

# CAS RPM Seminar

How “Smart” is Your Competitive Intelligence?

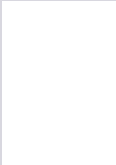
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March 2016

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# Importance of Investing in Competitive Analysis



## An effective competitive market analysis approach can be used to enhance the current pricing strategy in a variety of ways

### Current Rating Plan:

- Identifying strengths and weaknesses
- Knowing where you are in competitor spectrum of prices and products can help inform potential pricing/risk selection changes

### Future Rating Plan:

- Knowledge of emerging rating variables helps with data collection efforts
- Effective competitive analysis can inform short-term rating plan changes as well
- For smaller carriers, the results of a quantitative analysis could be used as the starting input dataset for a predictive modeling exercise



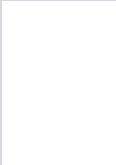
### Marketing:

- Combining results of competitive analysis with the company's target markets can help focus short-term marketing efforts prior to rating plan deficiencies being addressed
- Appetites for new target markets can also be informed by the results of competitive analysis
- Over time, the competitive analysis provides the carrier with a tool for aligning the risk appetite with price and product competitive position

### Underwriting:

- Being aware of adverse selection exposure can help shape temporary underwriting adjustments

# Types of Competitive Analysis

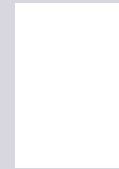
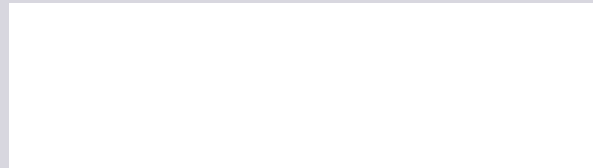
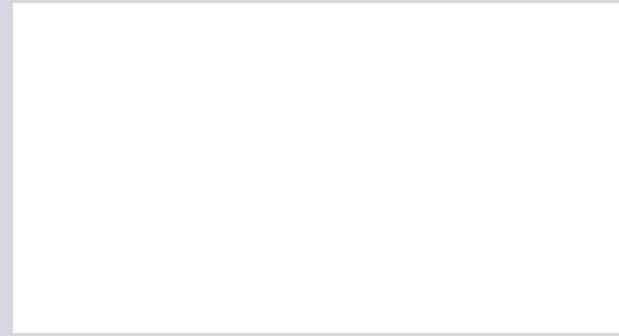


# Insurers use various approaches to competitive market analysis



These options are not mutually exclusive — different approaches can be used in combination


# Key Challenges in Performing Quantitative Competitive Analysis and How to Conquer Them



## Although generally more effective, advanced competitive market analysis techniques pose certain challenges

### Key Challenges

- Company selection
- Missing variables
- Product alignment
- Credit/tier alignment
- Validation of results



The next several pages briefly address each of these challenges



## Selecting which competitors to include is important... and trickier than one might think

- The ideal is a mix of direct competitors and industry leaders
- The target market segment should be considered
  - Competitors targeting the preferred market may be different than competitors targeting the non-standard market
- Once you choose a competitor group, selecting which particular company to rate can be challenging
- Relative premium volume may not be a good indicator, as one entity may be a new company (where all new business is being written)
- Agent feedback and rate filing reviews can help select the “right” company
- Some companies write only package policies (personal auto and homeowners on the same policy). This should be considered in the company selection (impact on coverage alignment and underwriting selection criteria)

## In some cases, a company may simply not collect accurate data on a rating variable that a competitor uses

- Depending on the importance of the variable, how missing values are populated can materially affect the results
- External data can sometimes be used to fill in missing values using sampling techniques
  - Census and other external data
  - Distributions obtained from competitor filings
- Care should be taken in how these variables are populated
  - Suppose a company does not collect data on a 55 & Retired Discount, but driver age is readily available
  - From census data and other publicly available data, one can obtain a population estimate of individuals who are retired
  - However, constraints should be placed on the sampling approach to avoid illogical results (e.g., a 25-year-old who is “retired”)

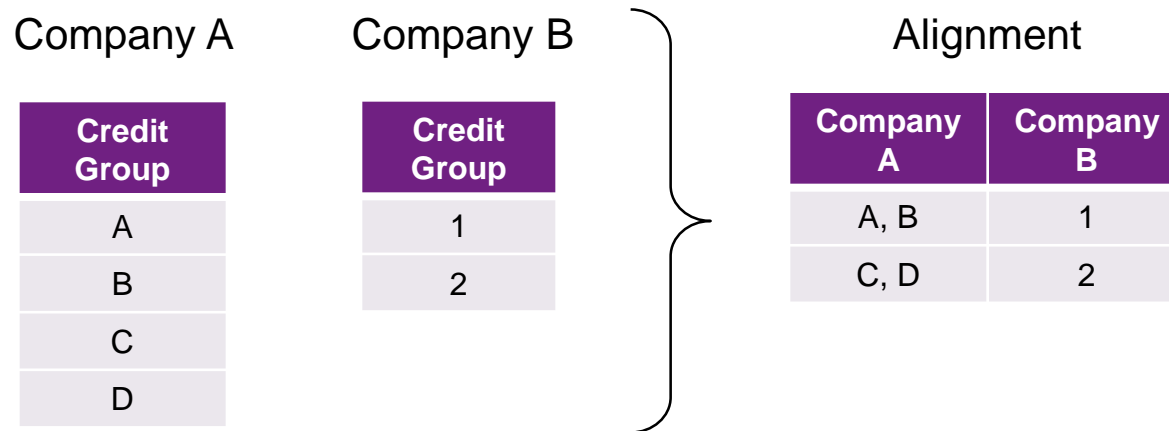
## Proper alignment of product/coverage is important in order to draw appropriate conclusions

### State X — Homeowners

Coverage/Feature	Competitor A “Standard” HO-3 Policy	Competitor B “Basic” HO-3 Policy
Earthquake	Included	Excluded
Water Backup	Excluded	Included
Coverage A	Actual cash value, with possible limited replacement cost coverage endorsement	Replacement cost coverage
Coverage C	70% of Coverage A	85% of Coverage A
Identity Theft	Included	Excluded

## Creating an accurate alignment between competitor credit groups and tiers is critically important

For example, simply aligning credit groups based on the number of groups used by a company will almost certainly lead to incorrect conclusions

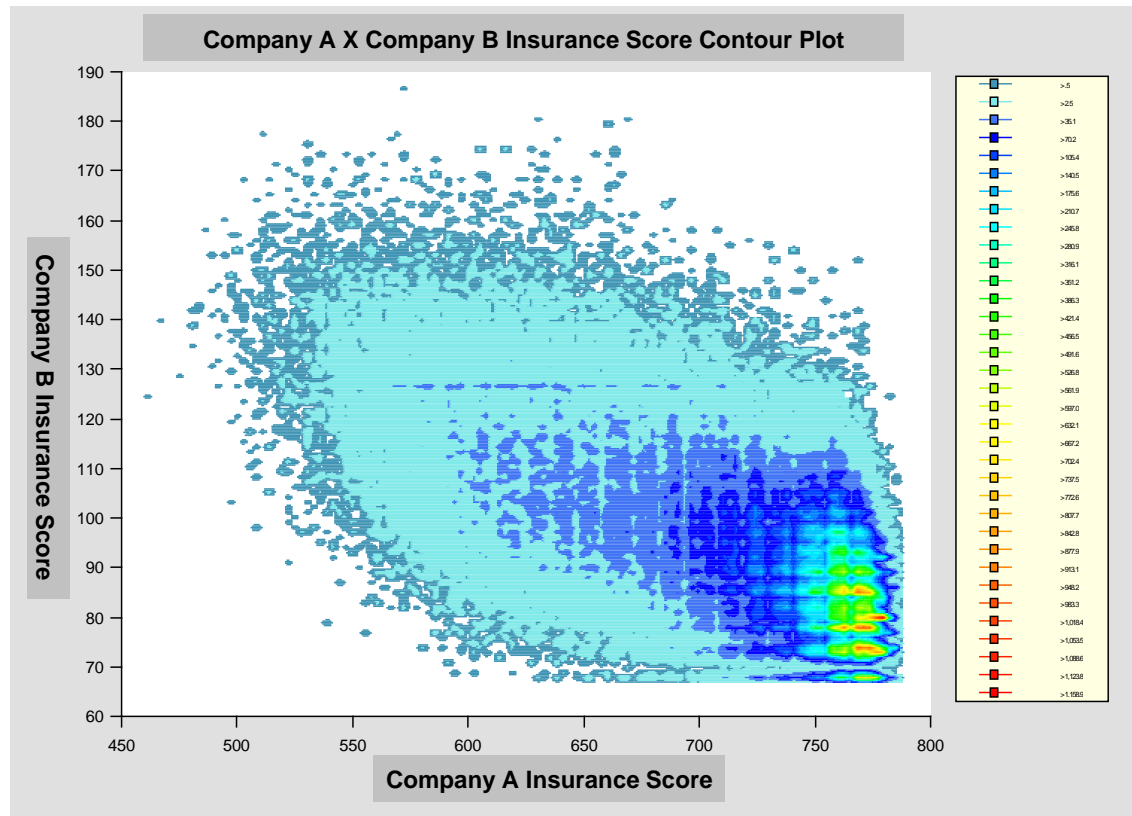


## Alternative approaches to aligning credit groups/tiers can increase accuracy (but can be costly and/or time consuming)

