CAS Annual Meeting

How “Smart” is Your Competitive Intelligence?

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November 2016

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Benefits of Investing in Competitive Analysis

An effective competitive market analysis approach can be used to improve operations in a variety of ways

Current Rating Plan:

- Identify strengths and weaknesses
- Knowing where you are in spectrum of competitor prices and products can help inform 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 start-ups and smaller carriers, the results of a quantitative analysis could be used to establish a rating plan

Marketing:

- Combining results of competitive analysis with your 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

Low Degree of Sophistication → High Degree of Sophistication


Agent Feedback


Competitor Rate Changes


Company Statistics


Market Basket


External Quotes


CMA: Qualitative Analysis


CMA: Quantitative Analysis

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

There are several sources of competitor premiums today – each with pros/cons

1. Rate filings / manuals

Procure publicly available rate filings and program rate order calculations into home-grown program

- Pro: Direct control over result, no vendor fees
- Con: Labor intensive, risk of misinterpretation or error

2. Comparative rating vendors

Vendor software tools (e.g., LexisNexis, Quadrant) that contain rate calculations based on publicly available filings

- Pro: Transparent; granular premiums (e.g., vehicle/coverage level); can be applied to any customer dataset
- Con: Premiums based on interpretation and some assumptions; errors possible

3. Broker quotation systems

Systems (e.g., Vertafore) used by independent agents to quote multiple carriers; vendor may supply competitor premium data to subscribing members

- Pro: Real quotes used by IAs
- Con: Limited to subscribing carriers; rates cannot be extended to other customer datasets; competitors are anonymized; premiums at policy level

4. Aggregators

Quote comparison website (e.g., Compare.com)

- Pros/Cons similar to #3

5. Self-declared premiums

Collected during quote process

- Pros: no vendor fees
- Cons: need process to collect consistently; may be inaccurate/biased

Key Challenges in Using Competitor Premiums 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 close 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

Company A

Credit Group
A
B
C
D

Company B

Credit Group
1
2

Alignment

Company A	Company B
A, B	1
C, D	2

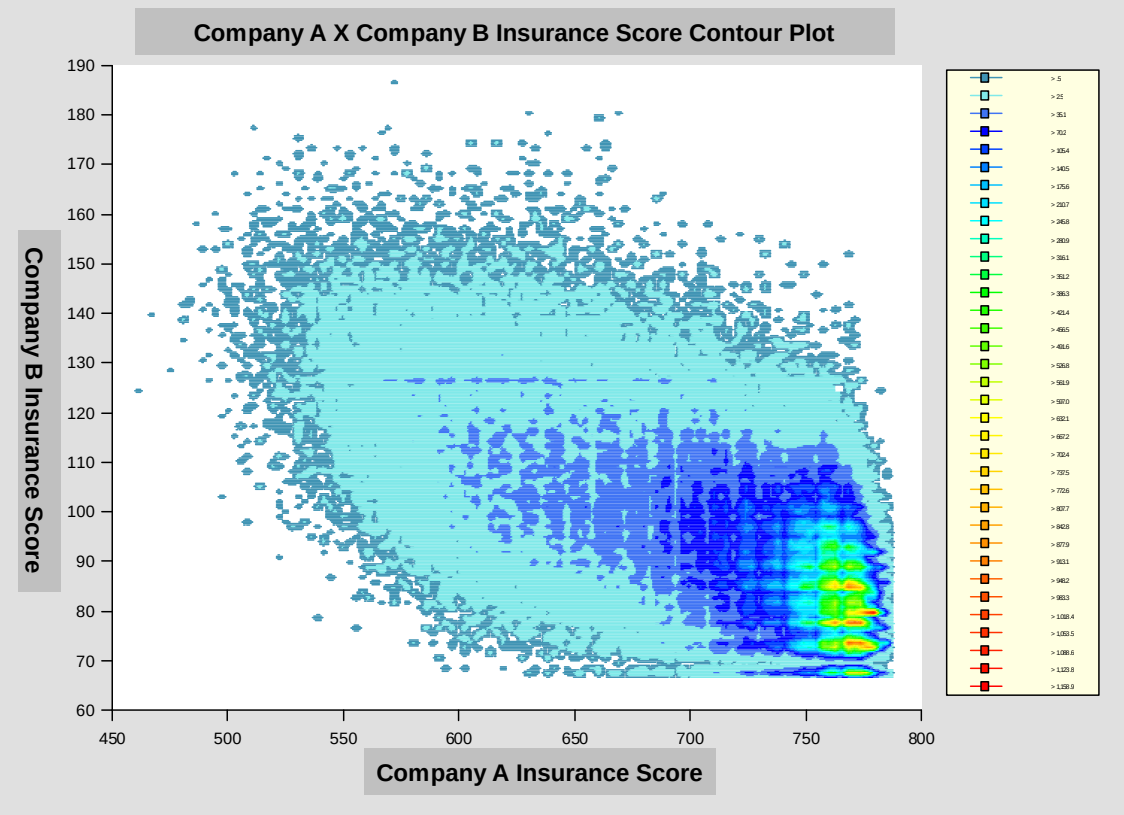
Alternative approaches to aligning credit groups/tiers can increase accuracy (but can be costly and/or time consuming)

- 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)

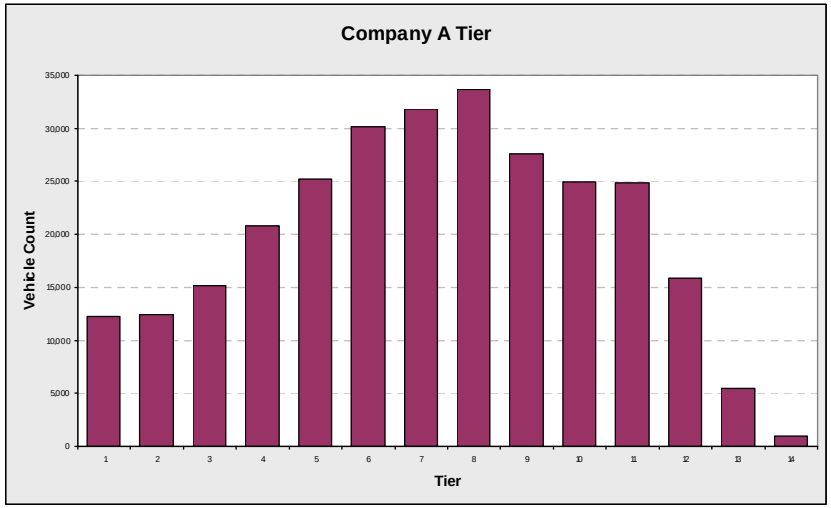
Credit-based insurance score used by different companies assess risk differently

