

Predictive Modeling: Past, Present and Future

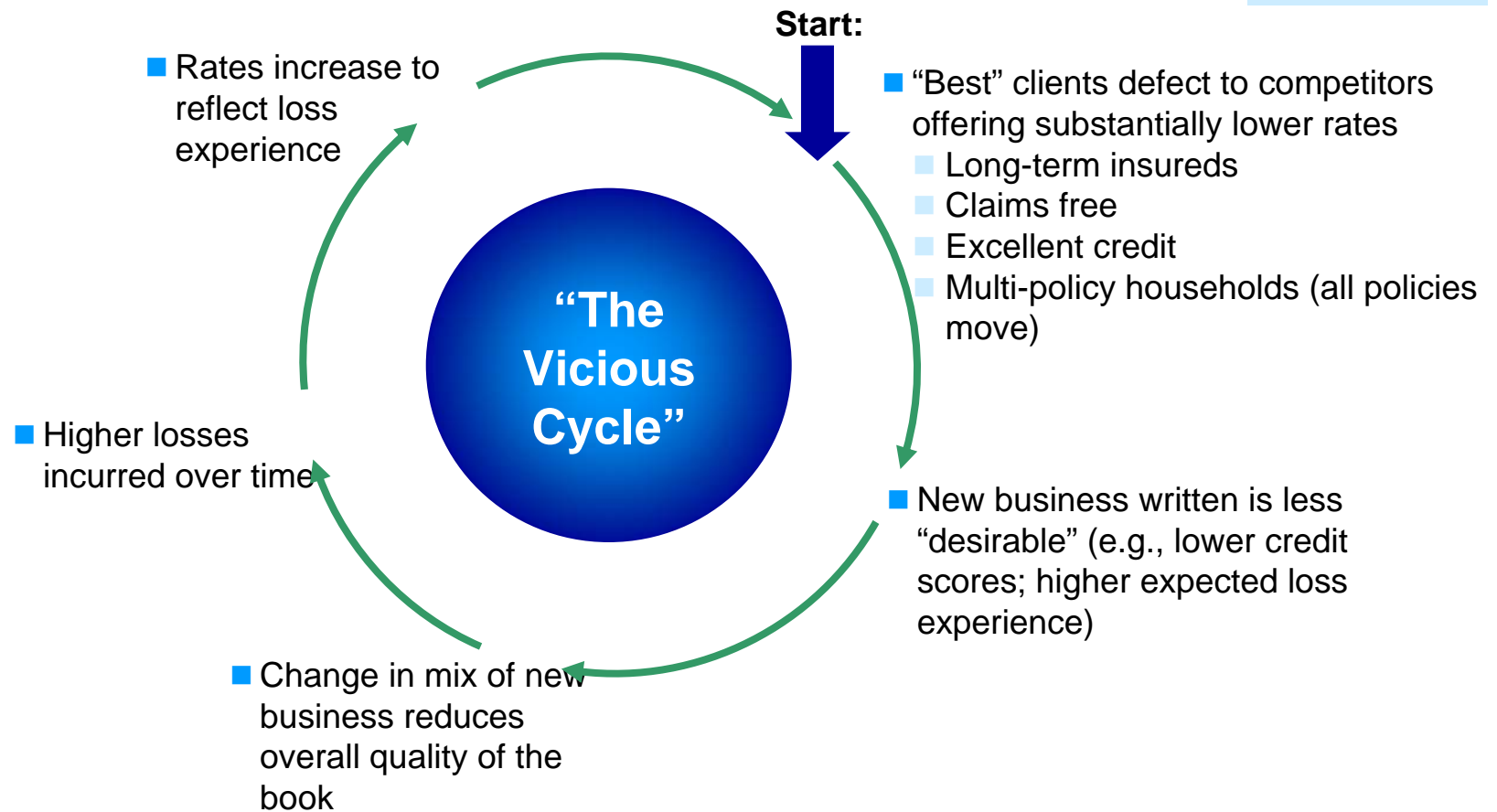
IMCA National Roundtable

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Predictive modeling is a best practice in product pricing and risk selection

