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# Marketing Applications of Predictive Analytics



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# Overview

- Who's Buying What?
- Who's Selling What?
- A Proactive Approach
- Monitoring Results

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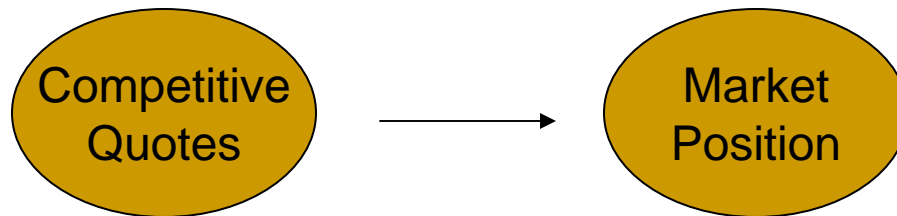
# Who's Buying What?

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# Questions

- Where Are Our Products Competitive?
- What Should We Encourage Our Agents to Sell?
- Where Do We Have a Competitive Advantage?

# Historical View - Competitive Position



- Based on rate differences
- If my rates are lower than the competitor, I must be more competitive
- If my rates are higher than the competitor, I must be less competitive
- Assumes insurance decision is solely based on price

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# “Those Were The Days”...How We Got Competitive Information

- Insurance Department
- Manual Exchange
- Industry Meetings
- Directly from Competitors
- Agents

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# What We Did With the Competitive Information

- Rate Examples
- Explored New Factors
- Adjusted Rate Actions Accordingly

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# What We Did With the Competitive Information

- Rate Examples – not sure if rates being calculated are right
- Explored New Factors – if you know what they are
- Adjusted Rate Actions Accordingly –  
now it is like taking a shot in the dark



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# That Was Then, This Is Now...

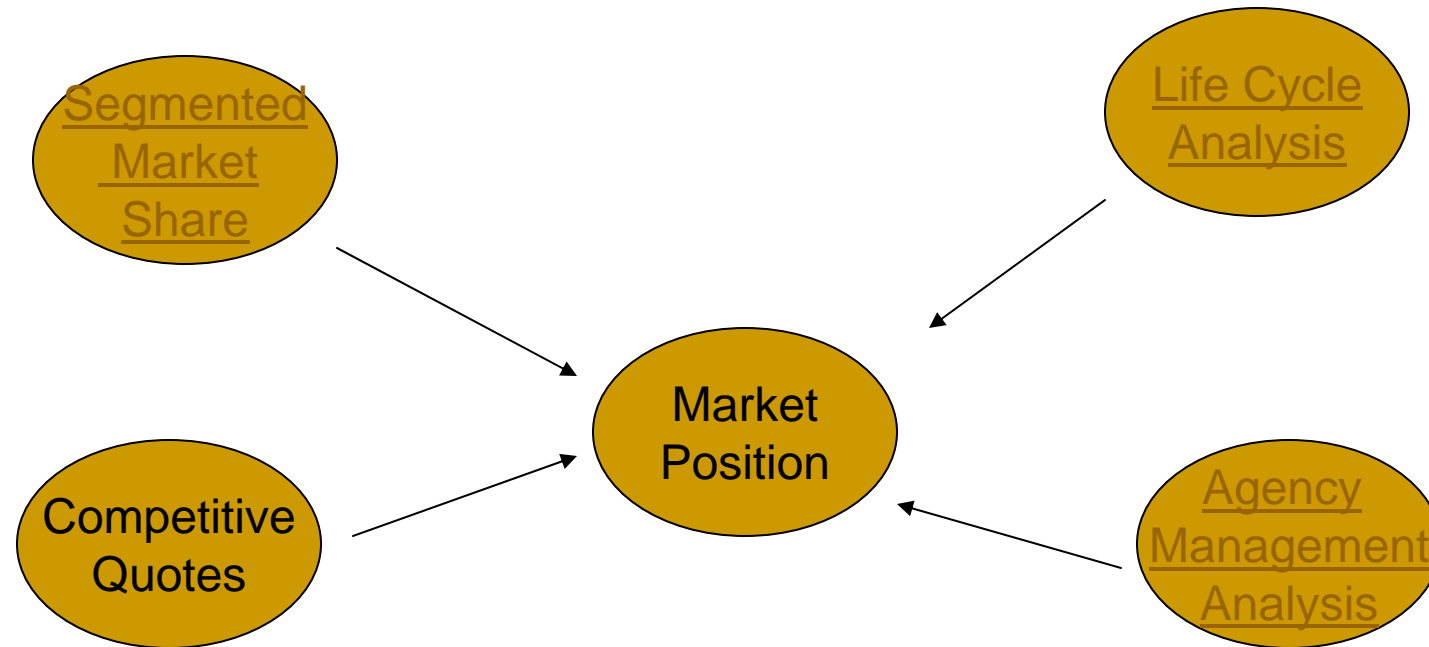
- Increased Use of Tiering/Scoring
- Increased Use of New or Proprietary Factors
  - Insurance Score
  - Prior Limits
  - Historical Non-chargeable Losses
- Increased Difficulty Getting Competitor Information
  - Filings on Copy Resistant Paper
  - Classifying Certain Information as Underwriting
  - Agents Not Getting Manuals
- Increased Complexity of Rating Plans

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# Competitive Positioning

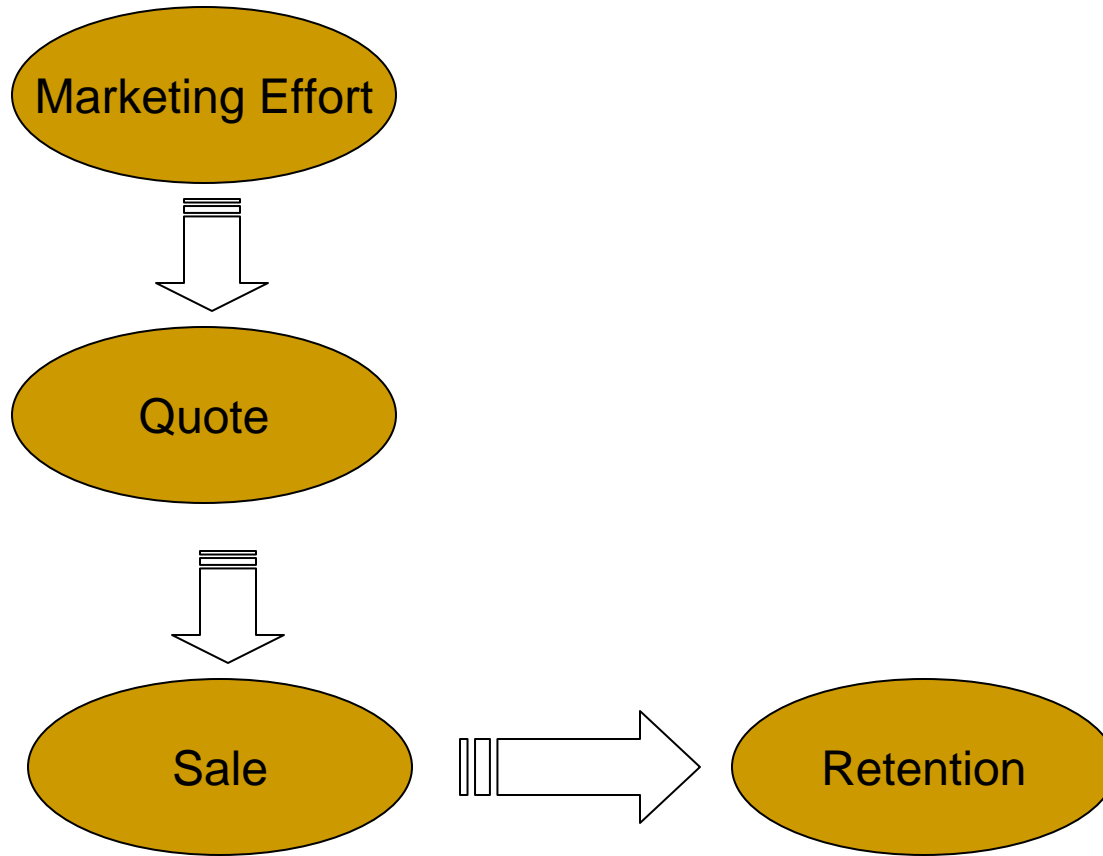
- Competitive Positioning – Determining How Your Company Compares to Their Competitors
- Considerations
  - ❑ Risk Characteristics
  - ❑ Geography
  - ❑ Price
  - ❑ Brand
  - ❑ Distribution channel

