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An Introduction to Equity Derivatives - Sebastien Bossu 2012-03-27
Everything you need to get a grip on the complex world of derivatives Written by the internationally respected academic/finance professional author team of Sebastien Bossu and Philipe Henrotte, An Introduction to Equity Derivatives is the fully updated and expanded second edition of the popular Finance and Derivatives. It covers all of the fundamentals of quantitative finance clearly and concisely without going into unnecessary technical detail. Designed for both new practitioners and students, it requires no prior background in finance and features twelve chapters of gradually increasing difficulty, beginning with basic principles of interest rate and discounting, and ending with advanced concepts in derivatives, volatility trading, and exotic products. Each chapter includes numerous illustrations and exercises accompanied by the relevant financial theory. Topics covered include present value, arbitrage pricing, portfolio theory, derivates pricing, delta-hedging, the Black-Scholes model, and more. An excellent resource for finance professionals and investors looking to acquire an understanding of financial derivatives theory and practice Completely revised and updated with new chapters, including coverage of cutting-edge concepts in volatility trading and exotic products An accompanying website is available which contains additional resources including powerpoint slides and spreadsheets. Visit www.introeqd.com for details.
Financial Derivatives in Theory and Practice - Philip Hunt 2004-07-02
For use in classes at masters and postgraduate level, this text covers financial derivatives in theory and practice.
Derivatives - Keith Cuthbertson 2019-10-10
Three experts provide an authoritative guide to the theory and practice of derivatives Derivatives: Theory and Practice and its companion website explore the practical uses of derivatives and offer a guide to the key results on pricing, hedging and speculation using derivative securities. The book links the theoretical and practical aspects of derivatives in one volume whilst keeping mathematics and statistics to a minimum. Throughout the book, the authors put the focus on explanations and applications. Designed as an engaging resource, the book contains commentaries that make serious points in a lighthearted manner. The authors examine the real world of derivatives finance and include discussions on a wide range of topics such as the use of derivatives by hedge funds and the application of strip and stack hedges by corporates, while providing an analysis of how risky the stock market can be for long-term investors, and more. To enhance learning, each chapter contains learning objectives, worked examples, details of relevant finance blogs technical appendices and exercises.
Derivative Pricing in Discrete Time - Nigel J. Cutland 2012-09-13
This book provides an introduction to the mathematical modelling of real world financial markets and the rational pricing of derivatives, which is part of the theory that not only underpins modern financial practice but is a thriving area of mathematical research. The central theme is the question of how to find a fair price for a derivative; defined to be a price at which it is not possible for any trader to make a risk free profit by trading in the derivative. To keep the mathematics as simple as possible, while explaining the basic principles, only discrete time models with a finite number of possible future scenarios are considered. The theory examines the simplest possible financial model having only one time step, where many of the fundamental ideas occur, and are easily understood. Proceeding slowly, the theory progresses to more realistic models with several stocks and multiple time steps, and includes a comprehensive treatment of incomplete models. The emphasis throughout is on clarity combined with full rigour. The later chapters deal with more advanced topics, including how the discrete time theory is related to the famous continuous time Black-Scholes theory, and a uniquely thorough treatment of American options. The book assumes no prior knowledge of financial markets, and the mathematical prerequisites are limited to elementary linear algebra and probability. This makes it accessible to undergraduates in mathematics as well as students of other disciplines with a mathematical component. It includes numerous worked examples and exercises, making it suitable for self-study.
Paul Wilmott on Quantitative Finance - Paul Wilmott 2007-01-11
Paul Wilmott on Quantitative Finance, Second Edition provides a thoroughly updated look at derivatives and financial engineering, published in three volumes with additional CD-ROM. Volume 1: Mathematical and Financial Foundations; Basic Theory of Derivatives; Risk and Return. The reader is introduced to the fundamental mathematical tools and financial concepts needed to understand quantitative finance, portfolio management and derivatives. Parallels are drawn between the respectable world of investing and the not-so-respectable world of gambling. Volume 2: Exotic Contracts and Path Dependency; Fixed Income Modeling and Derivatives; Credit Risk In this volume the reader sees further applications of stochastic mathematics to new financial problems and different markets. Volume 3: Advanced Topics; Numerical Methods and Programs. In this volume the reader enters territory rarely seen in textbooks, the cutting-edge research. Numerical methods are also introduced so that the models can now all be accurately and quickly solved. Throughout the volumes, the author has included numerous Bloomberg screen dumps to illustrate in real terms the points he raises, together with essential Visual Basic code, spreadsheet explanations of the models, the reproduction of term sheets and option classification tables. In addition to the practical orientation of the book the author himself also appears throughout the book—in cartoon form, readers will be relieved to hear—to personally highlight and explain the key sections and issues discussed. Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.
Global Derivatives - Eric Benhamou 2007
This book provides a broad description of the financial derivatives business from a practitioner's point of view, with a particular emphasis on fixed income derivatives, a specific development on fixed income derivatives and a practical approach to the field. With particular emphasis on the concrete usage of mathematical models, numerical methods and the pricing methodology, this book is an essential reading for anyone considering a career in derivatives either as a trader, a quant or a structurer.
Modelling Financial Derivatives with MATHEMATICA ® - William T. Shaw 1998-12-10
CD plus book for financial modelling, requires Mathematica 3 or 2.2; runs on most platforms.
Financial Mathematics, Derivatives and Structured Products - Raymond H. Chan 2019-02-27
This book introduces readers to the financial markets, derivatives, structured products and how the products are modelled and implemented by practitioners. In addition, it equips readers with the necessary knowledge of financial markets needed in order to work as product structurers, traders, sales or risk managers. As the book seeks to