ILLUSTRATIVE



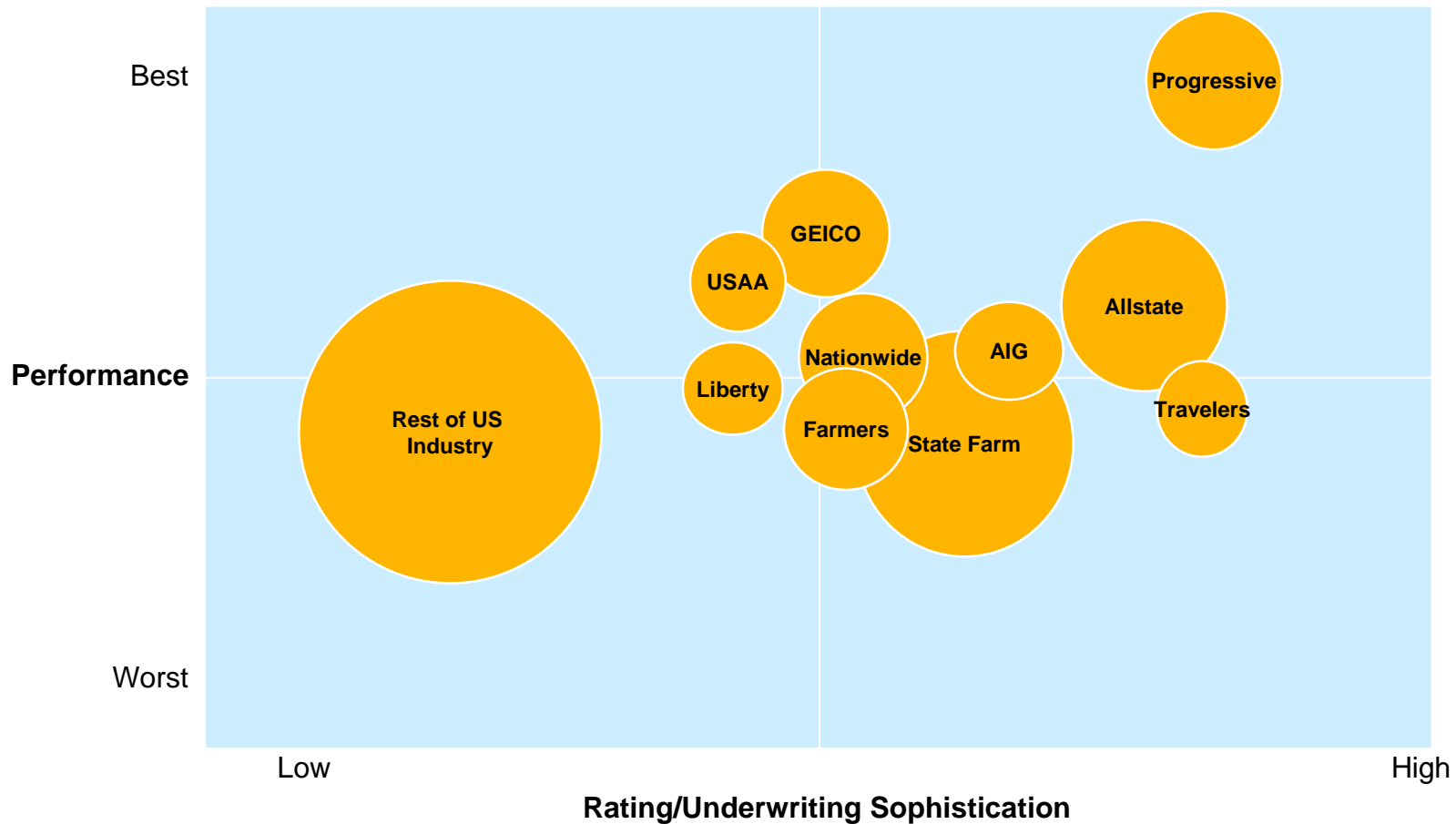
Without predictive modeling, a company is fundamentally disadvantaged and subject to adverse selection

BUSINESS CASE

By adopting increasingly sophisticated approaches to rating/underwriting, market leaders have distinguished themselves from “the pack”

