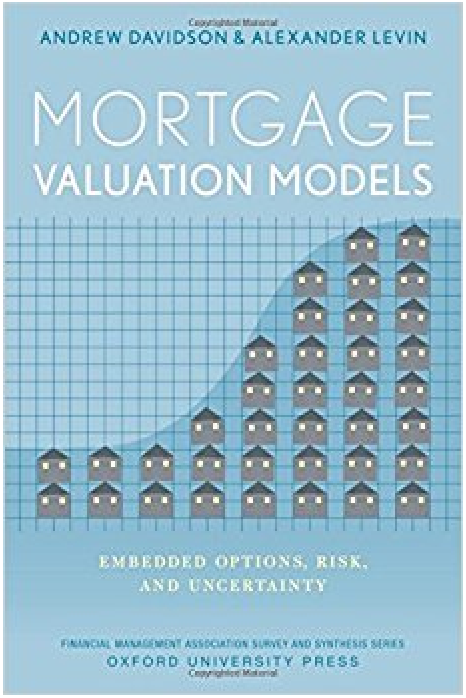
Mortgage Valuation Models: Embedded Options, Risk, And Uncertainty (Financial Management Association Survey And Synthesis)



Synopsis

Mortgage-backed securities (MBS) are among the most complex of all financial instruments. Analysis of MBS requires blending empirical analysis of borrower behavior with the mathematical modeling of interest rates and home prices. Over the past 25 years, Andrew Davidson and Alexander Levin have been at the leading edge of MBS valuation and risk analysis. Mortgage Valuation Models: Embedded Options, Risk, and Uncertainty contains a detailed description of the sophisticated theories and advanced methods that the authors employ in real-world analyses of mortgage-backed securities. Issues such as complexity, borrower options, uncertainty, and model risk play a central role in the authors' approach to the valuation of MBS. The coverage spans the range of mortgage products from loans and TBA (to-be-announced) pass-through securities to subordinate tranches of subprime-mortgage securitizations. With reference to the classical CAPM and APT, the book advocates extending the concept of risk-neutrality to modeling home prices and borrower options, well beyond interest rates. It describes valuation methods for both agency and non-agency MBS including pricing new loans; approaches to prudent risk measurement, ranking, and decomposition; and methods for modeling prepayments and defaults of borrowers.The authors also reveal quantitative causes of the 2007-09 financial crisis and provide insight into the future of the U.S. housing finance system and mortgage modeling as this field continues to evolve. This book will serve as a foundation for the future development of models for mortgage-backed securities.

Book Information

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Customer Reviews

"Mortgage Valuation Models delivers much more than its title suggests. It explores the key aspects of the mortgage market that ultimately were a trigger of the financial crisis. It offers potential policy solutions to remedy deficiencies in the current market structures. Most of all, though, alongside its very rigorous treatment of the technical details of mortgage models, it provides frequent illustrations and guidance that will help readers to avoid having unrealistically high expectations of their mortgage models." --Mark Adelson, Chief Strategy Officer, BondFactor Company "This book is written by two top MBS experts who look at and far beyond the OAS relative value methodology. Davidson and Levin explain why mortgage instruments are valued at different OAS levels and how this is related to model risk and uncertainty. They demonstrate how to extend the idea of risk-neutral valuation to modeling both borrower prepayment behavior and default behavior, a major addition to the toolkit of MBS portfolio managers and traders. The book provides many important insights and analyzes the 2007-2009 crisis rigorously and quantitatively." --Frank J. Fabozzi, Professor of Finance, EDHEC Business School; Editor, The Journal of Portfolio Management "This book is excellent. It combines a rigorous treatment of mortgage valuation models with a practical sense of what is important. It is easily comprehensible both to those familiar with the mortgage market and to those with reasonable quantitative backgrounds who are not. The chapters on the financial crises are particularly interesting, describing some of the trends that were overlooked in model calibration." --Laurie Goodman, Director, Housing Finance Policy Center, Urban Institute "It is gratifying to see how prepayment modeling for mortgage-backed securities has evolved from statistical analysis of historical data to recognizing that refinancings are the result of rational option exercise by borrowers. Davidson and Levin do a commendable job of bringing us up to date, providing along the way an insightful perspective of the 2008-2009 mortgage crisis and the subsequent regulatory developments around housing finance." --Andrew Kalotay, President, Andrew Kalotay and Associates, Inc. "Davidson and Levin offer their MBS valuation modeling framework as well as insights on the financial crisis and housing finance reform. As the housing market, mortgage industry and related governmental policies change, our MBS modeling needs evolve, too. This book places particular emphasis on modeling uncertainty during regime shifts. This intellectually stimulating book provides market participants with the tools to conceptualize these issues." --Jiawei "David" Zhang, Managing Director/Head of MBS Modeling, Credit Suisse

Andrew Davidson is a financial innovator and leader in the development of financial research and analytics. He has worked extensively on mortgage-backed securities product development, valuation, and hedging. He is president of Andrew Davidson & Co., Inc., a New York firm specializing in the application of analytical tools to investment management, which he founded in 1992. He is co-author of the books Securitization: Structuring and Investment Analysis and Mortgage-Backed Securities: Investment Analysis & Valuation Techniques. He has also contributed to The Handbook of Mortgage-Backed Securities, Mortgage-Backed Securities: New Applications and Research, and The Journal of Real Estate Finance and Economics. He received an M.B.A. in Finance at the University of Chicago and a B.A. in Mathematics and Physics at Harvard University.Alexander Levin is Director of Financial Engineering at Andrew Davidson & Co., Inc. He has developed innovative and efficient valuation models for mortgage-backed securities, including the Active-Passive Decomposition burnout model, the concept of prepay risk-and-option-adjusted valuation, and the method of Credit Option-Adjusted Spread and non-Monte Carlo shortcuts. His recent work focuses on the valuation of instruments exposed to credit risk, home-price modeling, and projects related to the MBS crisis. Levin has been a guest speaker at both academic and practitioner events and has published a number of papers. Levin is a recipient of the 2014 Mortgage Banking Magazine's Technology All-Stars award. He holds an M.S. in Applied Mathematics from Naval Engineering Institute, Leningrad, and a Ph.D. in Control and Dynamic Systems from Leningrad State University.

my family need to change a new one , This is my first review ever. This product is so sharp it is scary! Best investment ever at a great price! it is very fast delivery. great, and very happy. Nice and valuable.

This is an outstanding book for financial professionals, students and any individuals interested in MBS. While it is not a book for beginners, Andrew Davidson and Alex Levin have drawn on their collective experience and produced a book that is simultaneously innovative and instructive. It's clear that in addition to their strong basis of knowledge, a great deal of thought and original ideas went in to this book. Anyone who wants to move past the boilerplate, basic credit research to find something fresh should read this book. It's the future of mortgage valuation.

Great book covering a wide range of relevant topics, ranging from interest rate models to an analysis of the financial crisis. It can do it thanks to the author's ability to distill the relevant factors in each topic. It pushes the envelope beyond OAS, with a sober analysis of model failures in the crisis. Everybody with an interest in mortgages can find something useful here

This is an excellent book by two of the most thoughtful, creative and quantitative mortgage researchers. I would recommend this book to every quantitative researcher in mortgages.

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customer service is the best, great satification.

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Reagents for Organic Synthesis: Reagents for Heteroarene Synthesis (Hdbk of Reagents for Organic Synthesis) Managing Environmental Risk Through Insurance (Studies in Risk and Uncertainty) ISO/IEC Guide 98-3:2008, Uncertainty of measurement - Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)