unify the derivatives modelling and the financial engineering practice in the market, it will be of interest to financial practitioners and academic researchers alike. Further, it takes a different route from the existing financial mathematics books, and will appeal to students and practitioners with or without a scientific background. The book can also be used as a textbook for the following courses: • Financial Mathematics (undergraduate level) • Stochastic Modelling in Finance (postgraduate level) • Financial Markets and Derivatives (undergraduate level) • Structured Products and Solutions (undergraduate/postgraduate level)

Equity Derivatives Explained - M. Bouzoubaa 2014-05-09

A succinct book that provides readers with all they need to know about the equity derivatives business. It deals with vanilla equity products, their usage, structuring and their risk management. The author efficiently bridges the gap between theory and practice, constantly linking risk management tools with specific business objectives.

Equity Derivatives - Marcus Overhaus 2011-08-10

Written by the quantitative research team of Deutsche Bank, the world leader in innovative equity derivative transactions, this book acquaints readers with leading-edge thinking in modeling and hedging these transactions. Equity Derivatives offers a balanced, integrated presentation of theory and practice in equity derivative markets. It provides a theoretical treatment of each new modeling and hedging concept first, and then demonstrates their practical application. The book covers: the newest and fastest-growing class of derivative instruments, fund derivatives; cutting-edge developments in equity derivative modeling; new developments in correlation modeling and understanding volatility skews; and new Web-based implementation/delivery methods. Marcus Overhaus, PhD, Andrew Ferraris, DPhil, Thomas Knudsen, PhD, Frank Mao, PhD, Ross Milward, Laurent Nguyen-Ngoc, PhD, and Gero Schindlmayr, PhD, are members of the Quantitative Research team of Deutsche Bank's Global Equity Division, which is based in London and headed by Dr. Overhaus.

Understanding Risk - David Murphy 2008-04-23

Sound risk management often involves a combination of both mathematical and practical aspects. Taking this into account, Understanding Risk: The Theory and Practice of Financial Risk Management explains how to understand financial risk and how the severity and frequency of losses can be controlled. It combines a quantitative approach with a

Financial Derivatives in Theory and Practice - Philip Hunt 2004-11-19

The term Financial Derivative is a very broad term which has come to mean any financial transaction whose value depends on the underlying value of the asset concerned. Sophisticated statistical modelling of derivatives enables practitioners in the banking industry to reduce financial risk and ultimately increase profits made from these transactions. The book originally published in March 2000 to widespread acclaim. This revised edition has been updated with minor corrections and new references, and now includes a chapter of exercises and solutions, enabling use as a course text. Comprehensive introduction to the theory and practice of financial derivatives. Discusses and elaborates on the theory of interest rate derivatives, an area of increasing interest. Divided into two self-contained parts ? the first concentrating on the theory of stochastic calculus, and the second describes in detail the pricing of a number of different derivatives in practice. Written by well respected academics with experience in the banking industry. A valuable text for practitioners in research departments of all banking and finance sectors. Academic researchers and graduate students working in mathematical finance.

