



## Price Optimization & Insurance Regulation

CAS RPM - Chicago  
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## Agenda

- Ratemaking and Risk Management
- Price Optimization in P/C Insurance
- Price Optimization – US and UK
- What Are Regulators' Concerns
- Frequently Asked Questions

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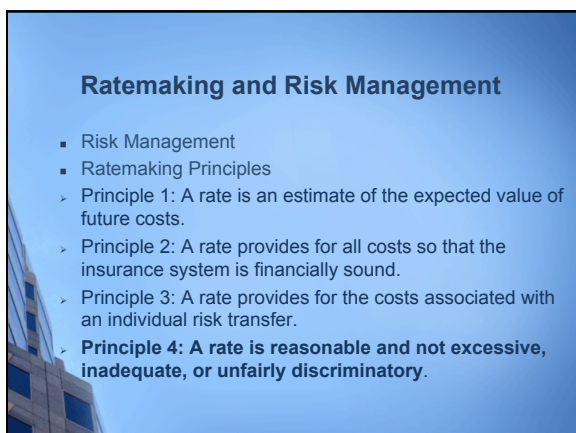
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## Ratemaking and Risk Management

- Risk Management
- Ratemaking Principles
  - Principle 1: A rate is an estimate of the expected value of future costs.
  - Principle 2: A rate provides for all costs so that the insurance system is financially sound.
  - Principle 3: A rate provides for the costs associated with an individual risk transfer.
  - **Principle 4: A rate is reasonable and not excessive, inadequate, or unfairly discriminatory.**

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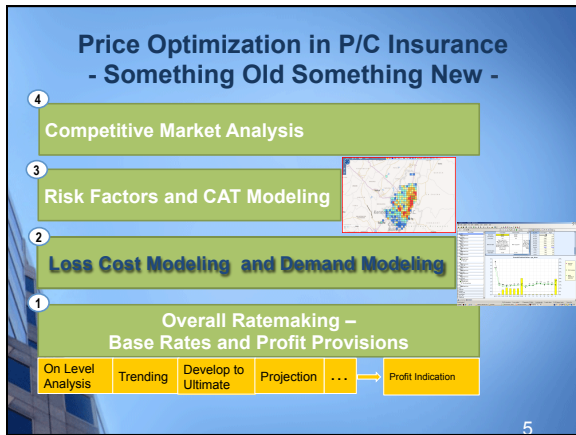
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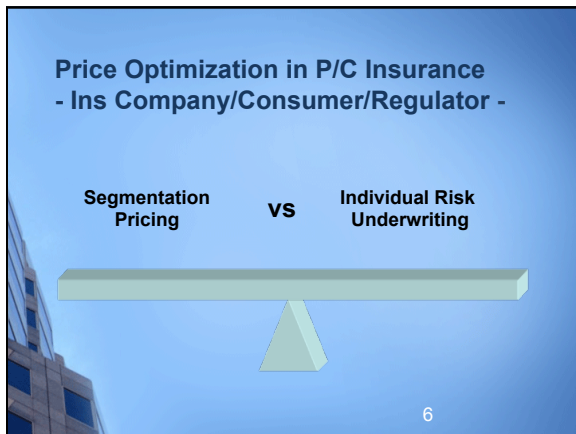
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**Price Optimization in P/C Insurance  
- Balance Cost and Benefit -**

Demand Modeling      Rate Indications  
Lost Cost Modeling



Profitability & Products Mgmt.      ASOP & Regulation

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**Price Optimization in P/C Insurance  
- Balance Cost and Benefit (Cont.) -**

- Loss Costs
- Price elasticity of demand.
- Expenses
- Profitability
- Consumer Behavior
- Retention
- Competition

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**Price Optimization  
- US and UK -**

- Aggregate Segments Optimization
- Individual Optimization
- Hybrid Optimization
- Survey

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### Price Optimization - US - Ratemaking Principles -

- Principle 1: A rate is an estimate of the expected value of future costs.
- Principle 2: A rate provides for all costs so that the insurance system is financially sound.
- Principle 3: A rate provides for the costs associated with an individual risk transfer.
- **Principle 4: A rate is reasonable and not excessive, inadequate, or unfairly discriminatory.**

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### Price Optimization - US - Common Concerns -

The Task Force believes the following practices , at a minimum, are inconsistent with statutory requirements that "rates shall not be ... unfairly discriminatory:"

- Price elasticity of demand.
- Propensity to shop for insurance.
- Retention adjustment at an individual level.
- A policyholder's propensity to ask questions or file complaints.

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### Price Optimization - UK - Ratemaking Principles -

- Lloyd's of London vs. ISO
- Costs and Benefits
- Aggregator and Behavior Pricing
- **Underwriter and Actuary**

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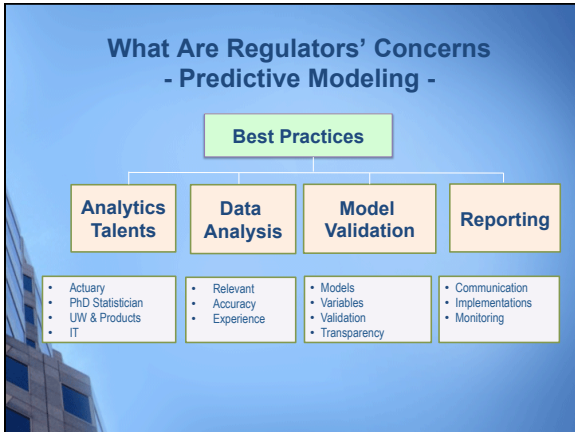
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- ### What Are Regulators' Concerns - Discussion Topics -
- Big Data
    - NAIC
    - State Limitations
  - Predictive Modeling
    - Black Box
    - FOIA
  - Legislative Issues
  - Correlation & Causation
  - Modeling Risks

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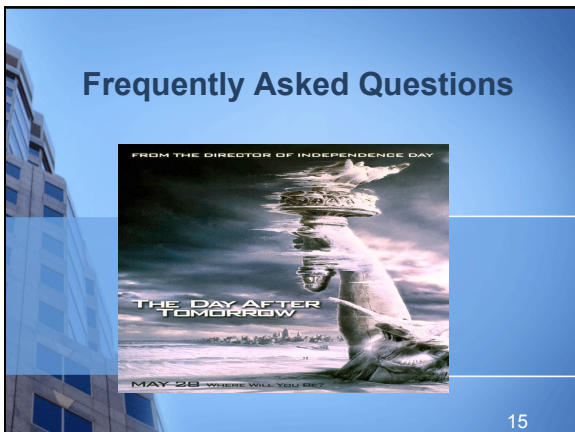
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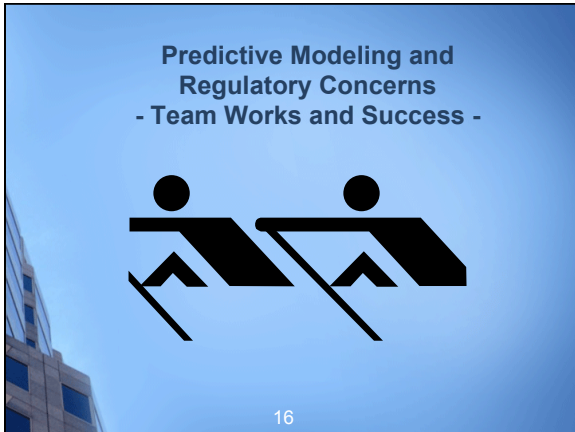
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