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JOURNAL OF INVESTMENT MANAGEMENT, Vol. 8, No. 2, (2010), pp. 114–115

BOOK REVIEW

Mark Kritzman, Senior Editor

ACTIVE CREDIT PORTFOLIO MANAGEMENT IN PRACTICE

By Jeffrey R. Bohn and Roger M. Stein
(*Reviewed by Cel Kulasekaran*)

Most will agree that the recent financial crisis of 2007/2008 can be attributed to the mismanagement and mispricing of risk involved with credit-related financial instruments. Some will also argue that regulatory agencies did not adopt practices to accommodate advances in these markets, i.e. the introduction of complex credit-derivatives. Financial institutions have been prompted to change in light of recent events in the way they manage and evaluate risk. In this book, Bohn and Stein set out to present the latest quantitative methods available to the industry and interpretations of their practical experiences for understanding and implementing these changes, where they have not yet been adopted.

Unlike prior texts in this field (e.g. Credit Risk Modeling by Lando, 2004—previously reviewed in JOIM Q1, 2005), the authors direct their focus toward showing how the theoretical (quantitative) models can actually be applied in practice. They go through great lengths to include discussions on data issues, model calibration, parameter specifications, liquidity concerns, the impact of taxes and costs of bankruptcy in the context of real business applications while maintaining the mathematical rigor of the credit-models used. They discuss shortfalls of textbook credit-models, and draw from their personal experiences to include suggestions on how to accommodate these issues—which is valuable for the practitioner and rarely found in more technical references.

Contradictory to the authors' suggestion, I found it helpful to read the book backwards. The final chapter (nine) is a practical case study of application that draws directly from the authors' experiences and coheres the book's content. This may compensate readers who lack practical exposure in the field. I also found it helpful to approach each chapter by starting with the list of review questions at the end, as a complement to the reading objectives outlined by the authors at the start. These strategies immediately give context to the content of each chapter and make it easier to identify the main ideas that Bohn and Stein try to deliver.

Basic definitions and concepts in credit-modeling are covered in the first two chapters of the book. Those unfamiliar with terminology will find it useful to review these. Bohn and Stein progressively introduce (and somewhat

liberally) abbreviations throughout the text, and a list in the appendix would be a much welcome addition for the benefit of the reader. The authors advocate at the outset, setting up active credit portfolio management as a separate department within a firm, so as to be free from operational pressures and influences. They also divulge their views and insights on managing a research department effectively for nonresearchers.

Next, they lay out the basics for building structural models by introducing the classic Black-Scholes-Merton framework and various extensions (e.g. Black-Cox, Vasicek-Kealhofer, etc.). They keep theoretical derivation of these models to a minimum in the body of the chapter as they focus on conceptual discussions, but include appendices where relevant for the academically inclined. As with most other credit-modeling texts, they progress from measuring probabilities of default directly from firm-specific parameters to data-driven (statistical) models such as probit/logistic and hazard rate regressions. They include discussion on the assumptions and subtle-choices that go hand-in-hand when employing these econometric methods such as working with limited data, multiple data sources, biased samples, multicollinearity, different definitions firm-year cycles, and selecting factors for default models.

Next they run through common approaches to estimating loss given default before introducing reduced-form models. While some may turn to the masters of the reduced-form approach (Duffie and Singleton) for a more academic treatment to these mathematical infrastructures, Bohn and Stein offer a more practical presentation of the subject matter. They present the basic building blocks and discuss the implications of these term-structure models under different loss given default assumptions and highlight scenarios where these models are effective. They also take the time to reveal the empirical difficulties of estimating these models.

The last few chapters are dedicated to probability default model validation and discussions on portfolio models. This includes methods on measuring and obtaining diversification for portfolios of corporate liabilities. As most methods discussed are recent (past decade), the authors caution on the interpretation of these models' output due to its complexity and challenges of choosing functions, parameters, and factors to provide a satisfactory approach to accurately assess credit-risk. They note in their concluding paragraph the ongoing active debate on the appropriate thickness and calibration of models to the extreme tails of loss distributions, without giving any references.

Bohn and Stein, two vetrans, satisfy their objective of providing a clear and comprehensive guide to credit risk management. *Active Credit Portfolio Management in Practice* is an excellent risk management text that is well structured and insightful which covers modeling, business research, data issues, and organizational implementation problems, as well as potential developments. I highly recommend this book to both the practitioner and academic.

Editor's note: In response to a suggestion in this review, the book's authors have since posted a guide to the abbreviations used in their text at: **www.creditrisklib.com.**