Pricing and Hedging Financial Derivatives - Leonardo Marroni 2014-06-19

The only guide focusing entirely on practical approaches to pricing and hedging derivatives One valuable lesson of the financial crisis was that derivatives and risk practitioners don't really understand the products they're dealing with. Written by a practitioner for practitioners, this book delivers the kind of knowledge and skills traders and finance professionals need to fully understand derivatives and price and hedge them effectively. Most derivatives books are written by academics and are long on theory and short on the day-to-day realities of derivatives trading. Of the few practical guides available, very few of those cover pricing and hedging—two critical topics for traders. What matters to practitioners is what happens on the trading floor—information only seasoned practitioners such as authors Marroni and Perdomo can impart. Lays out proven derivatives pricing and hedging strategies and techniques for equities, FX, fixed income and commodities, as well as multi-assets and cross-assets Provides expert guidance on the development of structured products, supplemented with a range of practical examples Packed with real-life examples covering everything from option payout with delta hedging, to Monte Carlo procedures to common structured products payoffs The Companion Website features all of the examples from the book in Excel complete with source code

Theory of Financial Risk and Derivative Pricing - Jean-Philippe Bouchaud 2003-12-11

Risk control and derivative pricing have become of major concern to financial institutions, and there is a real need for adequate statistical tools to measure and anticipate the amplitude of the potential moves of the financial markets. Summarising theoretical developments in the field, this 2003 second edition has been substantially expanded. Additional chapters now cover stochastic processes, Monte-Carlo methods, Black-Scholes theory, the theory of the yield curve, and Minority Game. There are discussions on aspects of data analysis, financial products, non-linear correlations, and herding, feedback and agent based models. This book has become a classic reference for graduate students and researchers working in econophysics and mathematical finance, and for quantitative analysts working on risk management, derivative pricing and quantitative trading strategies.

Derivatives - Jiří Witzany 2020-11-04

This book helps students, researchers and quantitative finance practitioners to understand both basic and advanced topics in the valuation and modeling of financial and commodity derivatives, their institutional framework and risk management. It provides an overview of the new regulatory requirements such as Basel III, the Fundamental Review of the Trading Book (FRTB), Interest Rate Risk of the Banking Book (IRRBB), or the Internal Capital Assessment Process (ICAAP). The reader will also find a detailed treatment of counterparty credit risk, stochastic volatility estimation methods such as MCMC and Particle Filters, and the concepts of model-free volatility, VIX index definition and the related volatility trading. The book can also be used as a teaching material for university derivatives and financial engineering courses.

An Introduction to Equity Derivatives - Sebastien Bossu 2012-05-14

Everything you need to get a grip on the complex world of derivatives Written by the internationally respected academic/finance professional author team of Sebastien Bossu and Philipe Henrotte, An Introduction to Equity Derivatives is the fully updated and expanded second edition of the popular Finance and Derivatives. It covers all of the fundamentals of quantitative finance clearly and concisely without going into unnecessary technical detail. Designed for both new practitioners and students, it requires no prior background in finance and features twelve chapters of gradually increasing difficulty, beginning with basic principles of interest rate and discounting, and ending with advanced concepts in derivatives, volatility trading, and exotic products. Each chapter includes numerous illustrations and exercises accompanied by the relevant financial theory. Topics covered include present value, arbitrage pricing, portfolio theory, derivates pricing, delta-hedging, the Black-Scholes model, and more. An excellent resource for finance professionals and investors looking to acquire an understanding of financial derivatives theory and practice Completely revised and updated with new chapters, including coverage of cutting-edge concepts in volatility trading and exotic products An accompanying website is available which contains additional resources including powerpoint slides and spreadsheets. Visit www.introeqd.com for details.

Paul Wilmott Introduces Quantitative Finance - Paul Wilmott 2013-10-18

Paul Wilmott Introduces Quantitative Finance, Second Edition is an accessible introduction to the classical side of quantitative finance specifically for university students. Adapted from the comprehensive, even epic, works Derivatives and Paul Wilmott on Quantitative Finance, Second Edition, it includes carefully selected chapters to give the student a thorough understanding of futures, options and numerical methods. Software is included to help visualize the most important ideas and to show how techniques are implemented in practice. There are comprehensive end-of-chapter exercises to test students on their understanding.

