EAA e-Conference on
Data Science & Data Ethics
16 May 2023 | online

european
actuarial
academy

Title

Successfully Leveraging Customer Analytics in Actuarial Departments

Speaker/Company

Lars Oehlmann / Gabriel Stoszek, PwC Germany

Abstract

Data science in insurance is often associated with customer orientated activities. Examples include analyses of purchase and churn behaviour e.g. for next-best-offer systems, the investigation of trigger factors and various market potential assessments for target group definitions. Unfortunately, these activities are rarely carried out by actuaries and generated insights are hardly ever used by actuarial departments.

The reality, however, is that dedicated departments dealing with customer analytics have become standard in the insurance industry. These departments have proven to deliver additional value to the entities and are therefore increasingly embedded within the organisations The primary focus of these departments is on answering questions from customer service units and strategic sales and marketing departments. Naturally, these questions are mostly customer oriented. But, as knowledge of customer behaviour, needs and characteristics grow, so do the possible applications in traditionally more back-office oriented departments. Therefore, it is straightforward that some actuarial departments are looking into the identification of valuable use cases. A classic example of an application with the involvement of an actuarial department are profitability simulations after premium adjustments that take customer behaviour into account.

In our presentation, we would like to introduce typical outcomes of customer analytics and show further fields of application in actuarial departments. In doing so, we will specifically address the limitations but also the strengths of established customer analytic models and methods. We will use examples to show possible fields of application from different actuarial areas. We link these application examples with the commercial benefit for insurance companies.

In particular, we will discuss customer behaviour models, price elasticities, the necessary granularities of the underlying customer data and several types of visualisations. For this purpose, we will introduce the concept of life phase models and discuss the underlying data basis for this models. For the general discussions of the necessary granularity, we will first create an understanding of the requirements of CRM and strategic sales departments. Then we will discuss the resulting granularity requirements and implied limitations for other applications. We will link these examples to applications in the fields of pricing and repricing, profitability management and strategic product development. During this detailed consideration, we will also address the importance of the correct visualisation of the respective types of results for the individual fields of application.

Biography

Gabriel Stoszek joined PwC as an actuary in 2019 and is a certified actuary (Aktuar DAV). He is particularly involved in customer behaviour predictions and customer value analytics. Gabriel Stoszek has successfully implemented cross-industry customer analytics models e.g. on behalf of strategic marketing and sales department.

Lars Oehlmann has worked as an actuary at PwC since 2016 and is a certified actuary (Aktuar DAV). His focus areas include life insurance and reinsurance. In particular, Lars Oehlmann focuses on actuarial modernisation initiatives in these industries. As a manager at Actuarial Risk Modelling Services, he is at the forefront of current market challenges and trends.