Dynamic Asset Pricing Theory Third Edition

Revised Edition
A Course in Asset Pricing
Information Choice in Macroeconomics and Finance
Theory of Knightian Uncertainty and Its Applications
Financial Econometrics, Mathematics and Statistics
Models and Methods
Asset Pricing
Asset Pricing Under Asymmetric Information
Futures Markets
Strategic Asset Allocation
Empirical Asset Pricing
Third Edition
Financial Asset Pricing Theory
Dynamic Asset Pricing Theory
Asset Pricing Theory
The Capital Asset Pricing Model in the 21st Century
The Paradox of Asset Pricing
Recursive Macroeconomic Theory, fourth edition
A Martingale-Based Approach
Modern Portfolio Theory Updated for the Smart Investor
The Econometrics of Financial Markets
Security Markets
Empirical Asset Pricing
Portfolio Choice for Long-Term Investors
A User's Guide
Analytical, Empirical, and Behavioral Perspectives
Linear Factor Models in Finance
Empirical Dynamic Asset Pricing
Cogs and Monsters
Continuous-Time Models in Corporate Finance, Banking, and Insurance
Dynamic Asset Pricing Theory
Asset Pricing for Dynamic Economies
Advanced Asset Pricing Theory
Principles of Financial Economics
Stochastic Models
Economics of Pessimism and Optimism
The Cross Section of Stock Returns
Asset Pricing and Information Transmission in Over-the-Counter Markets
Asset Prices, Booms and Recessions

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Revised Edition OUP Oxford
Financial Asset Pricing Theory offers a comprehensive overview of the classic and the current research in theoretical asset pricing. Asset pricing is developed around the concept of a state-price deflator which relates the price of any asset to its future (risky) dividends and thus incorporates how to adjust for both time and risk in asset valuation. The willingness of any utility-maximizing investor to shift consumption over time defines a state-price deflator which provides a link between optimal consumption and asset prices that leads to the Consumption-based Capital Asset Pricing Model (CCAPM). A simple version of the CCAPM cannot explain various stylized asset pricing facts, but these asset pricing 'puzzles' can be resolved by a number of recent extensions involving habit formation, recursive utility, multiple consumption goods, and long-run consumption risks. Other valuation techniques and modelling approaches (such as factor models, term structure models, risk-neutral valuation, and option pricing models) are explained and related to state-price deflators. The book will serve as a textbook for an advanced course in theoretical financial economics in a PhD or a quantitative Master of Science program. It will also be a useful reference book for researchers and finance professionals. The presentation in the book balances formal mathematical modelling and economic intuition and understanding. Both discrete-time and continuous-time models are covered. The necessary concepts and techniques concerning stochastic processes are carefully explained in a separate chapter so that only limited previous exposure to dynamic finance models is required.
A Course in Asset Pricing
Princeton University Press
Academic finance has had a remarkable impact on many financial services. Yet long-term investors have received curiously little guidance from academic financial economists. Mean-variance analysis, developed almost fifty years ago, has provided a basic paradigm for portfolio choice. This approach usefully emphasizes the ability of diversification to reduce risk, but it ignores several critically important factors. Most notably, the analysis is static; it assumes that investors care only about risks to wealth one period ahead. However, many investors—-both individuals and institutions such as charitable foundations or universities—-seek to finance a stream of consumption over a long lifetime. In addition, mean-variance analysis treats financial wealth in isolation from income. Long-term investors typically receive a stream of income and use it, along with financial wealth, to support their consumption. At the theoretical level, it is well understood that the solution to a long-term portfolio choice problem can be very different from the solution to a short-term problem. Long-term investors care about intertemporal shocks to investment opportunities and labor income as well as shocks to wealth itself, and they may use financial assets to hedge their intertemporal risks.

This should be important in practice because there is a great deal of empirical evidence that investment opportunities—-both interest rates and risk premia on bonds and stocks—-vary through time. Yet this insight has had little influence on investment practice because it is hard to solve for optimal portfolios in intertemporal models. This book seeks to develop the intertemporal approach into an empirical paradigm that can compete with the standard mean-variance analysis. The book shows that long-term inflation-indexed bonds are the riskless asset for long-term investors, it explains the conditions under which stocks are safer assets for long-term than for short-term investors, and it shows how labor income influences portfolio choice. These results shed new light on the rules of thumb used by financial planners. The book explains recent advances in both analytical and numerical methods, and shows how they can be used to understand the portfolio choice problems of long-term investors.