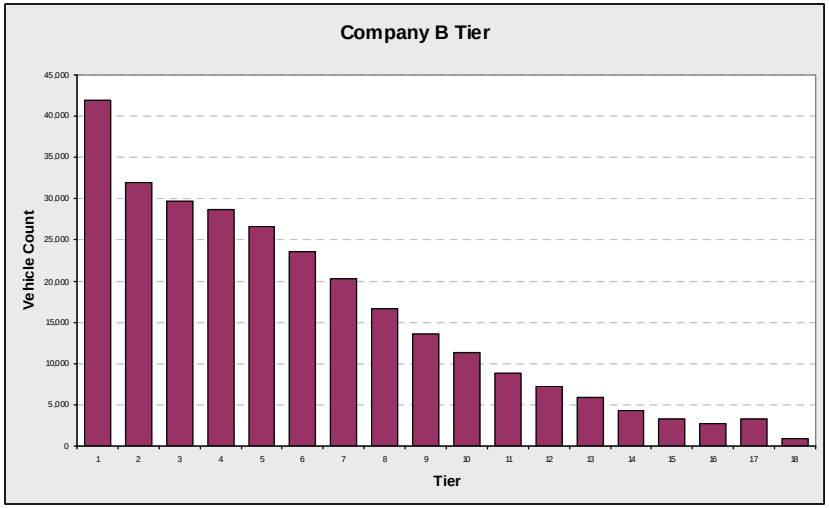
- "Company A" and "Company B" are personal auto insurers
  - Both are national writers with market share in the top 10 in most states
- Credit-based insurance scoring models
  - Company A uses a vendor model
    - High score is best (lowest risk)
  - Company B uses a proprietary model
    - Low score 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

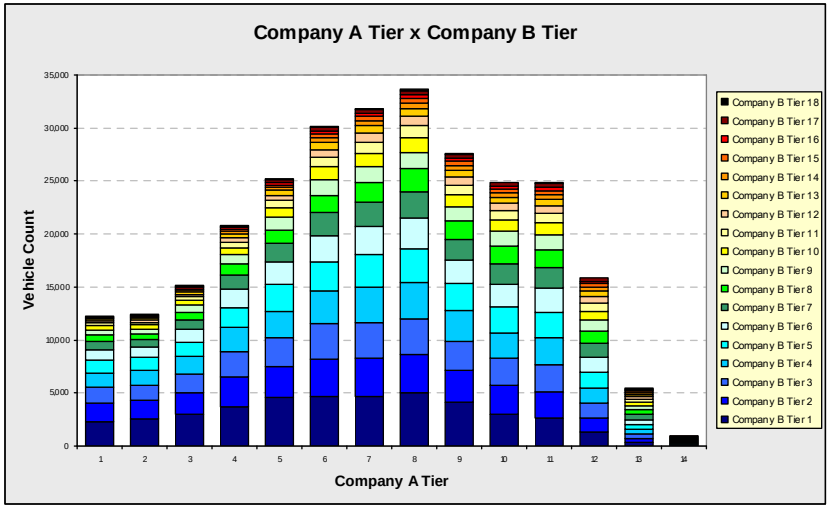
- Tier is a combination of the credit-based insurance score and other variables for both companies
- Company A and Company B use different variables in the tier determination
- Examples of variables used include
  - Prior liability limits
  - Lapses in coverage
  - Education
  - Occupation
  - Accident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

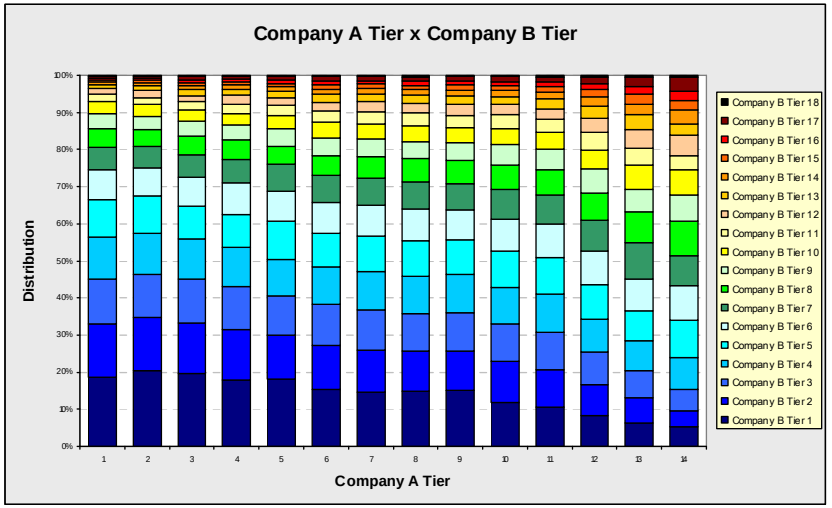




It is possible for a policy considered low risk for Company A to be considered high risk for Company B

- 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 in Quantitative Competitive Analysis

If you currently analyze competitive metrics only on an aggregate basis…

(or focus on territory as the only segment for a univariate analysis)

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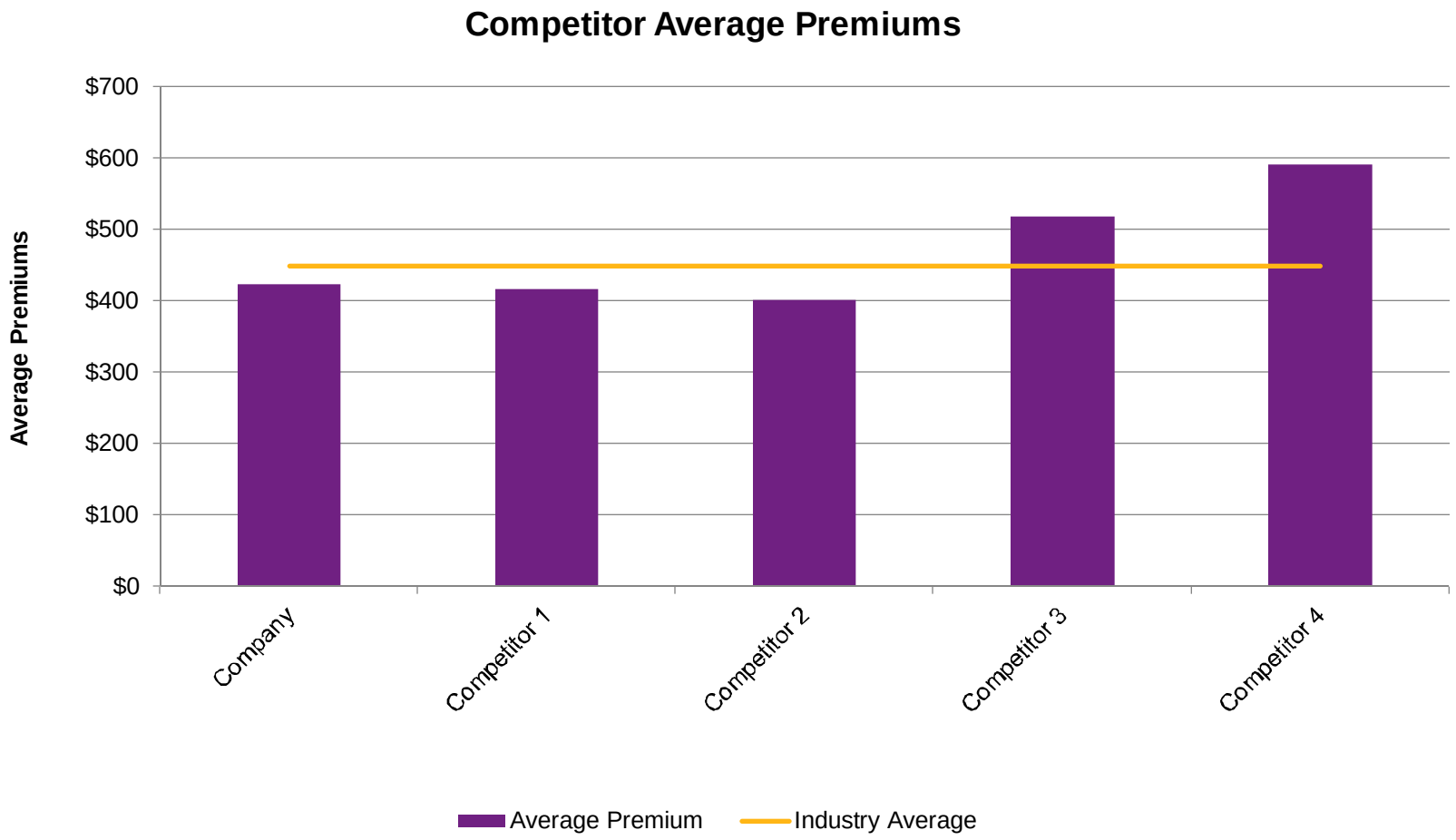