# Changing View of Competitive Positioning



- Based on market realities
- Still retains analysis of price
- Also includes market reality of actual results
- Allows insurer to then investigate cause of competitive issues

# Business Life Cycle



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# Retention & Conversion Analysis

- Quoting Analysis: Likelihood of a Prospective Insured Obtaining a Quote
- Conversion Analysis: Likelihood of a Insured that Received a Quote Purchasing from You
- Retention Analysis: Likelihood of a Current Insured Renewing with You
- Cross Selling Analysis - Likelihood of a Current Insured Purchasing Additional Coverages/Policies
- Use of These Likelihoods as a Proxy for Competition
  - Does not tell why you are losing/not writing risks

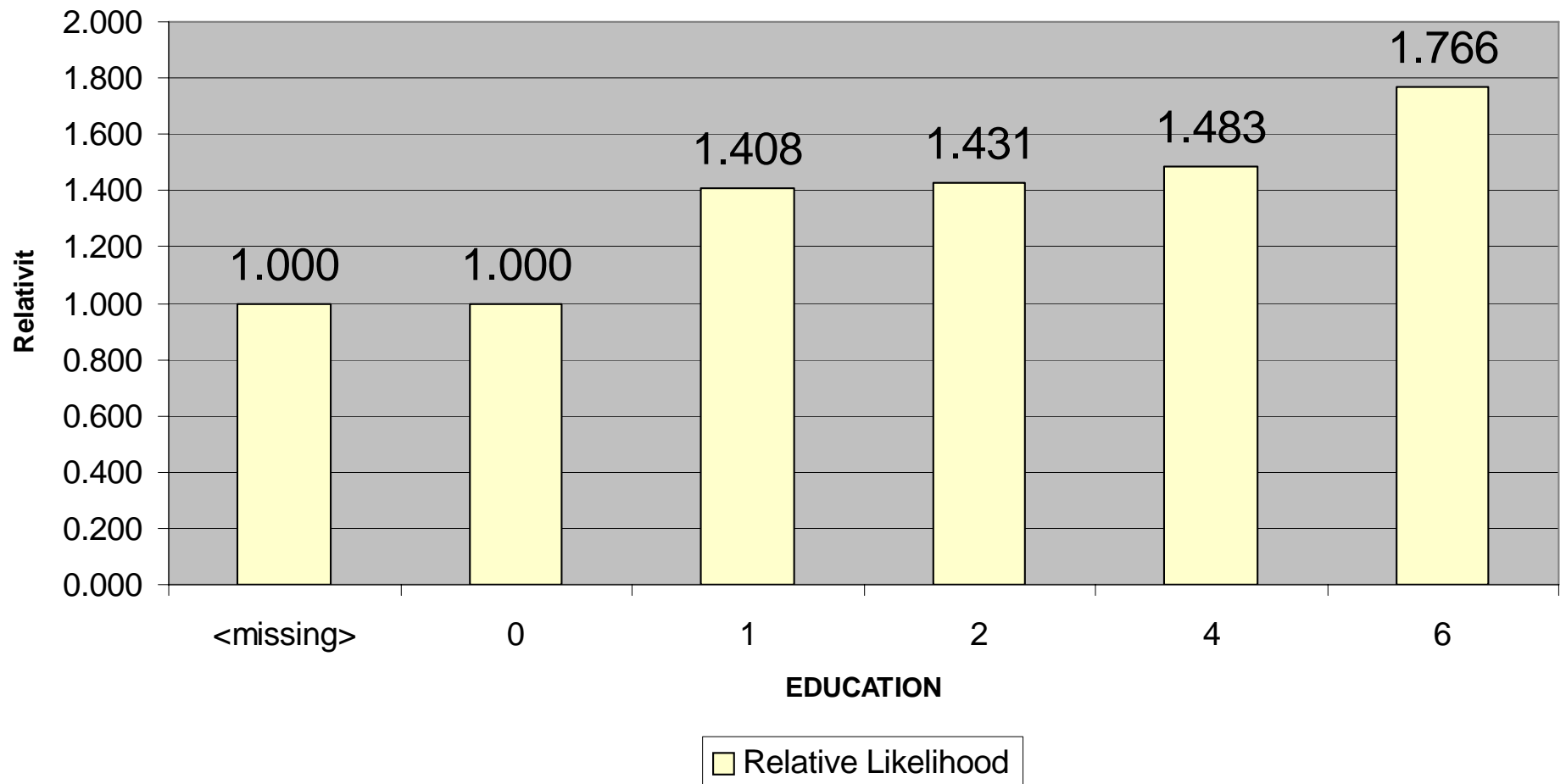
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# Quoting Analysis

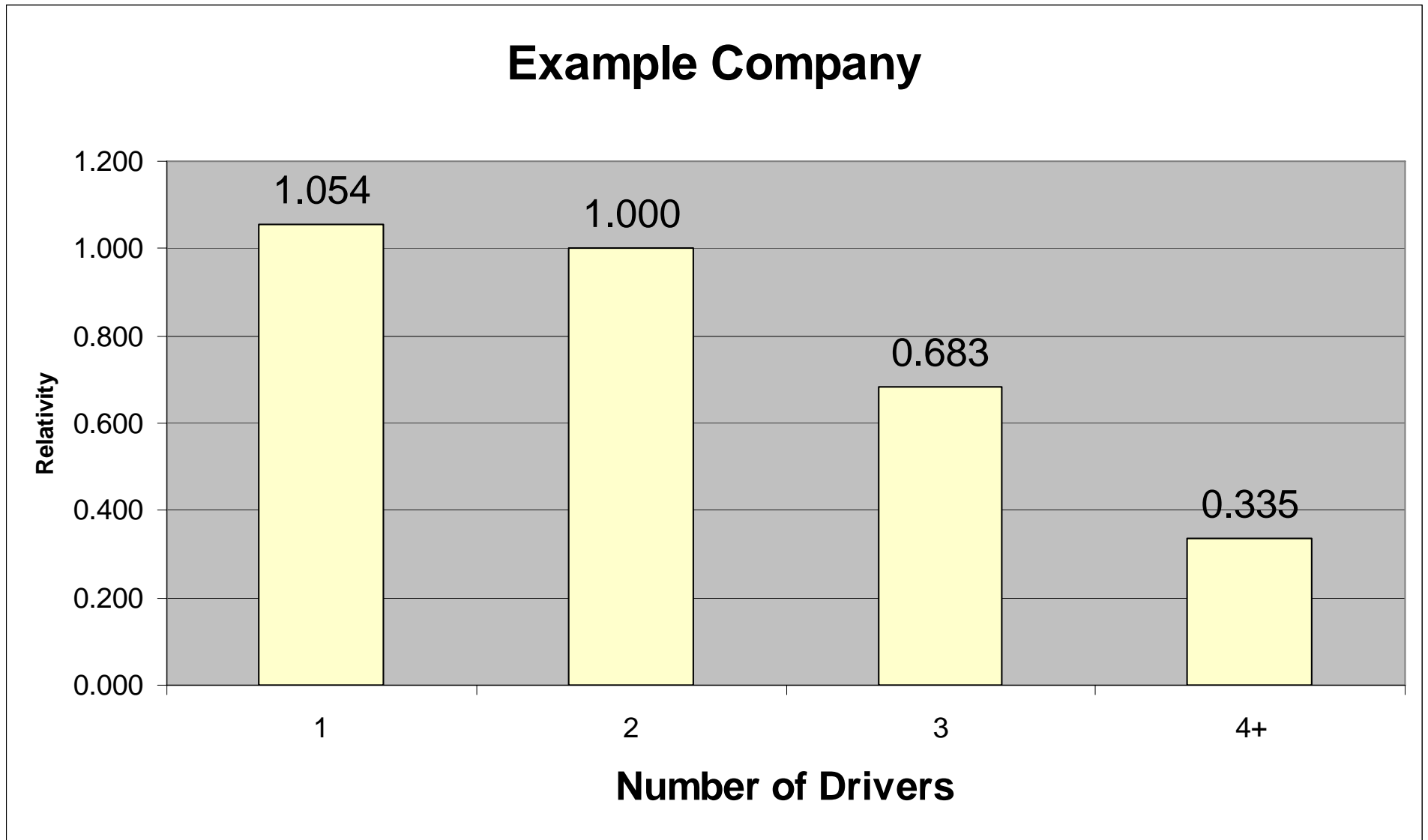
- Measure characteristics of shoppers, quoters, purchases, and retained business
- Characteristics
  - Internal company information
  - External demographic information
  - Credit profiles
  - Shopping incentives
- Identify insureds to target

