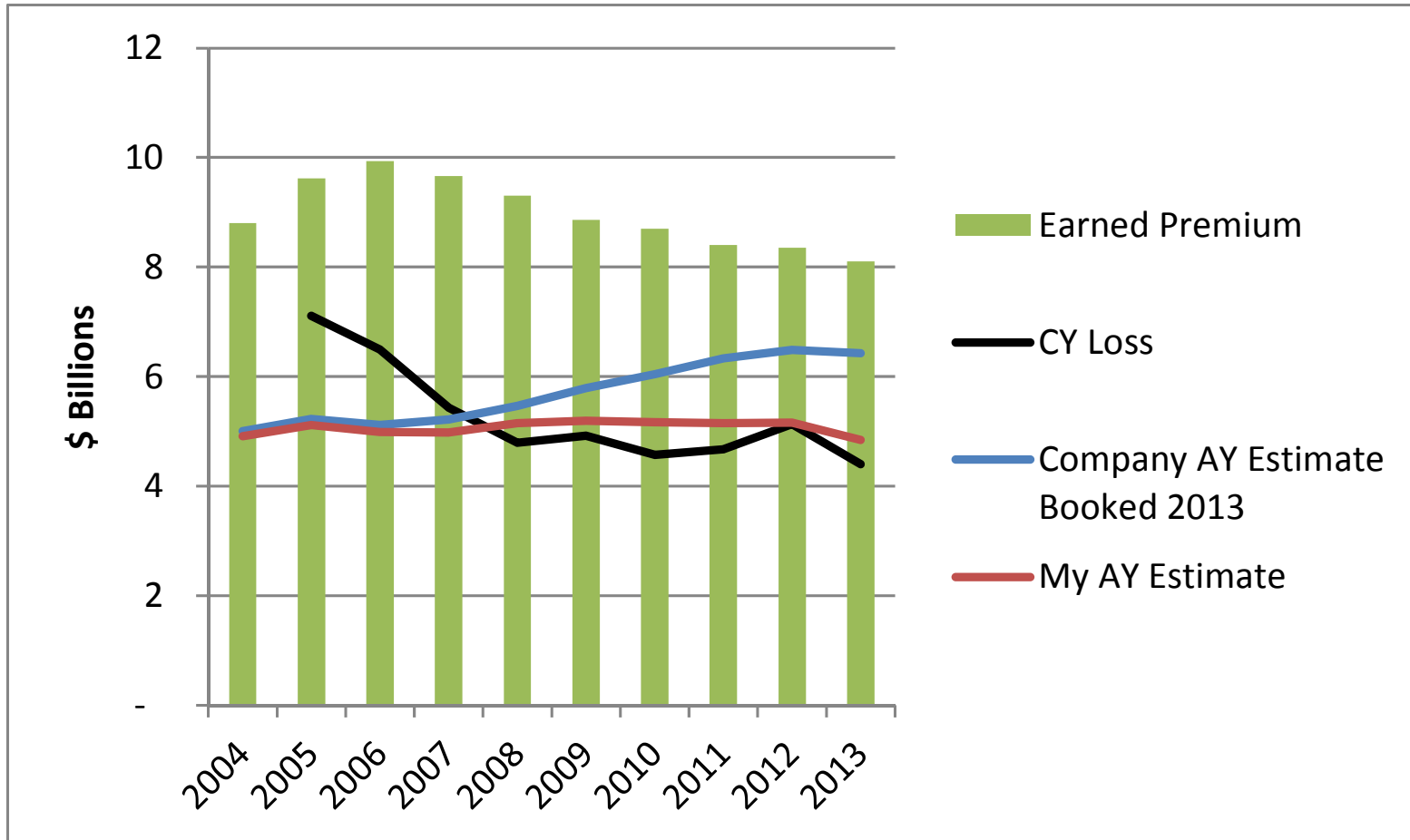


GROSS CONSULTING

Indicated Reserve Margin for Selected Companies



GROSS CONSULTING



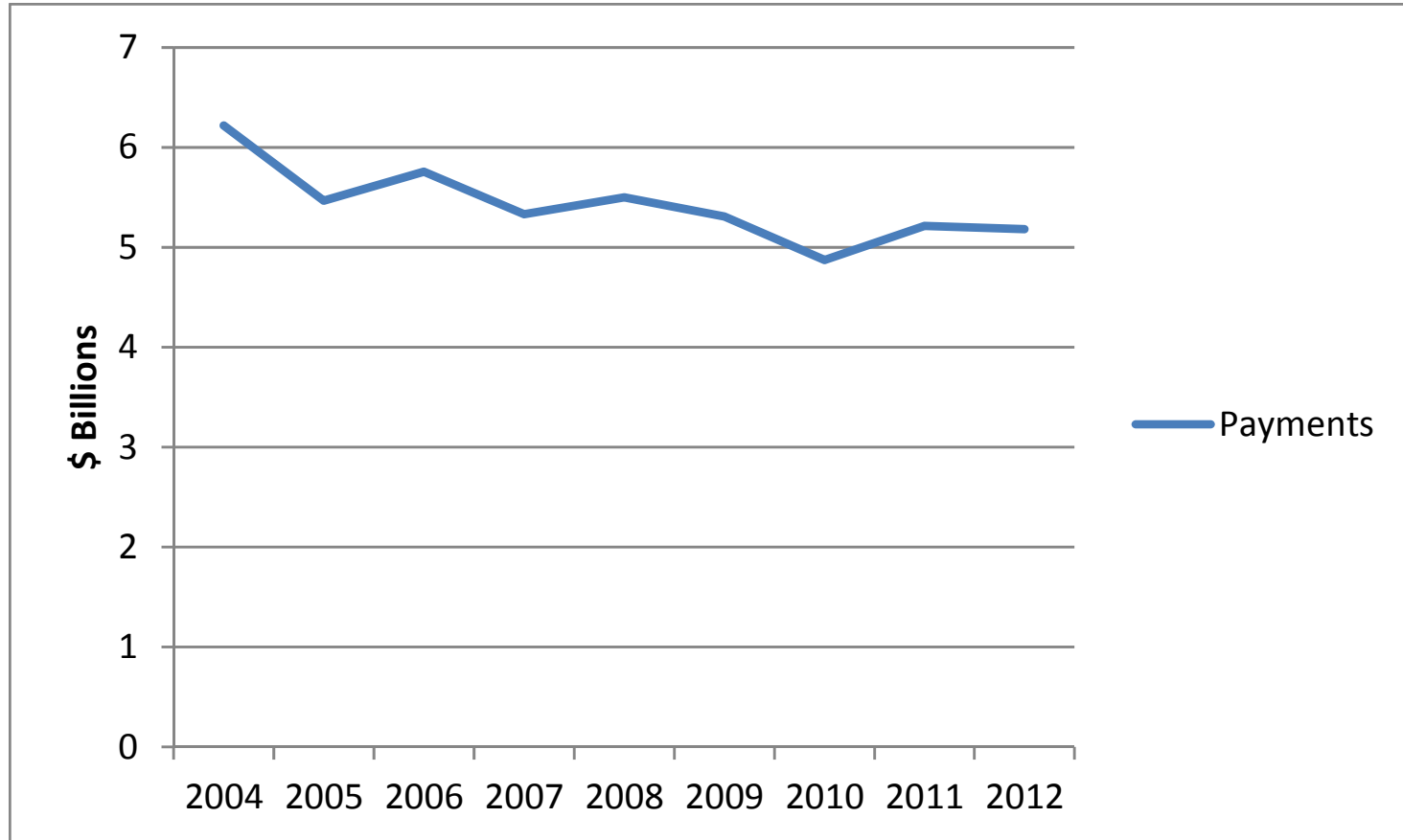
GROSS CONSULTING

Who's Right?