Financial Derivatives in Theory and Practice - Philip Hunt 2004-07-02

The term Financial Derivative is a very broad term which has come to mean any financial transaction whose value depends on the underlying value of the asset concerned. Sophisticated statistical modelling of derivatives enables practitioners in the banking industry to reduce financial risk and ultimately increase profits made from these transactions. The book originally published in March 2000 to widespread acclaim. This revised edition has been updated with minor corrections and new references, and now includes a chapter of exercises and solutions, enabling use as a course text. Comprehensive introduction to the theory and practice of financial derivatives. Discusses and elaborates on the theory of interest rate derivatives, an area of increasing interest. Divided into two self-contained parts ? the first concentrating on the theory of stochastic calculus, and the second describes in detail the pricing of a number of different derivatives in practice. Written by well respected academics with experience in the banking industry. A valuable text for practitioners in research departments of all banking and finance sectors. Academic researchers and graduate students working in mathematical finance.

Malliavin Calculus in Finance - Elisa Alos 2021-07-14

Malliavin Calculus in Finance: Theory and Practice aims to introduce the study of stochastic volatility (SV) models via Malliavin Calculus. Malliavin calculus has had a profound impact on stochastic analysis. Originally motivated by the study of the existence of smooth densities of certain random variables, it has proved to be a useful tool in many other problems. In particular, it has found applications in quantitative finance, as in the computation of hedging strategies or the efficient estimation of the Greeks. The objective of this book is to offer a bridge between theory and practice. It shows that Malliavin calculus is an easy-to-apply tool that allows us to recover, unify, and generalize several previous results in the literature on stochastic volatility modeling related to the vanilla, the forward, and the VIX implied volatility surfaces. It can be applied to local, stochastic, and also to rough volatilities (driven by a fractional Brownian motion) leading to simple and explicit results. Features Intermediate-advanced level text on quantitative finance, oriented to practitioners with a basic background in stochastic analysis, which could also be useful for researchers and students in quantitative finance Includes examples on concrete models such as the Heston, the SABR and rough volatilities, as well as several numerical experiments and the corresponding Python scripts Covers applications on vanillas, forward start options, and options on the VIX. The book also has a Github repository with the Python library corresponding to the numerical examples in the text. The library has been implemented so that the users can re-use the numerical code for building their examples. The repository can be accessed here: https://bit.ly/2KNex2Y.

Understanding Derivatives - Robert A. Strong 2016-11-10

Although most universities now have an undergraduate derivatives course, many instructors were, and still are, in desperate need of a book with coverage that is both adequate and accessible - as most textbooks on financial derivatives are either too basic or too advanced for undergraduate students.Understanding Derivatives: Theory and Practice, Preliminary Edition, provides a broad introduction to the options, futures, swaps and interest rate options markets, and also provides the intuition needed to understand the fundamental mathematics of pricing. In addition, coverage of innovative derivative products such as exotic options, weather derivatives, catastrophe futures and volatility spreads has not been neglected. We cover these concepts - without delving into their pricing or valuation - and conclude with a contemporary issues chapter that discusses the latest developments in the field.This book presents a good balance of theory and practice. It is important for a student of the derivatives market to understand how arbitrage arguments lead to rational option pricing, why the cost of carry is crucial to futures pricing, and how a swap dealer determines the fixed rate on an interest rate swap. These are enjoyable topics to learn about, and motivated finance students can find them fascinating. At the same time, it is equally important to understand how the end-user makes intelligent use of these products as risk management tools. Additionally, a variety of application examples are included from the perspective of both the speculator and the hedger.

Introduction to the Mathematics of Finance - Ruth J. Williams 2006

The modern subject of mathematical finance has undergone considerable development, both in theory and practice, since the seminal work of Black and Scholes appeared a third of a century ago. This book is intended as an introduction to some elements of the theory that will enable students and researchers to go on to read more advanced texts and research papers. The book begins with the development of the basic ideas of hedging and pricing of European and American derivatives in the discrete (i.e., discrete time and discrete state) setting of binomial tree models. Then a general discrete finite market model is introduced, and the fundamental theorems of asset pricing are proved in this setting. Tools from probability such as conditional expectation, filtration, (super)martingale, equivalent martingale measure, and martingale representation are all used first in this simple discrete framework. This provides a bridge to the continuous (time and state) setting, which requires the additional concepts of Brownian motion and stochastic calculus. The simplest model in the continuous setting is the famous Black-Scholes model, for which pricing and hedging of European and American derivatives are developed. The book concludes with a description of the fundamental theorems for a continuous market model that generalizes the simple Black-Scholes model in several directions.

