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## Book Review

***Worldwide Asset and Liability Modeling*; W.T. Ziemba and J.M. Mulvey (eds.); Cambridge University Press, Cambridge, 1998, ISBN: 0-521-57187-1, hardback (US\$ 95.00)**

This book is a compilation of papers that were presented at a conference held in 1995 at the Newton Institute, University of Cambridge, which was on Asset and Liability Modeling. The papers can be considered an overview of the advances that have been made in the last decade in the area of Asset/Liability Management (ALM). The book is divided in 8 parts, preceded by an introduction written by the editors.

In the introduction, four ways of modeling ALM are discussed, i.e., multi-stage decision rules, stochastic programming, capital growth and stochastic control, each presented in a clear manner with respect to model structure and solution algorithm. Given the different research areas in ALM (of which the papers in this book are an illustration), it is surprising that the introduction does not end with a detailed discussion of further research that can be expected in the different areas. Instead, the directions for further research are only described very briefly and in general terms, which is a pity as it really could have given the book an added value.

Parts 2–4, on static portfolio analysis, performance measurements and dynamic portfolio models, respectively, concentrate on the asset-side of ALM and can be placed in the broad range of the portfolio-management literature. The papers are interesting from the classical asset-management viewpoint, but they are not concerned with the modeling of assets *and* liabilities (which has to wait until part 7). This does not mean that they are not interesting though, as for example part 4 on dynamic portfolio models includes papers that explicitly model the dynamic environment inherent in the asset allocation problem. This is of course

closely linked to the dynamic approach to ALM modeling, where it is also used to make the model more in accordance with the decision-making environment.

Parts 5 and 6 contain papers on scenario generation and currency hedging, respectively. The former includes papers that focus on some of the many problems that can arise when using scenarios, e.g. consistency with respect to economic reality, postoptimality analysis of a scenario-based dynamic solution. Since scenarios are crucial to modeling and solving any dynamic model, the papers, though slightly technical, are a good read for anyone considering a dynamic model. Although part 6 only contains two papers on the issue of currency hedging, the area is still to be considered important for those involved with ALM, with financial institutions already working from an international perspective and financial markets integrating more and more internationally.

As for me, the real work starts from part 7 on, as it includes papers by Merton and by Sethi on continuous-time modeling, extending the theoretical framework for ALM, and papers by Dert and by Zenios on multistage dynamic ALM models. The last two give a good idea of what is considered state-of-the-art dynamic ALM modeling. Part 7 ends with papers by Klaassen and by Consigly and Dempster, which focus on the technical side of solving ALM models. It is closely connected to part 8, which contains two case studies of implemented ALM models. These can be seen as illustrations of the relevance and importance of using ALM models.

Finally, part 9 contains two papers on total integrative risk management models, Why the

models in this part should be more integrative than those in part 7 or 8 is not very clear, but in any case it is a fitting finale to the book as a whole. It includes the well-known Russell-Yasuda Kasai paper, which is one of the first on an implemented ALM model, as well as a paper by Berger and Mulvey on personal financial planning, an area of which many think will be an important area of research in the next few years.

Concluding, the book gives an overview of the papers that can be viewed as representative for the development of research in asset and liability modeling during the last few years. It is clear that for the researcher working in the area of ALM,

this book will not bring a lot of new insights. For the reader new to the subject and interested in ALM, this is the book to read. Finally, I would say that parts 7 to 9 of the book are the parts that best display the main features and research themes of the current standing of asset and liability modeling.

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