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Contents

Preface

Since the publication of the first edition of *The Credit Risk of Complex Derivatives* in 1994 the world of derivatives has undergone dramatic changes. Derivative product availability has increased, instruments once considered 'exotic' have become commonplace, trading volumes have expanded, and transaction maturities have lengthened. In the midst of these changes, various end-users and dealers have sustained significant derivative-related losses; many losses have been well publicized and some have found their way into the courts. Although the past few years have been a challenging time for the derivatives industry, one positive by-product has been the increased emphasis placed on derivative risk management processes by regulators, intermediaries and end-users; this has forced greater focus on the management of actual and potential risks in a more precise and disciplined fashion. One critical dimension of risk management is education on, and awareness of, risks; in order to heighten awareness of the changes which have affected the market over the past few years, the original version of *The Credit Risk of Complex Derivatives* has been substantially reorganized and updated.

- Coverage of complex option and complex swap products has been expanded to include the newest derivatives in the market. Product coverage continues to follow the same style used in the first edition (e.g. product description/examples, followed by possible credit risk quantification techniques), but greater detail and more examples have been incorporated.
- The focus on equity derivatives as a separate chapter and category of complex derivatives has been abandoned in order to stress the 'cross market' nature and use of complex derivatives; coverage in the second edition is divided into complex options (interest rate, equity, currency, commodity, credit) and complex swaps (interest rate, equity, currency, commodity, credit). Wherever possible the instruments are applied to a broad range of products to demonstrate their 'universality'.
- While the second edition continues to focus on a volatility-based risk equivalency process as the primary quantification framework, alternate credit quantification techniques used in the financial industry, such as simulation and option statics, are investigated and illustrated.
- In order to move from a pure transaction-based framework to an overall management framework two new chapters, focusing on the credit risk management of derivative portfolios, have been added. While Parts I, II and III of the text continue to deal primarily with development of a risk

quantification methodology and use of such methodology in transaction-specific risk evaluation, Part IV introduces concepts of quantitative and qualitative portfolio risk management. The quantitative segment focuses on the aggregation/management of exposures on a portfolio basis, the determination of expected and unexpected credit losses for derivative portfolios, and the calculation of risk-adjusted performance measures. The qualitative segment focuses on the dynamic management of credit exposures through risk-mitigation techniques (guarantees, netting, recouponing, credit derivatives, termination, assignment, intermediation, collateral), simulations/stress testing, dynamic credit limit adjustment and real-time credit systems; it also focuses on ancillary topics such as suitability, ability versus willingness to pay, and the validity of credit analysis in an era of lengthening transaction maturities.

A new glossary featuring concise definitions of both products and technical terminology has been added.

The primary aim of the new edition of this text is to present a current perspective on the very dynamic subject of derivative credit risk. As one might expect, there are many ways of describing and analyzing the credit risks of derivatives; this text represents just one possible approach, and readers are encouraged to seek all available information in order to form their own opinions on the best possible means of addressing the topics in this book. A more thorough understanding of complex derivatives, from different perspectives, will help ensure continued growth in, and use of, derivatives.

Sincere thanks are due to a great many financial professionals who have provided assistance, guidance and education over the years; without their help this book would not have been possible. Thanks also go to Jane Powell, my publishing editor, for her support in this project. The biggest thanks of all are due to my wife Milena, for her support, patience and good humour.

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