Machine Learning in Finance - Matthew F. Dixon 2020-07-01

This book introduces machine learning methods in finance. It presents a unified treatment of machine learning and various statistical and computational disciplines in quantitative finance, such as financial econometrics and discrete time stochastic control, with an emphasis on how theory and hypothesis tests inform the choice of algorithm for financial data modeling and decision making. With the trend towards increasing computational resources and larger datasets, machine learning has grown into an important skillset for the finance industry. This book is written for advanced graduate students and academics in financial econometrics, mathematical finance and applied statistics, in addition to quants and data scientists in the field of quantitative finance. Machine Learning in Finance: From Theory to Practice is divided into three parts, each part covering theory and applications. The first presents supervised learning for cross-sectional data from both a Bayesian and frequentist perspective. The more advanced material places a firm emphasis on neural networks, including deep learning, as well as Gaussian processes, with examples in investment management and derivative modeling. The second part presents supervised learning for time series data, arguably the most common data type used in finance with examples in trading, stochastic volatility and fixed income modeling. Finally, the third part presents reinforcement learning and its applications in trading, investment and wealth management. Python code examples are provided to support the readers' understanding of the methodologies and applications. The book also includes more than 80 mathematical and programming exercises, with worked solutions available to instructors. As a bridge to research in this emergent field, the final chapter presents the frontiers of machine learning in finance from a researcher's perspective, highlighting how many well-known concepts in statistical physics are likely to emerge as important methodologies for machine learning in finance.

Derivatives - Paul Wilmott 1998-12-08

Accompanying computer optical disc contains 'demos of commercial software, spreadsheets and code illustrating models and methods from the book, cutting-edge research articles..., data document and demo from CrashMetrics, the Value at Risk methodology'. (book)

Financial Derivatives and the Globalization of Risk - Edward LiPuma 2004-09-08

The market for financial derivatives is far and away the largest and most powerful market in the world, and it is growing exponentially. In 1970 the yearly valuation of financial derivatives was only a few million dollars. By 1980 the sum had swollen to nearly one hundred million dollars. By 1990 it had climbed to almost one hundred billion dollars, and in 2000 it approached one hundred trillion. Created and sustained by a small number of European and American banks, corporations, and hedge funds, the derivatives market has an enormous impact on the economies of nations—particularly poorer nations—because it controls the price of money. Derivatives bought and sold by means of computer keystrokes in London and New York affect the price of food, clothing, and housing in Johannesburg, Kuala Lumpur, and Buenos Aires. Arguing that social theorists concerned with globalization must familiarize themselves with the mechanisms of a world economy based on the rapid circulation of capital, Edward LiPuma and Benjamin Lee offer a concise introduction to financial derivatives. LiPuma and Lee explain how derivatives are essentially wagers—often on the fluctuations of national currencies—based on models that aggregate and price risk. They describe how these financial instruments are changing the face of capitalism, undermining the power of nations and perpetrating a new and less visible form of domination on postcolonial societies. As they ask: How does one know about, let alone demonstrate against, an unlisted, virtual, offshore corporation that operates in an unregulated electronic space using a secret proprietary trading strategy to buy and sell arcane financial instruments? LiPuma and Lee provide a necessary look at the obscure but consequential role of financial derivatives in the global economy.

The Social Life of Financial Derivatives - Edward LiPuma 2017-08-11

In The Social Life of Financial Derivatives Edward LiPuma theorizes the profound social dimensions of derivatives markets and the processes, rituals, and belief systems that drive them. In response to the 2008 financial crisis and drawing on his experience trading derivatives, LiPuma outlines how they function as complex devices that organize speculative capital as well as the ways derivative-driven capitalism not only produces the conditions for its own existence, but also penetrates the fabric of everyday life. Framing finance as a form of social life and highlighting the intrinsically social character of financial derivatives, LiPuma deepens our understanding of derivatives so that we may someday use them to serve the public well-being.

Derivatives Keith Cuthbertson 2019-12-16

Three experts provide an authoritative guide to the theory and practice of derivatives Derivatives: Theory and Practice and its companion website explore the practical uses of derivatives and offer a guide to the key results on pricing, hedging and speculation using derivative securities. The book links the theoretical and practical aspects of derivatives in one volume whilst keeping mathematics and statistics to a minimum. Throughout the book, the authors put the focus on explanations and applications. Designed as an engaging resource, the book contains commentaries that make serious points in a lighthearted manner. The authors examine the real world of derivatives finance and include discussions on a wide range of topics such as the use of derivatives by hedge funds and the application of strip and stack hedges by corporates, while providing an analysis of how risky the stock market can be for long-term investors, and more. To enhance learning, each chapter contains learning objectives, worked examples, details of relevant finance blogs technical appendices and exercises.