# Conversion Analysis Example

## Example

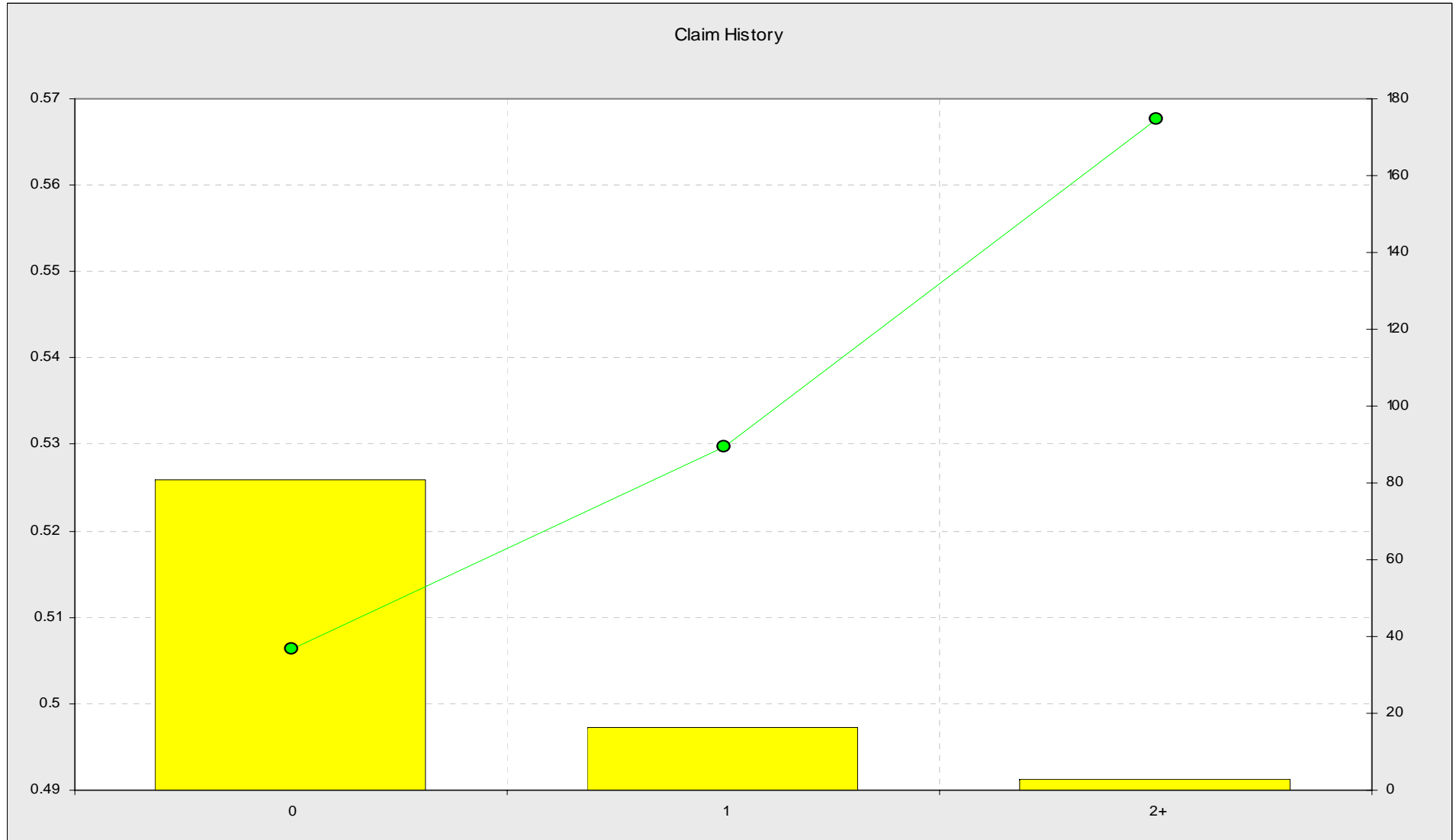


# Conversion Analysis Example





# Retention Analysis



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# Segmented Market Share

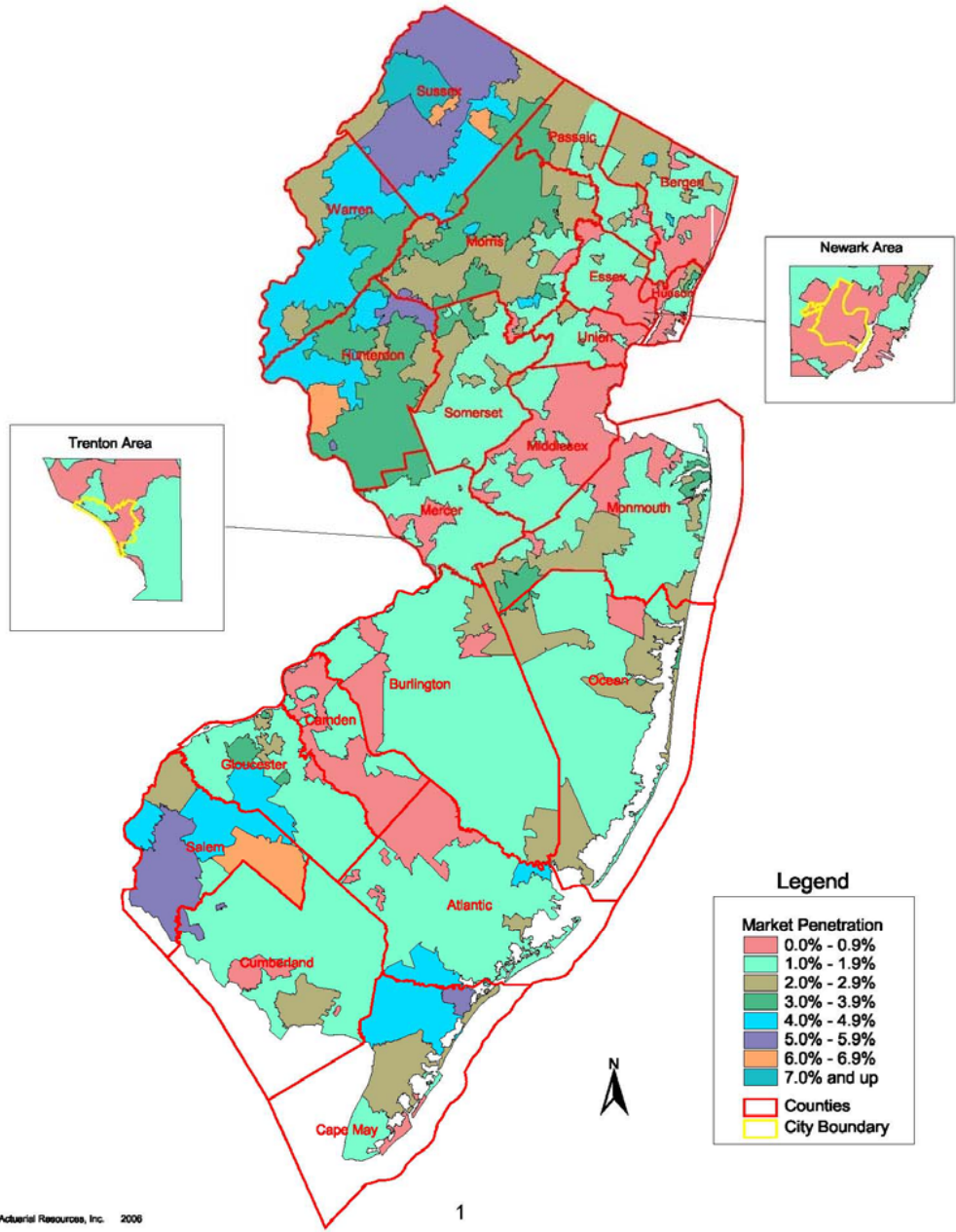
- Overall Market Share is the Focus
- Many Risk Segments can be Segmented by ZIP/County
  - Personal Vehicle Registrations
  - Homes
  - Businesses
  - Commercial Vehicles
- Some Registration Information Can be Tied to Demographic Information
  - Age