Information Choice in Macroeconomics and Finance Cambridge University Press

Modern asset pricing models play a central role in finance and economic theory and applications. This book introduces a structural theory to evaluate these asset pricing models and throws light on the existence of Equity Premium Puzzle. Based on the structural theory, some algebraic (valuation-preserving) operations are developed in asset spaces and pricing kernel spaces. This has a very important implication leading to practical guidance in portfolio management and asset allocation in the global financial industry. The book also covers topics, such as the role of over-confidence in asset pricing modeling, relationship of the portfolio insurance with option and consumption-based asset pricing models, etc.

Theory of Knightian Uncertainty and Its Applications World Scientific

An introduction to the theory and methods of empirical asset pricing, integrating classical foundations with recent developments. This book offers a comprehensive advanced introduction to asset pricing, the study of models for the prices and returns of various securities. The focus is empirical, emphasizing how the models relate to the data. The book offers a uniquely integrated treatment, combining classical foundations with more recent developments in the literature and relating some of the material to applications in investment management. It covers the theory of empirical asset pricing, the main empirical methods, and a range of applied topics. The book introduces the theory of empirical asset pricing through three main paradigms: mean variance analysis, stochastic discount factors, and beta pricing models. It describes empirical methods, beginning with the generalized method of moments (GMM) and viewing other methods as special cases of GMM; offers a comprehensive review of fund performance evaluation; and presents selected applied topics, including a substantial chapter on predictability in asset markets that covers predicting the level of returns, volatility and higher moments, and predicting cross-sectional differences in returns.

Other chapters cover production-based asset pricing, long-run risk models, the Campbell-Shiller approximation, the debate on covariance versus characteristics, and the relation of volatility to the cross-section of stock returns. An extensive reference section captures the current state of the field. The book is intended for use by graduate students in finance and economics; it can also serve as a reference for professionals.

Financial Econometrics, Mathematics and Statistics MIT Press

The determination of the values of stocks, bonds, options, futures, and derivatives is done by the scientific process of asset pricing, which has developed dramatically in the last few years due to advances in financial theory and econometrics. This book covers the science of asset pricing by concentrating on the most widely used modelling technique called: Linear Factor Modelling. Linear Factor Models covers an important area for Quantitative Analysts/Investment Managers who are developing Quantitative Investment Strategies. Linear factor models (LFM) are part of modern investment processes that include asset valuation, portfolio theory and applications, linear factor models and applications, dynamic asset allocation strategies, portfolio performance measurement, risk management, international perspectives, and the use of derivatives. The book develops the building blocks for one of the most important theories of asset pricing - Linear Factor Modelling. Within this framework, we can include other asset pricing theories such as the Capital Asset Pricing Model (CAPM), arbitrage pricing theory and various pricing formulae for derivatives and option prices. As a bare minimum, the reader of this book must have a working knowledge of basic calculus, simple optimisation and elementary statistics. In particular, the reader must be comfortable with the algebraic manipulation of means, variances (and covariances) of linear combination(s) of random variables. Some topics may require a greater mathematical sophistication. * Covers the latest methods in this area. * Combines actual quantitative finance experience with analytical research rigour * Written by both quantitative analysts and academics who work in this area

Models and Methods

Oxford University Press on Demand

Asset Pricing Theory is an advanced textbook for doctoral students and researchers that offers a modern introduction to the theoretical and methodological foundations of competitive asset pricing. Costis Skiadas develops in depth the fundamentals of arbitrage pricing, mean-variance analysis, equilibrium pricing, and optimal consumption/portfolio choice in discrete settings, but with emphasis on geometric and martingale methods that facilitate an effortless transition to the more advanced continuous-time theory. Among the book's many innovations are its use of recursive utility as the benchmark representation of dynamic preferences, and an associated theory of equilibrium pricing and optimal portfolio choice that goes beyond the existing literature. Asset Pricing Theory is complete with extensive exercises

