EAA Seminar
Non-Life Pricing: Introduction to Practical Implementation of Modern Techniques in R

16/17 March 2017 | Cologne, Germany

Organised by the EAA - European Actuarial Academy GmbH.

Introduction

Non-Life insurance is facing a lot of challenges ranging from fierce competition on the market or evolution in the distribution channel used by the consumers to evolution of the regulatory environment (Solvency II, IFRS...).

Pricing is the central link between solvency, profitability and market shares (volume). Improving pricing practice encompasses several dimensions:

- Technical: is our pricing adequate to cover the underlying cost of risk of my policyholders and the other costs we are facing? Which are the key variables driving the risk? Are they adequately taken into account in our pricing?
- Competition: at what price will we attract the segments that we target and price out those that we don't want? Is the positioning of our competitors influencing our pricing practice?
- Elasticity: what (new) price are our existing customers prepared to accept?
- Segmentation: is our segmentation granular enough for our purposes?

The aim of this seminar is to present the actuarial/statistical techniques used in non-life pricing. This seminar is a strong introduction to these techniques and will be followed in the next few months by an advanced seminar of the EAA.

Participants

The seminar is specially developed for non-life actuaries or statisticians working in product development or risk management departments. A basic knowledge of non-life premium calculation mechanisms is useful but not necessary.

Attendees are encouraged to bring a laptop computer with R installed as well as some useful packages (all the information will be provided after subscription).

Purpose and Nature

The seminar will alternate between methodological concepts, practical examples and case studies in order to ensure a comprehensive understanding of the techniques.

Participants will have the opportunity to apply in the R software concepts they will have learned in the theoretical sessions, using fictitious data. They will adjust GLM models, understand how results should be interpreted, perform statistical (significance) tests, etc. Examples will be provided for standard lines of business (e.g. MTPL and Fire).

On the basis of a realistic database, the participants will have to propose an appropriate pricing structure taking into account the characteristics of the portfolio and possibly marketing constraints

The seminar will start with a half-day introduction to R so that no specific knowledge of this software is required.

Language

The language of the seminar will be English.

Lecturers

Samuel Mahy (Reacfin)
Samuel graduated as a Civil Engineer in Applied Mathematics with an additional minor in Economy and also holds a Master in Actuarial Sciences. He is a qualified actuary of the Institute of Actuaries in Belgium (IA|BE) and involved in the Reinsurance and Non-Life Workgroup of the IA|BE. He is the Head of the Non-Life Center of Excellence at Reacfin. Samuel has been active 5 years in the reinsurance sector where he was involved in reinsurance pricing model developments. At the same time he was also the main responsible of the UK market portfolio profitability follow-up. Samuel joined Reacfin in June 2010 as a specialist in Non-Life Insurance and Reinsurance and he has acquired a sound knowledge of Solvency 2 frameworks (Non-Life, Health). As a director, he is involved in various missions as in the modelling, implementation and validation of pillar I deliverables (standard approach and (Partial) Internal models), reinsurance optimization, model documentation, non-life pricing model development for several lines of business.

Xavier Maréchal (Reacfin)

Xavier is founder and Managing partner of Reacfin. As the Head of the Innovation & Quality department he also leads the Centers of Excellence at Reacfin. Xavier is also one of the co-authors of: "Actuarial Modeling of Claim Counts: Risk Classification, Credibility and Bonus-Malus Systems" (Wiley, 2007). Xavier has obtained different academic degrees as: Civil Engineer in Applied Mathematics, MSc. Actuarial Sciences and MSc. Management. Xavier is a qualified actuary of the Institute of Actuaries in Belgium (IA|BE) and Member of the Non-Life workgroup of the IA|BE. Xavier has extensive experience in the actuarial field obtained during his 10 years as a principal consultant for many national and multinational insurance companies. He has gained a complementary experience in various fields going from Non-Life ratemaking and provisioning to life modeling and ALM. After several years of intensive modeling activities in life, non-life and ALM, Xavier works now as reviewer and mentor for consultants. He has also performed several validation assignments and holds the actuarial function for two health insurance companies.

Preliminary Programme

Thursday, 16 March 2017

08.45 - 09.00	Registration
09.00 - 09.15	Introduction & welcome (EAA)
09.15 - 10.45	Introduction to R: manipulating database, analysing data
10.45-11.00	Coffee Break
11.00-12.30	Introduction to R: basic modelling functions
12.30-13.30	Lunch
13.30-14.00	Introduction to risk classification
14.00-14.30	From linear to generalized linear models
14.30-15.15	Poisson regression for claim counts
15.15-15.30	Coffee Break
15.30-17.00	Case study: frequency model
approx. 18.30	Dinner

Friday, 17 March 2017

09.00-09.45	Gamma regression for attritional claims
09.45-10.45	Extreme value theory for large claims modeling
10.45-11.00	Coffee Break
11.00-12.15	Case study: cost model
12.15-13.15	Lunch
13.15-14.15	Other practical difficulties
14.15-15.10	Inclusion of commercial and capital constraints in final pricing
15.10-15.15	Concluding remarks, closing of seminar (EAA)

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Fees & Registration

Please register for the seminar as soon as possible because of the expected demand. If there are more persons interested in this seminar than places available we will give priority to the registrations received first. Please send your registration as soon as possible by using our online registration form at www.actuarial-academy.com.

Your registration is binding. Cancellation is only possible up to 4 weeks before the first day of seminar. If you cancel later, the full seminar fee is due. You may appoint someone to take your place, but must notify us in advance. EAA has the right to cancel the event if the minimum number of participants is not reached.

Please always give your invoice number when you effect payment. All bank charges are to be borne by the participant. We will send you an invoice, please allow a few days for handling.

Your early-bird registration fee is € 790.00 plus 19 % VAT until 16 January 2017. After this date the fee will be € 970.00 plus 19 % VAT.

Venue & Accommodation

The seminar will take place at the hotel

Mercure Hotel Severinshof Koeln City
Severinstraße 199
50676 Cologne, Germany
Phone: +49 221 2013 555
E-mail: H1206@accor.com
Hotel website

We have arranged special prices for accommodation. A single room costs € 103.00 per night, including breakfast and VAT, excluding tax for the promotion and advancement of culture in the City of Cologne (further information). This price is valid for bookings out of our allotment ''EAA'' until 28 February 2017. Please book your accommodation directly with the hotel. Kindly book early, as our allotment includes a limited number of rooms, and note the hotel's cancellation policy.

CPD

For this seminar, the following CPD points are available under the CPD scheme of the relevant national actuarial association:

Austria:	11 points
Belgium:	11 points
Bulgaria:	12 points
Czech Republic:	2-3 points (individual accreditation)
Estonia:	11 hours

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Germany: 12 hours
Hungary: 12 hours
Italy: approx.   4 credits (GdLA individual accreditation)
Netherlands: approx. 11 PE-points (individual accreditation)
Russia: 40 points
Slovakia: 8 CPD points
Slovenia: 50 points
Switzerland: 15 points

No responsibility is taken for the accuracy of this information.