  - Marital Status
  - Homeowners
  - Occupation
  - Etc.

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# Detailed Market Share Segments

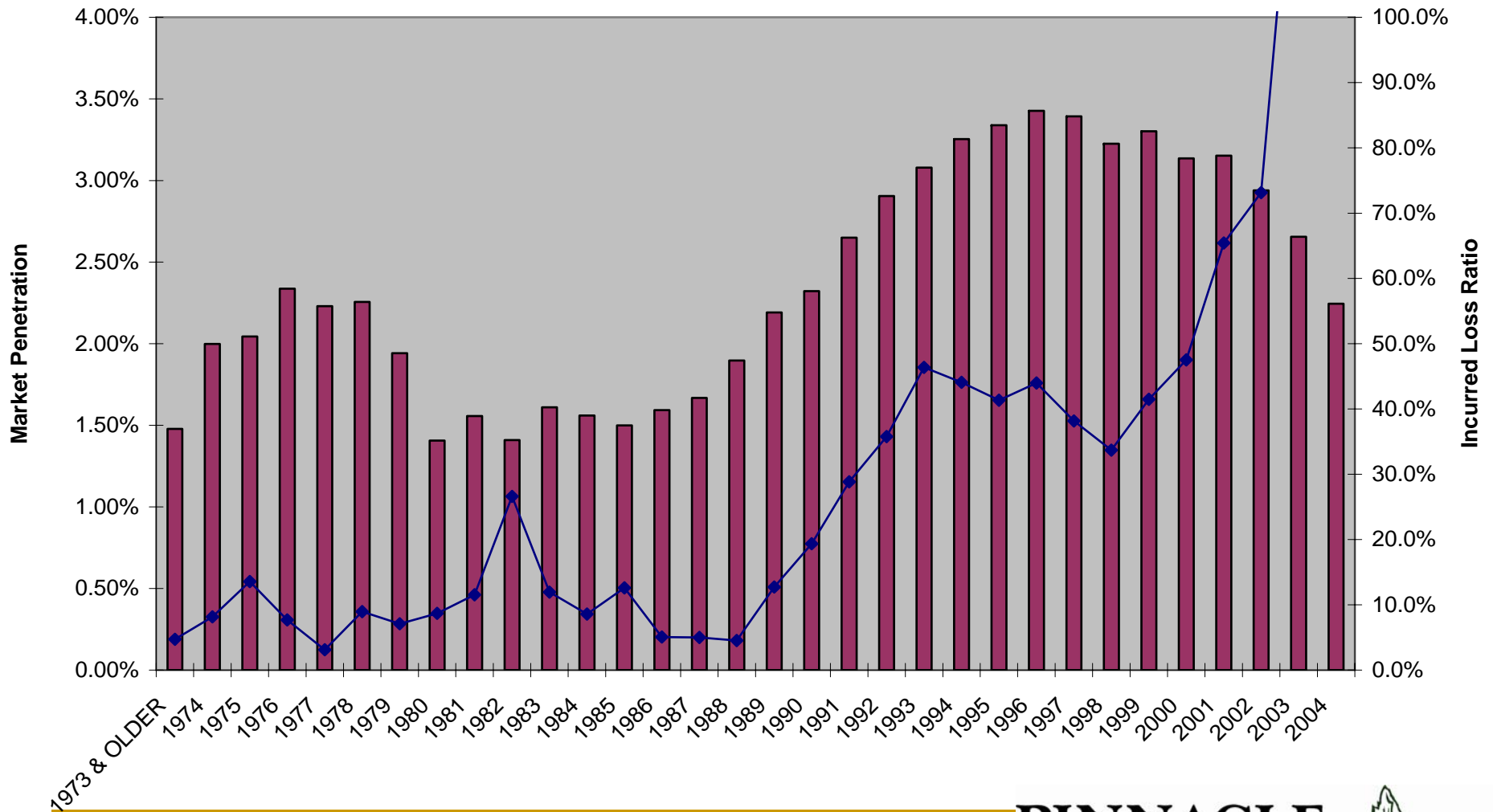
1. Detailed Penetration by:
  - ❑ Geography (ZIP, Census Block)
  - ❑ Risk Characteristics (Make/Model, Industry, etc.)
  - ❑ Insured/Driver Characteristics
2. Penetration Levels Based on Characteristics
3. Penetration Levels by Company Risk Characteristics
4. Models of Projected Market Penetration Based on Historical Data