at the end of every chapter and comprehensive mathematical appendixes, making this book a self-contained resource for graduate students and academic researchers, as well as mathematically sophisticated practitioners seeking a deeper understanding of concepts and methods on which practical models are built. Covers in depth the modern theoretical foundations of competitive asset pricing and consumption/portfolio choice Uses recursive utility as the benchmark preference representation in dynamic settings Sets the foundations for advanced modeling using geometric arguments and martingale methodology Features self-contained mathematical appendixes Includes extensive end-of-chapter exercises Princeton University Press This is a thoroughly updated edition of Dynamic Asset Pricing Theory, the standard text for doctoral students and researchers on the theory of asset pricing and portfolio selection in multiperiod settings under uncertainty. The asset pricing results are based on the three increasingly restrictive assumptions: absence of arbitrage, single-agent optimality, and equilibrium. These results are unified with two key concepts, state prices and martingales. Technicalities are given relatively little emphasis, so as to draw connections between these concepts and to make plain the similarities between discrete and continuous-time models. Readers will be particularly intrigued by this latest edition's most significant new feature: a chapter on corporate securities that offers alternative approaches to the valuation of corporate debt. Also, while much of the continuous-time portion of the theory is based on Brownian motion, this third edition introduces jumps--for example, those associated with Poisson arrivals--in order to accommodate surprise events such as bond defaults. Applications include term-structure models, derivative valuation, and hedging methods. Numerical methods covered include Monte Carlo simulation and finite-difference solutions for partial differential equations. Each chapter provides extensive problem exercises and notes to the literature. A system of appendixes reviews the necessary mathematical concepts. And references have been updated throughout. With this new edition, Dynamic Asset Pricing Theory remains at the head of the field. Asset Pricing Dynamic Asset Pricing Theory Asset pricing theory abounds with elegant mathematical models. The logic is so compelling that the models are widely used in policy, from banking, investments, and corporate finance to government. To what extent, however, can these models predict what actually happens in financial markets? In The Paradox of Asset Pricing, a leading financial researcher argues forcefully that the empirical record is weak at best. Peter Bossaerts undertakes the most thorough, technically sound investigation in many years into the scientific character of the pricing of financial assets. He probes this conundrum by modeling a decidedly volatile phenomenon that, he says, the world of finance has forgotten in its enthusiasm for the efficient markets hypothesis--speculation. Bossaerts writes that the existing empirical

evidence may be tainted by the assumptions needed to make sense of historical field data or by reanalysis of the same data. To address the first problem, he demonstrates that one central assumption--that markets are efficient processors of information, that risk is a knowable quantity, and so on--can be relaxed substantially while retaining core elements of the existing methodology. The new approach brings novel insights to old data. As for the second problem, he proposes that asset pricing theory be studied through experiments in which subjects trade purposely designed assets for real money. This book will be welcomed by finance scholars and all those math--and statistics-minded readers interested in knowing whether there is science beyond the mathematics of finance. This book provided the foundation for subsequent journal articles that won two prestigious awards: the 2003 Journal of Financial Markets Best Paper Award and the 2004 Goldman Sachs Asset Management Best Research Paper for the Review of Finance.

Asset Pricing Under Asymmetric Information

Princeton University Press

This handbook in two parts covers key topics of the theory of financial decision making. Some of the papers discuss real applications or case studies as well. There are a number of new papers that have never been published before especially in Part II.Part I is concerned with Decision Making Under Uncertainty. This includes subsections on Arbitrage, Utility Theory, Risk Aversion and Static Portfolio Theory, and Stochastic Dominance. Part II is concerned with Dynamic Modeling that is the transition for static decision making to multiperiod decision making. The analysis starts with Risk Measures and then discusses Dynamic Portfolio Theory, Tactical Asset Allocation and Asset-Liability Management Using Utility and Goal Based Consumption-Investment Decision Models.A comprehensive set of problems both computational and review and mind expanding with many unsolved problems are in an accompanying problems book. The handbook plus the book of problems form a very strong set of materials for PhD and Masters courses both as the main or as supplementary text in finance theory, financial decision making and portfolio theory. For researchers, it is a valuable resource being an up to date treatment of topics in the classic books on these topics by Johnathan Ingersoll in 1988, and William Ziemba and Raymond Vickson in 1975 (updated 2nd edition published in 2006).

Futures Markets

Academic Press

This sequel to Brownian Motion and Stochastic Calculus by the same authors develops contingent claim pricing and optimal consumption/investment in both complete and incomplete markets, within the context of Brownian-motion-driven asset prices. The latter topic is extended to a study of equilibrium, providing conditions for existence and uniqueness of market prices which support trading by several heterogeneous agents. Although much of the incomplete-market material is available in research papers, these topics are treated for the first time in a unified manner. The book contains an extensive set of references and notes

describing the field, including topics not treated in the book. This book will be of interest to researchers wishing to see advanced mathematics applied to finance. The material on optimal consumption and investment, leading to equilibrium, is addressed to the theoretical finance community. The chapters on contingent claim valuation present techniques of practical importance, especially for pricing exotic options.