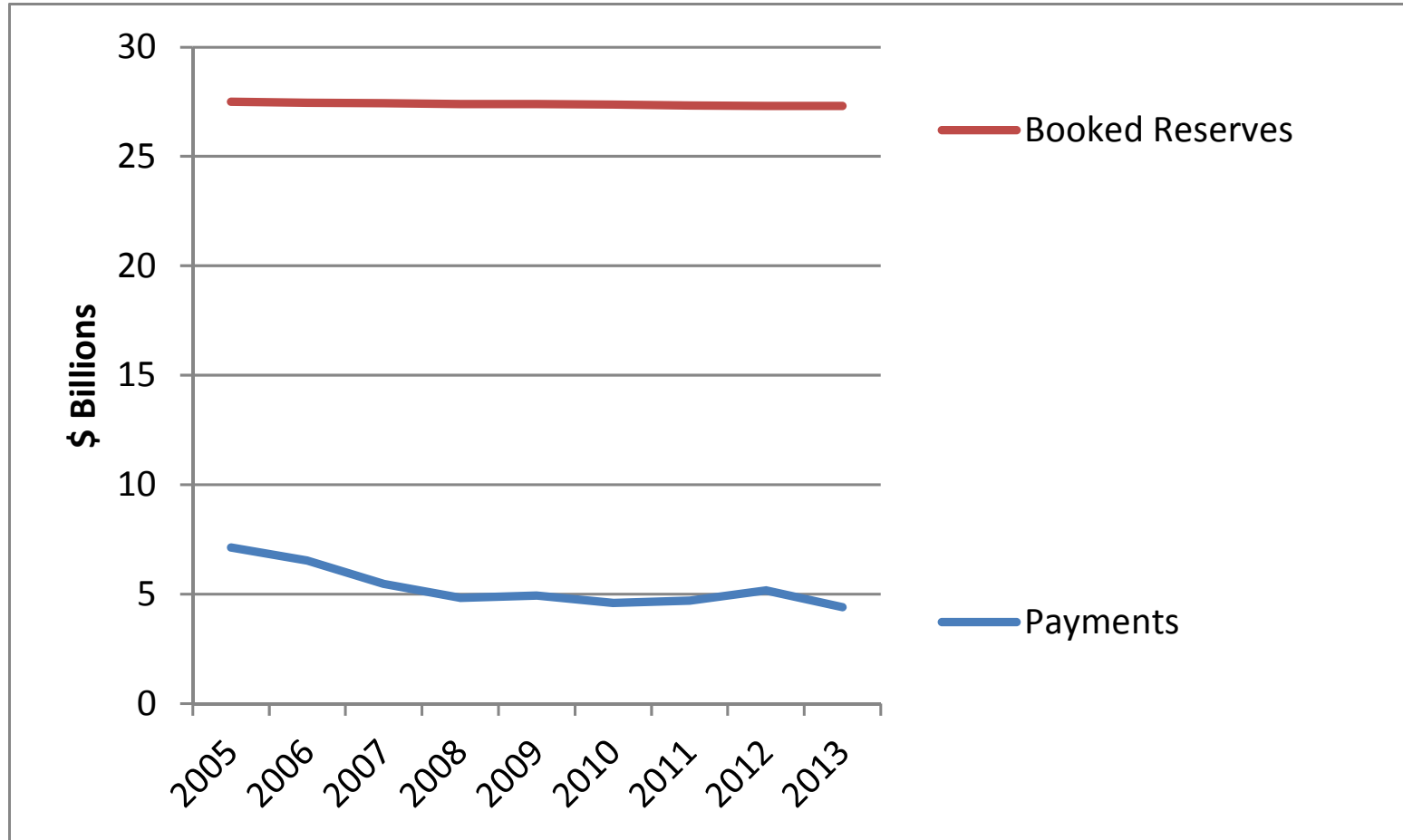
- My opinion is just that, there are certainly others. Why should you believe me?
- Not going to get into loss development factors, Bornhuetter-Ferguson ratios, etc. here.
- Looking at a broad section of the industry, looking at the trend of actual loss payments is useful for assessing reasonableness of reserves.