FINANCIAL DERIVATIVES - S.L. GUPTA 2017-07-01

This highly acclaimed text, designed for postgraduate students of management, commerce, and financial studies, has been enlarged and updated in its second edition by introducing new chapters and topics with its focus on conceptual understanding based on practical examples. Each derivative product is illustrated with the help of diagrams, charts, tables and solved problems. Sufficient exercises and review questions help students to practice and test their knowledge. Since this comprehensive text includes latest developments in the field, the students pursuing CA, ICWA and CFA will also find this book of immense value, besides management and commerce students. THE NEW EDITION INCLUDES • Four new chapters on 'Forward Rate Agreements', 'Pricing and Hedging of Swaps', 'Real Options', and 'Commodity Derivatives Market' • Substantially revised chapters—'Risk Management in Derivatives', 'Foreign Currency Forwards', and 'Credit Derivatives' • Trading mechanism of Short-term interest rate futures and Long-term interest rate futures • Trading of foreign currency futures in India with RBI Guidelines • Currency Option Contracts in India • More solved examples and practice problems • Separate sections on 'Swaps' and 'Other Financial Instruments' • Extended Glossary

Financial Derivatives - Jamil Baz 2004-01-12

Publisher Description

Derivatives Paul Wilmott 1999-02-05

Derivatives by Paul Wilmott provides the most comprehensive and accessible analysis of the art of science in financial modeling available. Wilmott explains and challenges many of the tried and tested models while at the same time offering the reader many new and previously unpublished ideas and techniques. Paul Wilmott has produced a compelling and essential new work in this field. The basics of the established theories-such as stochastic calculus, Black-Scholes, binomial trees and interest-rate models-are covered in clear and precise detail, but Derivatives goes much further. Complex models-such as path dependency, non-probabilistic models, static hedging and quasi-Monte Carlo methods-are introduced and explained to a highly sophisticated level. But theory in itself is not enough, an understanding of the role the techniques play in the daily world of finance is also examined through the use of spreadsheets, examples and the inclusion of Visual Basic programs. The book is divided into six parts: Part One: acts as an introduction and explanation of the fundamentals of derivatives theory and practice, dealing with the equity, commodity and currency worlds. Part Two: takes the mathematics of Part One to a more complex level, introducing the concept of path dependency. Part Three: concerns extensions of the Black-Scholes world, both classic and modern. Part Four: deals with models for fixed-income products. Part Five: describes models for risk management and measurement. Part Six: delivers the numerical methods required for implementing the models described in the rest of the book. Derivatives also includes a CD containing a wide variety of implementation material related to the book in the form of spreadsheets and executable programs together with resource material such as demonstration software and relevant contributed articles. At all times the style remains readable and compelling making Derivatives the essential book on every finance shelf.

Modern Derivatives Pricing and Credit Exposure Analysis - Roland Stamm 2015-06-01

This book provides a comprehensive guide for modern derivatives pricing and credit analysis. Written to provide sound theoretical detail but practical implication, it provides readers with everything they need to know to price modern financial derivatives and analyze the credit exposure of a financial instrument in today's markets.

Derivative Securities - Robert A. Jarrow 1999

Skilled investors know that to play in today's high-risk global-investment environment, they must maximize return while hedging risk. To do this successfully, investors must understand the intricacies and nuances of a myriad of investment vehicles, many relatively new to the investment arena. In Derivative Securities: The Complete Investor's Guide, two renowned experts show how a unified approach to derivatives that pays equal attention to options and futures pricing in both theory and practice, allows the investor to achieve his or her goals. Particular attention is paid to the issue of credit risk in pricing and the crucial function of risk management.

