

calculated. However, insurance companies rarely use debt, according to the authors. It would be interesting to know what features of insurance companies make debt undesirable.

Chapter 5 (Insurance Company Income and Dividend Policy) provides an excellent (but not information-theoretic) description of income measurement and dividend payout policies. The empirical facts are interesting, and the discussion of the real effects of apparently nominal accounting changes is compelling.

Chapter 6 (Financial Planning) provides a typical discussion of asset-side decision rules, capital budgeting and capital rationing. It leads the reader to incorporate beta estimates of underwriting portfolios into premium valuation, but the linkage is never forged. The discussion of the ISO State X method at the end of the chapter is interesting and thorough.

Chapter 7 (Investment Strategy) presents the Markowitz model of portfolio selection. The financial theorist may find the inclusion of the coefficient of variation as a measure of portfolio performance puzzling in this context. The expected introduction of a risk-free security never materializes. The authors seem to have assumed that insurance companies should diversify their holdings, without providing any explanation why. The chapter continues to describe interest rate risk, duration, and immunization. Once again, the technical aspects of the exposition are accurate, but the reader never knows why insurance companies should hedge interest rate risk.

The remaining chapters (8: The Economic Environment, 9: Financial Markets, 10: Money Markets and Related Instruments, and 11: Capital Markets) attempt to cover a great deal of material. Given the space limitations, the coverage is excellent. Occasionally, one will find the theory outdated; the monetarist/Keynesian dichotomy is dated, and discussions of the term structure do not mention modern theories. However, the student with limited time and the pressure to pass the AIAF 113 examination will find these chapters particularly valuable.

Overall, the text meets its objectives well. The examination-bound student will find the complete text indispensable. The competent and curious finance student (defined broadly) with interest in insurance company management should concentrate on Chapters 1, 5, 6 and the last part of Chapter 2. However, insurance practitioners seeking decision-making guidance from modern finance theory may wish to consult other sources.

*Health Care, Technology, and the Competitive Environment*, Edited by Henry P. Brehm and Ross M. Mullner, (Praeger Publishers, 1989).

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In the past several years the United States health care system has undergone many fundamental changes. Advances in medical and biomedical technologies have affected the types of health care available, the settings in which care is delivered, and the costs of that care. This book is a collection of essays that examine the relationships between health care, technology, and the economic

environment for care delivery. It is based partly on a 1987 conference titled "Health Technology Adoption in a DRG Age," sponsored by the Center for Technology and Policy at Boston University.

The essays in this book are divided into four sections. Part I sets the stage by discussing new developments in medical and biomedical technology and the implications of these technological changes. New diagnostic and therapeutic technologies have made it possible, in many cases, to either replace hospitalization with outpatient treatment or to significantly decrease the length of hospital stays. Since the need for hospitalization has been reduced, hospitals are faced with declining admissions, average daily censuses, and occupancy rates. Moreover, alternative delivery systems and settings have increased competitive pressures. Non-profit hospitals are gradually losing market share to for-profit institutions. In addition to specializing in relatively uncomplicated and potentially profitable cases, the for-profits generally operate private clinics that provide ambulatory care services such as laser surgery and mammography.

Advances in medical technology have also significantly increased the costs of medical care. In an attempt to control the increase in costs, Medicare has changed its method of reimbursement from a cost-based retrospective system to a Prospective Payment System (PPS) based on diagnostic related groups (DRGs). Many private insurers have followed suit in demanding cost containment measures from health care providers. Thus the technology that particular institutions adopt, and hence the care that patients receive, is to a certain extent determined by how that technology affects the cost of care and its reimbursement potential.

Part II is concerned mainly with the organizational structure of health care institutions. The essays describe the decision making process within typical hospital settings, and the effects of the prospective payment system on that process. They examine the implications of the decision making process on the adoption of new technologies and the manner in which technology may affect the organizational structure, staffing, and financial position of these institutions.

The essays in Part III focus on the way that hospitals are reimbursed under Medicare's PPS and the implications of that reimbursement system on both the adoption and development of new technologies. They also examine the way in which technology and the need for cost containment interact to influence market structure. Part IV is a single essay that evaluates the conclusions and implications of the preceding work.

These essays raise many interesting questions such as, what effects will changes in technology and reimbursement systems have on the quality of health care, the costs of that care, and overall fairness of the health care system? This collection describes the changes that have occurred in the medical environment and the impact that these changes have on the incentives facing health care professionals and institutions. The theoretical framework

for most of this work comes primarily from either sociology or management science. This volume will be of interest primarily to persons interested in health care administration and management.

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