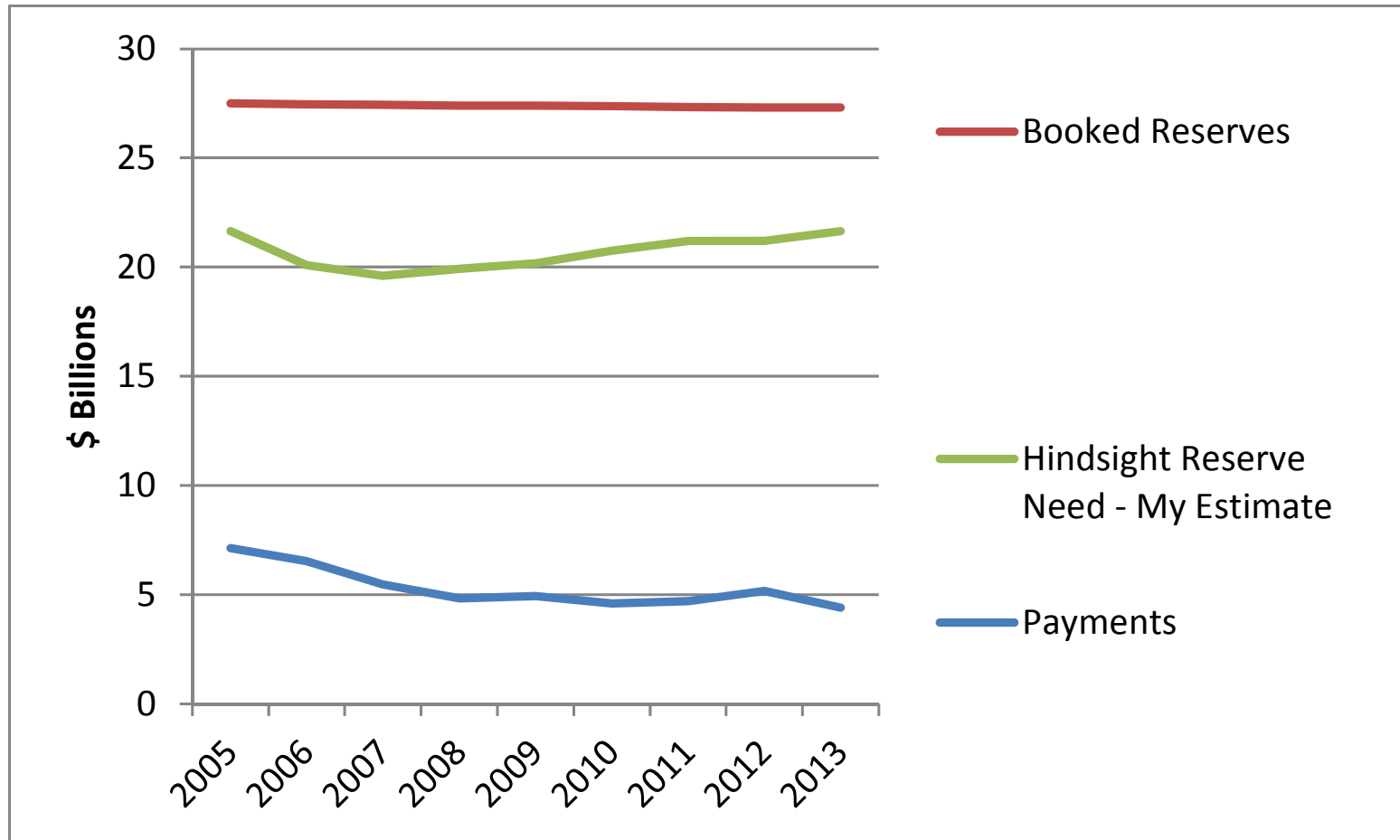
GROSS CONSULTING



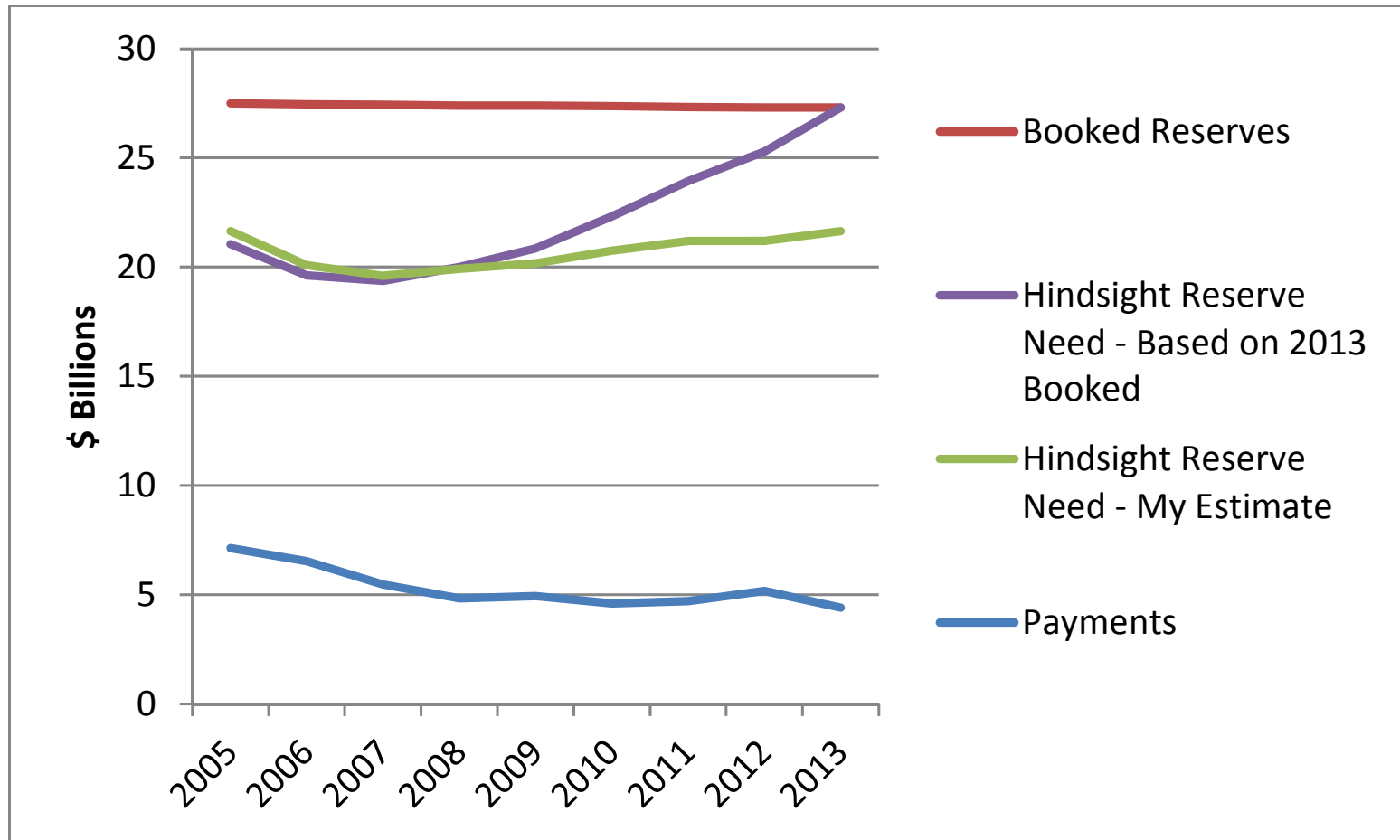
GROSS CONSULTING



GROSS CONSULTING

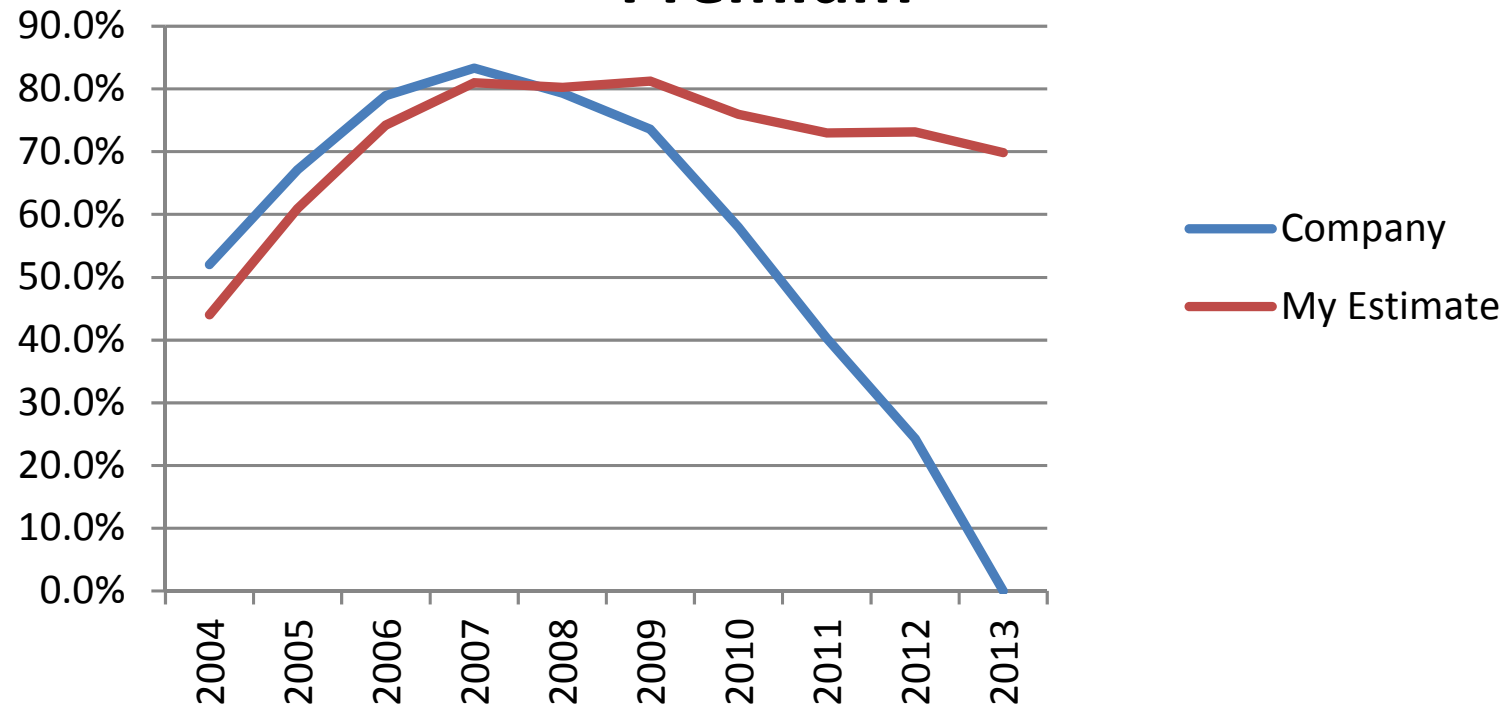


GROSS CONSULTING



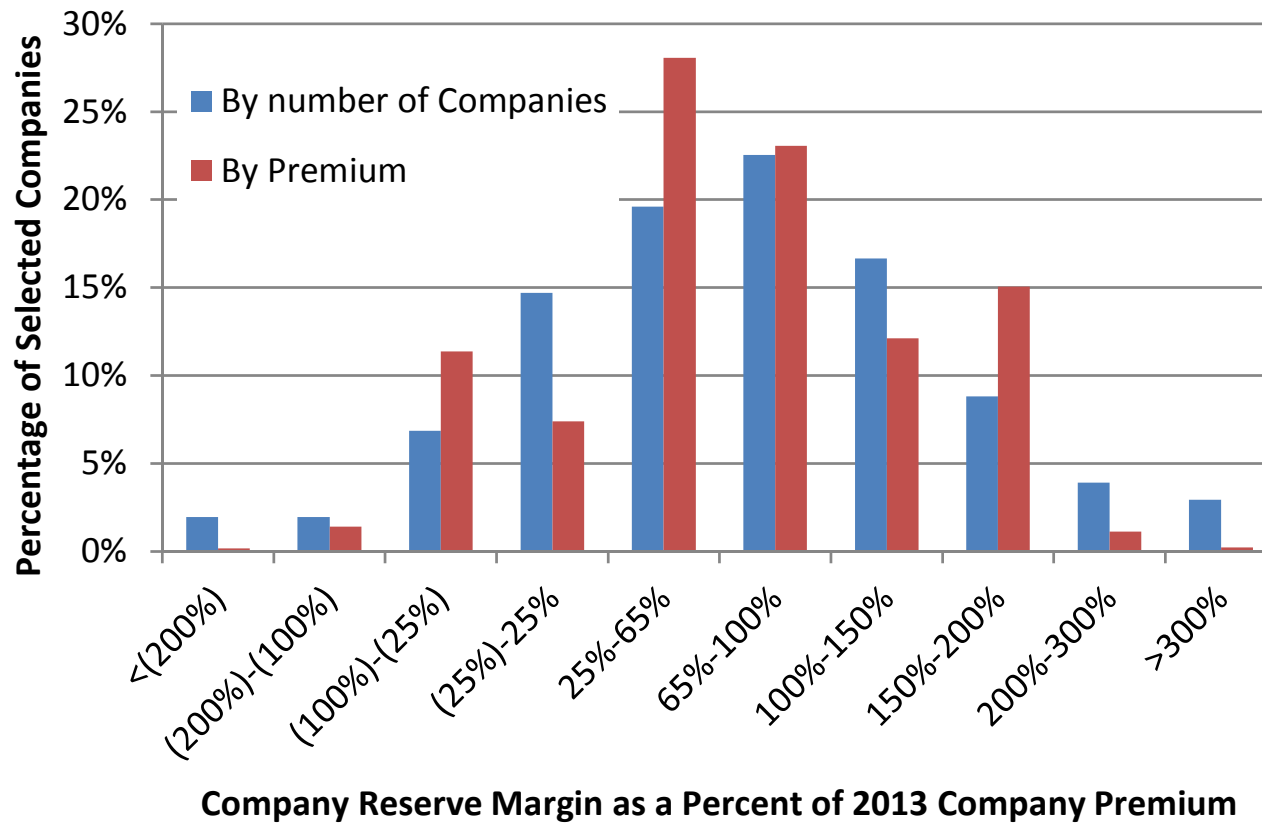
GROSS CONSULTING

Hindsight Reserve Margin as % of Premium



GROSS CONSULTING

Reserve Margin/Prem: Distribution by Company



GROSS CONSULTING

An end to the cycle?