Competitive Landscape — Personal Auto

ILLUSTRATIVE

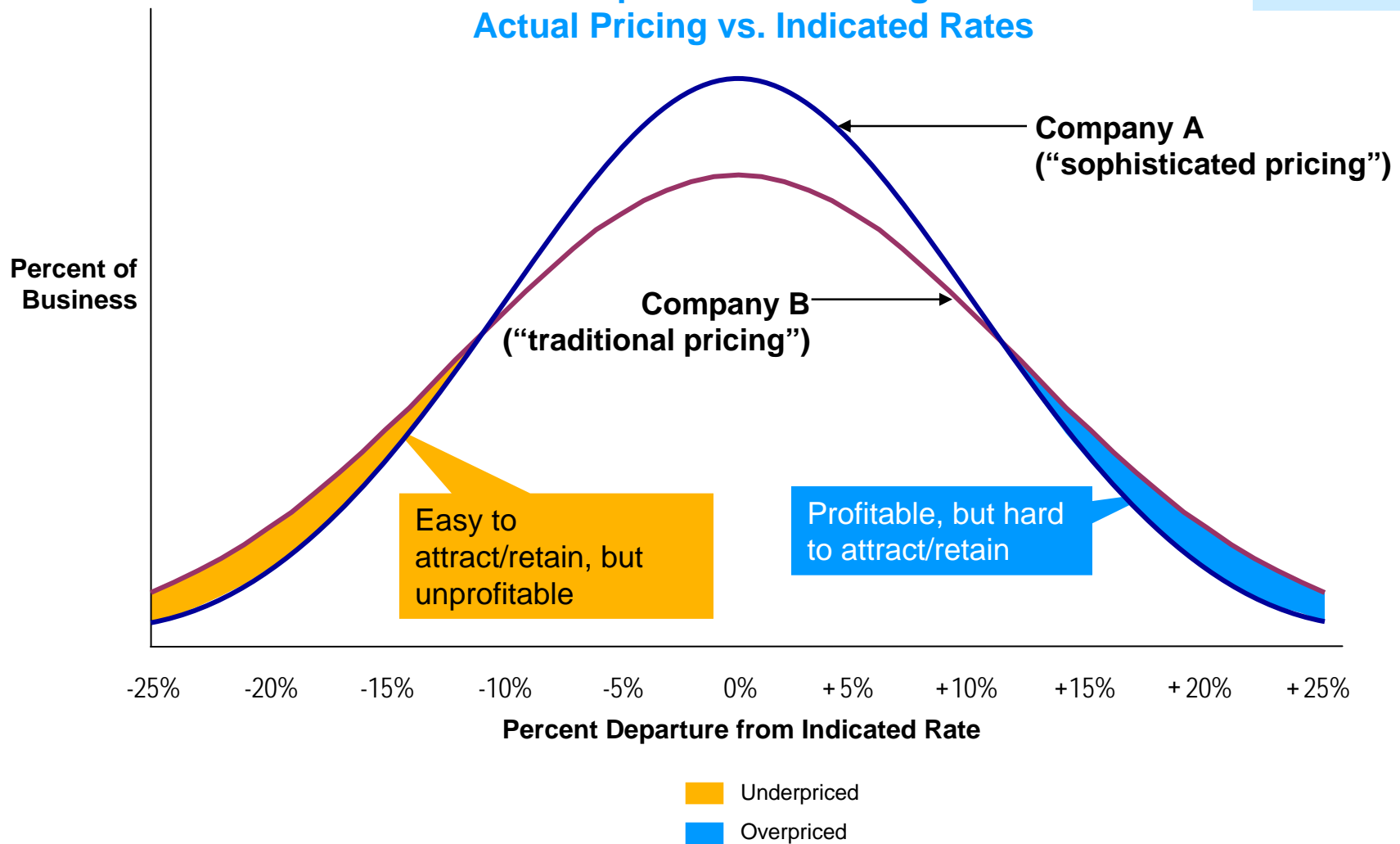


Note: Performance reflects premium growth and profitability

To illustrate, inaccurate rates make it difficult to attract and retain the business you want

ILLUSTRATIVE

Impact of Mis-Pricing Actual Pricing vs. Indicated Rates



What's different about predictive modeling?