- Insurance Score Alignment (Distribution Mapping) – Alignment based on company filed distributions by credit score range or tier
  - Relies on publicly available data
  - More accurate than uniform distribution assumption
  
- Insurance Score Assignment – Assignment based on programmed competitor credit scoring algorithms
  - Requires data at the individual credit attribute level
  - Relies on publicly available data
  - Processing current book of business through programmed algorithms results in an optimal credit score assignment for each competitor
  - Assumptions may still be necessary, depending on the data source and competitor(s)

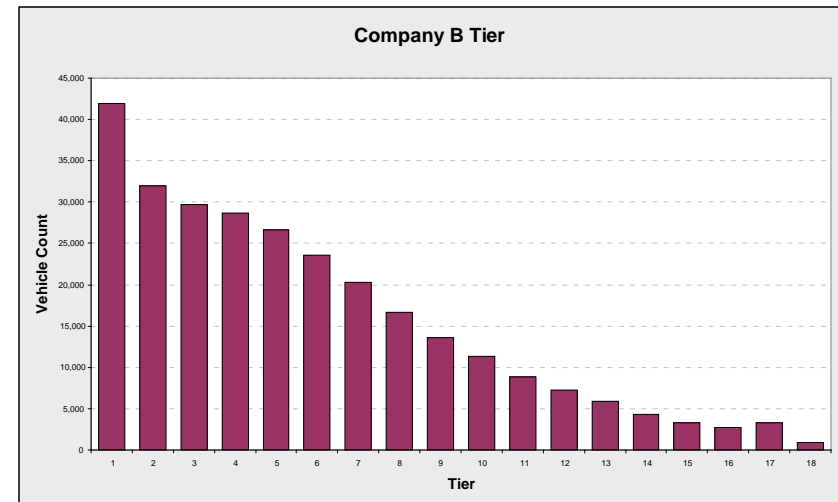
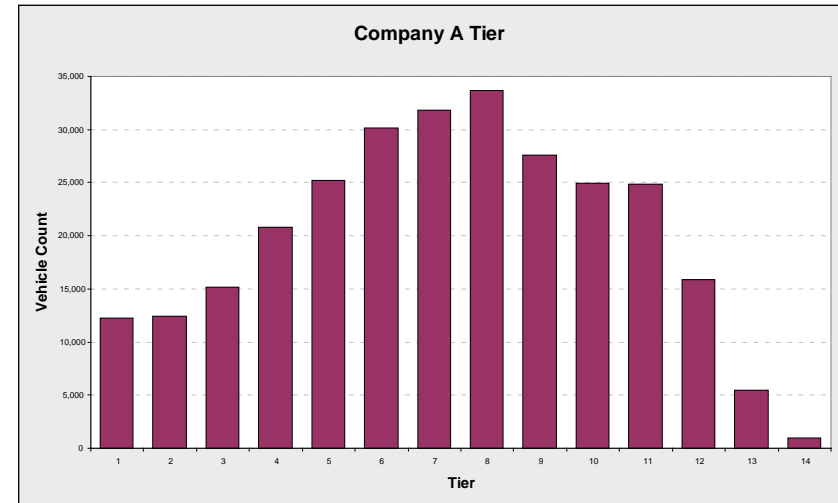
## Credit-based insurance score used by different companies assess risk differently

- “Company A” and “Company B” are personal auto insurers
  - Both are national writers with market share in the top 10 in most states
- Credit-based insurance scoring models
  - Company A uses a vendor model
    - High score is best (lowest risk)
  - Company B uses a proprietary model
    - Low score is best (lowest risk)
  - Models were found in publicly available filings
  - Models were programmed using actual credit data
- Correlation between the insurance scores, but not perfect
- Expect diagonal line if models assessed risk in the same way
- No hits/no scores are excluded



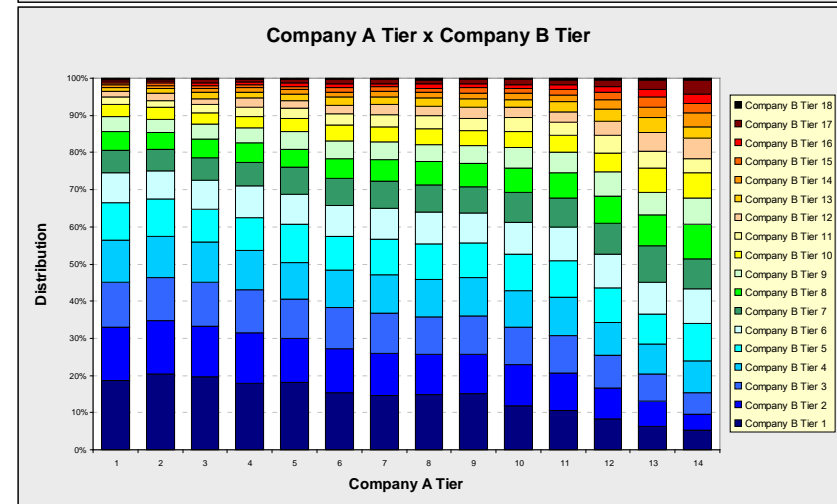
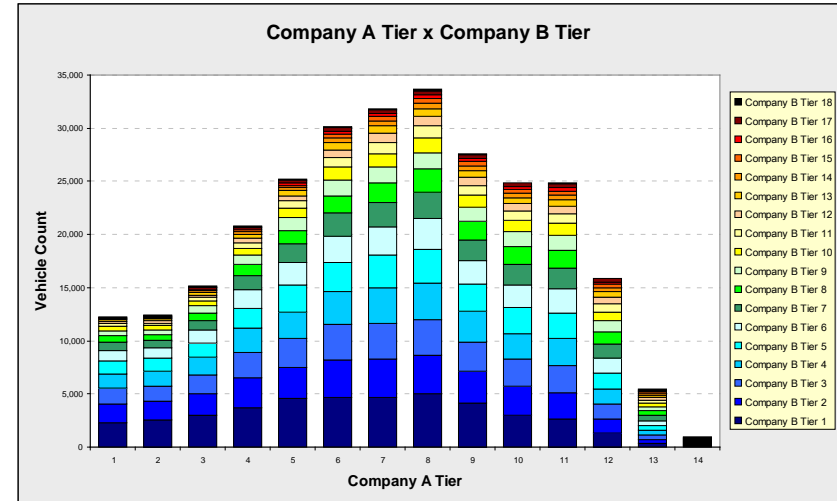
## Companies take different approaches to tier

- Tier is a combination of the credit-based insurance score and other variables for both companies
- Company A and Company B use different variables in the tier determination
- Examples of variables used include
  - Prior liability limits
  - Lapses in coverage
  - Education
  - Occupation
  - Accident and violations
  - Length of time insured with prior carrier



# It is possible for a policy considered low risk for Company A to be considered high risk for Company B

- Any tier for Company A has a range of tiers for Company B
- Can explain pricing differences at the individual vehicle/policy level
- Insurance score or tier alignment approaches miss the opportunity to look at the different approaches to risk assessment at the policy level

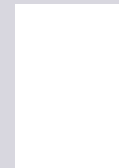
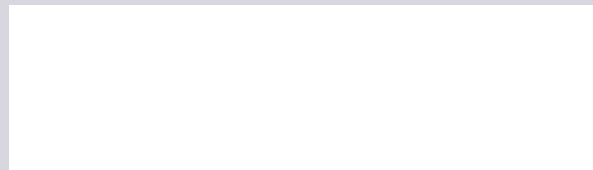
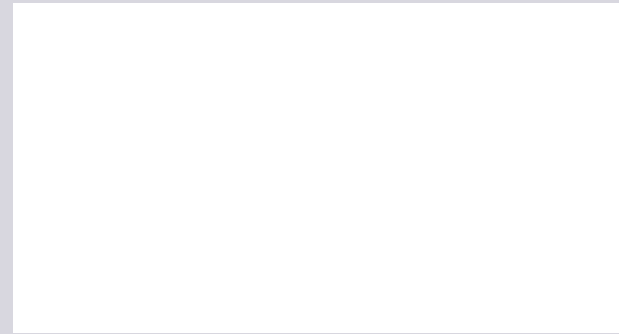