- Possibly – This cycle does appear fairly unique compared to the past, with reserve margin remaining high longer.
- My view – It's just prolonged
 - The previous soft market was generally not about rate decreases, but about steady erosion of profitability from loss trend.
 - Loss trend appears very low from historical standpoint. Will it remain that way? Tort reform reversals? Impact of ACA? Increased Inflation down the road from QE?
 - Either way, the temptation is too great for market participants who may wish to pick up significant market share by reducing profitability, funded by reserve margin.



Conclusions about the Cycle

- The good news-
 - Rates, while at lower levels than at the past, are still providing *true* AY loss ratios of around 60%.
- The bad news-
 - True profitability is going to continue to deteriorate for quite some time, perhaps five to ten years, before a hard market will occur. The speed of this deterioration will likely depend on loss trend.



GROSS CONSULTING

Navigating the Cycle

- Understand the cycle and estimate when it will turn
- Be careful with acquisitions in a soft market
- Watch the business like a hawk
 - Changing rates
 - Changing class mix
 - Changing deductibles
 - Impact on loss ratio and development
- We need new methods. Triangles are not enough.



GROSS CONSULTING

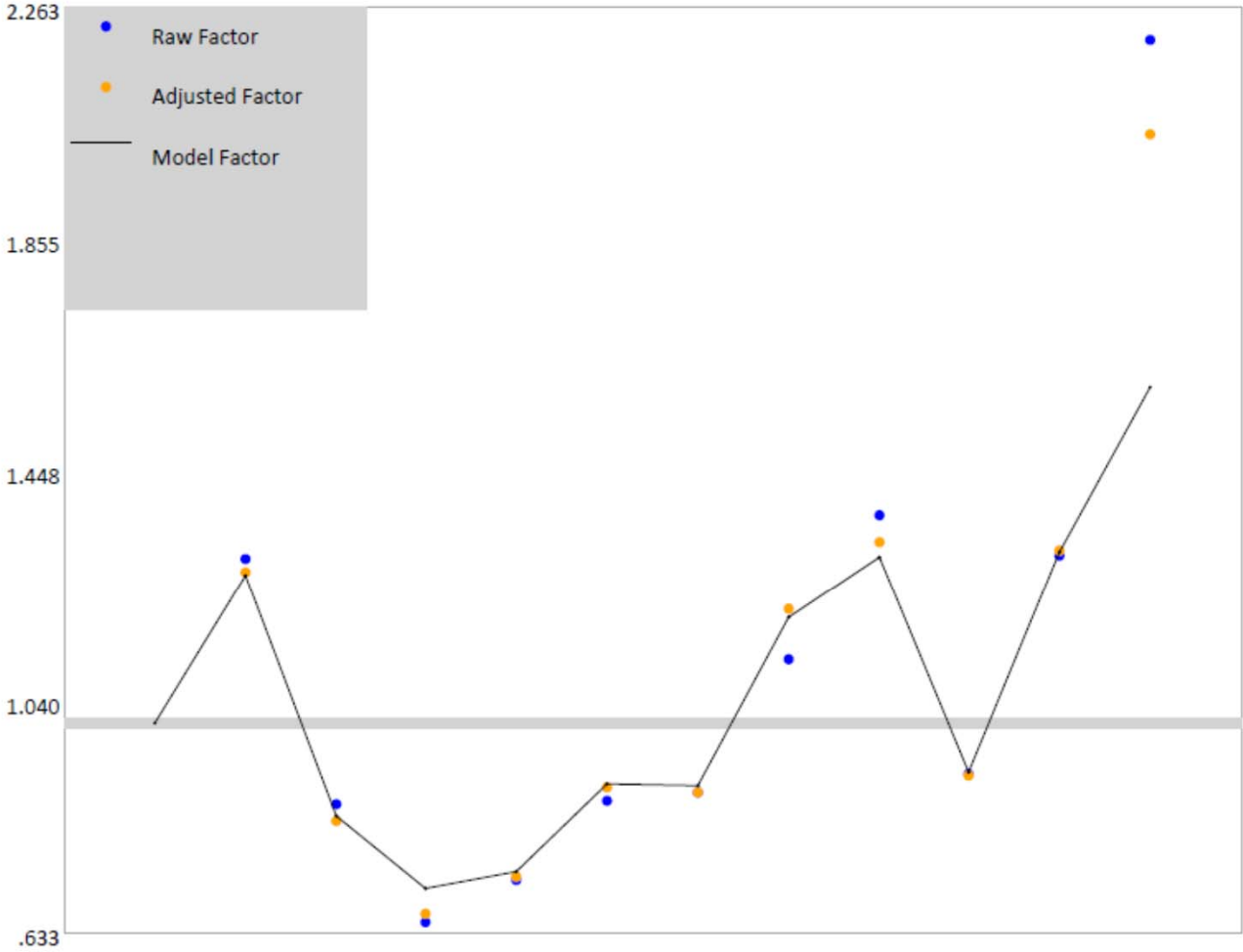
Claim Life Cycle Model

- Analyze individual claim emergence and development as a predictive modeling exercise using available claim and exposure characteristics
- Simulate future emergence and development using these models
- Provides a wealth of predictive information about the business



