

by the legal profession is most revealing and helpful in beginning the reconciliation process. Highly recommended, not only for the attorney and health care professional, but the interested lay person as well.

Risk, Information and Insurance, edited by Henri Loubergé, (Kluwer Academic Publishers, 1990) 274 pages.

Reviewer: Richard PonArul, Professor of Finance, California State University, Chico California.

Risk, Information and Insurance is a collection of essays in the memory of Professor Karl Borch. Professor Borch's prolific work has vastly strengthened the link between economic theory and insurance. This volume, in his honor, provides the reader with the different facets of the insurance field that are amenable to economic analysis. The papers are theoretical (rather than empirical) and are targeted to researchers in the field of insurance. Several of the papers require the reader to have graduate level training in economics. The editor, Professor Henri Loubergé, has written an introduction that outlines the salient features of the papers in this volume.

In the introductory part of the book, Professor Jean Lemaire presents a historical survey of the applications of Borch's theorem on Risk Exchange. He shows how game theoretic approach can be used to arrive at a unique Pareto-optimal treaty in the original risk exchange model. Game theoretic approach is also used to apply the risk exchange model to the case of a single policy holder and an insurer, and networks and chains of reinsurance.

The main body of the book is divided into three parts: Economics of Uncertainty, Economics of Information, and Economics of Insurance. The two papers in the first part address the allocation of risk in the market in the presence of labor income risk. The second part addresses the effect of asymmetric information—moral hazard and adverse selection on the equilibrium in insurance markets. The third part contains papers concerning the "institutional" nature of insurance company operations and regulation.

Economics of Uncertainty

In the first paper, Professor Drèze examines the optimal labor contract (that provides for efficient allocation of risk) in a world in which the Capital Asset Pricing Model (CAPM) holds. The market price of risk from the CAPM is an input to the optimal labor contract. The wages depend partly on the aggregate output, thus departing from the marginal value product of labor.

Professors Dionne, Eeckhoudt and Briys analyze the consumption-saving problem of an individual in a two period model with either income risk or capital risk present. They show that changes in capital risk affect the consumption decision of borrowers and lenders differently. They also show that the effect of changes in each type of risk on consumption depends on

assumptions about the interaction of the utility function and the interest rate. In other words the assumption of risk aversion alone will not allow us to sign the changes in consumption in response to changes in either type of risk.

Economics of Information

Models that incorporate information asymmetries among agents have led to major advances in Economic and Financial theories in the last decade. Such models are now becoming part of the text book fare. Moral Hazard and Adverse Selection are two phenomena that make the competitive equilibrium inefficient, and the insurance markets provide the most typical examples of these phenomena. The first two papers in this section argue that "the concept of perfect competition may be too strong for the insurance markets."

The paper by Professors Arnott and Stiglitz provides a taxonomy of the market failures in insurance markets due to moral hazard. Such problems, as the authors argue, are not unique to insurance markets. But they are most explicit in insurance. The authors establish that ideal governments can enhance welfare through intervention in the insurance markets.

The paper by Professor Eisen examines the inefficiency of competitive equilibrium with moral hazard, adverse selection, and both present. He shows that the effect of the inefficiency due to adverse selection may be partly offset by moral hazard, thus leading to "synergistic effects" from these two phenomena.

Professors Eden and Kahane present a lucid model of the insurance market structure using the moral hazard argument. The reinsurers are remote providers of risk pooling services, and the local insurer provides the monitoring services to combat moral hazard. To ensure incentives for monitoring, the local insurer does not cede all the risk to the reinsurer. The last article in this section by Professors Datta and Doherty presents a framework for analyzing the capital structure decision of stock and mutual (Property-Liability) insurers. This paper should stimulate regulation oriented research on capital structure issues.

Economics of Insurance

The five papers in this section are less technical (with the exception of the last paper by Professor Karten) than the rest of the book. They provide institutional information that may be very useful for theoretical research. Professor Farny's paper addresses the insurer's problem of balancing between growth and profit objectives. The model he presents is general but does not incorporate competitive market environment as the other papers in this volume have done. Professor Van den Bergh's paper reviews the theories of regulation and analyses insurance regulated regulation in EEC countries. Professor Outreville's paper presents a micro-economic analysis of the effects of price regulation in insurance markets. The author addresses the emergence of parallel markets in response to price controls but does not

specify the forms these markets may assume. For instance, in developing countries black markets do emerge due to price controls in the case of goods and services. But in the case of insurance, self insurance is more likely than black markets.

The paper by Professors Carter and Diacon describe the information aggregation process in the London insurance through the coinsurance slip system. The last paper in this section by Professor Karten is a technical paper that provides an elegant solution to the determination of the "effective" solvency margin of insurers when they hold shares in other insurance firms. He shows that the common intuition that interfirm holding of shares reduces the solvency margin is valid only when the risks insured by the two firms are perfectly positively correlated.

Summary

This volume is a collection of theoretical papers and should serve as a reference book as well as source of stimulation for those engaged in research. The topics are very current with much potential for future research. Some of the papers have traces of transliteration from another language. Expressions such as "these huge differences are more optical than real" and "aggressive market-processing strategies" may be refreshing or cumbersome depending on the reader. This reviewer found them refreshing.

It's My Retirement Money, Take Good Care of It: The TIAA-CREF Story
by William C. Greenough (Pension Research Council, 1990), 396 pages.

Reviewed by: Dr. Barry D. Smith, CPCU, CLU, Department Head,
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University.

This book chronicles the history of TIAA-CREF. From the announcement in 1905 by Andrew Carnegie of "free pensions" for college professors to the establishment of TIAA in 1918 and CREF in 1952 and through the sweeping changes of the seventies and eighties, the book provides an insider's perspective through the keen eye of Dr. William C. Greenough, a staff member of TIAA-CREF from 1941 through 1979, which included terms as President from 1957-1967 and Chairman and CEO from 1963-1979.

His account of the innovation, growth, setbacks, and controversies over this 85-year period are fascinating. He spends a significant portion of the book detailing the critical role played by the Carnegie Foundation in helping to establish TIAA and support its activities throughout the years. Another large section of the book is devoted to the origins of the variable annuity concept and the establishment of CREF in 1952. This portion of the work is particularly insightful because the author was a leading character in the development of this radical, innovative concept. As a pioneer, his anecdotal