## What process will be followed to ensure that the calculated competitor rates are accurate?

- Rater accuracy should be considered in selecting a third-party vendor
  
- Even the larger comparative rating vendors are often not accurate
  - Programming errors
  - Credit/tiering alignment
  - Oversimplification/misunderstanding of a competitor's rating approach
  - Goal may be to get “close enough”
  
- Certain actions can be taken to increase the accuracy of the analysis
  - Hand-rating of a random sampling of policies (which can be time consuming)
  - Verifying calculated average premiums with certain filed materials
  - Conversations with agents (“gut checks”)

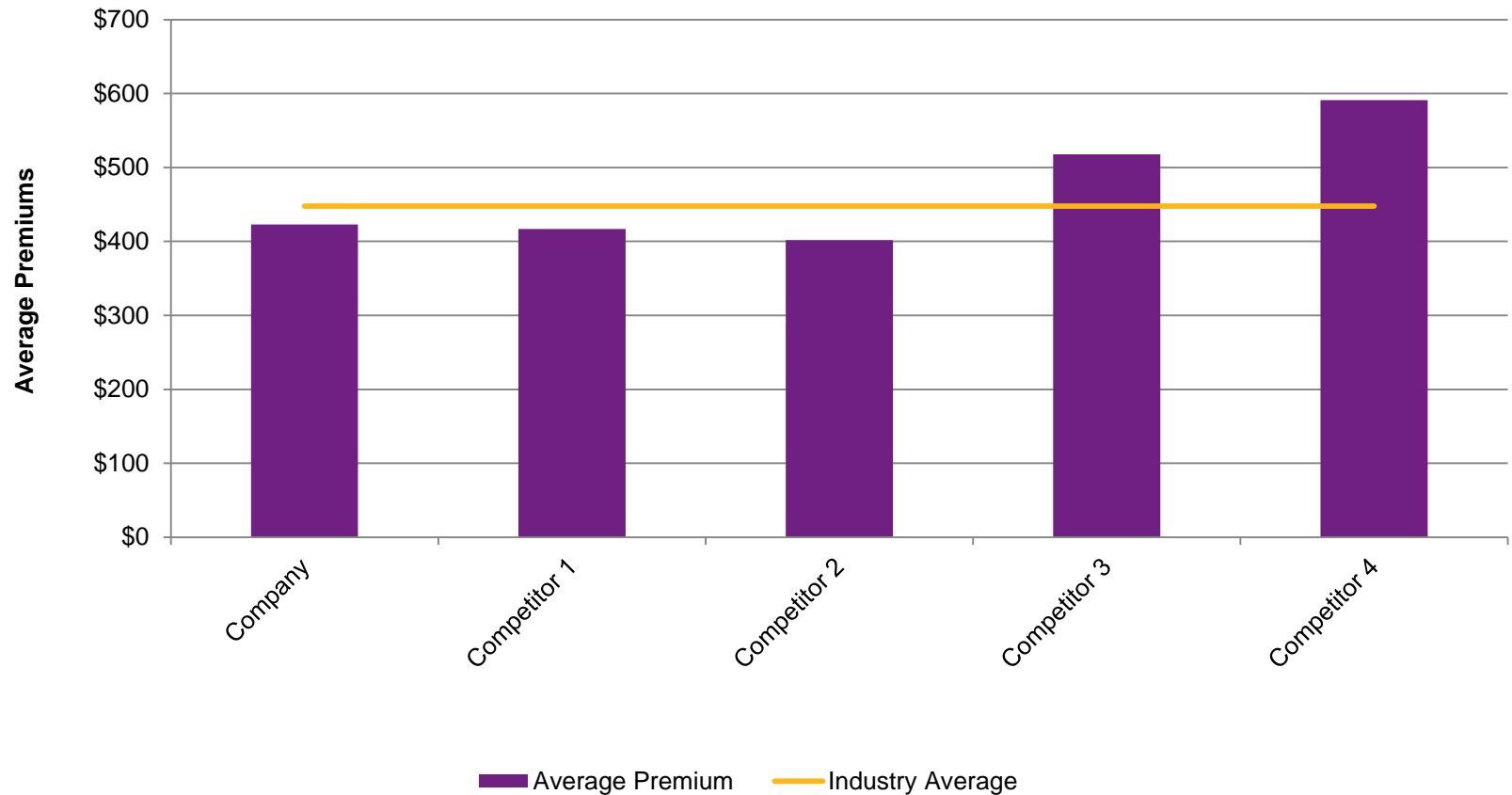
## Enhancements to Consider



If you currently analyze competitive metrics only on an aggregate basis...  
(or focus on territory as the only segment for a univariate analysis)

