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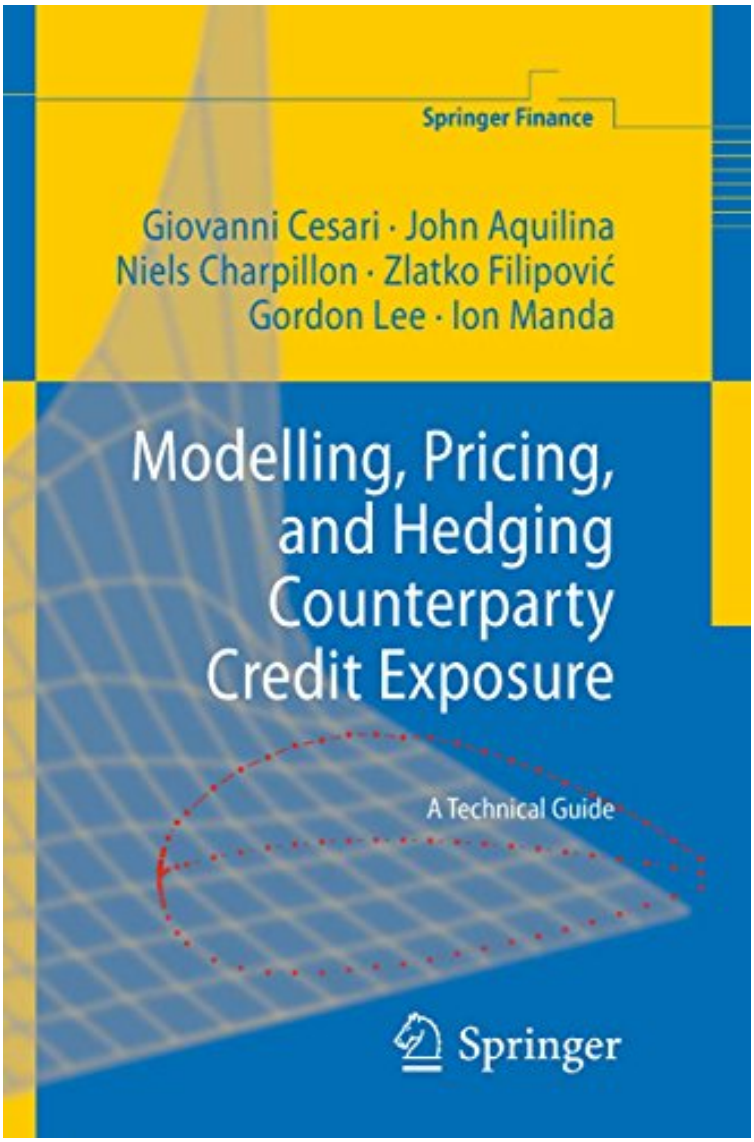

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1 of 1 people found the following review helpful. Unified approch toward modeling CCRBy C ParkA very useful book for both reference and as a refresher. It explains topics step by step and provides useful references in case you are interested in delving further in a particular area. A well written book with helpful examples and illustrations to guide you through some of the technical points.

It was the end of 2005 when our employer, a major European Investment Bank, gave our team the mandate to compute in an accurate way the counterparty credit exposure arising from exotic derivatives traded by the ?rm. As often happens, - posure of products such as, for example, exotic interest-rate, or credit derivatives were modelled under conservative assumptions and credit of?cers were struggling to assess the real risk. We started with a few models written on spreadsheets, t- lored to very speci?c instruments, and soon it became clear that a more systematic approach was needed. So we wrote some tools that could be used for some classes of relatively simple products. A couple of years later we are now in the process of building a system that will be used to trade and hedge counterparty credit ex- sure in an accurate way, for all types of derivative products in all asset classes. We had to overcome problems ranging from modelling in a consistent manner different products booked in different systems and building the appropriate architecture that would allow the computation and pricing of credit exposure for all types of pr- ucts, to ?nding the appropriate management structure across Business, Risk, and IT divisions of the ?rm. In this book we describe some of our experience in modelling counterparty credit exposure, computing credit valuation adjustments, determining appropriate hedges, and building a reliable system.

