Intelligent Use of Competitive Analysis

2012 Ratemaking and Product Management Seminar

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TOWERS WATSON

Session agenda and objectives

- Today, we will discuss
  - Different industry approaches to competitive analysis
  - Key challenges in performing quantitative competitive analysis
  - Analysis of “on-the-street” prices

Competitive Market Analysis

Insurers use various approaches to competitive market analysis — we will consider advantages and disadvantages of six specific techniques

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

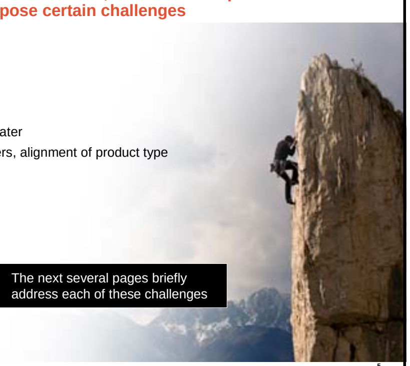
These options are not mutually exclusive — different approaches can be used in combination

Addressing Challenges

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

Key Challenges

- Company selection
- Credit/tier alignment
- Missing variables
- Choice of a comparative rater
- Particularly for homeowners, alignment of product type
- 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
  - For example, Allstate writes auto insurance in at least 14 companies across the country
- 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)

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

- If a comparative rater provides automatic credit scoring alignment at all, it usually provides a simplified approach, such as this:

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

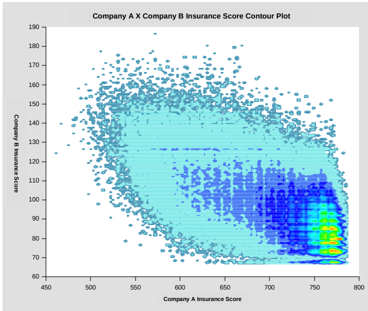
This approach has obvious disadvantages and could lead to incorrect conclusions

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)

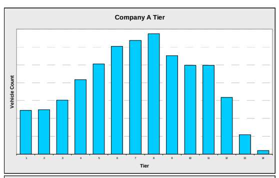
Credit-based insurance score used by different companies assess risk differently

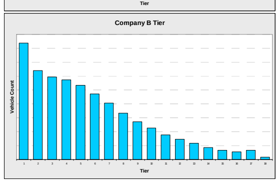
- "Company A" and "Company B" are personal auto insurers
  - Both are national writers with market share in the top 10 in most states
- Credit-based insurance scoring models
  - Company A uses a vendor model
    - High score is best (lowest risk)
  - Company B uses a proprietary model
    - Low score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

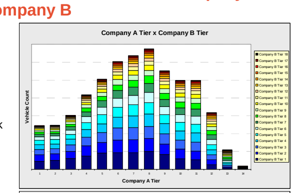
- Tier is a combination of the credit-based insurance score and other variables for both companies
- Company A and Company B use different variables in the tier determination
- The same data set was used to generate both tier graphs
- Examples of variables used include
  - Prior liability limits
  -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

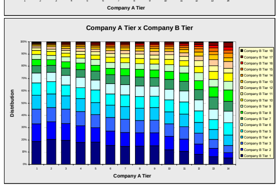




It is possible for a policy considered low risk for Company A to be considered high risk for Company B

- 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





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")

There are a number of important due diligence considerations in selecting a comparative rater

- Are the rates for your company and the selected competitors already included in the tool (and if not, what are the additional costs to include?)
  - What are the alternatives if additional cost is prohibitive?
- Does the software support batch rating hundreds of thousands of policies (or more) in a timely fashion? How much computing power is necessary?
- Does the platform accurately perform:
  - Driver assignment for personal auto?
  - Territorial assignment?
  - Tier assignment?
- What process does the vendor have in place to ensure accurate results?
- What types of training and support services does the vendor provide?
- Does the vendor have a tool to convert your exposure data into a format that the batch rater can use?
- Does the vendor have appropriate marketplace knowledge to understand complex rate filings?

Although companies can decide to perform this work in-house, the effort has significant staffing and cost implications

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

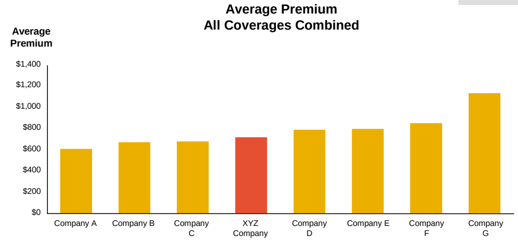
What process will be followed to ensure that the calculated competitor rates are accurate?

- 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")

Analysis of "On-The-Street" Prices

A quantitative analysis can compare new and renewal business pricing against competitors for the entire book…

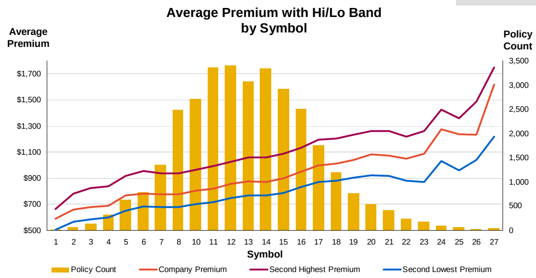
ILLUSTRATIVE



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

…and by rating factor/segment…

ILLUSTRATIVE



…to identify the current competitive 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 may also be considered when determining the target market position
  - $ or % Impacts
  - $ or % Subsidization
  - Expected loss ratio
  - Expected retention
  - Hit/conversion ratio

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?

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