ILLUSTRATIVE

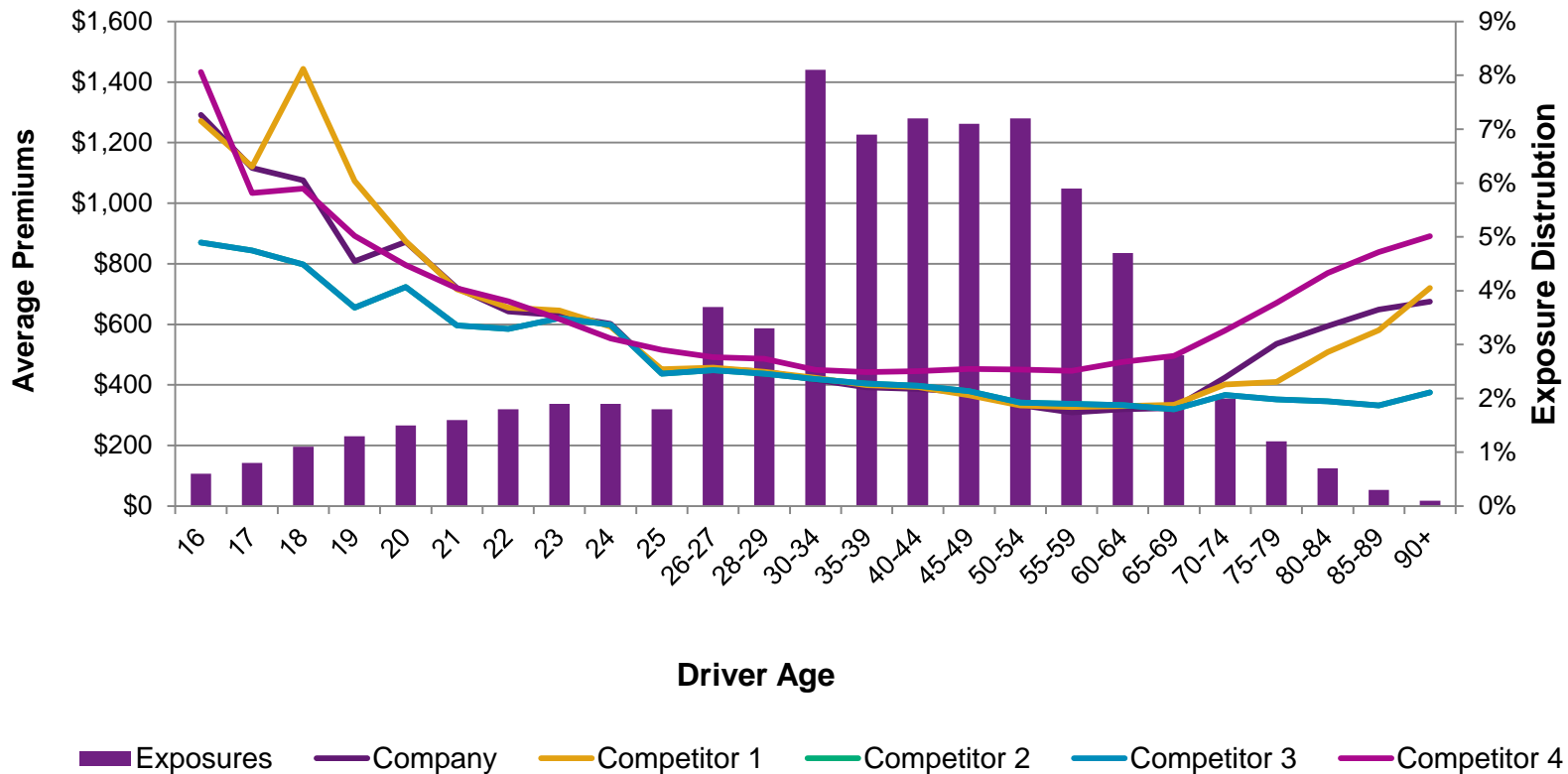
### Competitor Average Premiums



# ...all variables used in a rating plan can be reviewed in a univariate rating factor/segment analysis

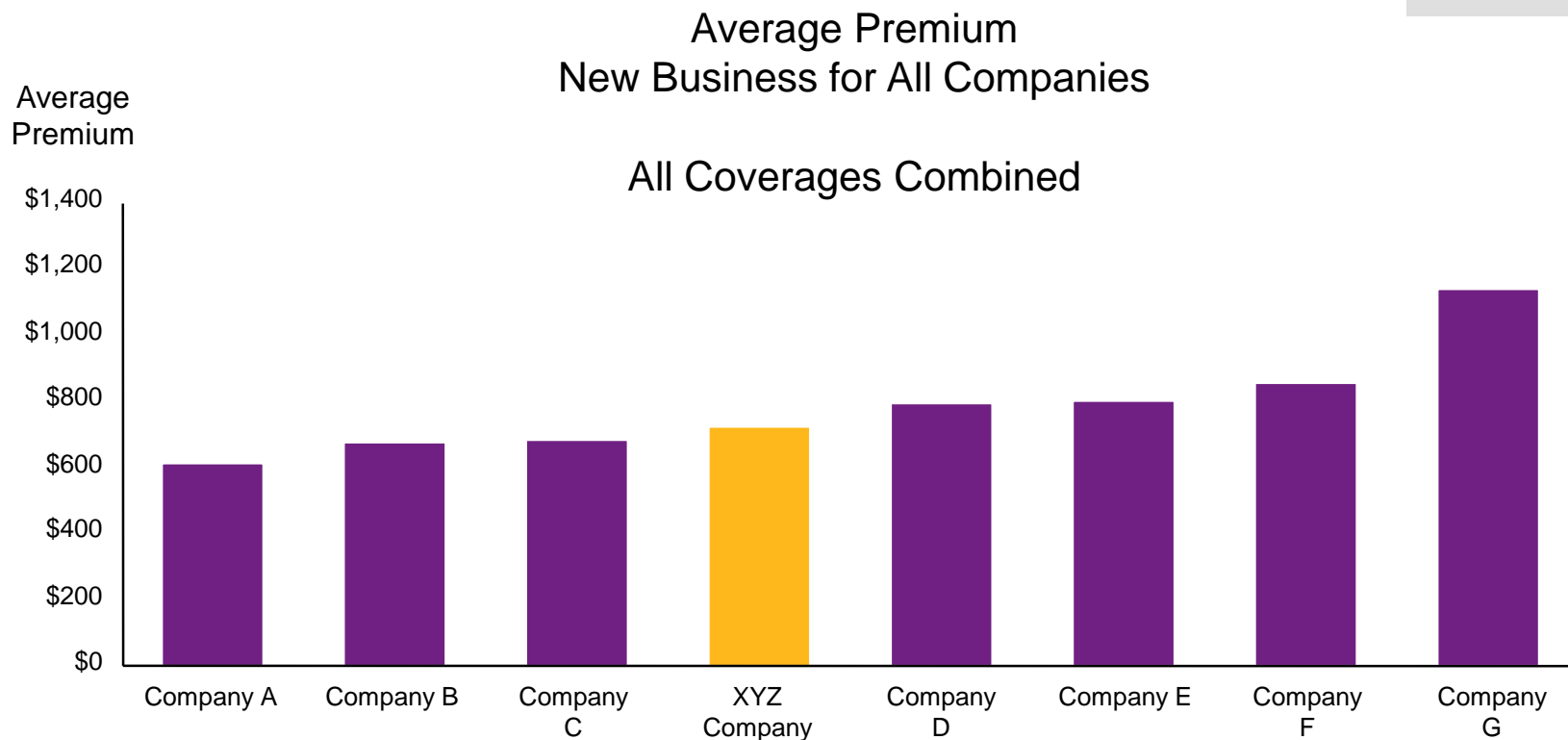
ILLUSTRATIVE

### Competitor Average Premiums



# If you currently perform competitive analysis only on quote data (or only on your in-force book of business)...

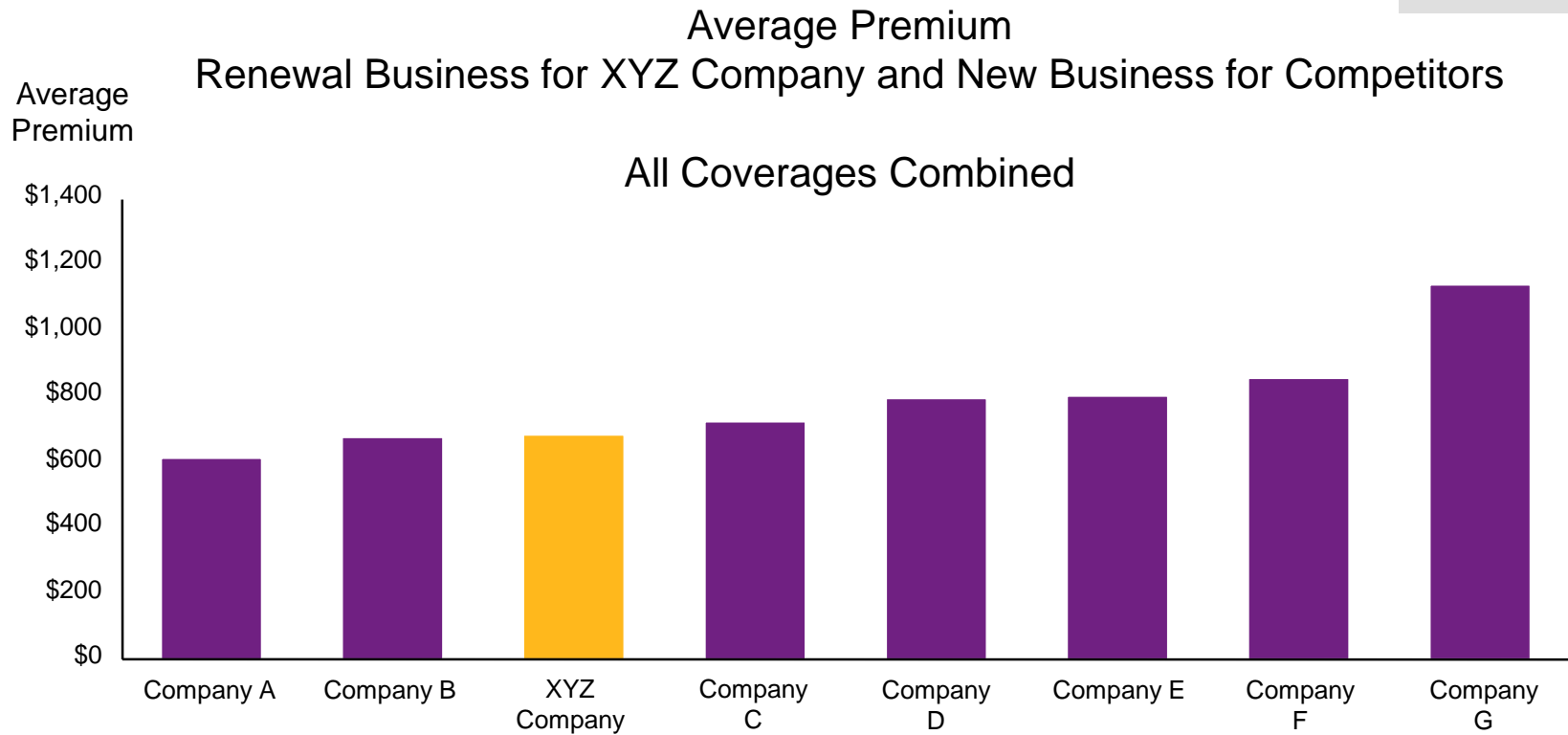
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**Beware of potential inherent bias in using current policy mix of business**

...try using your in-force data (or quote data) to assess competitive positioning of renewal (or new) business