Strategic Asset Allocation World Scientific

This is the first book to investigate individual's pessimistic and optimistic prospects for the future and their economic consequences based on sound mathematical foundations. The book focuses on fundamental uncertainty called Knightian uncertainty, where the probability distribution governing uncertainty is unknown, and it provides the reader with methods to formulate how pessimism and optimism act in an economy in a strict and unified way. After presenting decision-theoretic foundations for prudent behaviors under Knightian uncertainty, the book applies these ideas to economic models that include portfolio inertia, indeterminacy of equilibria in the Arrow-Debreu economy and in a stochastic overlapping-generations economy, learning, dynamic asset-pricing models, search, real options, and liquidity preferences. The book then proceeds to characterizations of pessimistic (ε-contaminated) and optimistic (ε-exuberant) behaviors under Knightian uncertainty and people's inherent pessimism (surprise aversion) and optimism (surprise loving). Those characterizations are shown to be useful in understanding several observed behaviors in the global financial crisis and in its aftermath. The book is highly recommended not only to researchers who wish to understand the mechanism of how pessimism and optimism affect economic phenomena, but also to policy makers contemplating effective economic policies whose success delicately hinges upon people's mindsets in the market. Kiyohiko Nishimura is Professor at the National Graduate Institute for Policy Studies (GRIPS) and Professor Emeritus and Distinguished Project Research Fellow of the Center for Advanced Research in Finance at The University of Tokyo. Hiroyuki Ozaki is Professor of Economics at Keio University.

Empirical Asset Pricing Princeton University Press

The past twenty years have seen an extraordinary growth in the use of quantitative methods in financial markets. Finance professionals now routinely use sophisticated statistical techniques in portfolio management, proprietary trading, risk management, financial consulting, and securities regulation. This graduate-level textbook is intended for PhD students, advanced MBA students, and industry professionals interested in the econometrics of financial modeling. The book covers the entire spectrum of empirical finance, including: the predictability of asset returns, tests of the Random Walk Hypothesis, the microstructure of securities markets, event analysis, the Capital Asset Pricing Model and the Arbitrage Pricing Theory, the term structure of interest rates, dynamic models of economic equilibrium, and nonlinear

financial models such as ARCH, neural networks, statistical fractals, and chaos theory. Each chapter develops statistical techniques within the context of a particular financial application. This exciting new text contains a unique and accessible combination of theory and practice, bringing state-of-the-art statistical techniques to the forefront of financial applications. Each chapter also includes a discussion of recent empirical evidence, for example, the rejection of the Random Walk Hypothesis, as well as problems designed to help readers incorporate what they have read into their own applications.

Third Edition Elsevier

The year 2000 is the centenary year of the publication of Bachelier's thesis which - together with Harry Markovitz Ph. D. dissertation on portfolio selection in 1952 and Fischer Black's and Myron Scholes' solution of an option pricing problem in 1973 - is considered as the starting point of modern finance as a mathematical discipline. On this remarkable anniversary the workshop on mathematical finance held at the University of Konstanz brought together practitioners, economists and mathematicians to discuss the state of the art. Apart from contributions to the known discrete, Brownian, and Lvy process models, first attempts to describe a market in a reasonable way by a fractional Brownian motion model are presented, opening many new aspects for practitioners and new problems for mathematicians. As most dynamical financial problems are stochastic filtering or control problems many talks presented adaptations of control methods and techniques to the classical financial problems in portfolio selection irreversible investment risk sensitive asset allocation capital asset pricing hedging contingent claims option pricing interest rate theory. The contributions of practitioners link the theoretical results to the steadily increasing flow of real world problems from financial institutions into mathematical laboratories. The present volume reflects this exchange of theoretical and applied results, methods and techniques that made the workshop a fruitful contribution to the interdisciplinary work in mathematical finance.