Traditional Approach

- One insured characteristic at a time
- Nearly all insurance related:
 - Driver Characteristics
 - Vehicle Characteristics
 - State, Territory
 - Claims History

Predictive Modeling

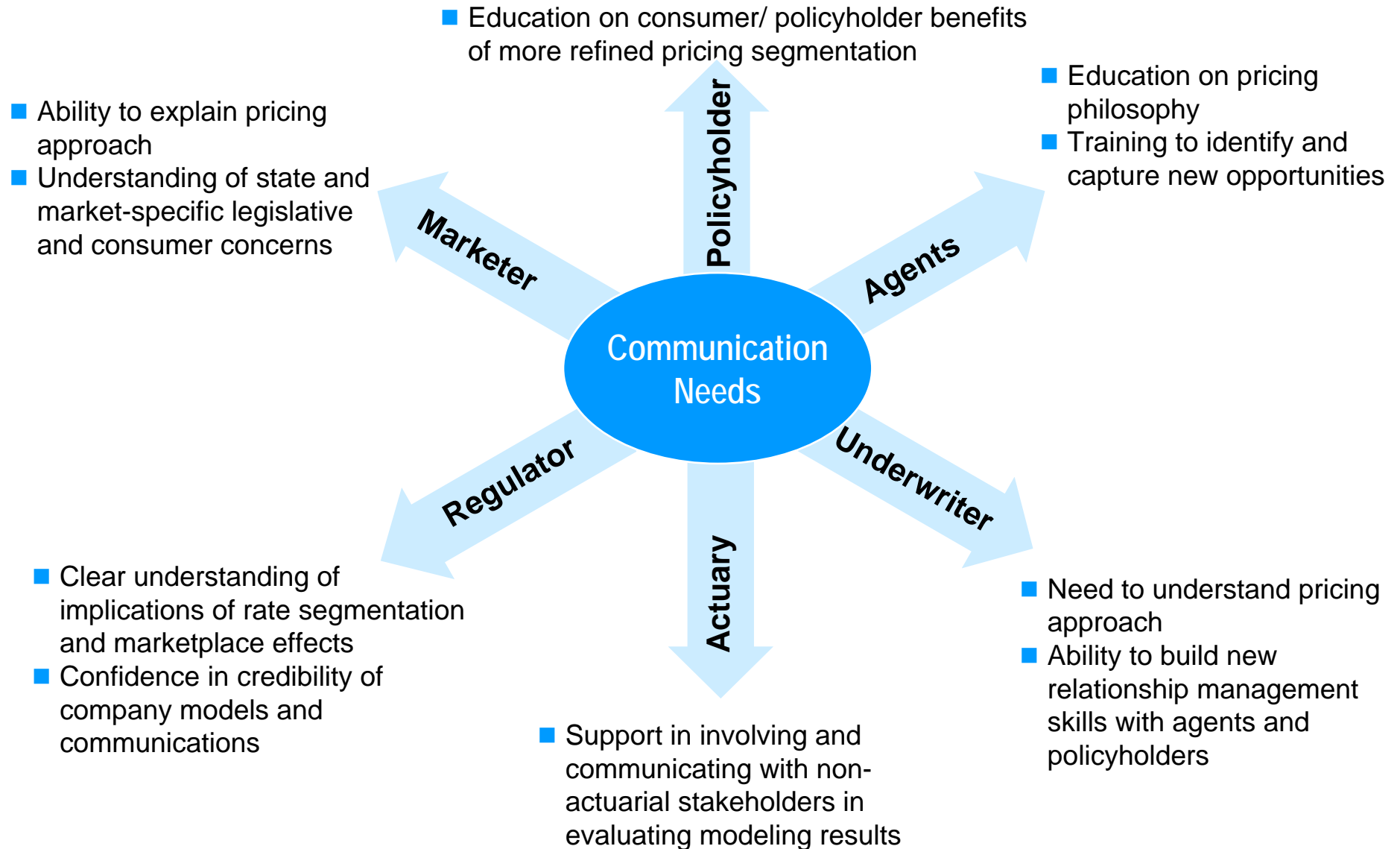
- All characteristics in combination
- Supplement traditional insurance data with other information:
 - Credit Score
 - Non-chargeable losses
 - Other coverages with same insurer
 - Premium payment plan and history

Predictive modeling is...