…all variables used in a rating plan can be reviewed in a univariate rating factor/segment analysis

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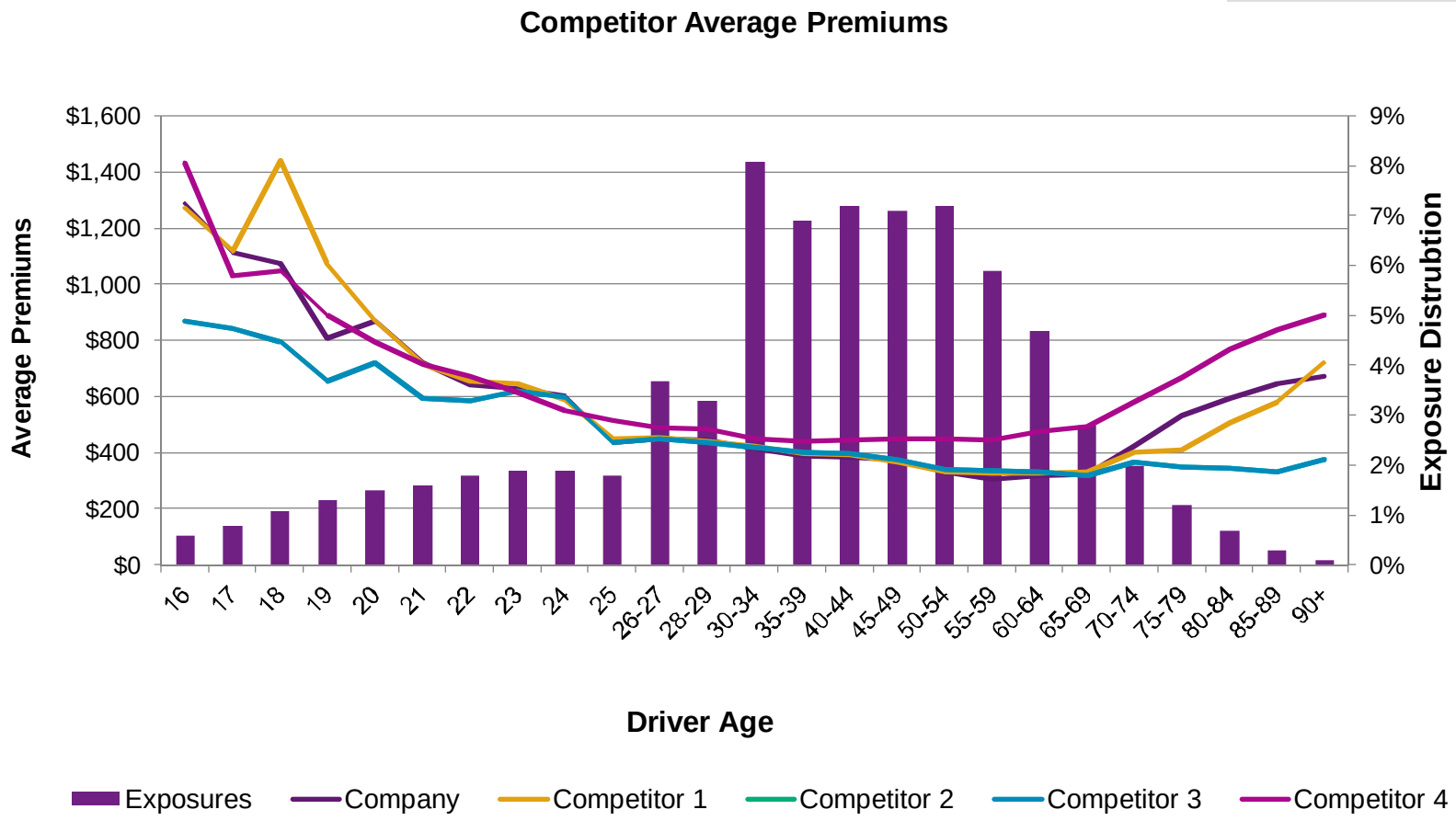

If you currently perform competitive analysis only on quote data (or only on your in-force book of business)…

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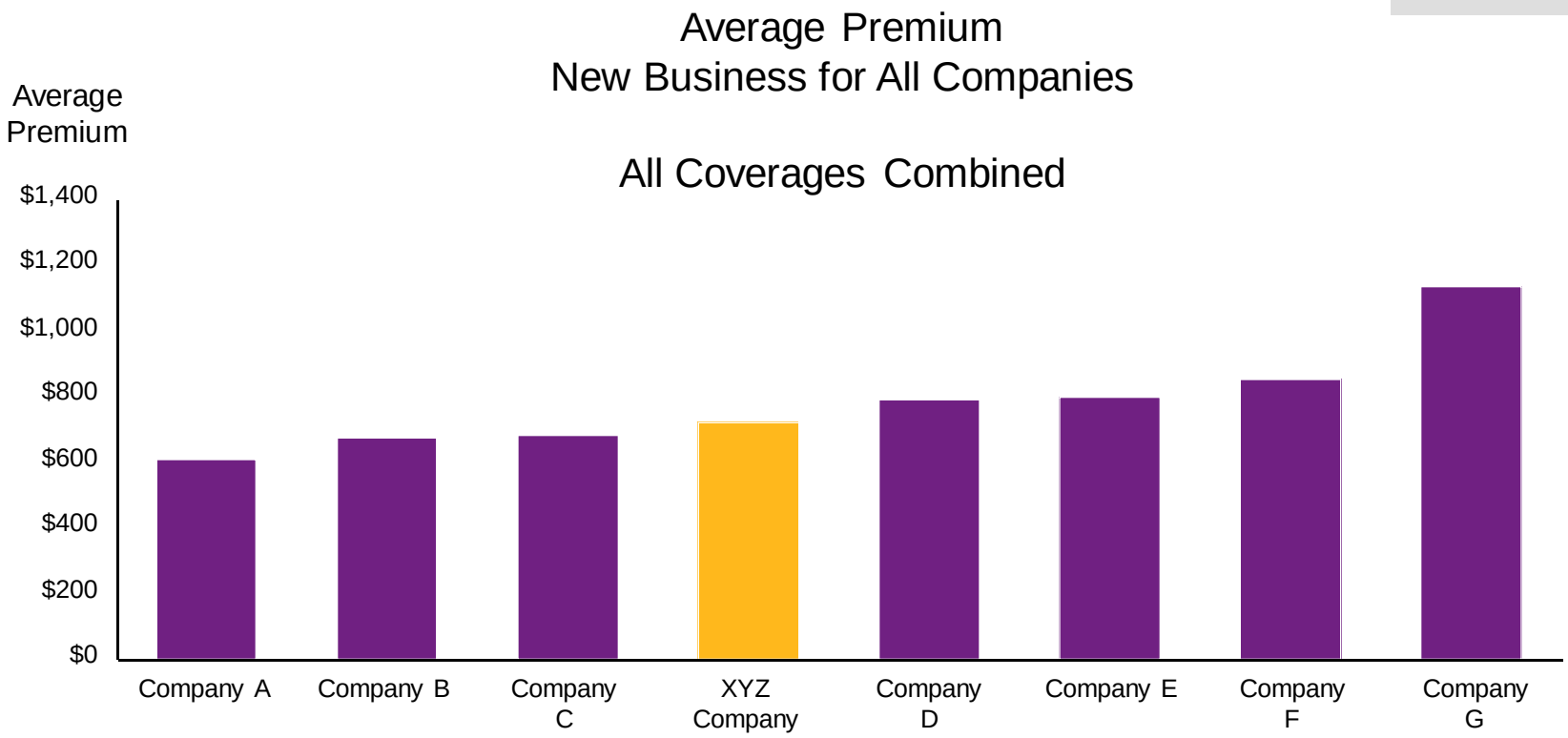