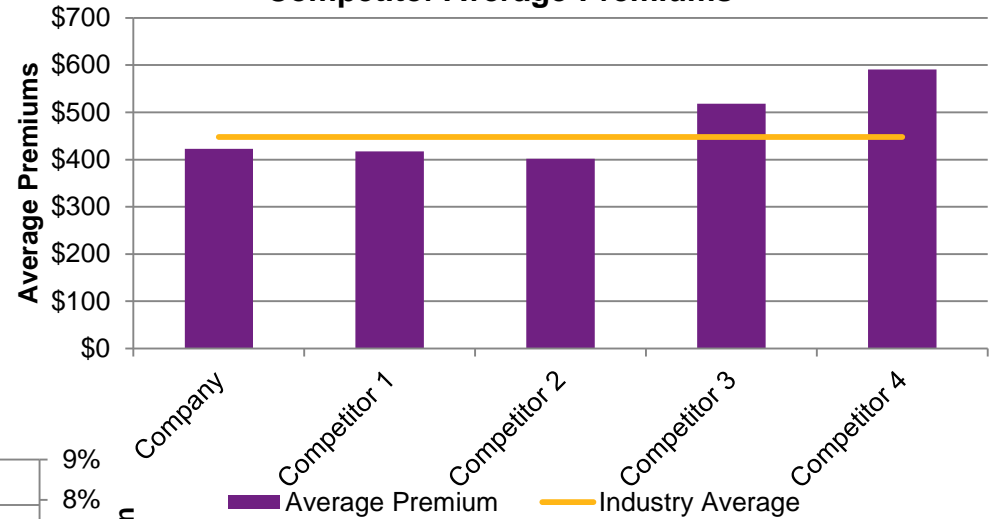
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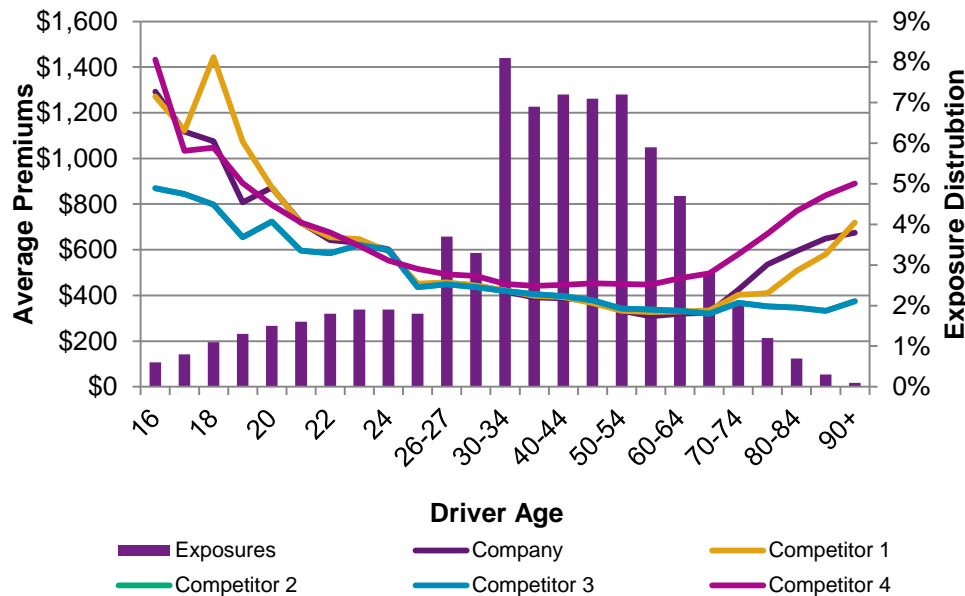
Beware of potential inherent bias in using current policy mix of business

# If you currently focus on competitor average premiums as your metrics...

Competitor Average Premiums

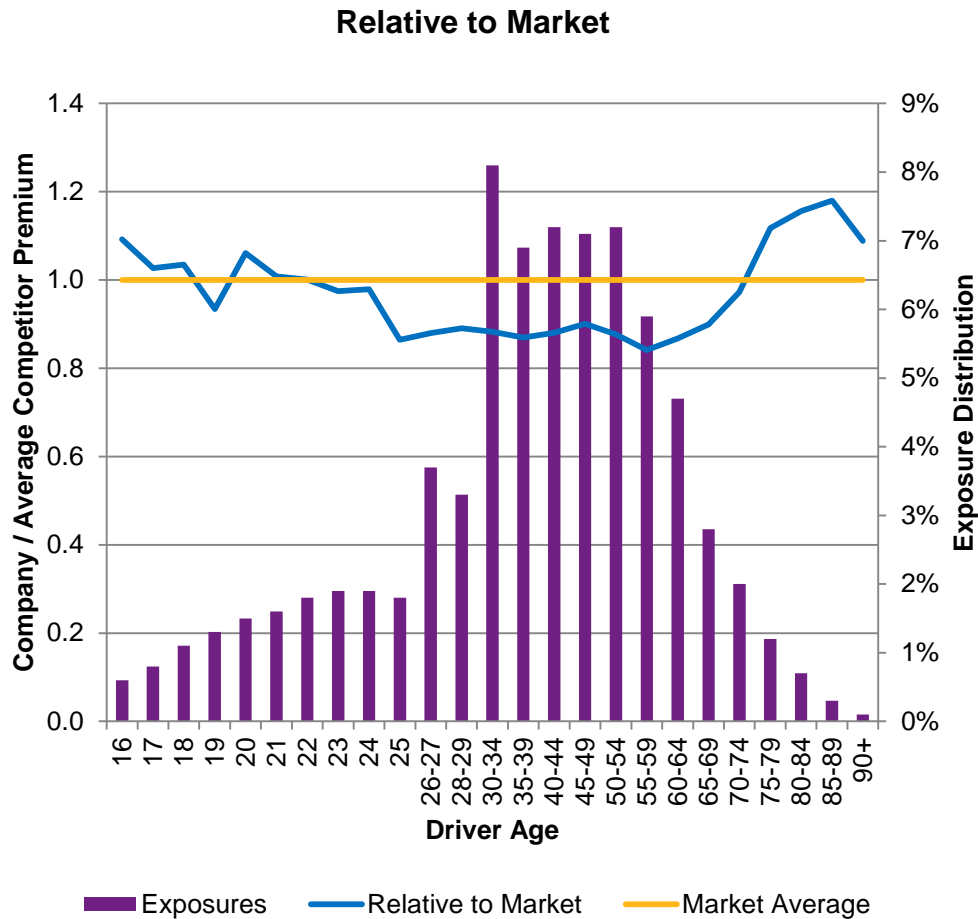


Competitor Average Premiums



# ...consider expanding to additional metrics

Including Relative to Market...

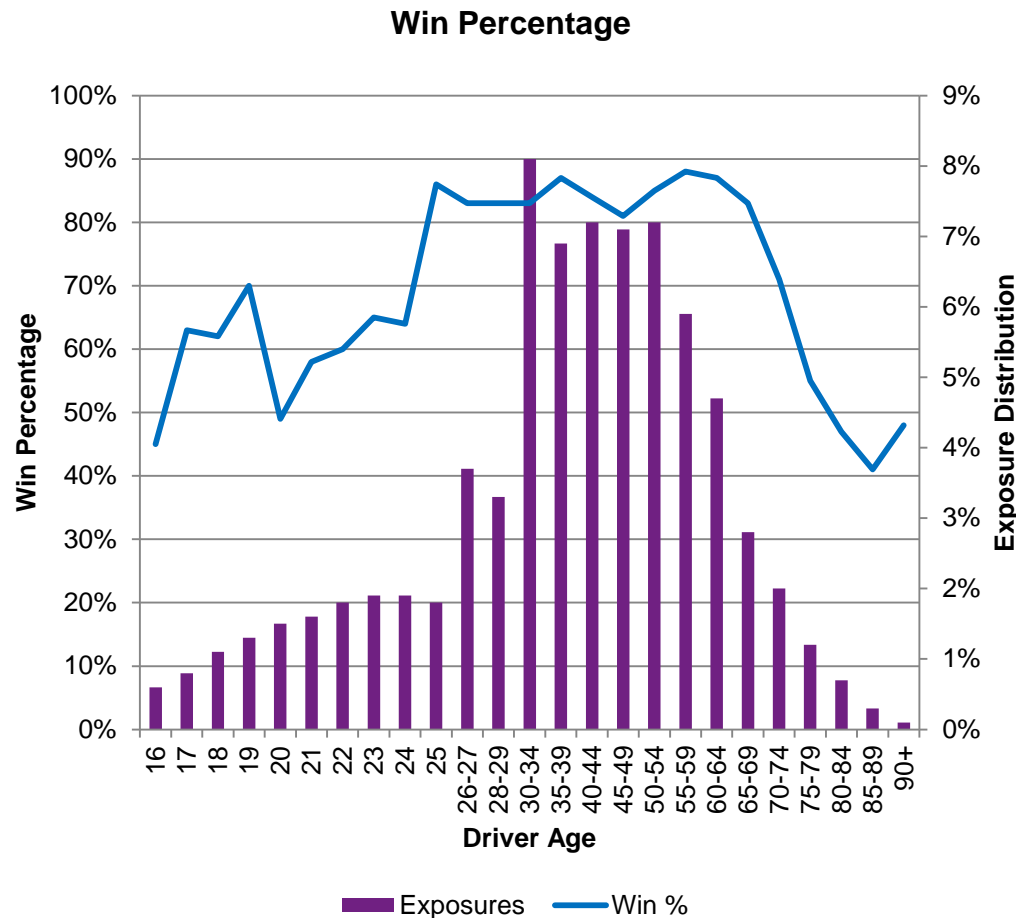


Use a simple average or weighted average of selected competitor premiums; base the weights on market share or select the weights



