Book Review

Changes in the Life Insurance Industry: Efficiency, Technology, and Risk Management, edited by J. David Cummins and Anthony M. Santomero, Series on Innovations in Financial Markets and Institutions (IFMI), 1999, Kluwer Academic Publishers, 369 pages.

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This volume is organized in 10 independent but related chapters devoted to enhance our understanding of the challenges facing life insurers in their quest for a successful strategy. A total of 13 authors wrote or coauthored the chapters, including the leading researchers engaged in two major projects coordinated by the Wharton Financial Institutions Center (WFIC) during the second half portion of the 1990s. One project was a major survey of the industry sponsored by the Sloan Foundation, with a special focus on key drivers of performance, namely technology and labor. The other was a field-based investigation of the financial risk management practices of life insurers.

The book's writing style clearly signals that it is targeting a hybrid audience of academics and practitioners. The price to pay is that the more technical material is kept to a minimum. This can possibly be unsatisfactory to specialized readers. Nevertheless, there are many nice features in this book, including the charts, tables, and illustrations that help to understand the material.

Chapter 1, "Life Insurance: The State of the Industry" by Anthony M. Santomero, reviews the changing landscape of the financial services industry, in general, and of the U.S. life insurance sector, in particular. Its discussion of the threats and opportunities faced by life insurers leads to the identification of the determinants of success or failure in this line of business. It ends with a nice outline of the remaining chapters.

Chapter 2, "The Industry Speaks: Results of the WFIC Insurance Survey" by James F. Moore and Anthony M. Santomero, reports survey results on numerous topics including (1) threat and opportunities as seen by participants, (2) product offerings, (3) distribution channels, (4) strategic choices, (5) use of technology, (6) human resource (HR) practices, and (7) performance measures and standards. Their main conclusion is that not all life insurers are alike.

Chapter 3, "Efficiency in the U.S. Life Insurance Industry: Are Insurers Minimizing Costs and Maximizing Revenues" by J. David Cummins, relies on the frontier approach to analyze the performance of specific life insurance firms by comparing them to efficient frontiers consisting of best practice firms in the industry. *Data envelopment* *analysis* (DEA) is applied to estimate efficiency frontiers based on a yearly sample of about 750 firms for which financial data on outputs, inputs, output prices, and input prices were available, over the period from 1988 through 1995. The author measures life insurance outputs through variables that correlate highly with the value added by life insurers in their supply of services. Yearly average efficiencies and interfirm performance are discussed. Cummins also looks at the characteristics of the industry's efficiency leaders, the issue of economies of scale, and whether there appears to be a link between distribution and efficiency. Several conclusions emerge from Cummins' analysis of the U.S. life insurance sector. In particular, he finds that efficiency scores are relatively low and widely dispersed among life insurance firms in comparison with other financial industries.

Chapter 4, "Efficiency and Competitiveness in the U.S. Life Insurance Industry: Corporate, Product, and Distribution Strategies" by Roderick M. Carr, J. David Cummins, and Laureen Regan, aims at increasing our understanding of the best practices associated with life insurer efficiency. It focuses on the relationships between business strategies and efficiency by correlating insurer efficiency DEA scores (cost and revenue) with the business practices of life insurers who participated in the 1995–1996 WFIC survey. Two types of statistical analyses are conducted: (1) "Categorical analysis" that involves a series of pairwise comparisons of average efficiencies for insurers who are categorized based on size, business mix, and distribution channels and (2) "Multiple regression analysis" that captures the effect of each independent variable on efficiency, holding constant the effects of the other variables included in the model. Key findings are that size and distribution choices both play an important role in relative efficiency across insurers and that technology expenditures tend to be profitable while giving insurers better capabilities to perform sales and service functions.

Chapter 5, "Life Insurance Mergers and Acquisitions" by J. David Cummins, Sharon Tennyson, and Mary Weiss, sheds some light on which firms succeed in attaining cost and revenue efficiency (in a DEA sense) through merger and acquisition activity (M&A) and which do not. For that purpose, they first compare the efficiency characteristics of the life insurance firms in their sample that were acquired during the period 1989–1994 to those of firms that were not targets of M&A activity. Then, they rely on multiple regression analysis to study the relationship between being an acquisition target and efficiency changes over the time period. Finally, they analyze the effects of acquisitions on a reduced sample (because of a lack of data) of 46 acquiring firms. Their results tend to show that, for the most part, M&A activity in the life sector is driven by economically viable objectives with a positive impact on efficiency in the industry as a whole.