Beware of potential inherent bias in using current policy mix of business

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

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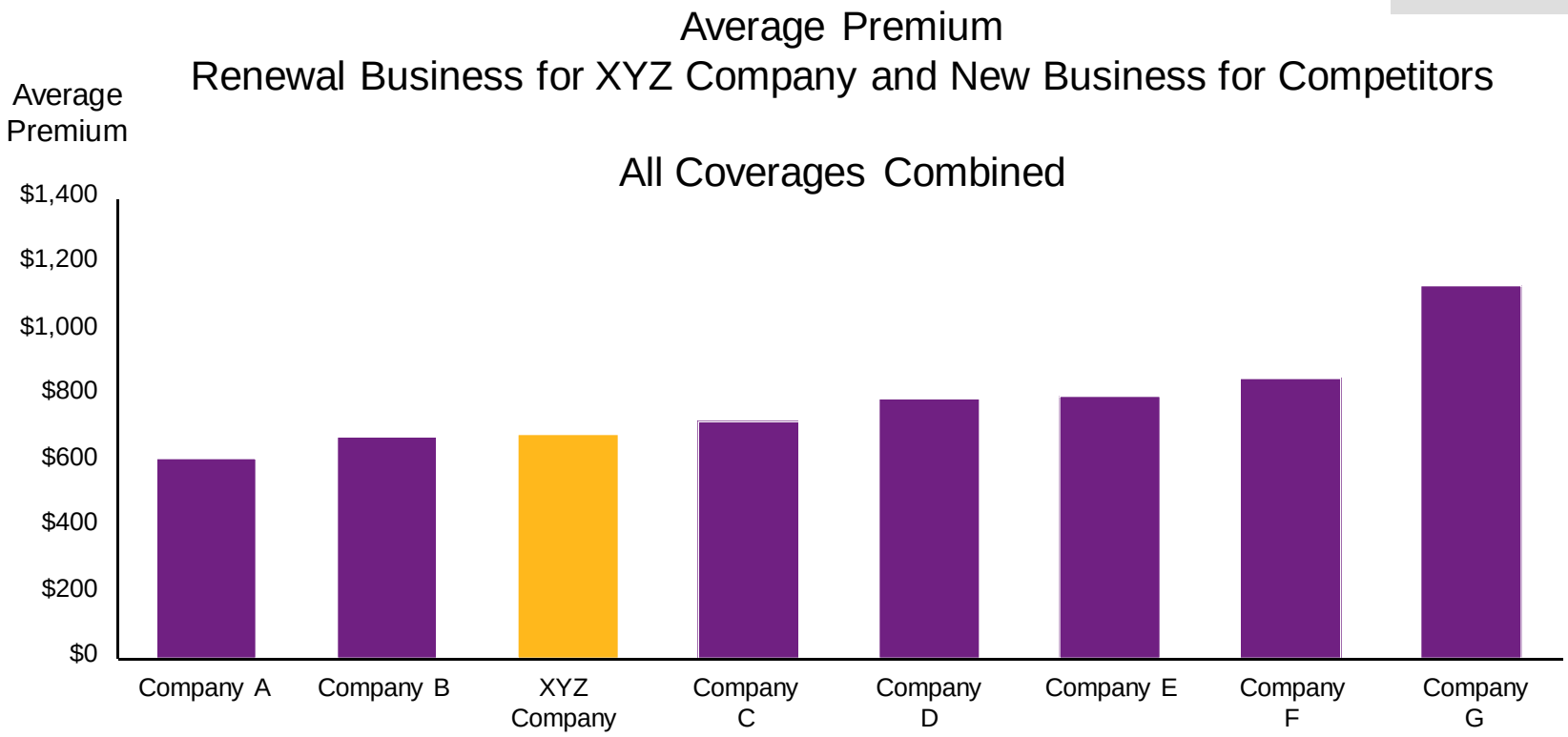
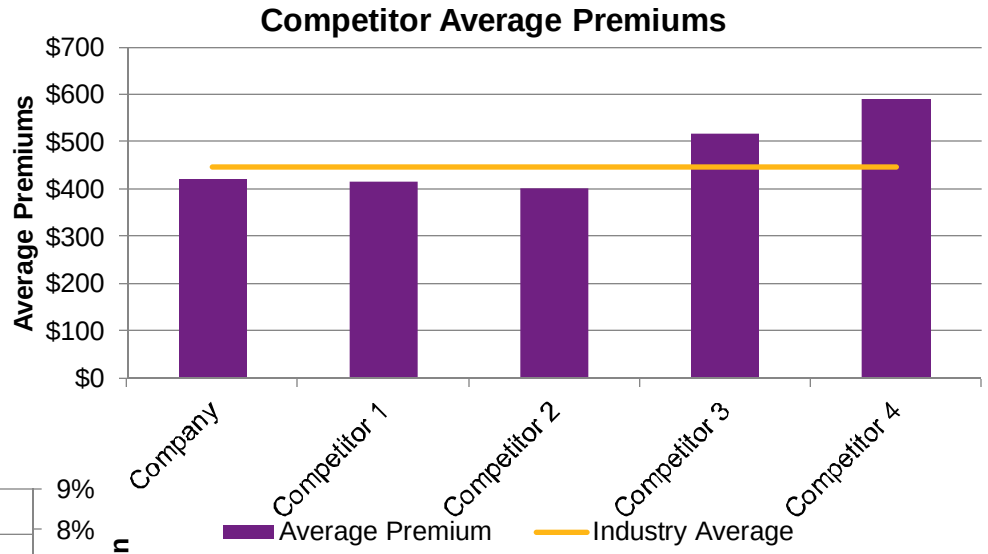
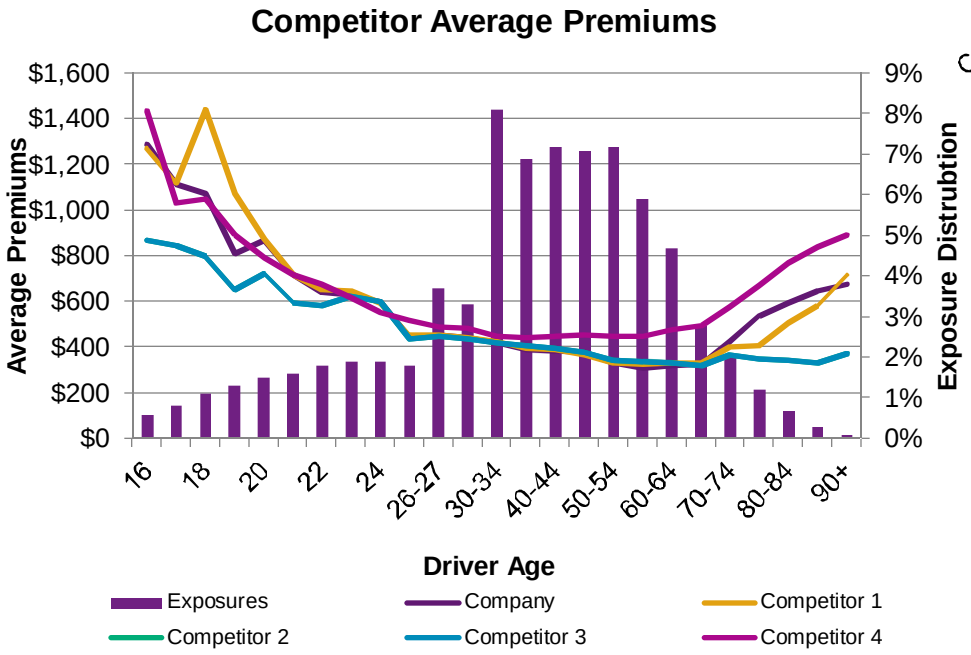