From the Back CoverBuilding an accurate representation of firm-wide credit exposure, used for both trading and risk management, raises significant theoretical and technical challenges. This volume can be considered as a roadmap to finding practical solutions to the problem of modelling, pricing, and hedging counterparty credit exposurenbsp;for large portfolios of both vanilla and exotic derivatives, usually traded by large Investment Banks. It is divided into four parts, (I) Methodology, (II) Architecture and Implementation, (III) Products, and (IV) Hedging and Managing Counterparty Risk. Starting from a generic modelling and valuation framework based on American Monte Carlo techniques, it presents a software architecture, which, with its modular design, allows the computation of credit exposure in a portfolio-aggregated and scenario-consistent way. An essential part of the design is the definition of a programming language, which allows trade representation based on dynamic modelling features. Several chapters are then devoted to the analysis of credit exposure across all asset classes, namely foreign exchange, interest rate, credit derivatives and equity. Finally it considers how to mitigate and hedge counterparty exposure. The crucial question of dynamic hedging is addressed by constructing a hybrid product, the Contingent-Credit Default Swap. This volume addresses, from a quantitative perspective, recent developments related to counterparty credit exposure computation. Its unique characteristic is the combination of a rigorous but simple mathematical approach with a practical view of the financial problem at hand. "...a fantastic book that covers all aspects of credit exposure modelling. Nowhere else can the interested reader find such a comprehensive collection of insights around this topic covering methodology, implementation, products and applications. A "must read" for practitioners and quants working in this space." Jouml;rg Behrens, Fintegral Consulting, CH "In the aftermath of the credit crunch, nobody will need convincing of the importance of managing counterparty risk. This unique book provides a consistent approach to the subject, taken all the way from underlying concepts to the nuts and bolts of computer architecture. It opens up many avenues for future research and throws down a challenge to the industry at large: any organization whose techniques are not at least as good as the ones described here had better shape up!" Mark Davis, Imperial College London, UK "hellip;impressive mathematical monograph hellip; first unified and comprehensive approach to pricing and measuring counterparty credit exposures and, therefore, an essential must-have for all quantitatively oriented credit risk manager, academic researchers, and mathematics students alike hellip; takes into account a unified approach for modelling the future economic scenarios across all asset classes under risk-neutral measure while generating a theoretic as well as technical framework for calculating credit and debit valuation adjustments hellip; easily adapted to calculating the price of credit risk hellip; flexible enough to price complex and hybrid financial derivatives in a completely scenario consistent way. These features make the book an absolutely outstanding and highly recommendable treatisehellip;" Marcus R.W. Martin, Darmstadt University of Applied Sciences, DAbout the AuthorGiovanni Cesari is Managing Director at UBS. He has more than 10 years' experience in modelling and pricing counterparty credit exposure. Before moving to finance, Giovanni worked for several years in particle physics and in theoretical computer science. Giovanni holdsnbsp;a Laurea in Electrical Engineering from the University of Trieste, a Perfezionamento in Physics from the University of Padova, and a Ph.D. from ETH, Zurich.John Aquilina holds an M.Phil. in Statistical Science from the University of Cambridge and a Ph.D. in Mathematical Finance from the University of Bath. He has worked on modelling counterparty credit exposure at UBS since 2005.Niels Charpillon holds a Diplocirc;me d'Ingeacute;nieur from Ecole des Mines, an M.Sc. in Financial Mathematics from Warwick Business School, and a Licence in Economics from University of St. Etienne. He joined the counterparty exposure team at UBS in 2006.Zlatko Filipovicnbsp;started working for UBS in 2005 as a Quantitative Analyst in the counterparty exposure team. Before

joining UBS, Zlatko had been working for Mako Global Derivatives, London, as a Financial Engineer. Zlatko obtained a Ph.D. in Quantitative Finance from Imperial College, London, after graduating from the Faculty of Mathematics, University of Belgrade.Gordon Lee joined the counterparty exposure team at UBS in 2006. Prior to UBS, he was a Senior Associate in quantitative risk and performance analysis at Wilshire Associates. Gordon holds an M.A. in Mathematics from Churchill College, University of Cambridge.Ion Manda holds a Diploma de Inginer in Software Engineering from the University of Bucharest and a M.Sc. in Financial Engineering from the University of London. He has been working in the credit exposure team at UBS since 2006. Ion is the creator of the Portfolio Aggregation Language (PAL) and the architect of the Risk Analytics.