Championing Price Optimization

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Championing Price Optimization

Many pricing executives identify the value of Price Optimization and push for application of such projects in their companies. However, in many cases obtaining the required buy-in, budgets, and technical infrastructure takes very long, and even fails. Actuaries in particular must develop a wider understanding of the overall business strategy (*e.g.*, short term profitability *vs.* customer lifetime value), as well as business realities such as price elasticity, distribution strategies and IT constraints, in order to succeed in a pricing (as opposed to a costing) world. This session will review the recurring hurdles associated with price optimization, both generally and from the actuary's perspective, and advise on how to overcome some of these hurdles. Data considerations for nontraditional lines will also be discussed.
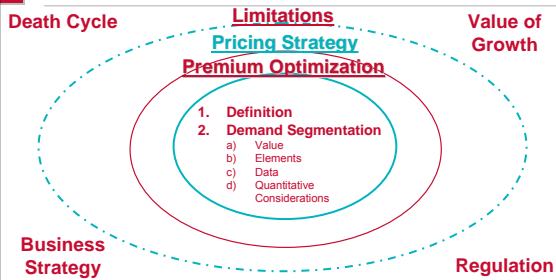
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Presentation Plan [*my portion*]

Death Cycle

Limitations

Pricing Strategy

Premium Optimization

1. **Definition**
2. **Demand Segmentation**
   a) Value
   b) Elements
   c) Data
   d) Quantitative Considerations

Value of Growth

Business Strategy

Regulation

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Defining Price Optimization

- « (…) the "Optimal Premium" that should be charged to the policyholder in order to maximize the company's profits on a specific type of policy in order to meet all the contractual obligations of the company (…). »

(Perla Rocio Calidonio Aguilar, Chunhui Xu, "Modeling and Optimization of Life Insurance Policies", http://journals.isss.org/index.php/proceedings51st/article/view/600/260)

- More generally, premium optimization is a pricing strategy that maximizes a target function like long-term customer value, present value of profits, long-term growth, etc.

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Exploring Pricing Strategy

- « Pricing strategy that **integrates** the firm's **cost** with **marketing** strategy, **business conditions**, **competition**, **demand**, **product** variables, channels of **distribution**, and general **resources** can determine the success or failure of a business. »

(J. Paul Peter, James H. Donnelly, Jr. , "a Preface to MARKETING MANAGEMENT", McGraw-Hill, 2006, Chapter 11 "Pricing Strategy")

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Limitations (I): the Death Cycle

- « (…) rarely through the dramatic organic growth that once created their success. »

Lars Kolind, "THE SECOND CYCLE: Winning the War Against Bureaucracy", Chapter 1 "The First Cycle: Why Success Breeds Failure", Wharton School Publishing; 1 edition (May 4 2006)

- « (…) the core business is milked to a degree that leaves too little for the ongoing renewal and regeneration of it. » *(Opus Citate)*

- « First generation management that had a passion for products and customers is substituted with a different type of manager (…). » *(Opus Citate)*

- « (…) long-term sustained growth seldom comes from clever financial management. » *(Opus Citate)*

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Limitations (II): the Value of Growth

- « On average, each additional percentage point of revenue growth generated an equivalent increase in the total shareholder return premium (…). »

(Nick Palmer, et al., "The top line is the bottom line in insurance", Bain & Co. Publishing, 2006, p.2)

- « What sets the top performers in the insurance industry apart is an ability to master two of today's thorniest growth challenges:

  - High-performance insurers **cultivate organic growth** by identifying their most valuable customers and investing to increase sales to them; by recruiting new clients through **referrals**; and by **raising retention rates**.
  - Insurers that rely on **mergers and acquisitions** to boost revenues make regular, **modest-sized deals** to add real value, and they **integrate** their new acquisitions quickly and seamlessly. » (*Opus Citate*) [my emphasis]

- « With the exception of the brief cyclical peaks when premiums spike, **property and casualty insurers have little pricing power**. » (*Opus Citate*)

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Limitations (III): Generic Business Strategy

(see also Hitt *et al.*, "Strategic Management: Competitiveness and Globalization", Thomson / Nelson, 2006, Chapter 5 "Business-Level Strategy")

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Limitations (IV): Regulation

- Utility-type (cost-plus) mandated pricing
- Mandatory products

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Demand Segmentation (I): the Value

- Steadfast policyholders:
  - Increase new-customer referrals.
  - Buy more products.
  - Are less price-sensitive.
  - Are less likely to shop around or defect.
- « Our analysis shows that a 5% increase in retention rates corresponds to a nearly 80% increase in the lifetime value of the ongoing customer relationship. » (Bain, *ibid.*, p.3)

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Demand Segmentation (II): Elements

- **Who decides**?
- What is the customer's level of **risk aversion**?
- Is the customer **'*naturally*' price sensitive**?
- What are the **insurance alternatives** available to the customer?
- Is the decision **emotional? automatic? rational**?
- **How valuable** are services, extra protection, *etc.* to the customer?

(freely inspired from J. Paul Peter, James H. Donnelly, Jr. , "a Preface to MARKETING MANAGEMENT", McGraw-Hill, 2006, Chapter 3 "Consumer Behavior", Chapter 4 "Business, Government, and Institutional Buying", Chapter 5 "Market Segmentation")

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Demand Segmentation (III): Data

- Objectives of R&D must be clearly defined:
  - Is it to determine an initial pricing structure for a new product or refine an existing pricing structure for current products?
- Type of data:
  - Quantitative vs. Qualitative
  - Direct (from consumers) vs. Indirect (from operations, agents, brokers, etc.)
  - Small sample vs. At large sampling
  - In-house vs. Outsourced

(freely inspired from *Ibid.*, Chapter 2 "Marketing Research: Process and Systems for Decision Making ")

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Demand Segmentation (IV): Quantitative Considerations

- When analyzing retention / new business / closing ratios and / or quote activity, it is important to isolate the appropriate effects:
  - when looking at the effect of a marketing campaign, **how much activity would there have been without the campaign**?
  - **is the customer leaving because** they have ceased to exist, they do not have an insurable interest anymore, they lost access to their agent / broker, the product / service / experience does not meet their need / expectation, the price is too high?

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Demand Segmentation (V): Quantitative Considerations (II)

- When analyzing retention / new business / closing ratios and / or quote activity, it is important to isolate the appropriate effects:
  - are there **seasonal effects** to isolate?
  - what is the appropriate **stability / responsiveness** balance? (length of time of data, credibility, credibility complement)
  - when do **apparent trends** become credible?
  - what would have had happened **if the quoted price had been different**?

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Demand Segmentation (VI): Quantitative Considerations (III)

Policy / Quote #	Quote Date	Effective Date	Line of Business	Occupancy	Age(?)	Other Contracts	Value of Other Contracts
1	2007-07-15	2007-07-15					
1	2008-07-15	2008-07-15					
1	2009-07-15	2009-07-15					
2	2008-07-15	2008-07-15					
2	2009-07-15	2009-07-15					
3	2009-07-15	2009-07-15					
4	2009-07-15	2009-07-15					

Policy / Quote #	Quoted Premium	Known Competitor Premium	Which Competitor	...	Acceptance / Decline	Reasons for Decline	Financial Stability
1							
1							
1							
2							
2							
3							
4							

Policy / Quote #	Claims	Specialized Coverage	Part of a Program	Target of Marketing Campaign			
1							
1							
1							
2							
2							
3							
4							

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