Financial Asset Pricing Theory Springer

This book is intended as a textbook for Ph.D. students in finance and as a reference book for academics. It is written at an introductory level but includes detailed proofs and calculations as section appendices. It covers the classical results on single-period, discrete-time, and continuous-time models. It also treats various proposed explanations for the equity premium and risk-free rate puzzles: persistent heterogeneous idiosyncratic risks, internal habits, external habits, and recursive utility. Most of the book assumes rational behavior, but two topics important for behavioral finance are covered: heterogeneous beliefs and non-expected-utility preferences. There are also chapters on asymmetric information and production models. The book includes numerous exercises designed to provide practice with the concepts and also to introduce additional results. Each chapter concludes with a notes and references section that supplies

references to additional developments in the field.
Dynamic Asset Pricing Theory Cambridge University Press
Continuous-Time Models in Corporate Finance synthesizes four decades of research to show how stochastic calculus can be used in corporate finance. Combining mathematical rigor with economic intuition, Santiago Moreno-Bromberg and Jean-Charles Rochet analyze corporate decisions such as dividend distribution, the issuance of securities, and capital structure and default. They pay particular attention to financial intermediaries, including banks and insurance companies. The authors begin by recalling the ways that option-pricing techniques can be employed for the pricing of corporate debt and equity. They then present the dynamic model of the trade-off between taxes and bankruptcy costs and derive implications for optimal capital structure. The core chapter introduces the workhorse liquidity-management model—where liquidity and risk management decisions are made in order to minimize the costs of external finance. This model is used to study corporate finance decisions and specific features of banks and insurance companies. The book concludes by presenting the dynamic agency model, where financial frictions stem from the lack of interest alignment between a firm's manager and its financiers. The appendix contains an overview of the main mathematical tools used throughout the book. Requiring some familiarity with stochastic calculus methods, Continuous-Time Models in Corporate Finance will be useful for students, researchers, and professionals who want to develop dynamic models of firms' financial decisions.
Asset Pricing Theory Birkhäuser
This book provides a framework for thinking about economic instiutions such as firms. The basic idea is that institutions arise in situations where people write incomplete contracts and where the allocation of power or control is therefore important. Power and control are not standard concepts in economic theory. The book begins by pointing out that traditional approaches cannot explain on the one hand why all transactions do not take place in one huge firm and on the other hand why firms matter at all. An incomplete contracting or property rights approach is then developed. It is argued that this approach can throw light on the boundaries of firms and on the meaning of asset ownership. In the remainder of the book, incomplete contacting ideas are applied to understand firms' financial decisions, in particular, the nature of debt and equity (why equity has votes and creditors have foreclosure rights); the capital structure decisions of public companies; optimal bankruptcy procedure; and the allocation of voting rights across a company's shares. The book is written in a fairly non-technical style and includes many examples. It is aimed at advanced undergraduate and graduate students, academic and business economists, and lawyers as well as those with an interest in corporate finance, privatization and regulation, and transitional issues in Eastern Europe, the former Soviet Union, and China. Little background knowledge is required,

since the concepts are developed as the book progresses and the existing literature is fully reviewed.

The Capital Asset Pricing Model in the 21st Century Springer

This book provides a broad introduction to modern asset pricing theory. The theory is self-contained and unified in presentation. Both the no-arbitrage and the general equilibrium approaches of asset pricing theory are treated coherently within the general equilibrium framework. It fills a gap in the body of literature on asset pricing for being both advanced and comprehensive. The absence of arbitrage opportunities represents a necessary condition for equilibrium in the financial markets. However, the absence of arbitrage is not a sufficient condition for establishing equilibrium. These interrelationships are overlooked by the proponents of the no-arbitrage approach to asset pricing.This book also tackles recent advancement on inversion problems raised in asset pricing theory, which include the information role of financial options and the information content of term structure of interest rates and interest rates contingent claims.The inclusion of the proofs and derivations to enhance the transparency of the underlying arguments and conditions for the validity of the economic theory made it an ideal advanced textbook or reference book for graduate students specializing in financial economics and quantitative finance. The detailed explanations will capture the interest of the curious reader, and it is complete enough to provide the necessary background material needed to delve deeper into the subject and explore the research literature.Postgraduate students in economics with a good grasp of calculus, linear algebra, and probability and statistics will find themselves ready to tackle topics covered in this book. They will certainly benefit from the mathematical coverage in stochastic processes and stochastic differential equation with applications in finance. Postgraduate students in financial mathematics and financial engineering will also benefit, not only from the mathematical tools introduced in this book, but also from the economic ideas underpinning the economic modeling of financial markets.Both these groups of postgraduate students will learn the economic issues involved in financial modeling. The book can be used as an advanced text for Masters and PhD students in all subjects of financial economics, financial mathematics, mathematical finance, and financial engineering. It is also an ideal reference for practitioners and researchers in the subjects.

