

B.A.J. **8**, **1**, 195 (2002)

REVIEW

Introductory Statistics with Applications in General Insurance (second edition). BY I. B. HOSSACK, J. H. POLLARD and B. ZEHNWIRTH (Cambridge University Press, 1999)

This is the second edition of a textbook which will be well-known to actuarial students who took Institute Subject 5/Faculty Part IVB in the late 1980s and early 1990s.

The textbook still covers a number of topics included in the new 100 series exams. It would, therefore, be a useful addition to the library of an actuarial student, particularly one entering the profession from an educational background that did not include courses in probability and statistics.

The introductory chapters cover some basic mathematics, elementary probability theory and statistics. The material is not mathematically demanding, with emphasis being placed more on applications of results. Subsequent chapters cover actuarial topics such as loss and counting distributions, risk premiums, experience rating, the use of simulation, estimation of outstanding claims provisions and elementary risk theory.

Material is mostly at an introductory level, and there are good discussions to motivate topics such as experience rating and outstanding claims provisions. The text provides a good introduction to actuarial topics, but the mathematically inclined reader must explore more advanced texts such as Hogg & Klugman (1984) and Panjer & Willmot (1992) for details. (Surprisingly, each of these texts is absent from the authors' list of further reading.) Each chapter contains a number of numerical examples, and concludes with exercises for which partial solutions are provided.

Whilst tutoring for professional exams, I found the first edition a useful text. The second edition, whilst retaining everything I liked about the first, has disappointed me. Apart from the inclusion of a new five page section in the chapter on outstanding claims provisions, the text is largely unchanged from the first edition.

In the preface, the authors refer to the changes in the sixteen years since the first edition, notably the advent of personal computing. Yet nowhere in the text do they exploit this. Many problems discussed in the text can be tackled easily in a spreadsheet — for example, simulation, calculation of distribution functions through supplied functions and claims run-off calculations are all easily taught with such software.

Actuarial science has changed significantly in the sixteen years since the first edition. The concluding chapter on elementary risk theory, which I considered to be the poorest chapter of the first edition, now seems hopelessly dated. In my view, this chapter should not have survived to the second edition.

In conclusion, this is a good introductory text on topics in general insurance. The production of a second edition has, however, been a missed opportunity to both delete dated material and include modern computational methods.

REFERENCES

- HOGG, R.V. & KLUGMAN, S.A. (1984). *Loss distributions*. John Wiley & Sons, New York.
PANJER, H.H. & WILLMOT, G.E. (1992). *Insurance risk models*. Society of Actuaries, Itasca, IL.

D.C.M. DICKSON