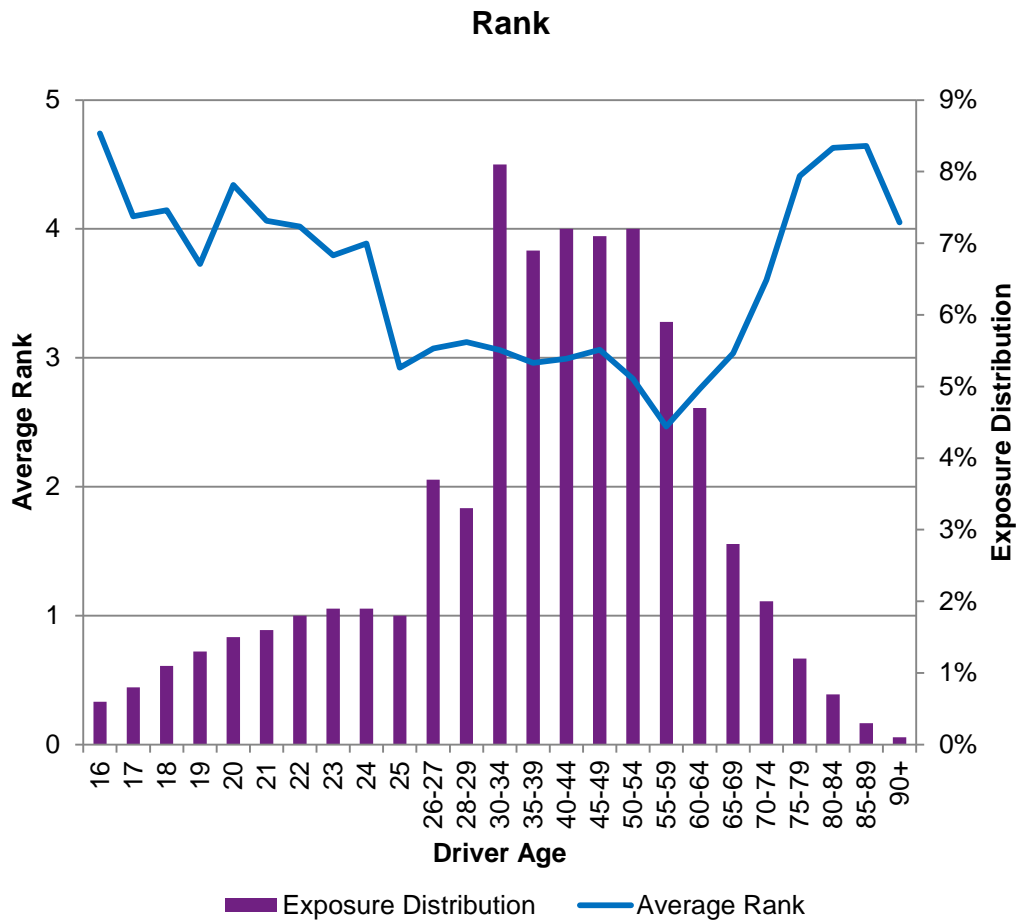
# ...consider expanding to additional metrics

...Win Percentage...



- Percentage of the time that Company’s “wins”
- Criterion for a "win" may be defined by XYZ Company
- A "win" may be defined as:
  - XYZ Company’s premium is below the competitor premium by a penny
  - XYZ Company’s premium is within \$50 or below the competitor premium
  - XYZ Company’s premium is within 5% or below the competitor premium

# ...consider expanding to additional metrics ...and Rank



- XYZ Company's average rank among the competitor premiums
- Target rank may fall in a range, such as between first and third
- You might also consider looking at percentile in addition to (or instead of) rank

# Consider looking at your premium compared to individual competitors for clusters of risks

ILLUSTRATIVE

## vs. Competitor A



- More vehicles than drivers, ages 40 – 65, in tiers 10+
- Drivers aged <30 or above 65, more vehicles than drivers

## vs. Competitor B



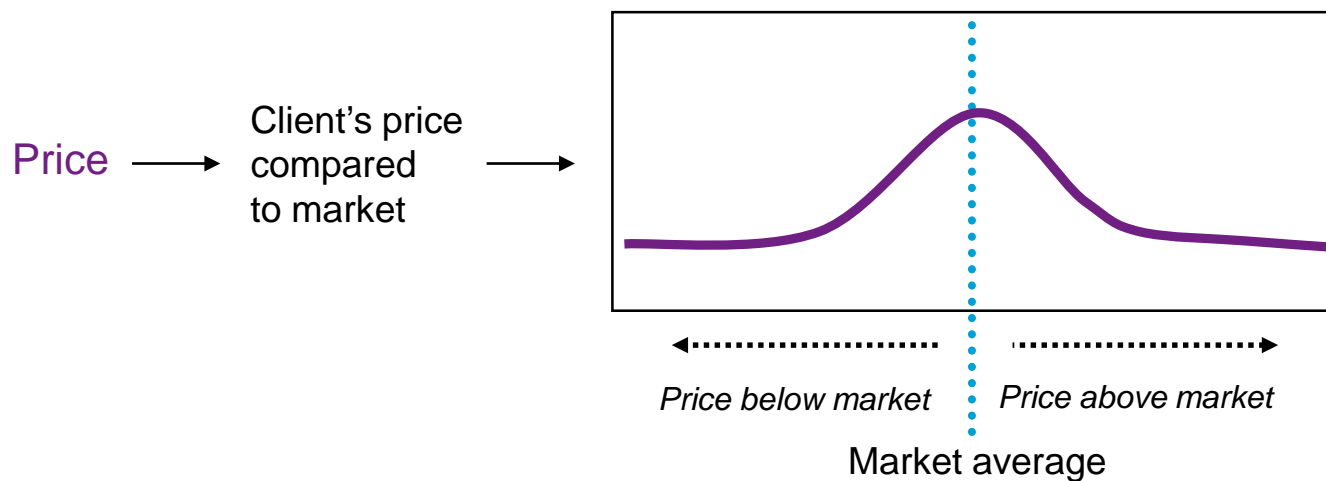
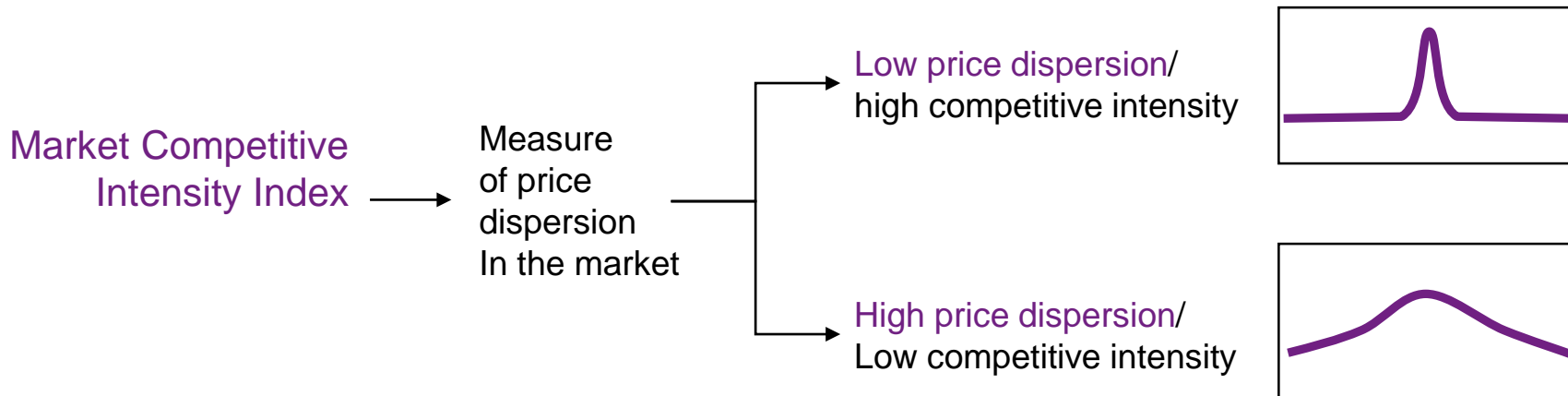
- Drivers below age 20, one driver on the policy
- Drivers below 23, with three or more drivers on the policy