# New Jersey Market Penetration



# Penetration by Model Year

ABC Insurance Company



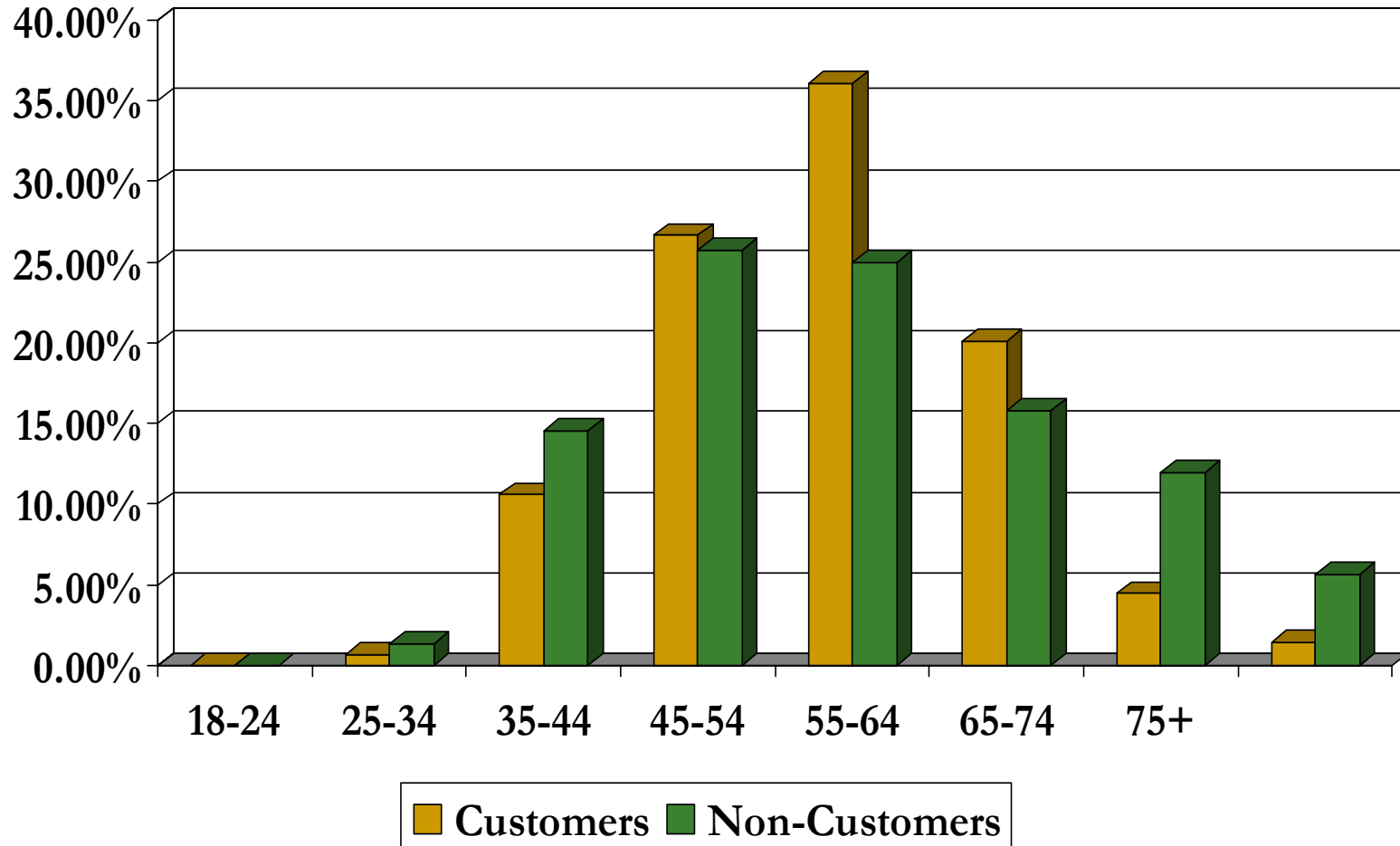
Vehicle Year

Market Penetration Incurred Loss Ratio

**PINNACLE**  
ACTUARIAL RESOURCES, INC.

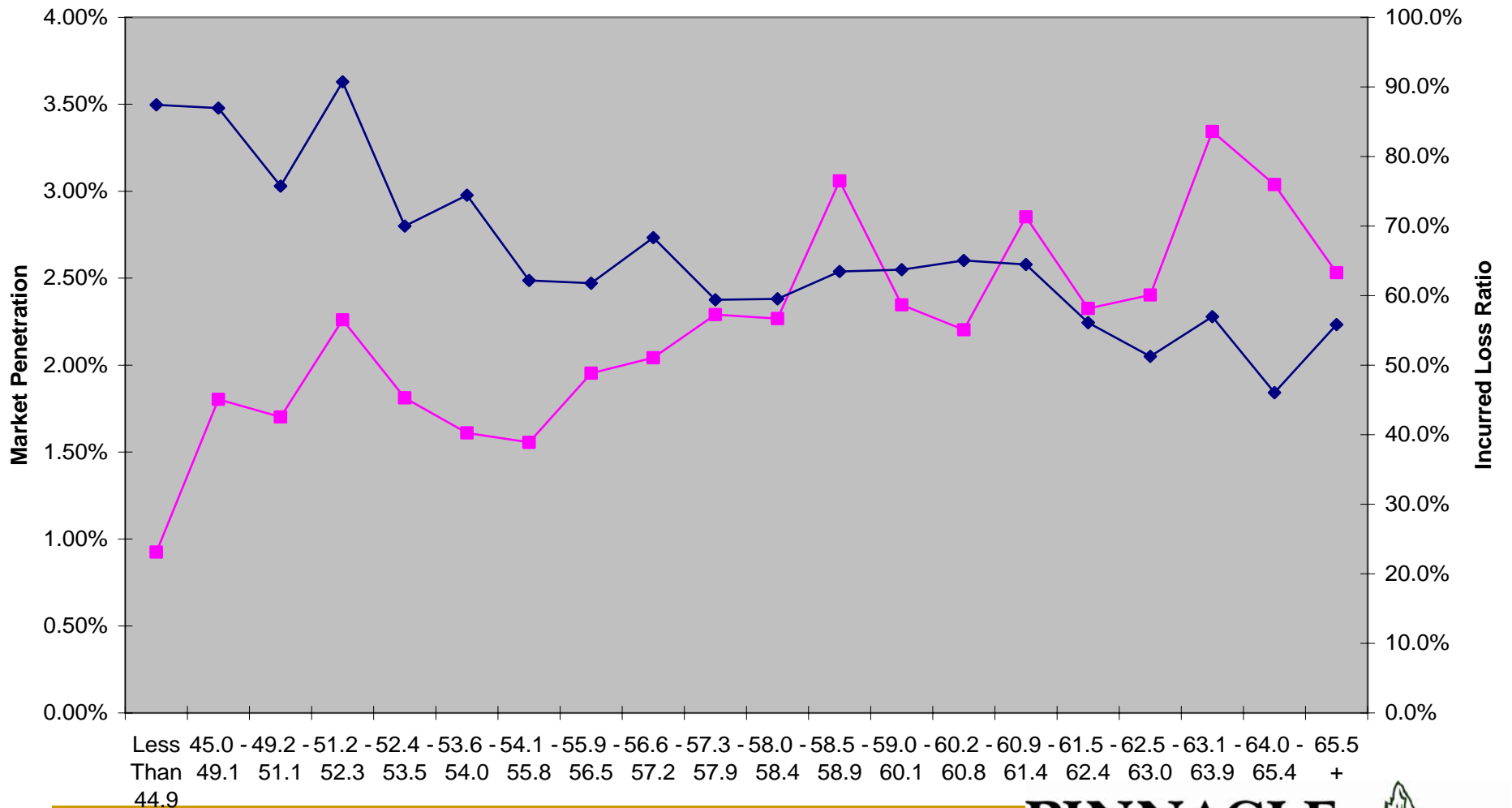


# Segmented Market Share



# Demographic Characteristics

Penetration by Percent Married



■ Penetration ◆ Incurred Loss Ratio

**PINNACLE**  
ACTUARIAL RESOURCES, INC.



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# Who's Selling What?



