Price Optimisation: A case study of new pricing techniques
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Agenda

• What is price optimisation?
• Price optimisation in the life market – benefits and practicalities
• Conclusions and questions
What is price optimisation?

• Any movement away from a “technical” price is price optimisation, and it happens all the time:
Price optimisation in insurance

Insurance is different!
• Customers are used to providing lots of information
• Fewer “physical” constraints
• …. but stronger TCF requirements

Use of customer demand to set prices
• Analyse the likelihood of different segments to purchase
• … and use this as a quantitative input
• Traditionally done only at a very high level
• Separate “risk” and “demand and elasticity” components

Risk modelling
• The underlying cost of providing the insurance policy
• Covering commission, benefits, expenses, cost of capital
• Typical cashflow model, with assumptions
• Nothing new!
• But an opportunity to improve risk modelling
Demand and elasticity modelling

Demand – assess probability of sale
- As a function of different factors
- At a granular level
- Uses historical quote data
- GLMs typically used

Elasticity
- Randomised price trials can be used
- Alternatives are available

Pricing constraints
- Consider overall objectives
- Essential to work through all criteria possible affecting prices:
  - Distribution agreements
  - Existing quote delivery systems
  - High-level pricing principles
- Use as quantitative constraints on rate decision-making
Pricing decision

- Price chosen at granular level, to maximise overall objectives

Current use of price optimisation

GI
- Well entrenched in UK motor market
- Also used in other markets
- Lots of factors, very competitive market, rapid repricing,
- Move to real time price optimisation

Life
- Most applicable to annuity and protection products
Price optimisation in the Life market
Benefits and practicalities

The Protection Market

- Life & Sickness
- Advised Channel
- Flat Market
- Price Is Important
- “Standard” Price
- Other Factors
Opportunity for life insurers?

Key Reasons used in GI

- Risk Factors
- Aggregators
- Term of Contracts
- Volume of Data

Opportunities in Life

- Risk Factors
- Aggregators
- Regulatory Pressure
- Flat Market

Overview of Price Optimisation Model

- Risk (profit) Model
- Demand Model
- Price Selection
- KPIs
- Price tables
- Price engine

Focus on “Demand Model” and “Price Selection”
Demand Model: what to optimise?

An Application conversion rate could be an appropriate measure to optimise.

Demand Model: What Market Data is Relevant?

Linking Sales Opportunities and Applications allows you to calculate an Application conversion rate at a granular level.
Demand Model: Checking Data

Consistency of quote data
Changes over time
Linking to Applications

You’d need to decide when the data is good enough? How to handle unfiltered data?

Demand Model: Calculating Elasticity

Theory		Practice

Random Price Tests		Restricted Price Test
Only Change Price		Other Changes
Price Changes
Competitor Data
Overview of Price Optimisation Model

Price Selection: Fairness

- Optimal Price
- Customer Value
- Regulator

What is the maximum profit on a customer?
What is the maximum difference between customers with similar risk?
What is the approach to cross subsidies?
Price Selection: Governance & Wider Business

Cost+ → Demand Driven
Price Sign Off → Delegated Authority
Phased Approach

Adviser Relationships | Sales Teams | Operational Capacity

Conclusions
Price optimisation has arrived in Life insurance!

• Well proven techniques that add significant business value
• Additional challenges in Life insurance
• Enhanced understanding of customers
• Already being used in the market
• Will become a necessity to compete

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