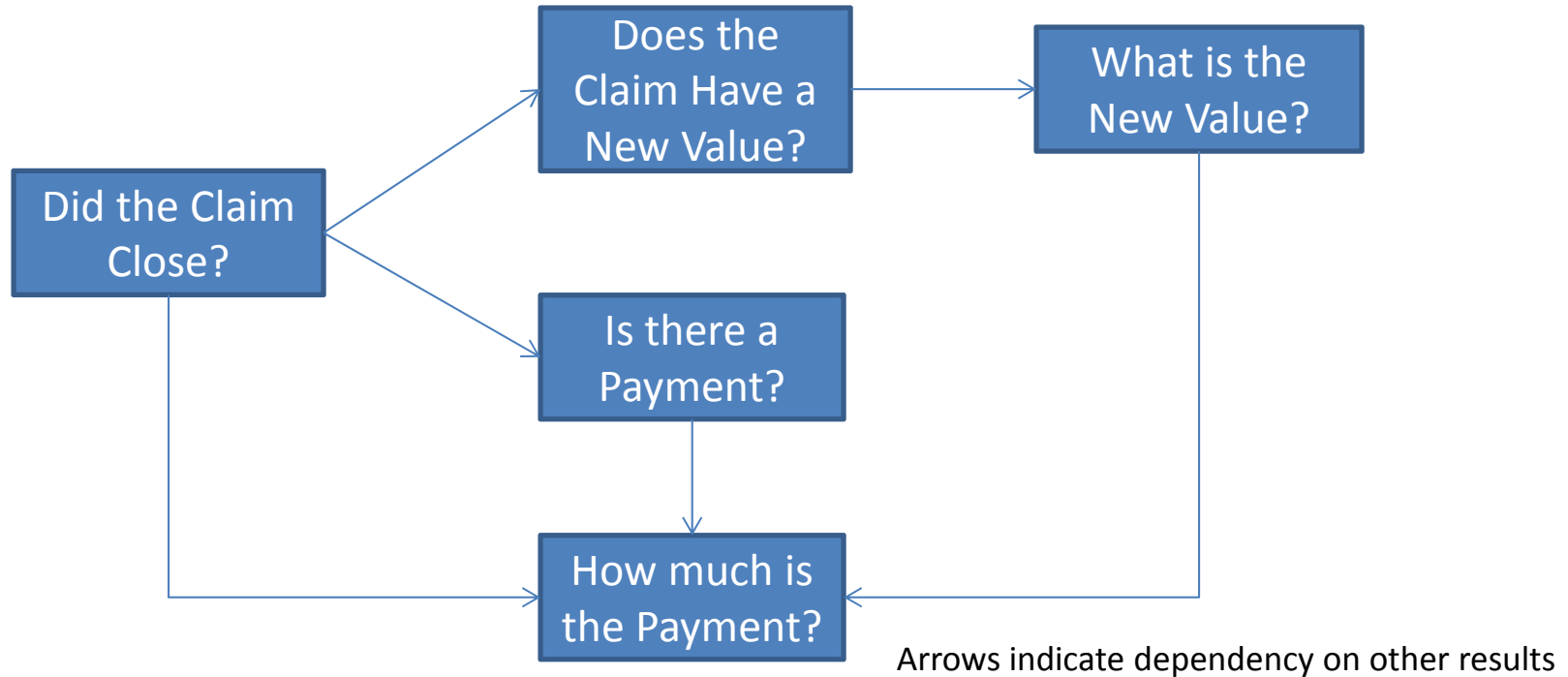
Characteristic: SeverityDescription

Closure Probability



GROSS CONSULTING

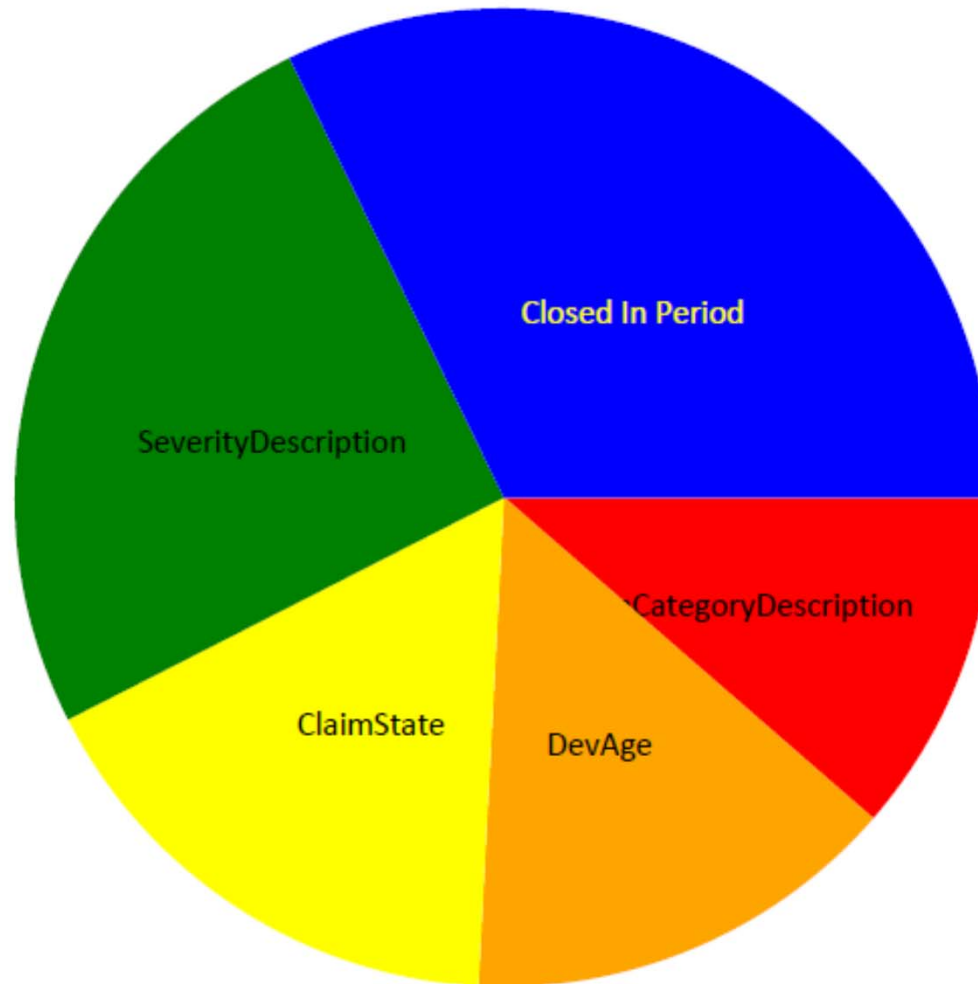
Claim activity from the beginning of the quarter to the end of the quarter



A number of available claim or exposure characteristics may have predictive value for any of these questions.