The Paradox of Asset Pricing Cambridge University Press

Today’s modern portfolio theory is not your father’s MPT. It has undergone many changes in the past fifty years. Indeed, a new understanding of MPT has emerged, one that has a significant impact on managing asset allocation—especially in today’s turbulent markets. Dynamic Asset Allocation interprets and integrates the developments in modern portfolio theory: from the efficient-market hypothesis and indexing of decades past to strategies for building winning portfolios today. The book is filled with practical, hands-on advice for investors, including

guidance on approaching investment as a risk-management task. *Recursive Macroeconomic Theory, fourth edition* World Scientific Targeting readers with backgrounds in economics, Intermediate Financial Theory, Third Edition includes new material on the asset pricing implications of behavioral finance perspectives, recent developments in portfolio choice, derivatives-risk neutral pricing research, and implications of the 2008 financial crisis. Each chapter concludes with questions, and for the first time a freely accessible website presents complementary and supplementary material for every chapter. Known for its rigor and intuition, Intermediate Financial Theory is perfect for those who need basic training in financial theory and those looking for a user-friendly introduction to advanced theory. Completely updated edition of classic textbook that fills a gap between MBA- and PhD-level texts Focuses on clear explanations of key concepts and requires limited mathematical prerequisites Online solutions manual available Updates include new structure emphasizing the distinction between the equilibrium and the arbitrage perspectives on valuation and pricing, and a new chapter on asset management for the long-term investor A Martingale-Based Approach Princeton University Press "Bali, Engle, and Murray have produced a highly accessible introduction to the techniques and evidence of modern empirical asset pricing. This book should be read and absorbed by every serious student of the field, academic and professional." Eugene Fama, Robert R. McCormick Distinguished Service Professor of Finance, University of Chicago and 2013 Nobel Laureate in Economic Sciences "The empirical analysis of the cross-section of stock returns is a monumental achievement of half a century of finance research. Both the established facts and the methods used to discover them have subtle complexities that can mislead casual observers and novice researchers. Bali, Engle, and Murray's clear and careful guide to these issues provides a firm foundation for future discoveries." John Campbell, Morton L. and Carole S. Olshan Professor of Economics, Harvard University "Bali, Engle, and Murray provide clear and accessible descriptions of many of the most important empirical techniques and results in asset pricing." Kenneth R. French, Roth Family Distinguished Professor of Finance, Tuck School of Business, Dartmouth College "This exciting new book presents a thorough review of what we know about the cross-section of stock returns. Given its comprehensive nature, systematic approach, and easy-to-understand language, the book is a valuable resource for any introductory PhD class in empirical asset pricing." Lubos Pastor, Charles P. McQuaid Professor of Finance, University of Chicago Empirical Asset Pricing: The Cross Section of Stock Returns is a comprehensive overview of the most important findings of empirical asset pricing research. The book begins with thorough expositions of the most prevalent econometric techniques with in-depth discussions of the implementation and interpretation of results illustrated through detailed examples. The

second half of the book applies these techniques to demonstrate the most salient patterns observed in stock returns. The phenomena documented form the basis for a range of investment strategies as well as the foundations of contemporary empirical asset pricing research. Empirical Asset Pricing: The Cross Section of Stock Returns also includes: Discussions on the driving forces behind the patterns observed in the stock market An extensive set of results that serve as a reference for practitioners and academics alike Numerous references to both contemporary and foundational research articles Empirical Asset Pricing: The Cross Section of Stock Returns is an ideal textbook for graduate-level courses in asset pricing and portfolio management. The book is also an indispensable reference for researchers and practitioners in finance and economics. Turan G. Bali, PhD, is the Robert Parker Chair Professor of Finance in the McDonough School of Business at Georgetown University. The recipient of the 2014 Jack Treynor prize, he is the coauthor of Mathematical Methods for Finance: Tools for Asset and Risk Management, also published by Wiley. Robert F. Engle, PhD, is the Michael Armellino Professor of Finance in the Stern School of Business at New York University. He is the 2003 Nobel Laureate in Economic Sciences, Director of the New York University Stern Volatility Institute, and co-founding President of the Society for Financial Econometrics. Scott Murray, PhD, is an Assistant Professor in the Department of Finance in the J. Mack Robinson College of Business at Georgia State University. He is the recipient of the 2014 Jack Treynor prize.