- The use of advanced statistical and computational techniques to:
 - Extract knowledge from large amounts of information (data)
 - Identify patterns, relationships and correlations across various data elements
 - Make better business decisions
- Predictive models identify the factors that:
 - Are good measures of claim likelihood or severity
 - Improve accuracy in pricing and underwriting
 - Can be used to target marketing efforts
 - Provide an array of other benefits
 - Insurance fraud identification
 - Policyholder retention
 - Claim administration resource allocation

But a predictive model is not an explanatory model

Communications should start from the point of view of stakeholders' needs and concerns



Guidelines for approaching communications

Context Matters

- A key decision point: whether to introduce a new rating program to new customers only or to affect existing policyholders – all other decisions flow from this
- Look at the accumulation of changes you have introduced in the past several years – especially from a policyholder perspective, but also consider underwriters, agents and marketers

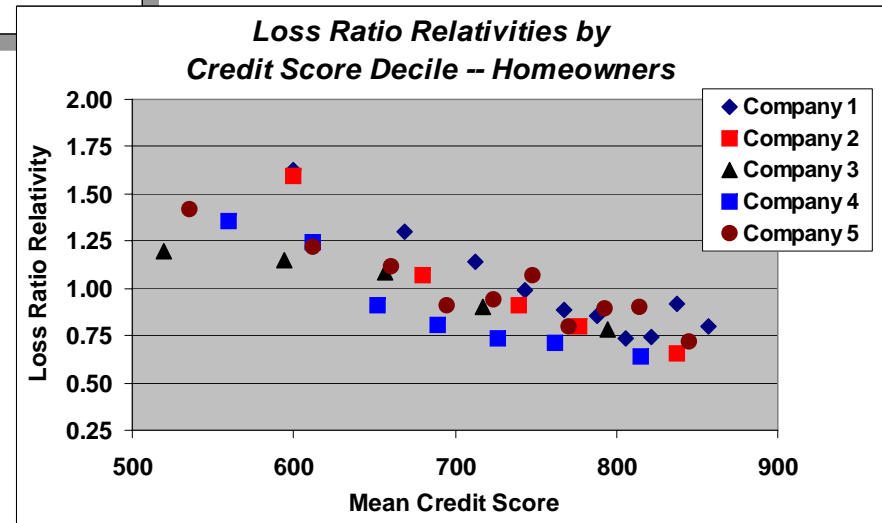
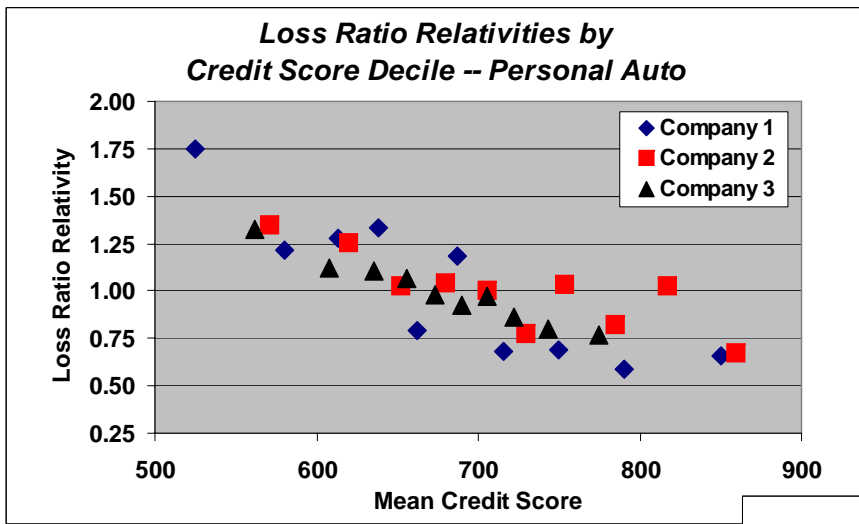
Change and Communication Challenges

- Involve internal stakeholders (e.g., sales force, underwriters, claims staff, and actuarial) early and get feedback on concerns and priorities
- Make communications relevant
 - Less information about model details
 - Figure out early how to address “What’s In It For Me?”
 - Communicate from the audiences point of view

Leadership Alignment

- Leadership team must understand the purpose of the modeling and support the objectives
- Need people to champion the change and lead the communication internally

Credit history is controversial, but has proven to be powerful in predicting losses in automobile and homeowners insurance



Source:
Published Tillinghast Study

Understanding market competitiveness
is the key to the next generation of pricing approach enhancement

The Challenge

- Understand how rates compare to the market and key competitors
- Understand rating differences with key competitors by tier and individual factors
- Understand the dispersion of competitors' rates and your position in the market
- Identify pricing adjustments that will increase profitability and/or market share



One Solution

Competitive Market Analysis (CMA)