Beware of potential inherent bias in using current policy mix of business

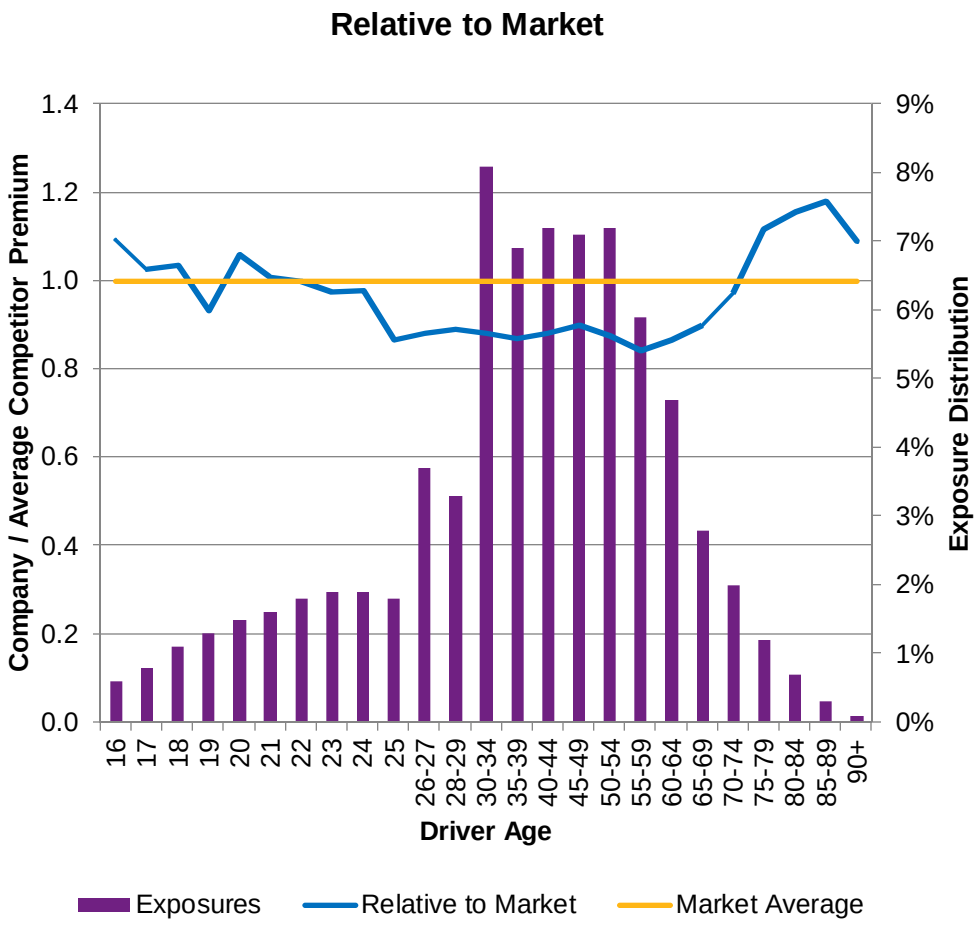
If you currently focus on competitor average premiums as your metrics…





