BEHAVIORAL FINANCE – EXAMPLES IN PRICING

3rd Current Issues in General Insurance – Institute of Actuaries of India

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Why Behavioral Finance in Pricing?

- Pricing process involves:
  - Adjustments to Limited or inconsistent data
  - Selecting appropriate methodology and model parameters
  - Judgment and expert opinion
  - Extrapolation from historical results, data and exposure

...People involved in the pricing process exhibit Behavioral bias

Behavioral Finance – Pricing Example (1)

- Anchoring Impacts
  - Historical price / Market price – In Indian market context it could be Tariff Rate (of course discounts!!)
  - Previous pricing review
  - Underwriters view of Loss Ratio

Behavioral Finance - Pricing Example (2)

- Heuristics & Biases
  - Range of Loss Ratio estimates / Claims frequency - e.g. 4% to 7% in GCV class of business
  - Reconciliations with reserving exercise
  - Trend selection e.g. claims inflation

Behavioral Finance - Pricing Example (3)

- Overconfidence
  - Sophisticated pricing method – e.g. GLM or stochastic process
  - Trend selection (based on few data points)
  - Using distribution – entire range of plausible scenarios are covered

2014 J&K Floods

- 2014 Jammu Kashmir Floods in numbers:
  - 400mm (15.75 inch) in one day. Up to 15 feet water logging in areas
  - Around 300 dead in India affecting 2,600 villages in state
  - Almost 100,000 houses fully damaged and another 150,000 partially damaged
  - 300,000 military personnel involved in rescue operations
  - US$ 3bn – US$ 5bn economic loss
  - Non-Life Insurance loss approx. US$ 350mn (ex-crop)

2014 J&K Floods (2)

- Non-Life insured Loss characteristics:
  - Mainly commercial shops, small business operations e.g. artisans and motor claims
  - Bancassurance channel i.e. loanee segment
  - Almost 48,000 claims related to fire and motor class of business. Average claims less than INR 5 lakhs
  - Government and Honorable High court involvement to speed-up claim settlement
  - High level of underinsurance

2014 J&K Floods (2)

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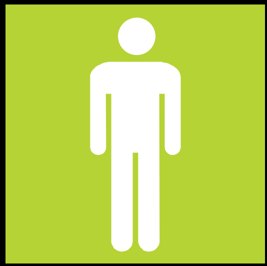
Burning Cost Adjustments

- Large Risk Loss
  - Risk loading selected v/s RI cost incurred
- CAT Loss
  - Adjust historical loss for changes in exposure
  - Cat loading (if any) v/s RI cost incurred
  - Different loading based on geography/peril

Q & A

Any Questions??

THANK YOU!!!



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