■ Percent of risks in State X where price is \$50 or more below competitor

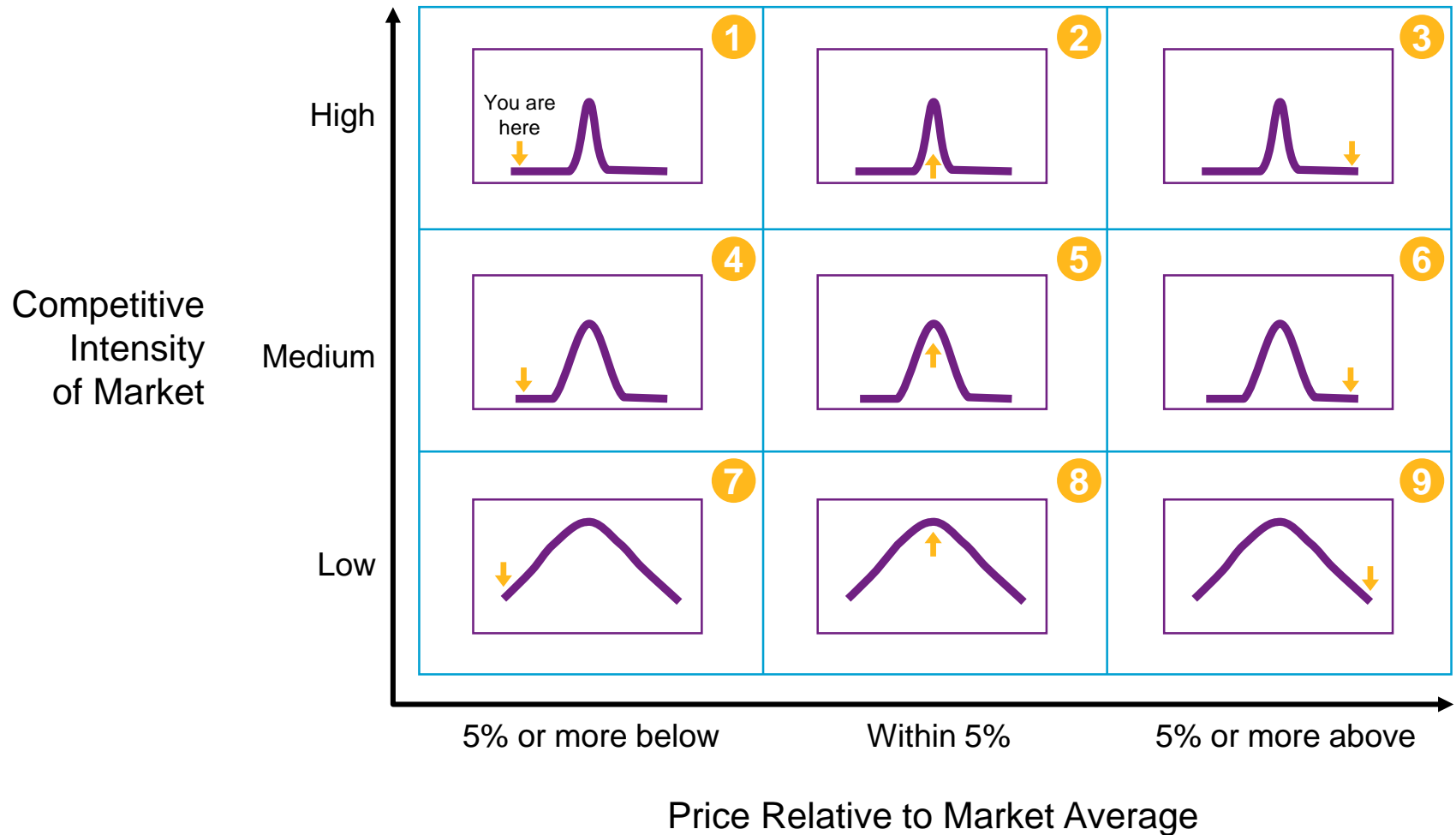
■ Percent of risks in State X where price is \$50 or more above the competitor

Note: Text bullets show representative types of risks.

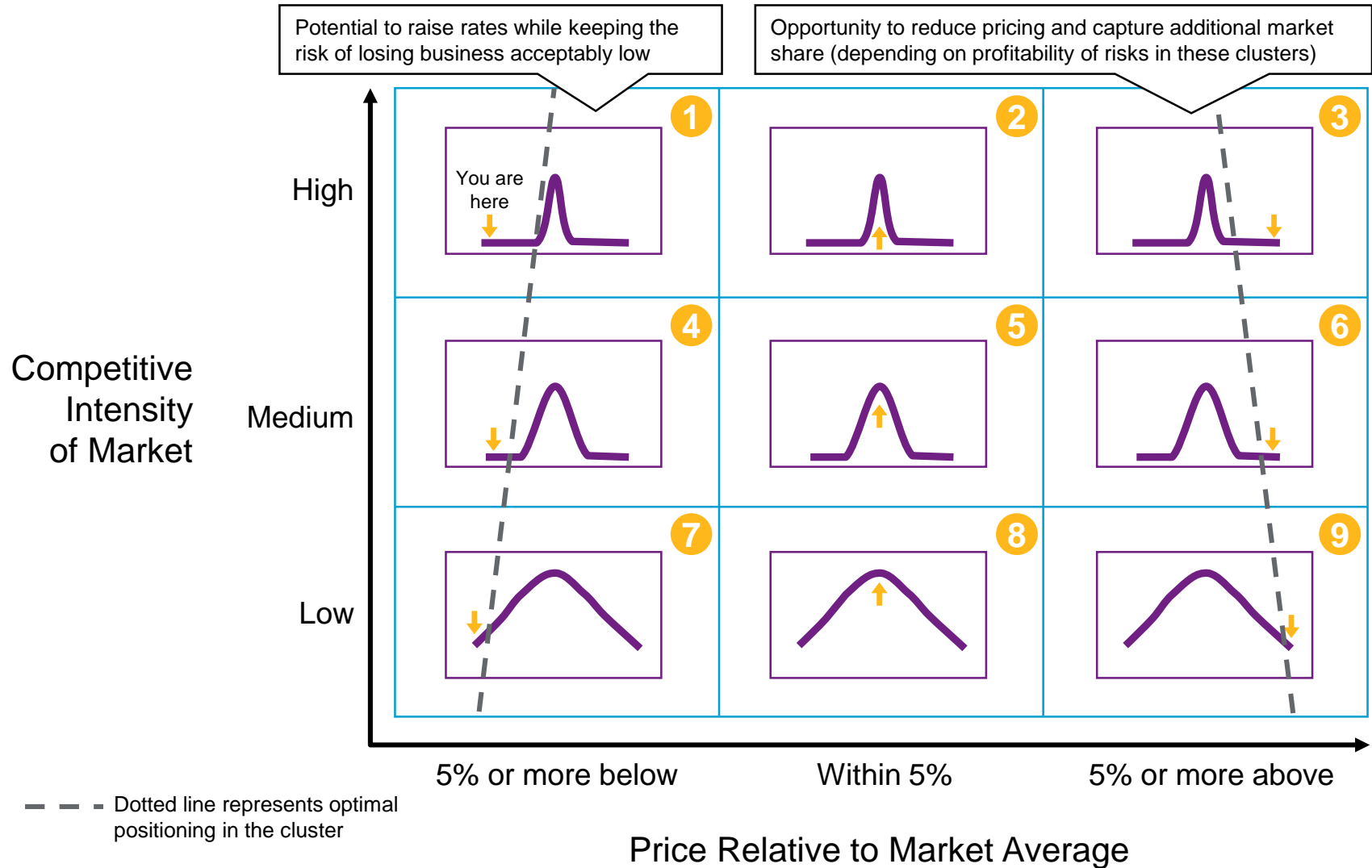
# Competitive position can be segmented in a cluster analysis, which focuses on the company and competitor premiums on two dimensions



# Based on these two dimensions, we can describe the company's competitive position using nine clusters



# The clusters suggest potential pricing strategies



## If you currently look at a wide variety of competitive metrics, consider using additional metrics to help determine target market position