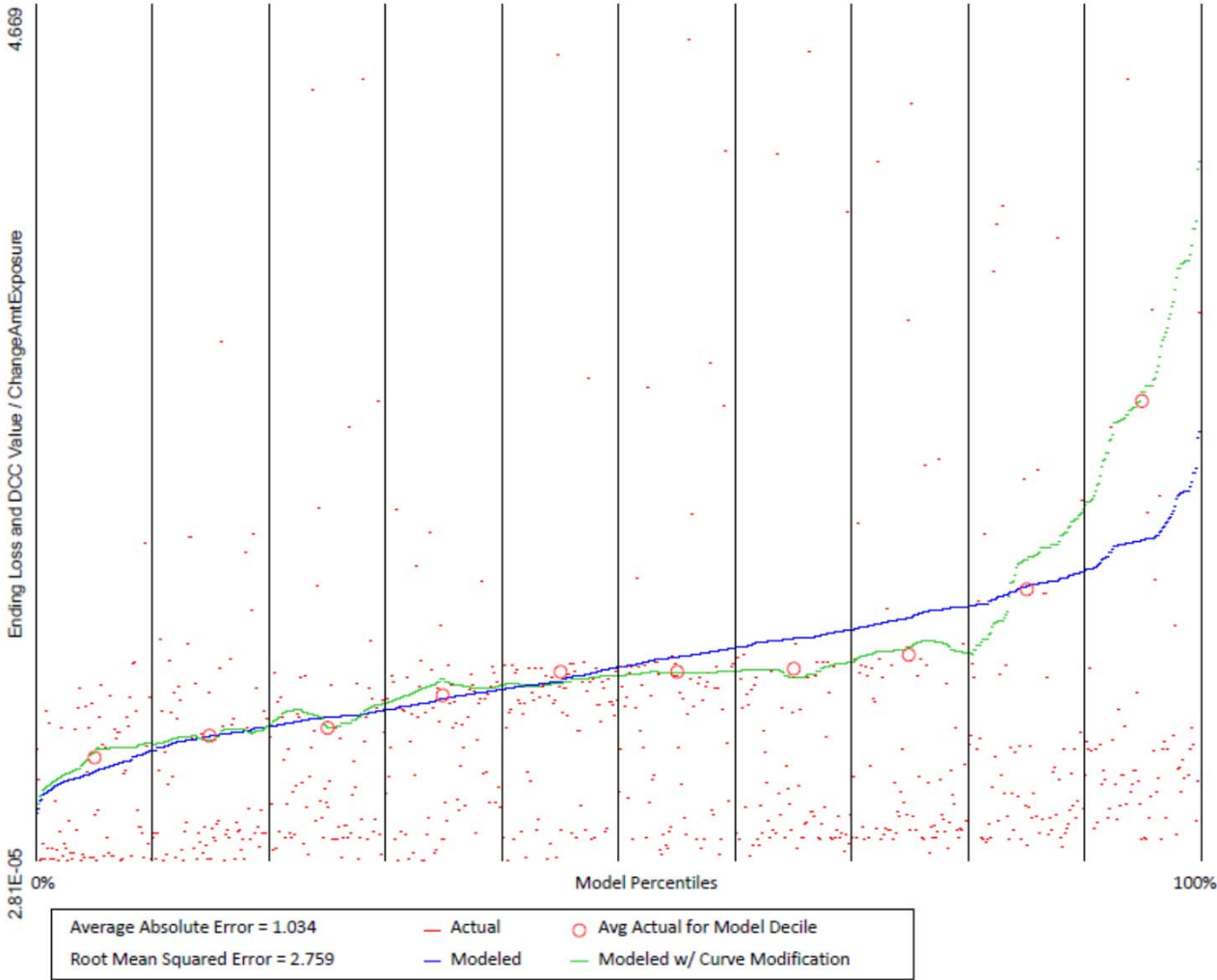


Change Probability
Predictive Significance



GROSS CONSULTING

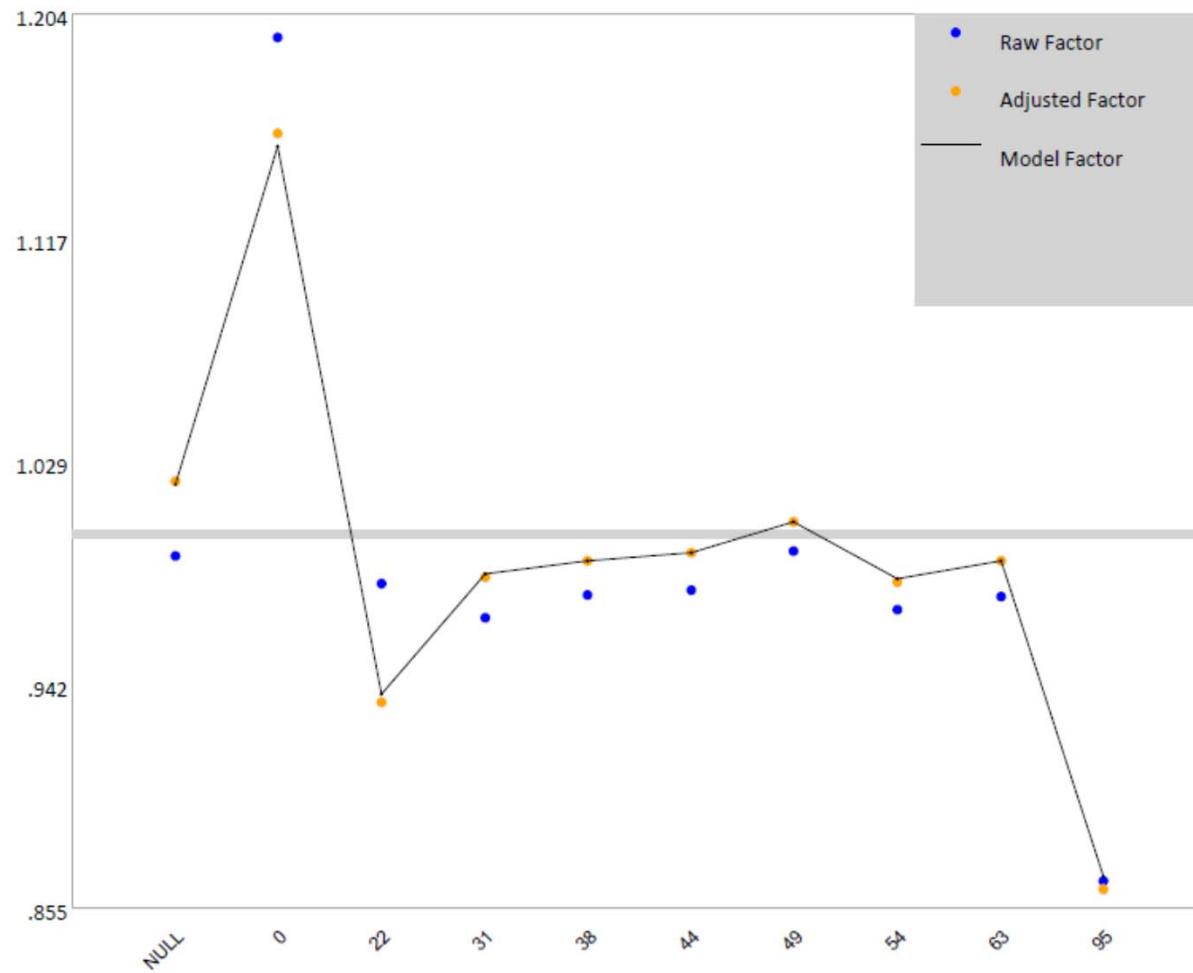
Change in Value
Test Data Fit by Model Deciles