…consider expanding to additional metrics

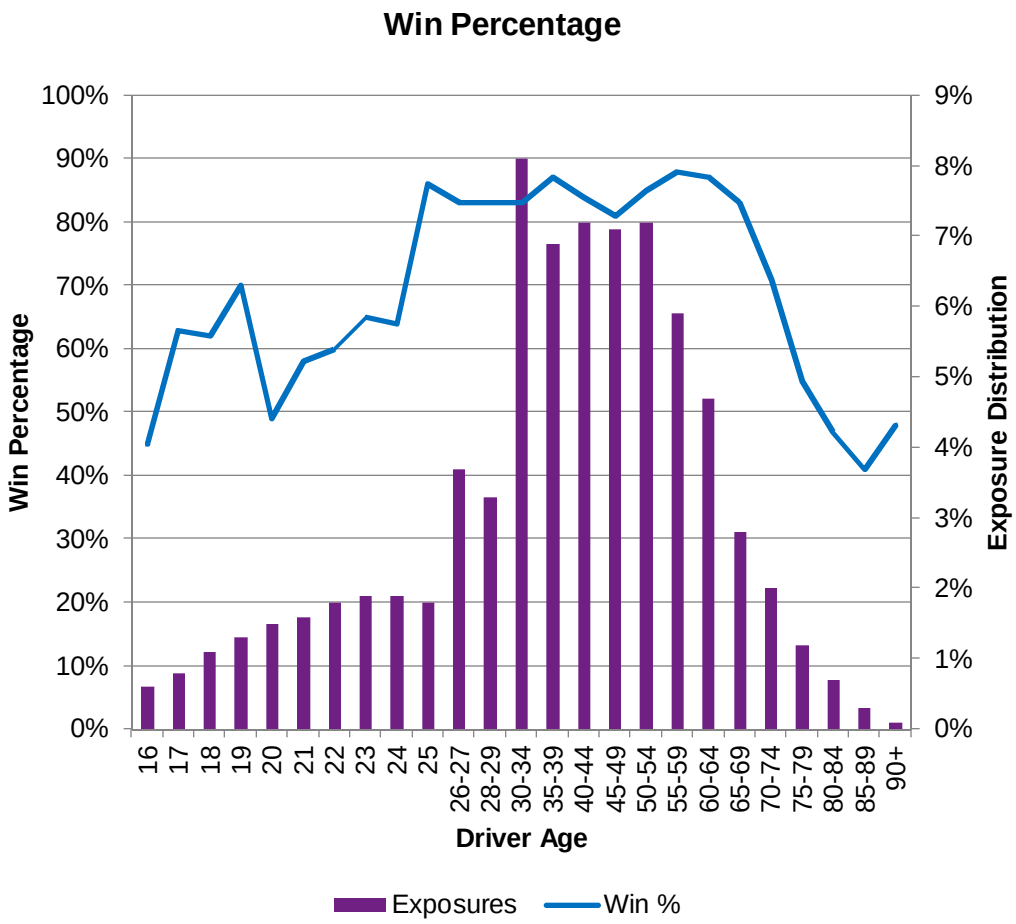
Including Relative to Market…



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

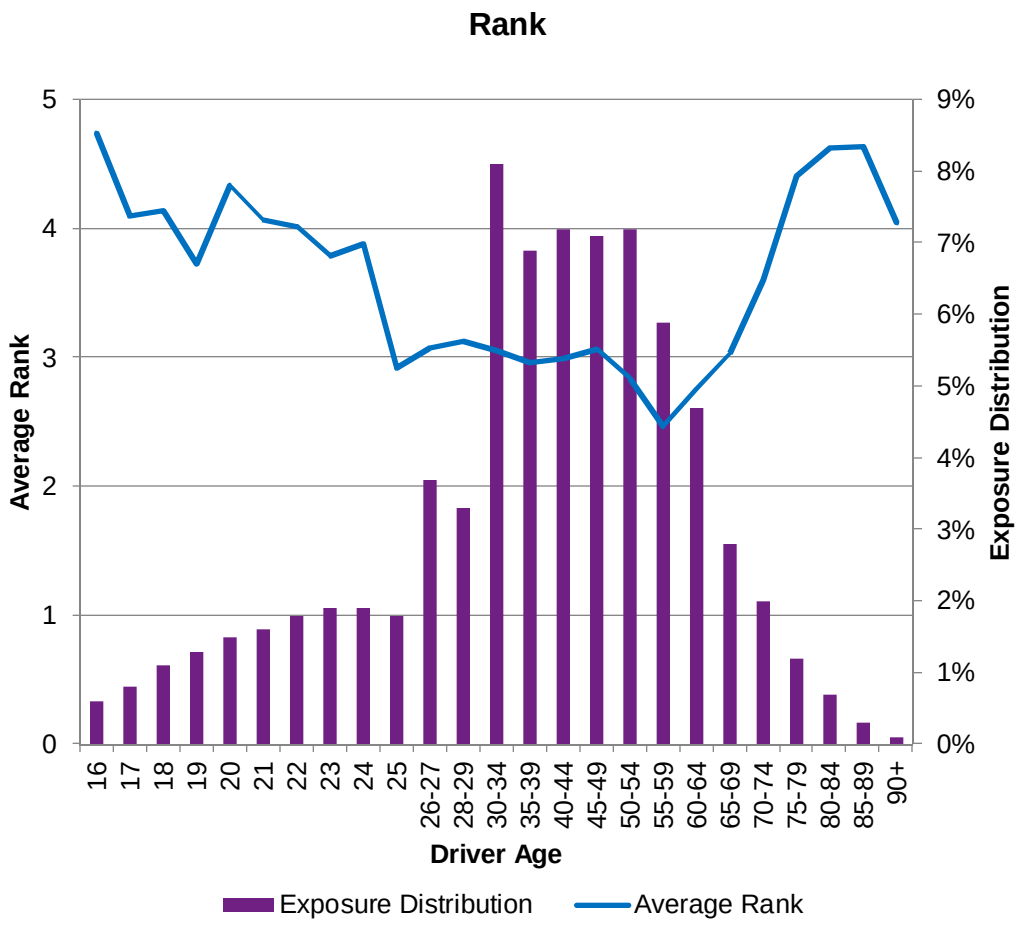
…Win Percentage…



- Percentage of the time that Company's "wins"
- Criteria for a "win" may be defined by XYZ Company
- A "win" may be defined as:
  - XYZ Company's premium is below the competitor premium
  - XYZ Company's premium can be up to $50 more expensive
  - XYZ Company's premium can be up to 5% more expensive

…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

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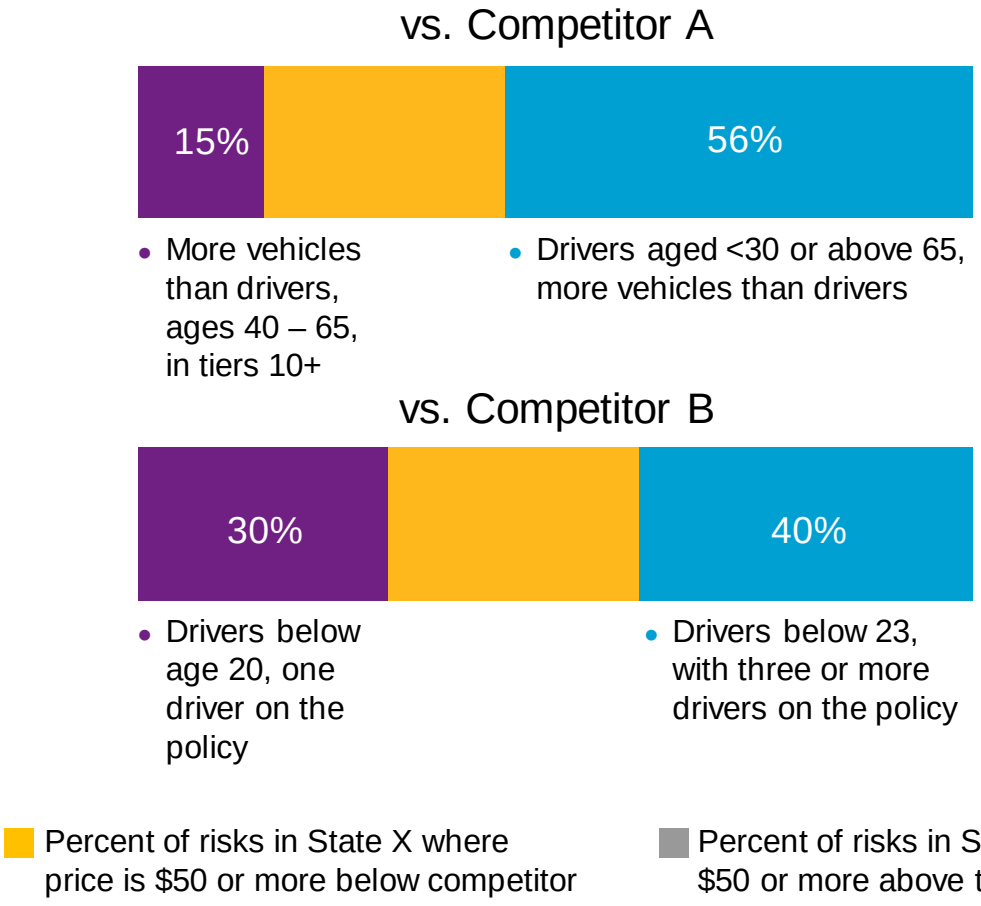
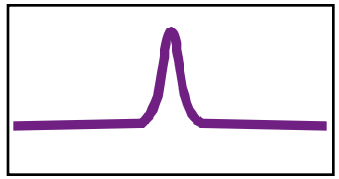


Note: Text bullets show representative types of risks.

