liability system will likely be unwilling or unable to digest the information that it contains.

Economics of Insurance by Karl H. Borch (North-Holland 1990), 402 pp.

Reviewer: Dr. Tapen Sinha, School of Business, Bond University, Australia.

The writing of this advanced textbook was undertaken by one of the outstanding theorists of the economics of insurance: Karl H. Borch. He was one of the few researchers who contributed in economic theory as well as in insurance. (A summary of Borch's contribution to insurance was presented by Phelm P. Boyle in *The Journal of Risk Insurance*, June 1990.) Unfortunately, he died before he was able to complete the book, so this task was undertaken by two of his colleagues at the Norwegian School of Economics and Business Administration: Knut K. Aase and Agnar Sandmo.

From the overall structure of the book it is clear that this monograph was to be the magnum opus encompassing all the research interests of the author. The topics covered are (1) insurance and economics, (2) insurance and utility theory, (3) insurance and competitive equilibrium, (4) life insurance, (5) business insurance, (6) household insurance, (7) uninsurable risks, and (8) risk theory and government supervision. Each topic is discussed from the point of view of (neo-classical) economic theory. This approach stands in stark contrast with the literature on general insurance theory in which concepts like Pareto Optimality is never even mentioned. Borch weaves in concepts such as the capital asset pricing model (CAPM), Bellman's equation, and asymmetric information effortlessly into standard literature.

This book could aid a person familiar with the mathematics of insurance (e.g., an actuary) as to what economics/finance has to offer. For example, one can learn that there are only two basic types of insurance: term life and contingent annuities. Other complicated policies are merely different combinations of these basic policies. One can learn how the basic life cycle model of economics can accommodate various concepts of insurance. The concepts and limitations of optimal insurance structures using utility theory are demonstrated beautifully. Historical notes are presented also in an interesting fashion.

There is one important shortcoming of the monograph as a textbook. It was originally meant to be a self contained integrated textbook. But Borch's sudden death forced Aase and Sandmo to simply insert many of the published articles of Borch "as is" in the relevant chapters. This process has resulted in a book with uneven levels of difficulty for the uninitiated. After all, *Economics Letters, Geneva Papers of Risk and Insurance, Journal of Risk and Insurance* and *Econometrica* (some of the journals from which the articles are taken) do not call for the same writing style.

There are some minor (but still disturbing) errors in the book. For example, in chapter 1, Jensen's inequality is claimed to state $E\,u(x) < E(x)$ (p. 5) whereas later (p. 31) we get the (correct) version of the inequality $E\,u(x) < u(E(x))$ if

$u''(x) < 0$. In chapter 4, perpetuities are referred to as British consuls. The uninitiated might not know the difference between consols and consuls! Also, a person unfamiliar with Stanley Fischer and Irving Fisher would not know the spellings of their last names are different after reading this book (p. 256–260).