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Foundations of Casualty Actuarial Science: by Casualty Actuarial Society, 1990.

Reviewer: Tapen Sinha, Bond University, Australia.

In insurance, there are a number of introductory books written in a workbook format. For example consider the textbook of the Society of Actuaries: *Actuarial Mathematics* (1986) by Bowers et al. You have to plod your way through that book! In contrast, this book is very readable. It does not read like a workbook.

The technical level is not very demanding. Thus, anyone who can follow a little bit of calculus/algebra/statistics can follow the main body of the book without difficult as long as one is not deterred by a few double integrals and some not so obvious properties of a Poisson process.

The authors are practitioners from insurance companies (with the exception of Steve D'Arcy. Then again, Steve is an award winning Professor known for innovations in teaching insurance to make it practical and interesting). Therefore, the book emphasizes heavily the practical aspects of Casualty Actuarial Science.

The first and introductory chapter provides a roadmap of Casualty Actuarial Science. If the reader is completely new to the subject, the opening section starts with the convenient heading "What It's All About." It provides a historical background of how Casualty Actuarial Science arose in America at the turn of the century.

There are eight other chapters in the book: Ratemaking, Individual Risk Rating, Loss Reserving, Risk Classification, Reinsurance, Credibility, Expense Issues, and Special Issues. (The last chapter discusses measurement, allocation and uses of surpluses, insurer solvency, risk theory, planning and forecasting, and data sources.) All chapters are about 40 pates each with the exception of the chapters on reinsurance and credibility: they are about 100 pages each.

In a sense, this book provides a "kinder and gentler" introduction to casualty property insurance literature. More technical details are referred to at the end of the chapter references. Parts of the book are written matter of factly. In other parts, there is humor lurking. For example, in the introductory section of the chapter on credibility, we find the following paragraph:

> A word about "data": it is assumed in this chapter that "data" is a singular English noun which derives from a latin plural noun, as did "agenda." Moreover, it is a collective noun, like "snow." Thus, ideally, "snow is white" is true, and "data is reliable" is at least grammatical. In the word of Charles Kuralt, "However much purists may object, the fact is, 'daturm' ain't an English word. 'Data,' well, is.

I might have expected an introduction to the usage of the term data in a book on statistics, but not in a chapter introducing credibility!

One curious fact about Casualty Actuarial Science is that it was profoundly influenced by statistics rather than economics, at least until the

1960s. Perhaps the single personality who has changed that was Karl Borch. Inevitably, the influence of finance followed. In that arena, we are finding the Capital Asset Pricing Model (CAPM), Arbitrage Pricing Theory (APT) and other associated jargon entering the vocabulary of the insurance practitioners. In the coming decades, we are likely see work like *The Financial Theory of Pricing Property-Liability Insurance Contracts* (by S. D'Arcy and N. Doherty, 1988) in standard insurance literature.

A. M. Best published a report last year on insolvency of property/casualty insurers between 1969 and 1990. If we look at the primary cause of insolvency of 372 companies, "Inadequate Pricing" (28%) and "Rapid Growth" (21%) account for nearly half of the insolvencies. Reading this book will give the reader a sound footing on how to handle the pricing problem (by managing reserves), but it will be of little use to address the problem of rapid growth. Perhaps management problems associated with rapid growth in property/casualty insurance are not considered and integral part of Casualty Actuarial *Science*.

In summary, the book provides quite a useful introduction to Casualty Actuarial Science. There is one jarring bad note about the book. The index at the end of the book is useless. For example, Arthur Bailey's name is featured prominently throughout the book, including one whole section in the first chapter. But, the index mentions him once at page 22! Similarly, one of the authors, Stephen D'Arcy, is not even listed in the index. Such an index is not satisfactory. These days with cheap word processing programs it is not difficult to create a good index. There is no excuse for not having a more useful index.

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Commercial Liability Underwriting Volumes I and II, by Larry D. Gaunt, Numan A. Williams and Everett D. Randall (Insurance Institute of America, 1990)

Reviewer: Mark L. Cross, Associate Professor of Insurance and Finance, Louisiana Tech University.

This third edition of Commercial Liability Underwriting has been written primarily to help student meet the current educational objectives of the Insurance Institute of America's Associate in Underwriting 63 course. Since the second edition of this text was published many changes have taken place in the commercial liability coverage area. The most important change dealt with the introduction of a new set of simplified commercial liability policies introduced in the mid-1980s. The most visible of the policy changes was the introduction of a claims-made commercial general liability policy form. In addition, the risk classification table of the Commercial Lines Manual was also revised in the mid-1980s.

The third edition of Commercial Liability Underwriting deals with the new commercial liability policies and risk classification rules. The text is not intended to be an in-depth course on policy coverages. The emphasis is