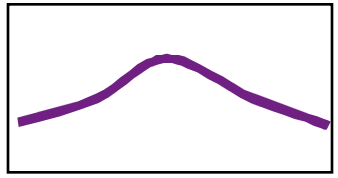
Competitive position can be segmented in a cluster analysis, which focuses on the company and competitor premiums on two dimensions

Market Competitive Intensity Index → Measure of price dispersion In the market

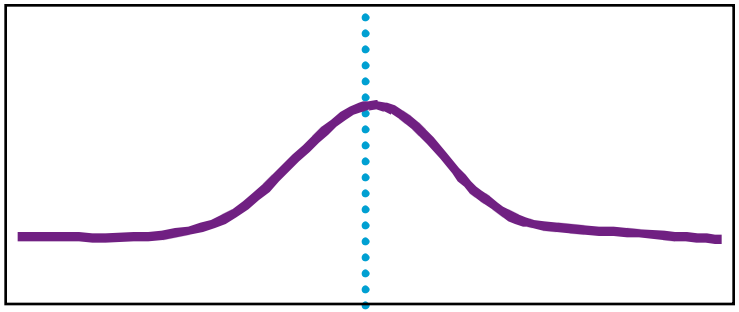
→ Low price dispersion/ high competitive intensity



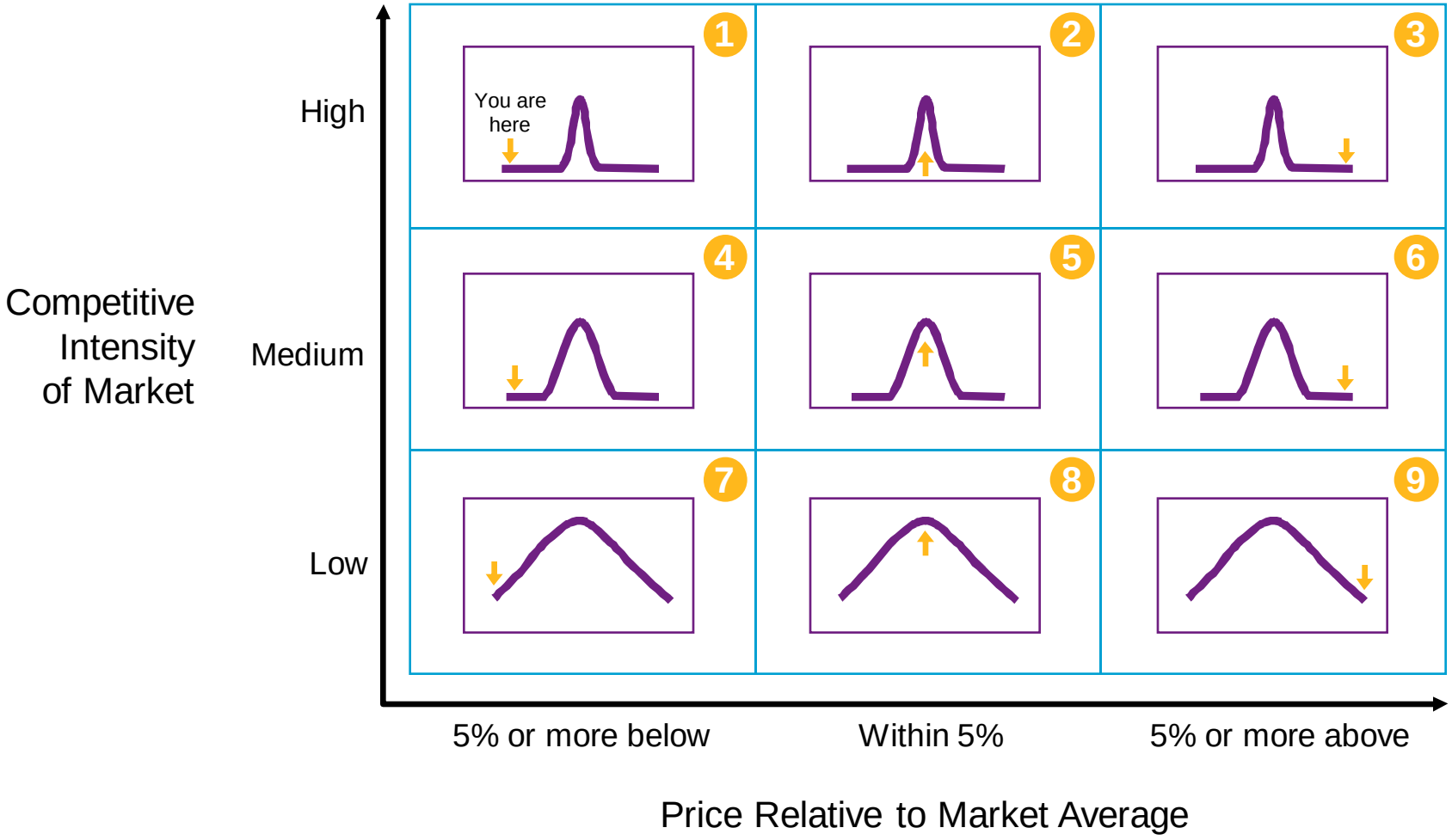
→ High price dispersion/ Low competitive intensity



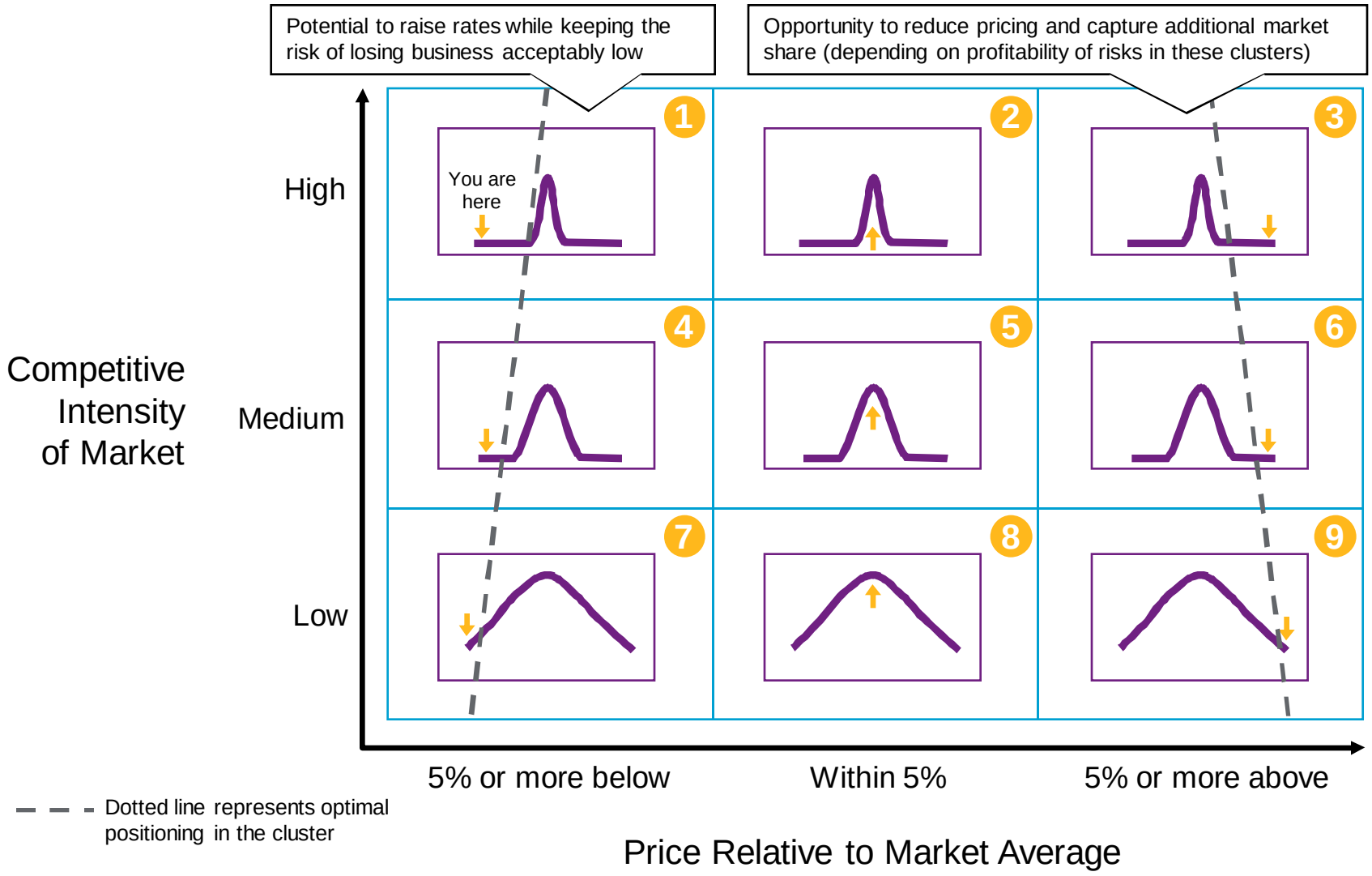
Price → Client's price compared to market →



