E09: Defining Claims Inflation - Round Table
Markus Gesmann

05 October 2015

Agenda

• A brief history and motivation
• Defining claims inflation
• Claims inflation in the context of price monitoring
• Summary & Discussion
A brief history

• 2012
  ▪ Lloyd’s receives questions on claims inflation

• 2013
  ▪ “A known unknown”, The Actuary, May Issue
  ▪ Data & Intelligence Day 2013

• 2014
  ▪ Set up of working group with Lloyd’s market practitioners to define claims inflation
  ▪ Publication on www.lloyds.com/claimsinflation

• 2015
  ▪ First submission of plans with reference to agreed definition

Motivation

• Claims inflation can have a significant impact on insurer’s balance sheet

• No consistent definition existed
  ▪ Estimates not comparable so unverifiable

• Similar situation to price monitoring at Lloyd’s pre-2009
  ▪ No consistent approach for risk adjusted rate change (RARC)
Lloyd’s aim

• Agree a standard definition for claims inflation
• Foster language that allows comparison of claims inflation across lines of business and companies
• Update instructions where Lloyd’s asks for claims inflation, e.g. SBF118

Definitions

Inflation

• Change in cost of a “basket of goods and services” across time

Claims inflation

• Change in expected ultimate loss for a given policy across time
• Insurance contract / claims service / “basket of words”
Inflation

Features

- Compare identical **product**
- Specific to **product**
- Specific to **process**
- Not **model** specific
- Entire **effect of time**

---

**Change in basket cost**

```
2010 policy
2010

2011 policy
2011
```
Change in basket cost

2010 policy

2010

2011 policy

2011

policy/basket changes

2010

2011 policy

claims inflation
Claims inflation as part of price monitoring

Last year’s costs basis | Claims Inflation
---|---

Changes on policy

Source: www.lloyds.com/claimsinflation

Definition vs estimation

μ

PARAMETER

- Define claims inflation
- Function of distribution
- Not observable in sample
Definition vs estimation

PARAMETER
- Define claims inflation
- Function of distribution
- Not observable in sample

ESTIMATOR
- Estimate claims inflation
- Function of data
- Sampling, modelling error

Product specific

Property details
- Property built in 1970
- Consider insuring in 2010

Alternative products
- Insurance contract for specific year built
- Insurance contract for specific age
Product: Age

Expected loss

Claims inflation

Policy changes

2010 2011

year

Process specific

2010 policy

2011 policy

Policy changes

2010 2011

Pricing
Process specific

Different time trends

<table>
<thead>
<tr>
<th>Underwriting year</th>
<th>Development year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>2010 2011 2012 2013 2014</td>
</tr>
<tr>
<td>2011</td>
<td>2011 2012 2013 2014</td>
</tr>
<tr>
<td>2012</td>
<td>2012 2013 2014</td>
</tr>
<tr>
<td>2013</td>
<td>2013 2014</td>
</tr>
<tr>
<td>2014</td>
<td>2014</td>
</tr>
</tbody>
</table>
Not model specific

Compute expected loss

- Model 1: age predictor
- Model 2: colour predictor

Property policy

- Same product
- Same claims inflation
- Different adjustment for unnamed factors

Product: Year built
Product: Year built

Product: Age
Summary

Claims inflation

• Change in expected ultimate loss for a given policy across time

Features

• Compare identical product
• Specific to product
• Specific to process
• Not model specific

www.lloyds.com/claimsinflation
The views expressed in this presentation are those of invited contributors and not necessarily those of the IFoA. The IFoA do not endorse any of the views stated, nor any claims or representations made in this presentation and accept no responsibility or liability to any person for loss or damage suffered as a consequence of their placing reliance upon any view, claim or representation made in this presentation.

The information and expressions of opinion contained in this publication are not intended to be a comprehensive study, nor to provide actuarial advice or advice of any nature and should not be treated as a substitute for specific advice concerning individual situations. On no account may any part of this presentation be reproduced without the written permission of the IFoA and author.