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# Questions

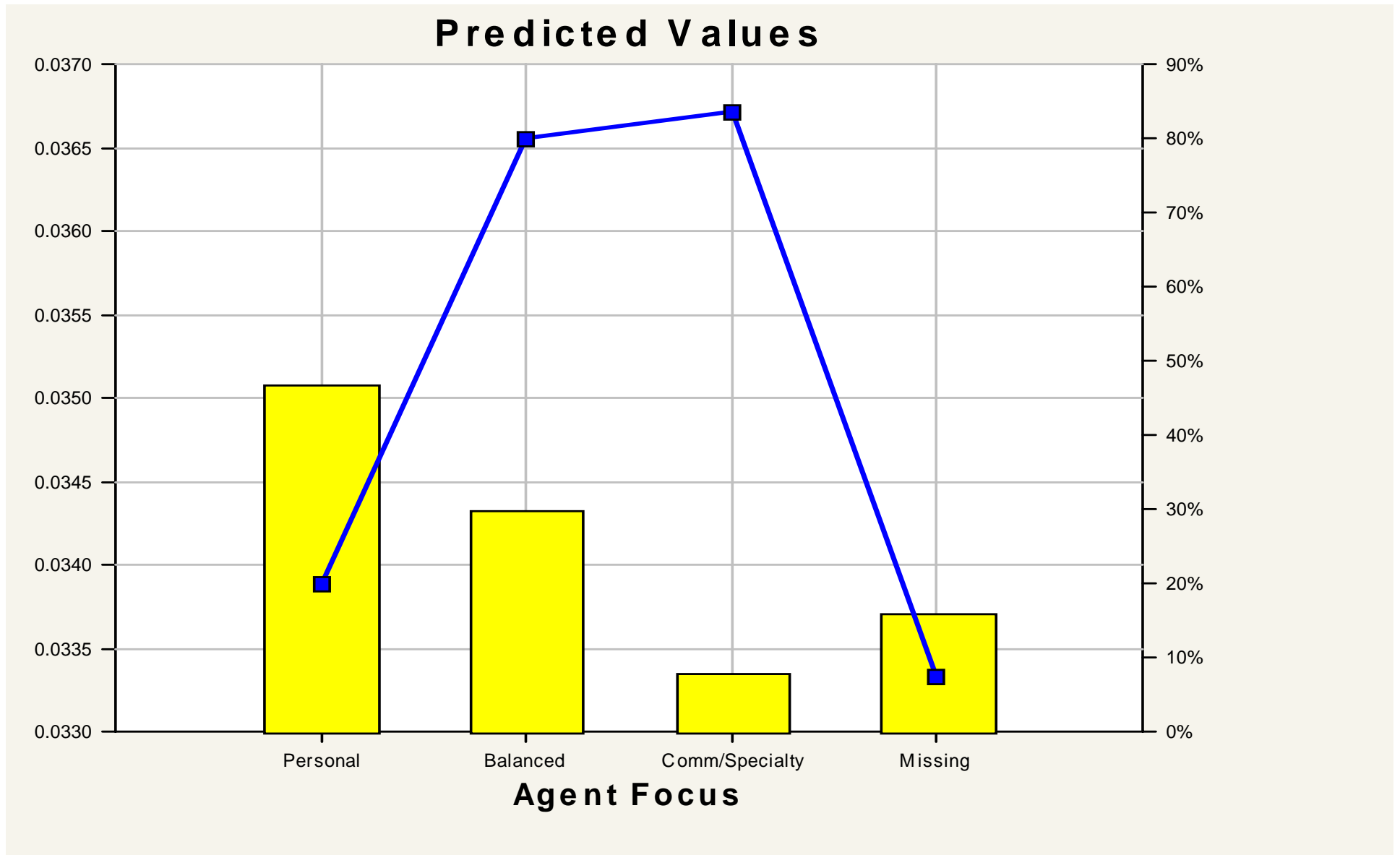
- Which Agents Place Our Products in a Preferred Marketing Position?
  - Higher Conversion Ratio
  - Superior Underwriting Results
- Which Agents Use Us To Keep Their Preferred Markets “Honest”?
  - High Quote Counts, Low Conversion
  - High Underwriting Expenses
  - Adverse Selection
- Which Agents are Efficient Sources of New Business?

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# Issues

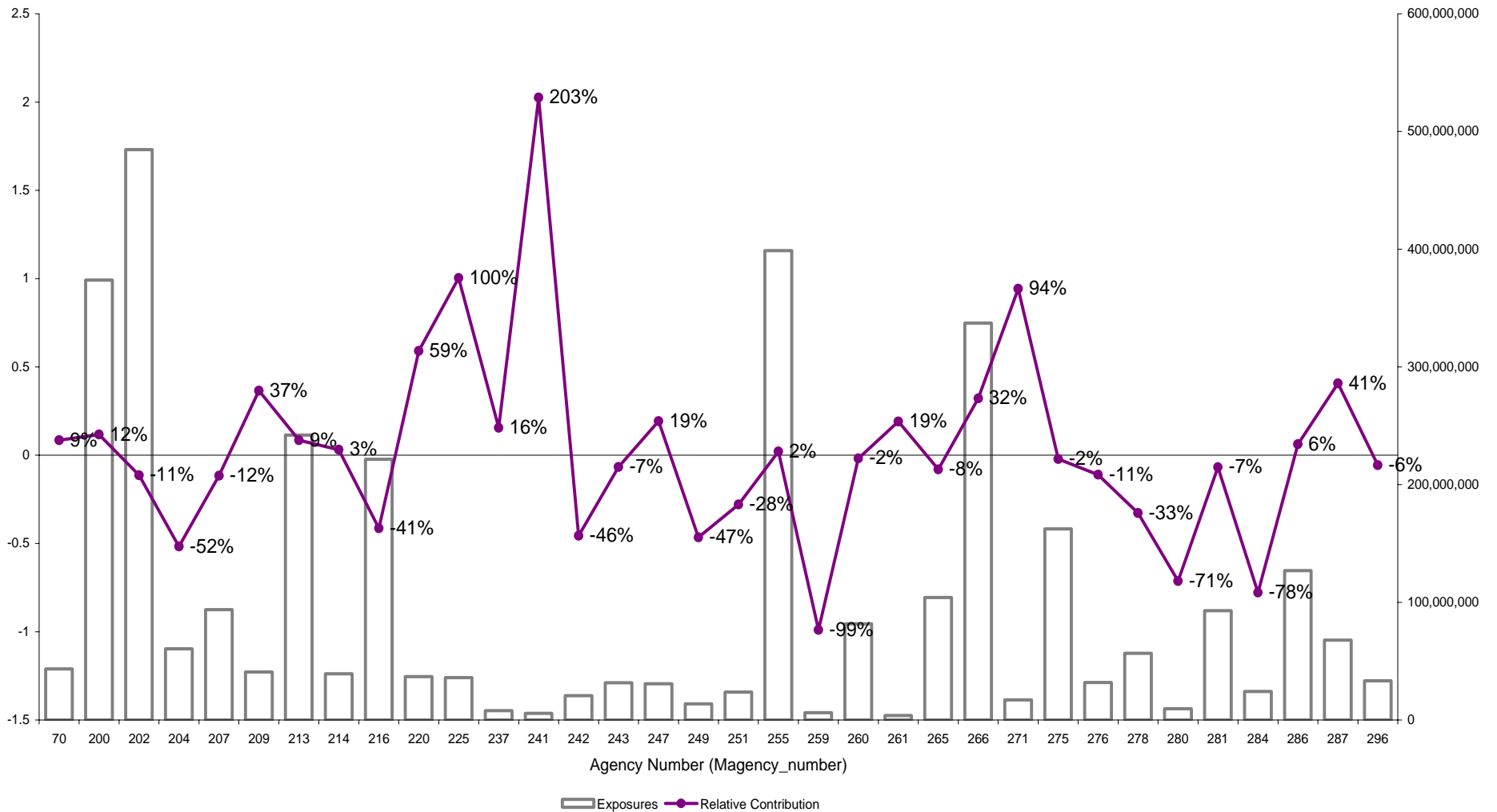
- It is Important to Separate the Role of the Agent from the Role of the Rating Plan
- How Does an Agent's Book Compare to a Comparable Book Across All Agents?
- What Incremental Value Does the Agent Add?
  - Higher Hit Ratio
  - Higher Retention Ratio
  - Lower Claim Frequency
  - Lower Loss Ratio
- Questions Ideally Suited for Predictive Modeling