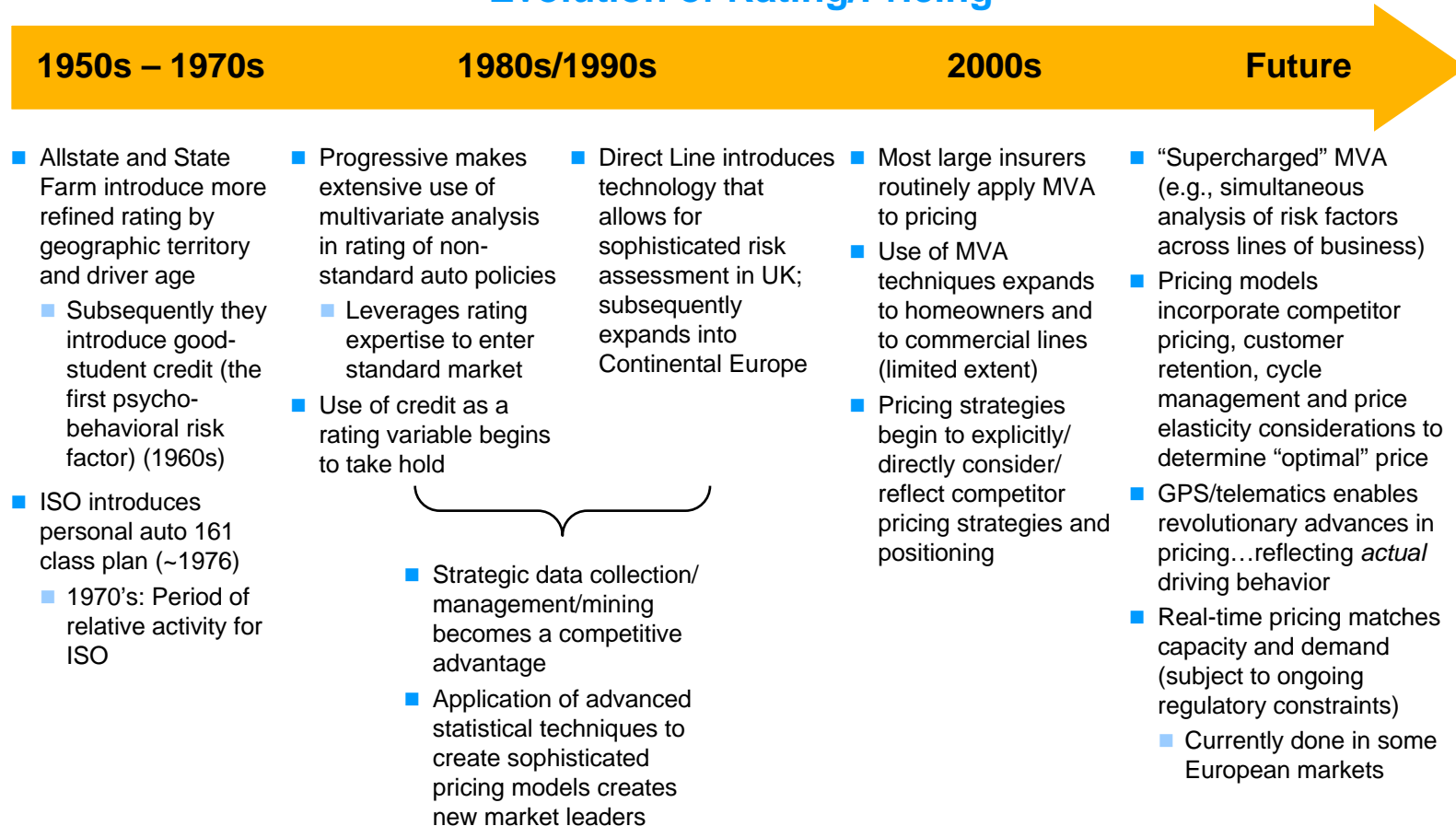
- Tillinghast's comprehensive approach to improving market competitiveness
- Three-part approach
 - Rating plan analysis
 - Competitor rate dispersion analysis
 - Pricing adjustment recommendation

Appendix



Developments in rating/pricing have fundamentally changed the competitive environment

Evolution of Rating/Pricing



Profound changes in market leadership occurred because of dramatic advances in risk assessment, coupled with the courage to implement that knowledge via more accurate pricing