GROSS CONSULTING

Characteristic: ClaimantAge

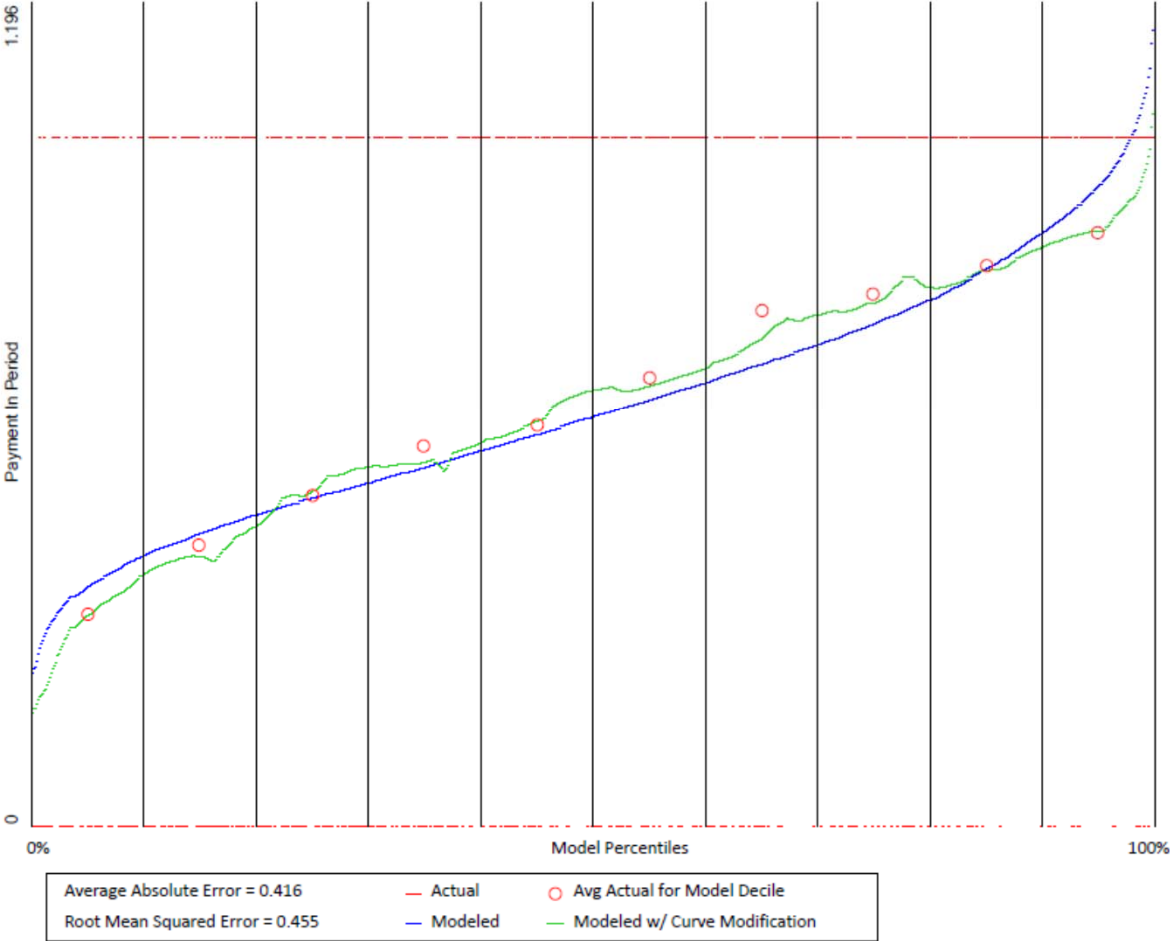
Change in Value



GROSS CONSULTING

Payment Probability

Test Data Fit by Model Deciles



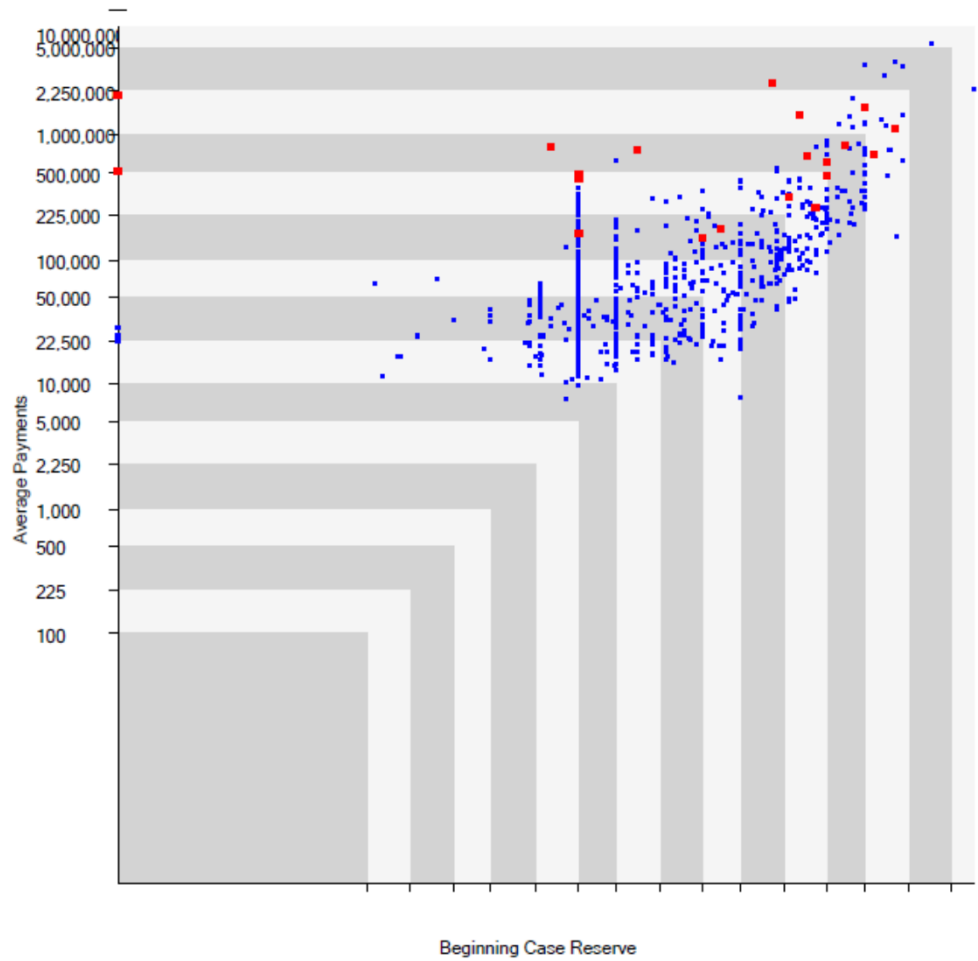
GROSS CONSULTING

Simulate Going Forward

- Claim Development
 - Start with current inventory of open claims
 - For each open claim simulate a number of potential outcomes for the next time-step (using the claims' characteristics)
 - For those simulated claim-paths that are still open simulate forward another time-step.
 - Continue until all simulated claim-paths are closed