# Profiles by Agency Focus



# Agency Management Example

## WC Agency Analysis Example



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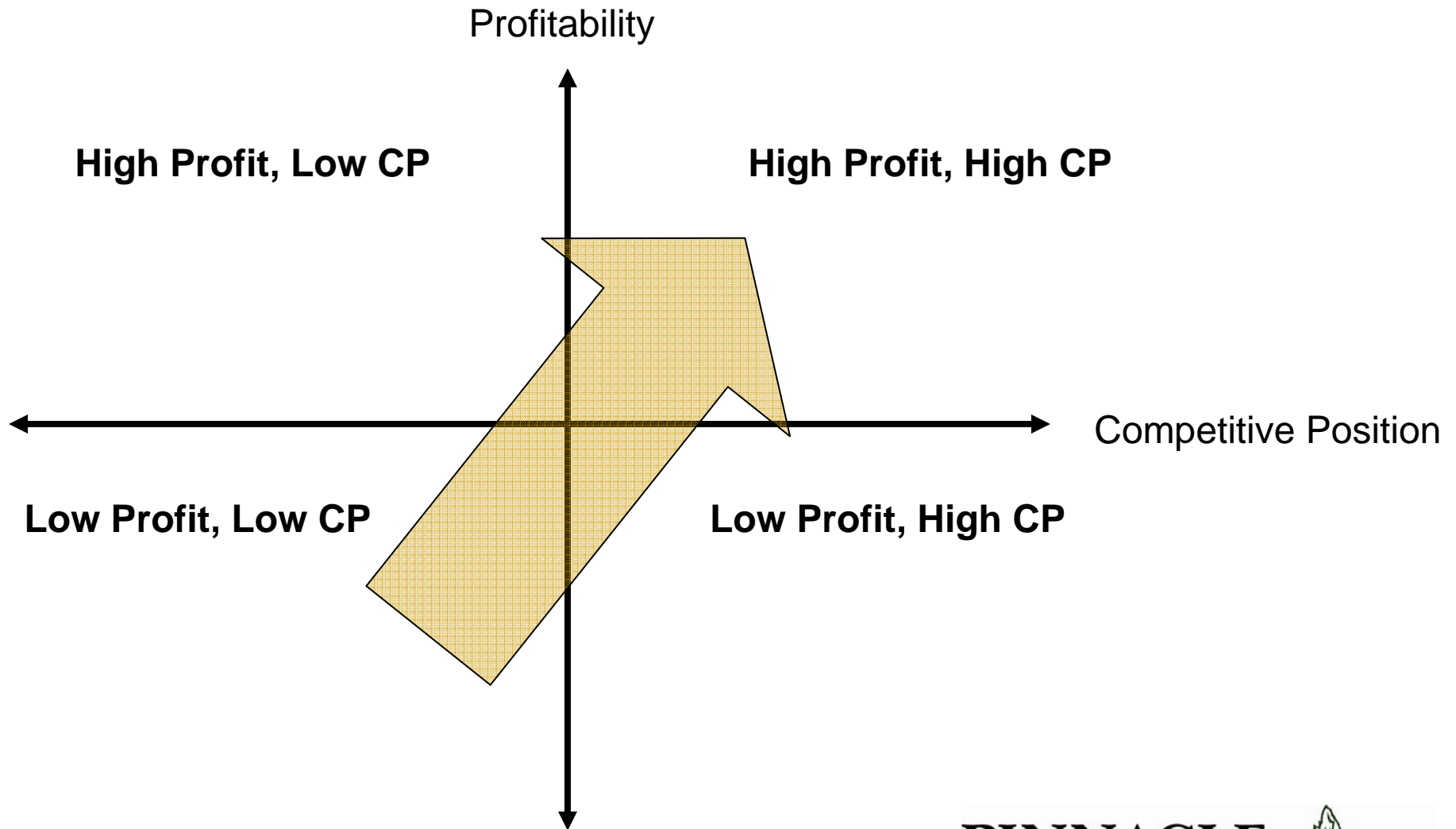
# Factors That Matter

- Rank in Agency
- Volume in Agency
- Number of Carriers Represented
- Geography (Urban, Suburban, Rural)
- Licensing Status
- Years of Appointment
- Agency Life Cycle

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# A Proactive Approach

# Where Do I Want to Improve?



# How to Improve Competitive Position

## ■ Marketing to Quote

- ❑ Target Marketing Lists
- ❑ Demographic Analysis
- ❑ Brand
- ❑ Ease of Doing Business

## ■ Quote to Sale

- ❑ Service
- ❑ Price
- ❑ Value
- ❑ Ease of Doing Business

## ■ Sale to Retention

- ❑ Service
- ❑ Price
- ❑ Value
- ❑ Relationship
- ❑ Ease of Doing Business



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# Marketing to Quote

- Goal
  - Increase Desirable Quote Traffic
- Targets
  - Customer We Expect to Have Superior “Performance”
    - Lifetime Value?
  - Independent agent with demonstrated success
- Tactics
  - Create awareness of company
  - Identify shoppers
    - Target marketing lists
    - Demographic analysis
  - Provide shoppers with incentive to contact
    - Ease of Doing Business

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# Marketing to Quote – Example 1

- Analysis Reveals Lower than Average Penetration in State X
  
- Targeted solution:
  - List of households in the market to purchase a new or used car in the next 6 months, for direct marketing:
    - State X: 525,000 records
    - 10 zip codes: 11,400 records
  - Further Refine for Territories/Current Vehicle Types You Have Been Having Success

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# Marketing to Quote – Example 2

- Conversion Analysis Reveals a Competitive Advantage
  - Above Average Hit Ratio
  - Superior Underwriting Results
  - Appears Related to Class Plan/Underwriting Score
    - Garage Service Operations
    - Non-Franchised
    - In Business More than 3 Years
    - Above Average Credit Score (Blended Commercial/Personal)
- Buy Marketing List of Businesses that Meet Criteria
- Provide to Agents with Proven Success with Program

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# Monitoring Results

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# How are we doing?

- Many of the Modeling Techniques also Measure Changes/Trends
  - Hit Ratios/Conversion Ratio Analyses
  - Segmented Market Penetration
- How Do We Measure Risks That Are “In the Market” Instead of the Total Market?

