

E. KREMER: *Applied Risk Theory*.

This book of Erhard Kremer presents some selected chapters of risk theory. It starts with a nice 20 page summary of the basic results of probability theory.

Chapter two gives an overview about the common premium principles and proves their basic properties. Special emphasis is put on the “Swiss premium principle”.

Chapter three deals with classical credibility theory. The reader might actually be misled by the title “rating theory”, since beside credibility theory no other rating methods are discussed.

In the introduction the author mentions that in his view reinsurance is one of the main and nicest topics in Risk Theory. Unfortunately, my high expectations raised by these comments were not fully met. Although the material treated in chapter four covers some important concepts, e.g. Panjer’s algorithm or optimality of reinsurance covers, the link to practical applications is fully missing. Beside the classical material I would also have expected some words on today’s hot topics like extreme value theory or modelling of correlated risks.

The last chapter gives a short introduction to some methods used in life insurance, including applications of martingale theory.

In my opinion this book can be of value for actuarial students in order to quickly get a first idea about risk theory and some important actuarial principles. I wouldn’t recommend it, however, to a practical actuary, who is usually interested in quite different types of questions.

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