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



The clusters suggest potential pricing strategies



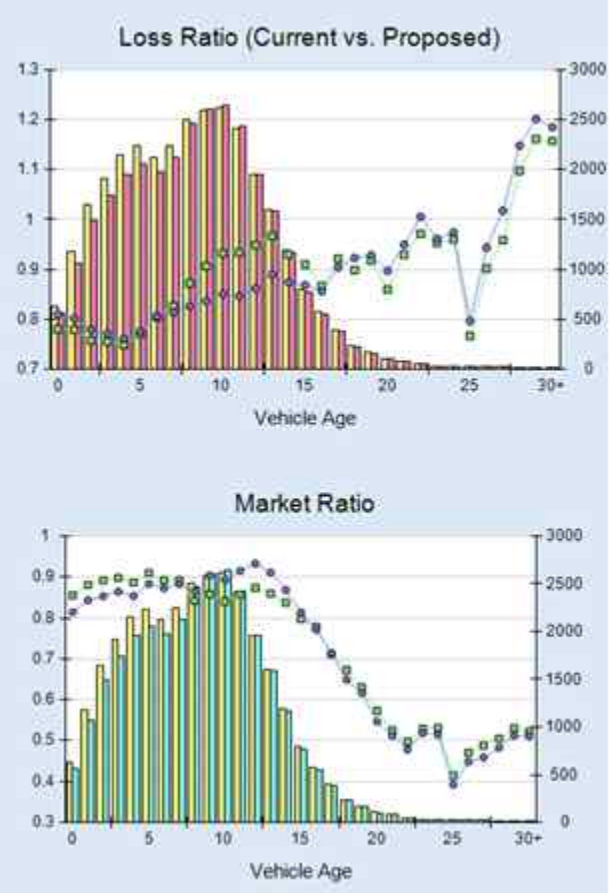
Integration of Results into Decision-Making and Monitoring of Results

Now what?

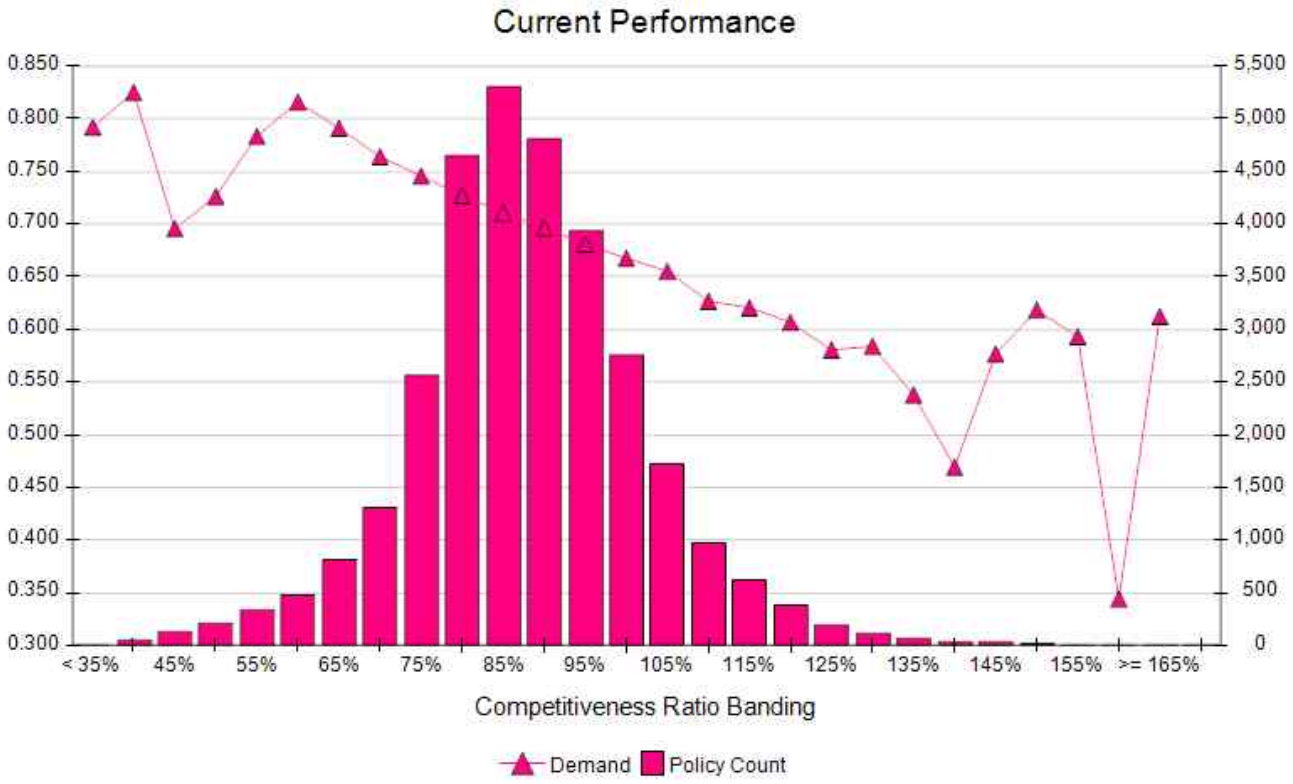
- Identified current competitive position
  - Calculated current premiums for your company and selected competitors, overcoming many hurdles in calculating the competitor premiums
  - Analyzed the premiums to determine the current competitive position
- Identified target competitive position
- How do 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 based on CMA learnings
- 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
- Rules-based pricing
  - Set target premium rules and apply to each policy
  - Fit models to this response
  - Design rating plan and test



Competitive metrics should be used for regular monitoring of results



In Conclusion…

- Competitive analysis can inform pricing, underwriting and marketing decisions
- The science has progressed beyond asking for agent feedback or reviewing a handful of risk profiles
- Sources of competitor premium data are expanding, each with pros/cons
- Data accuracy can be improved – make sure your effort aligns with your goals
- Quantitative analysis examines a variety of competitive metrics on large customer datasets, allowing
  - Drill-down and filtering
  - Analysis of relative competitive differences and degrees of market intensity
  - Overlay of additional metrics (e.g., profitability)
- Acting on competitive analysis results can vary from subjective tweaking to more systematic approaches
- Competitive metrics add valuable information to your monitoring efforts

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