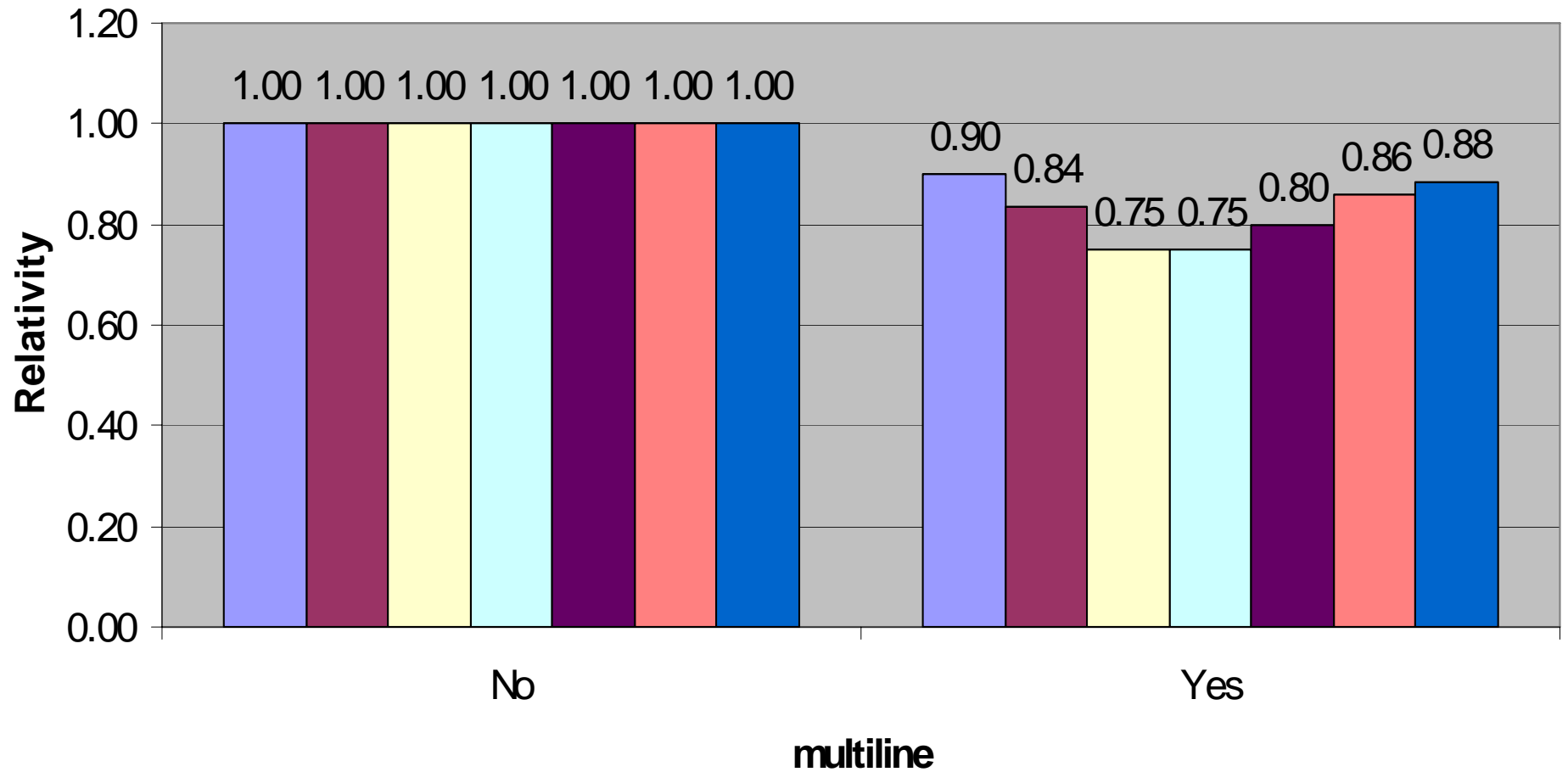
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# Analysis of Quote Activity

- Batch quoting is not an exact science
  - May not reflect mix of business in marketplace
  - Because of insurance scoring and other proprietary elements, absolute rate level is difficult to determine
  - More likely to get relative performance between risks correct
- Use Performance of Different Insurers in Common Agency Management Platform to Determine “Effective” Competitor Relativities – Difference Between Your Program and Other Companies by Risk Characteristics

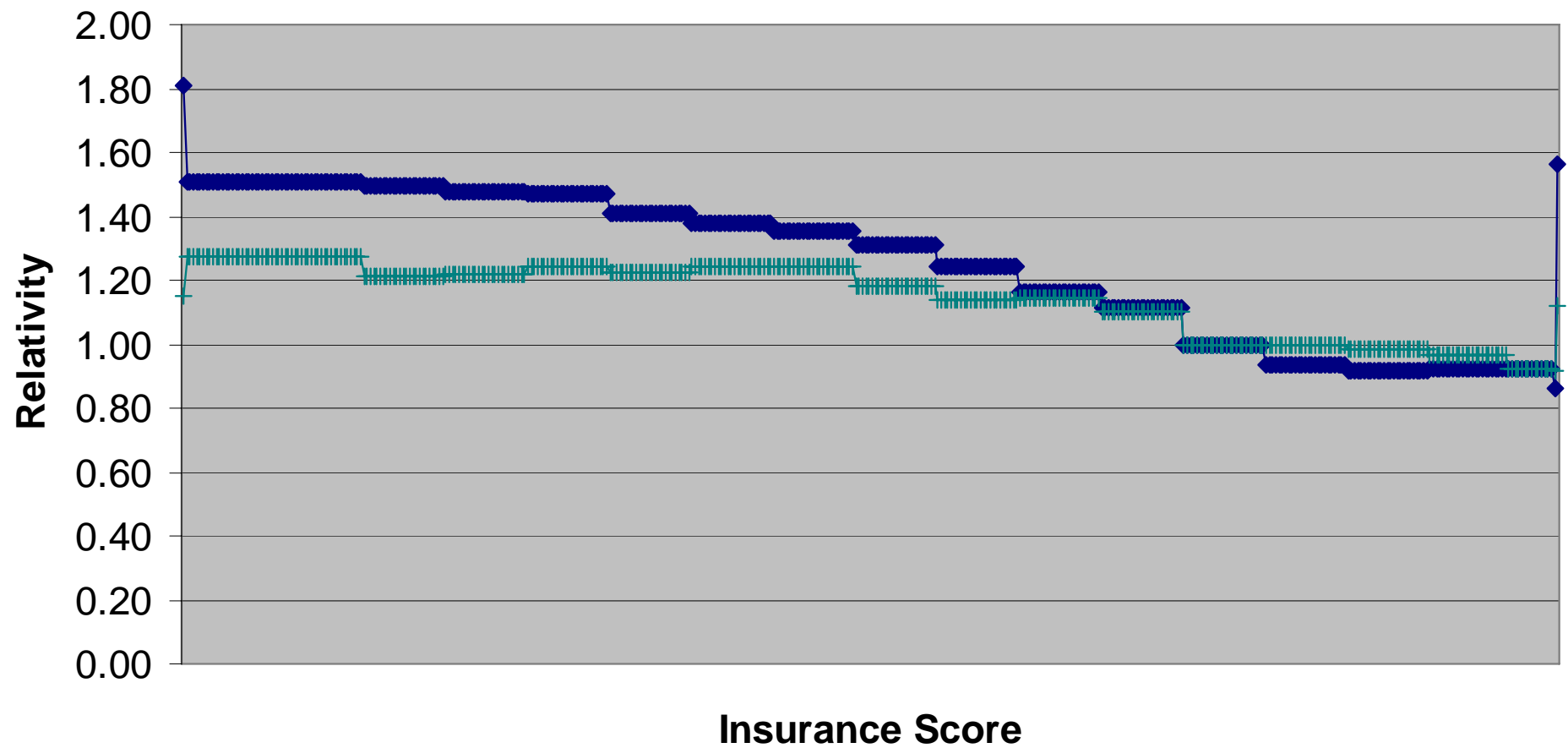
# Effective Competitor Relativities

## Example Company



# Credit Scores Conversion

## Example





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# Parting Thoughts

When asked to divulge the secret of his playing strategy, ice hockey great Wayne Gretzky used to say,

**"I skate where the puck is going to be, not where it's been."**