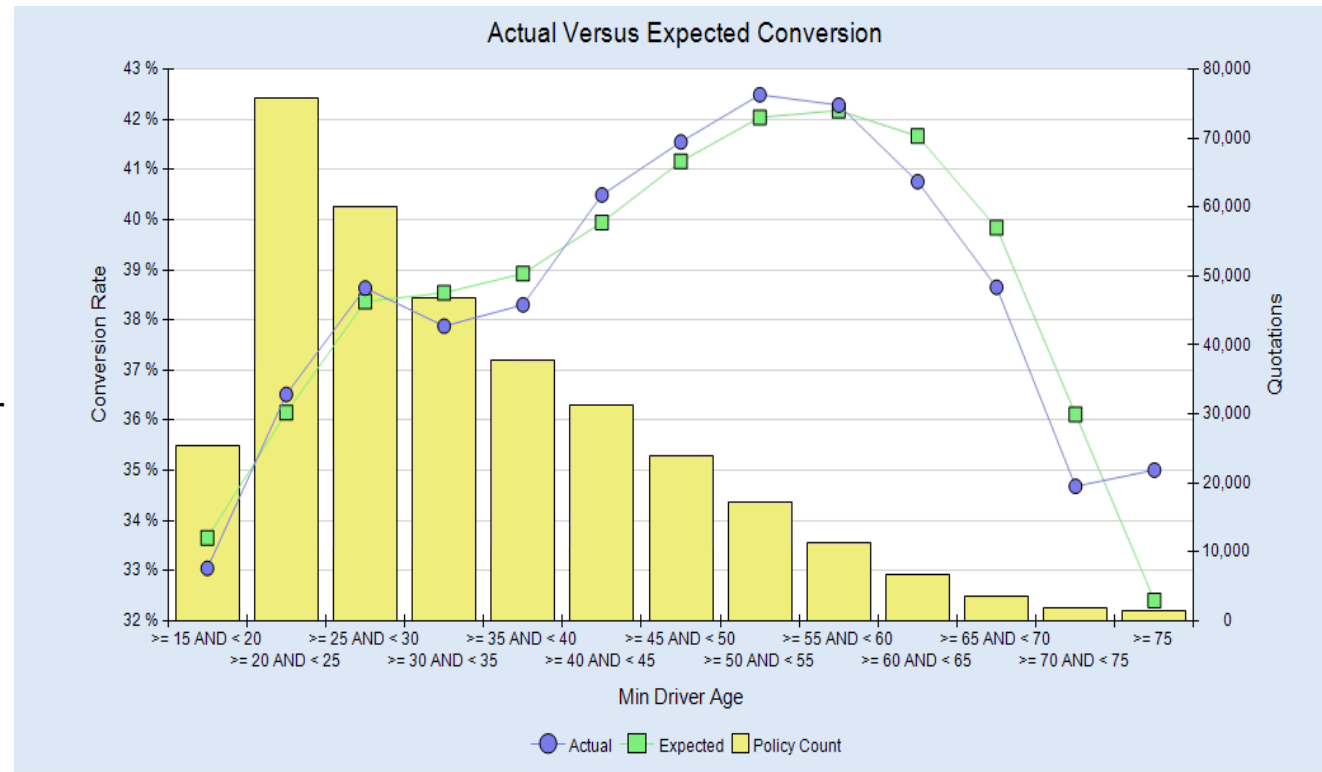
- The target market position should be identified and then metrics can be developed to monitor competitive position relative to target

- **Competitive Metrics**

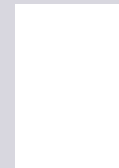
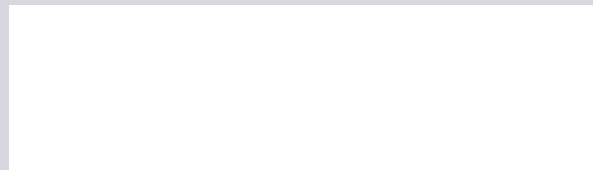
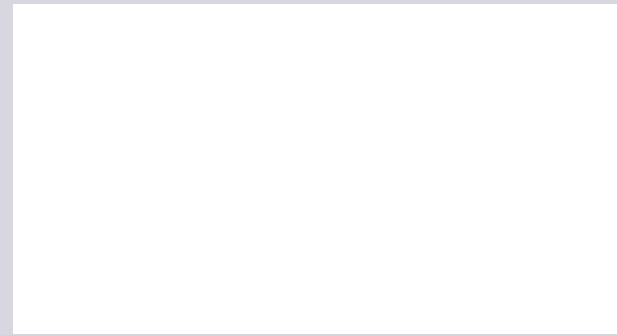
- \$ or % Competiveness
- % Wins
- Relative to Market
- Rank
- Average premiums

- **Other metrics to consider**

- \$ or % Impacts
- \$ or % Subsidization
- Expected loss ratio
- Expected retention
- Hit/conversion ratio



# Integration of Results into Decision-Making and Monitoring of Results



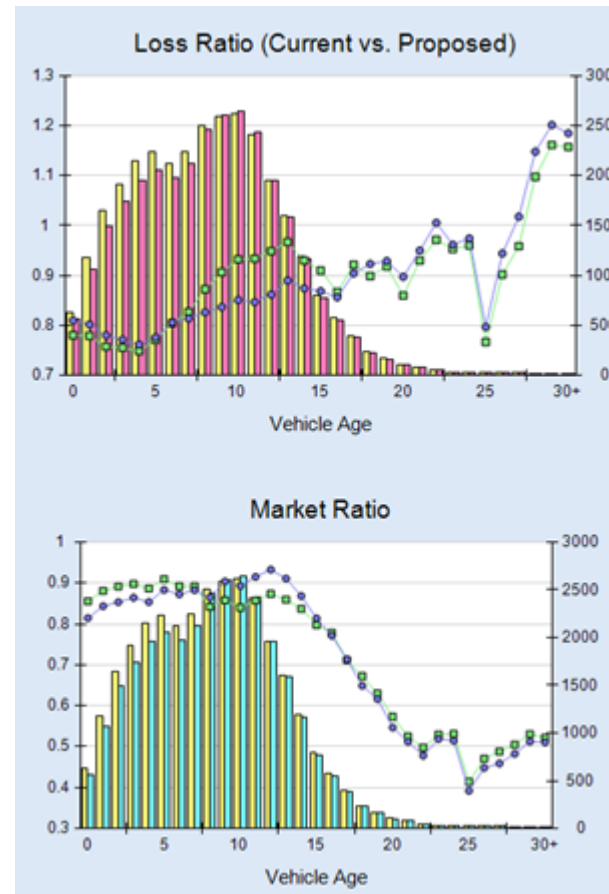


## Now what?

- Identified current competitive position
  - Calculated current premiums for your company and selected competitors, overcoming many hurdles in calculating the competitor premiums
  - Analyzed the premiums to determine the current competitive position
  
- Identified target competitive position
  
- How do you get there?
  - How should the current rating plan be revised to achieve the target competitive position?
  - How do you ensure that you are achieving the desired results?

## Integration of competitive analysis results into pricing decisions varies from subjective to highly systematic approaches

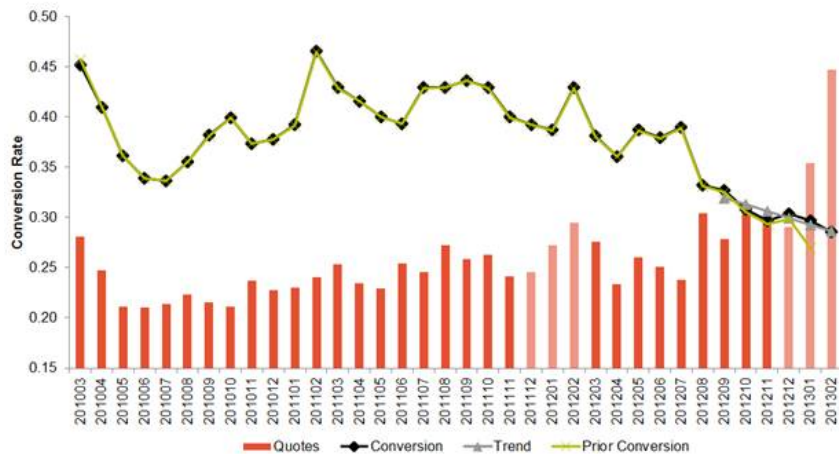
- Judgmental tweaks to rates
  - Changes through offset and base rates
  - Adjustments for regulatory rules
- Integrate CMA learnings with other data to examine a broad range of KPIs
  - Profitability
  - Subsidy
  - Volume
- Scenario test
  - Rate changes
  - Premium capping strategies
  - Underwriting changes



# Data from a competitive analysis can be used for regular monitoring of results

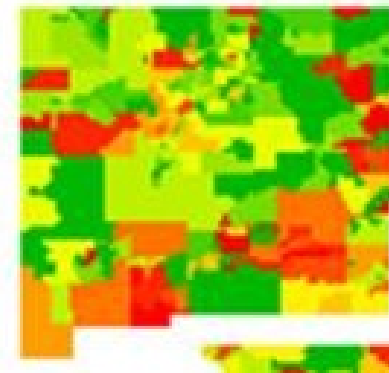
## Track quotes/conversions

- By month
- By geography



## Heat maps to demonstrate

- Density of quotes
- Conversion rates
- % change in conversion (from prior period)



## Conversion trends by key segment — e.g.,

- Tier
- Prior claim
- Youth vs. non-youth
- # vehicles (to right)
- Average premium size