Chapter 6, "Strategy, Human Resources Management, and the Performance of Life Insurance Firms" by Clint Chadwick and Peter Cappelli, makes use of the broad-based industry WFIC survey data to investigate how HR practices can and do affect life insurance firm productivity and efficiency (in a DEA sense). The authors first compare the life insurance sector to manufacturing. Then, they explain why and how HR systems should support strategic objectives and enhance implementation. Third, they examine whether life insurance firms attempt to preserve relationships with employees during events such as downsizing and restructuring. Finally, they study (using Tobit regressions) whether HR practices have a significant impact, over and above other basic performance variables, on the average cost efficiency score (1993–1995) of a sample of life firms ($n = 68$). Their empirical results suggest that HR practices that target specific employees' behaviors in performance appraisals and direct compensation tend to increase cost efficiency, whereas profit sharing plans or other similar financial rewards do not.

Chapter 7, "The Impact of Information Technology Management Practices on the Performance of Life Insurance Companies" by Lorin M. Hitt, explores the effects of the information technology (IT) organization on cost efficiency (again in a DEA sense) of IT investments as well as their contribution to the efficiency of the life insurance firm as a whole. Tobit regressions are used on a sample of 54 firms to analyze the determinants of cost and revenue efficiency and whether IT practices matter. Results do indicate that the way IT practices are created and deployed within life insurance organizations can have a substantial effect on efficiency over and above the effects of particular technologies themselves.

Chapter 8, "Toward a Unified Valuation Model for Life Insurers" by David F. Babbel and Craig Merrill, focuses primarily on the economic valuation of insurance liabilities of life firms. First, the authors identify the components of an insurance company's economic value and then they discuss the 10 criteria which, in their view, are required for a viable economic valuation model. After reviewing the taxonomy of valuation models available in the literature and the specifics of insurance liabilities, they conclude that only models that feature stochastic cash flows that are influenced by stochastic interest rates are capable of producing viable valuation estimates of life insurance liabilities. Finally, they provide an illustration and highlight some of the difficulties associated with the implementation of such a model. In their conclusion, the authors argue that insurers who operate in a competitive environment are facing potentially greater costs if they do not adopt an economic focus in valuing their firm, due to mispricing of policies and asset/liability mismatch.

Chapter 9, "An Analysis of the Financial Risk Management Process Used by Life Insurers" by David F. Babbel and Anthony M. Santomero, reports the state of risk management techniques employed by a group of relatively sophisticated life insurance firms. It focuses on the standard of practice and evaluates how and why it is conducted as such. At times, it is also critical of the current practice of these firms. They cover the reasons why risk should be managed by firms, in general, and by insurers, in particular. They make a strong case about the importance of differentiating among actuarial (traditional) risks and financial (modern) risks. Then, they review the so-called insurance risk management systems currently in place in the life sector, with a special emphasis on systematic risks faced by insurers. They conclude with a section on what the future should bring, especially when it comes to the appropriate level of risk for a life organization as a whole. Their claim is that much remains to be done in this area.

Chapter 10, "Challenges and Issues for Growth in the Life Industry" by Michael R. Tuohy, focuses on the U.S. retail life insurance sector. It starts with a recap of the major trends that have been shaping the industry during the 1990s. Then, it provides a summary of the top concerns and priorities of CEOs, based on a survey done by Tillinghast–Towers Perrin in 1997. Finally, it ends with a discussion of where the industry is headed with respect to (1) structure, (2) distribution, and (3) product. In conclusion, the author argues that a company's future strategy must be built on its "real" strengths, those which can provide sustainable competitive advantages.

Despite its release 6 years ago, it is my opinion that it is still possible to claim that "the new perspectives offered in this book on the changing industry will be helpful to contemplate the future" (p. 18).