Chapter 0 - What Is This?

UECM3433 Introduction to Ratemaking and Reserving

Outline

About This Subject

- UECM3433 Introduction to Ratemaking and Reserving
- This subject covers some techniques used in ratemaking and reserving for general insurance.

Topics

Topics covered in this subject:

1. Key Concepts
2. Projecting Ultimate Claims
3. Financial Reporting
4. Trending
5. Ratemaking
6. Catastrophe Modelling

References

- Main References:
  1. Friedland, J., 2013. *Fundamentals of general insurance actuarial analysis*. Actex Publications.
  2. Grossi, P. and Kunreuther, H., 2005. *Catastrophe Modeling: A New Approach to Managing Risk*. Boston, MA: 9249.
- Additional References:
  3. Werner, G, and Modlin, C., 2010. *Basic Ratemaking*. 4th ed. Casualty Actuarial Society.
  4. Friedland, J.F., 2010. *Estimating Unpaid Claims Using Basic Techniques*. 3rd ed. Casualty Actuarial Society.

Assessment

- The assessment of this subject is 40% coursework and 60% final examination.
- Cousework:
    1. Test 1 - 20%, Week 7.
    2. Test 2 - 20%, Week 12.

Consultation Hour

- Email: chewcy@utar.edu.my
- Consultation Hour:
  1. Tues, 10:00 a.m. - 12:00 p.m.
  2. Fri, 10:00 a.m. - 12:00 p.m.
- Office: FE 51(1)

Note: Kindly send an email before coming for consultation. You are not limited to the above consultation time only.

What is Insurance?

- Generally insurance is being split into two types, life insurance and general insurance.
- This subject is generally learning the techniques of pricing and reserving for general insurance.
- So, why is pricing of insurance so special and/or important?
- Also, why do we need reserving?

A Famous Laksa Stall

- Imagine if you are the owner of a famous Laksa stall, and you would like to have a profit margin of 20%. Then you consider all the raw materials you will need to make a bowl of laksa, say RMx, then you can sell your laksa at RM$1.2x$.
- Is this calculation valid?
- It sounds right but we have ignored the some other costs, like rental, electricity and etc.
- So we can easily improve our calculations and get a more accurate price to achieve the target margin of 20%.
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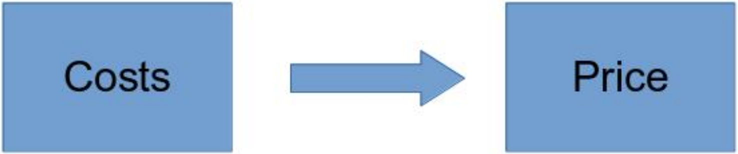
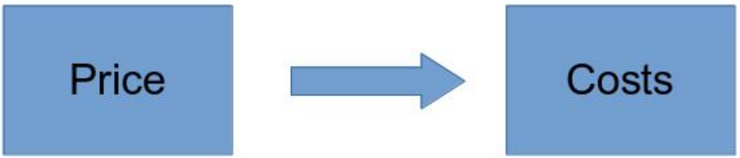


How About Insurance Products?

- Unlike our laksa or other normal products, insurance products are sold before its cost is being known.
- For example, when we sell a car insurance to someone, we DO NOT know whether he will make any claim in the future or not, we DO NOT know if he makes a claim, how much it will be.
- So when we sell insurance to policyholder, we do not know the cost of our product, unlike the Famous Laksa.
- 

Using Expected Value

- What can we do?
- We can only find an EXPECTED value of the cost and then load it with profit margin, cost of capital and etc.
- What happen if we use EXPECTED value?
- It means that what we charge (premium) is not necessary correct. It has uncertainties.
- It also implies that the premium we collect today should be kept for future claims. But, HOW MUCH?
- Thus, we need reversing.

Life and General Insurance

- What are the differences between life and general insurance?
- Life insurance, policies are usually of longer period, for example, whole life insurance.
- And policyholder might make a claim 20 years later.
- While for general insurance, the policies are usually shorter period (could be only a year, e.g. car insurance)
- But the claim that policyholder files might only be closed after 5 years.
- Thus, the techniques of pricing and reserving for both will be quite different.