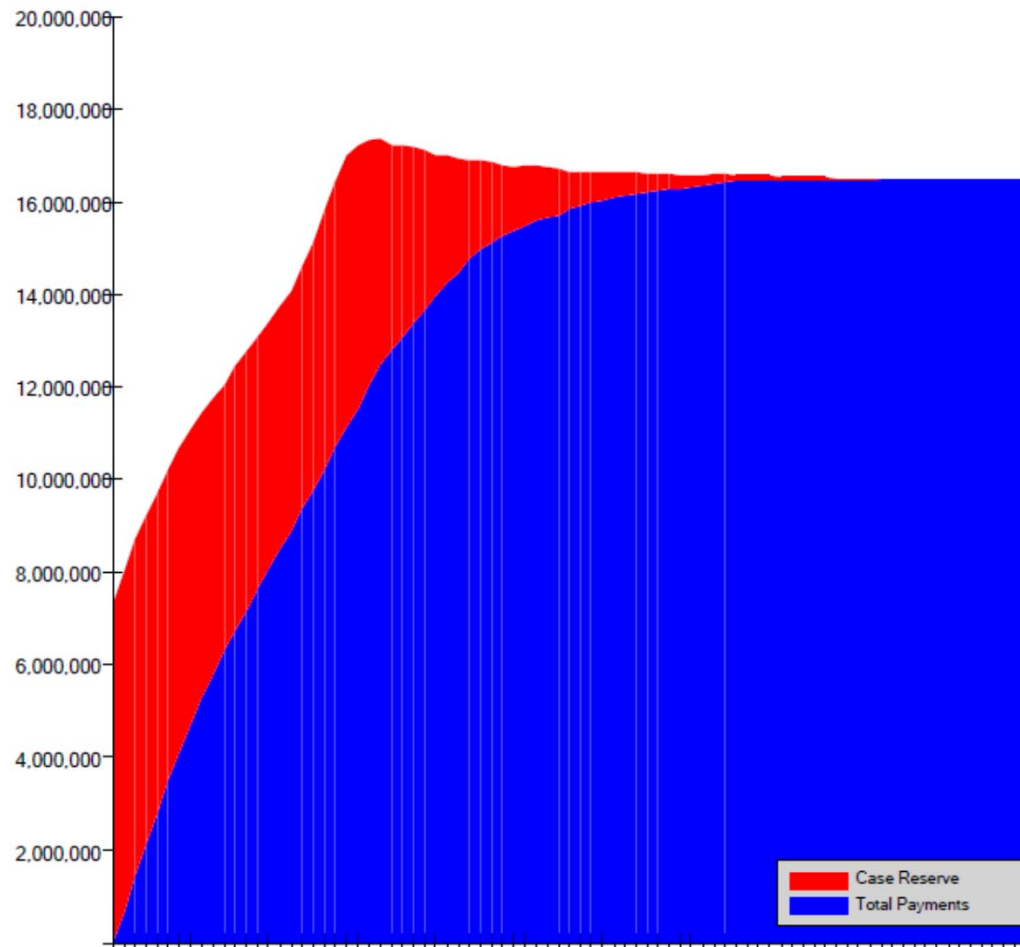


Severity Description 1



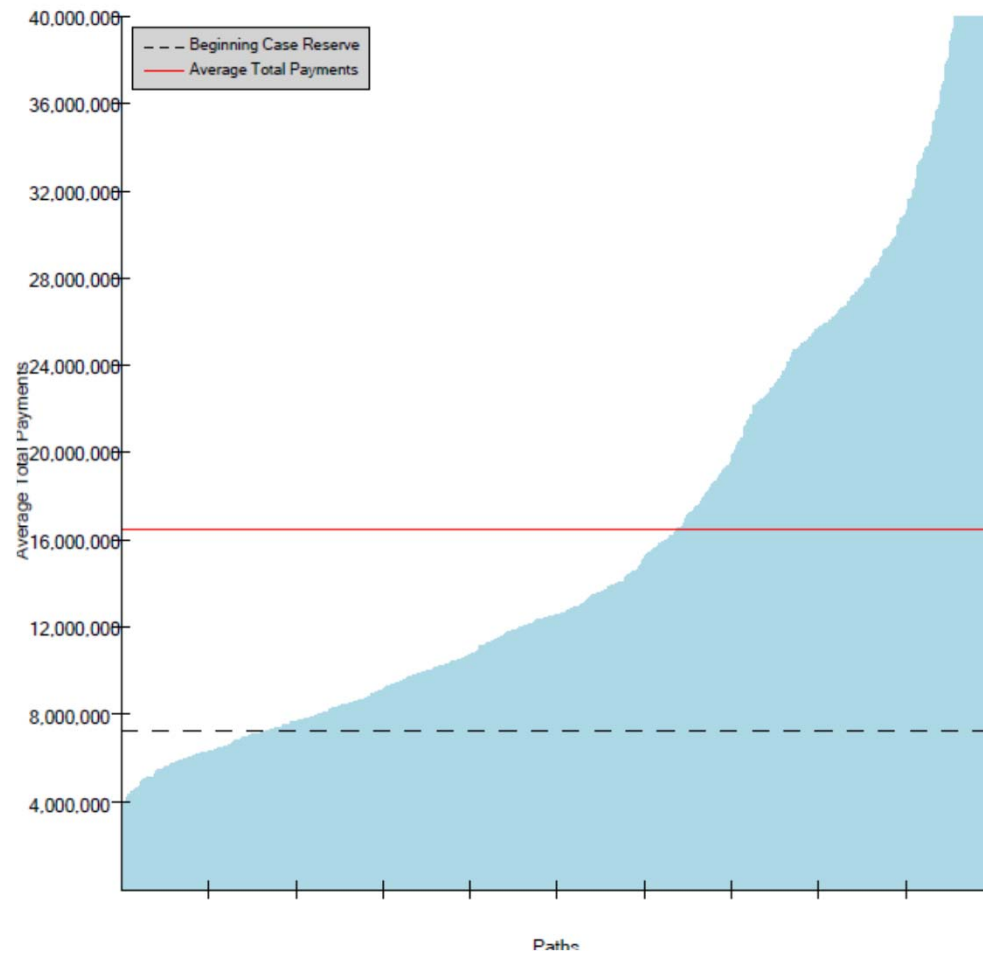
GROSS CONSULTING

Severity Description 1



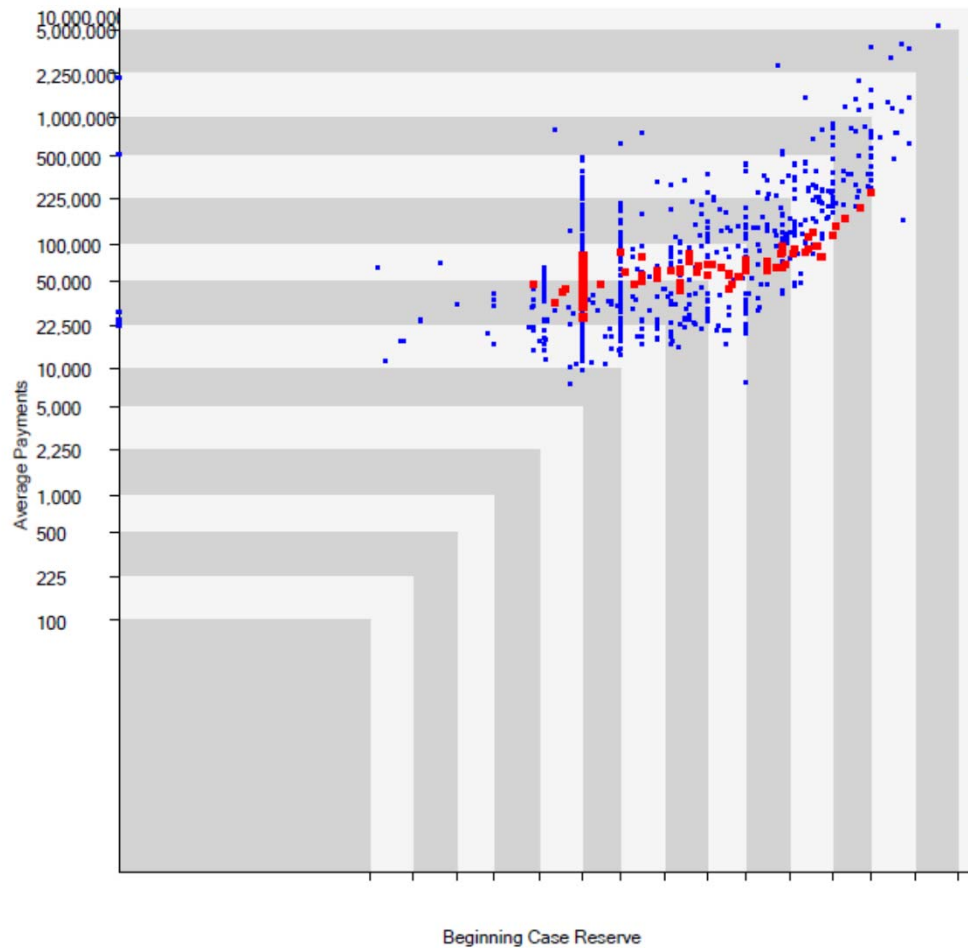
GROSS CONSULTING

Severity Description 1



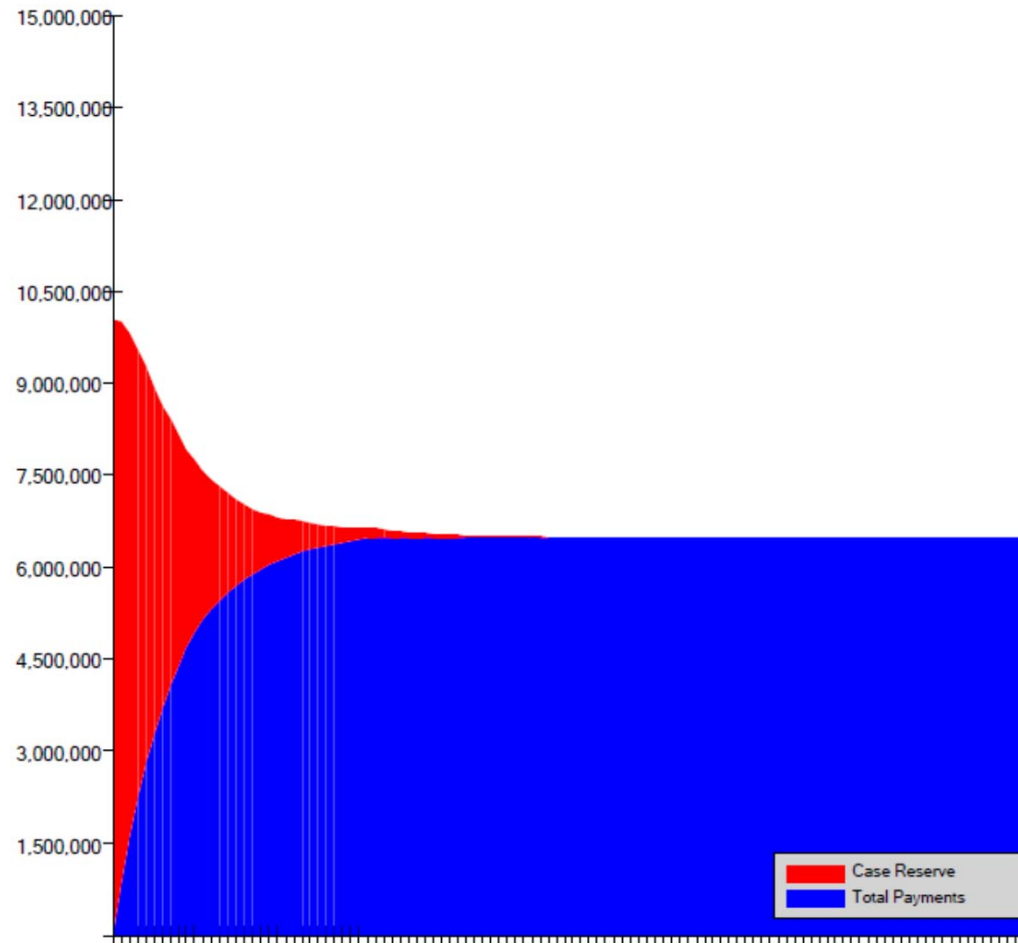
GROSS CONSULTING

Severity Description 2



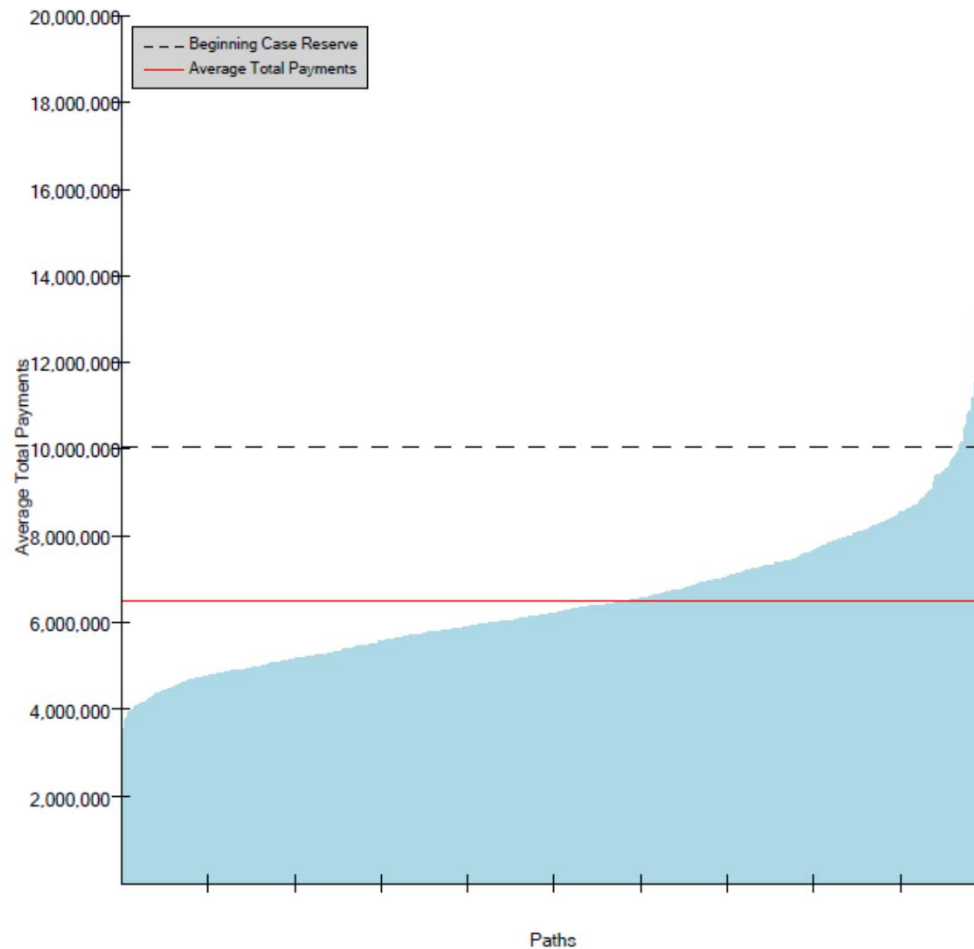
GROSS CONSULTING

Severity Description 2



GROSS CONSULTING

Severity Description 2



GROSS CONSULTING

Changes that could impact reserves

- Deductible/Limit
- Geography
- Changes in reinsurance program
- Class mix
- Doctor characteristics
- Types of claims/claimants



GROSS CONSULTING

Summary

- The softening in the market is likely to remain for some time to come
- MPL writers will need to tread carefully in the next few years
- Actuaries need to be more aware of changes in the book of business when looking at reserves.
- Predictive modeling techniques in reserving can help