Advanced Derivatives Pricing and Risk Management - Claudio Albanese 2006

Written by leading academics and practitioners in the field of financial mathematics, the purpose of this book is to provide a unique combination of some of the most important and relevant theoretical and practical tools from which any advanced undergraduate and graduate student, professional quant and researcher will benefit. This book stands out from all other existing books in quantitative finance from the sheer impressive range of ready-to-use software and accessible theoretical tools that are provided as a complete package. By proceeding from simple to complex, the authors cover core topics in derivative pricing and risk management in a style that is engaging, accessible and self-instructional. The book contains a wide spectrum of problems, worked-out solutions, detailed methodologies and applied mathematical techniques for which anyone planning to make a serious career in quantitative finance must master. In fact, core portions of the book's material originated and evolved after years of classroom lectures and computer laboratory courses taught in a world-renowned professional Master's program in mathematical finance. As a bonus to the reader, the book also gives a detailed exposition on new cutting-edge theoretical techniques with many results in pricing theory that are published here for the first time. *Includes easy-to-implement VB/VBA numerical software libraries *Proceeds from simple to complex in approaching pricing and risk management problems *Provides analytical methods to derive cutting-edge pricing formulas for equity derivatives

An Introduction to the Mathematics of Financial Derivatives - Salih N. Neftci 2000-05-19

This popular text, publishing Spring 1999 in its Second Edition, introduces the mathematics underlying the pricing of derivatives. The increase of interest in dynamic pricing models stems from their applicability to practical situations: with the freeing of exchange, interest rates, and capital controls, the market for derivative products has matured and pricing models have become more accurate. Professor Neftci's book answers the need for a resource targeting professionals, Ph.D. students, and advanced MBA students who are specifically interested in these financial products. The Second Edition is designed to make the book the main text in first year masters and Ph.D. programs for certain courses, and will continue to be an important manual for market professionals.

Theory and Practice of Shipping Freight Derivatives - Manolis G. Kavussanos 2011

This book is an essential purchase for all members of the shipping and financial communities. The book will also be required reading for academics and students of maritime or transportation-related university programs.

Interest Rate Models - Theory and Practice - Damiano Brigo 2007-09-26

The 2nd edition of this successful book has several new features. The calibration discussion of the basic LIBOR market model has been enriched considerably, with an analysis of the impact of the swaptions interpolation technique and of the exogenous instantaneous correlation on the calibration outputs. A discussion of historical estimation of the instantaneous correlation matrix and of rank reduction has been added, and a LIBOR-model consistent swaption-volatility interpolation technique has been introduced. The old sections devoted to the smile issue in the

LIBOR market model have been enlarged into a new chapter. New sections on local-volatility dynamics, and on stochastic volatility models have been added, with a thorough treatment of the recently developed uncertain-volatility approach. Examples of calibrations to real market data are now considered. The fast-growing interest for hybrid products has led to a new chapter. A special focus here is devoted to the pricing of inflation-linked derivatives. The three final new chapters of this second edition are devoted to credit. Since Credit Derivatives are increasingly fundamental, and since in the reduced-form modeling framework much of the technique involved is analogous to interest-rate modeling, Credit Derivatives -- mostly Credit Default Swaps (CDS), CDS Options and Constant Maturity CDS - are discussed, building on the basic short rate-models and market models introduced earlier for the default-free market. Counterparty risk in interest rate payoff valuation is also considered, motivated by the recent Basel II framework developments.

Financial Calculus - Martin Baxter 1996-09-19

The rewards and dangers of speculating in the modern financial markets have come to the fore in recent times with the collapse of banks and bankruptcies of public corporations as a direct result of ill-judged investment. At the same time, individuals are paid huge sums to use their mathematical skills to make well-judged investment decisions. Here now is the first rigorous and accessible account of the mathematics behind the pricing, construction and hedging of derivative securities. Key concepts such as martingales, change of measure, and the Heath-Jarrow-Morton model are described with mathematical precision in a style tailored for market practitioners. Starting from discrete-time hedging on binary trees, continuous-time stock models (including Black-Scholes) are developed. Practicalities are stressed, including examples from stock, currency and interest rate markets, all accompanied by graphical illustrations with realistic data. A full glossary of probabilistic and financial terms is provided. This unique book will be an essential purchase for market practitioners, quantitative analysts, and derivatives traders.

Finance and Derivatives - Sebastien Bossu 2005-12-08

Finance and Derivatives teaches all of the fundamentals of quantitative finance clearly and concisely without going into unnecessary technicalities. You'll pick up the most important theoretical concepts, tools and vocabulary without getting bogged down in arcane derivations or enigmatic theoretical considerations. --Paul Wilmott Finance and Derivatives: Theory and Practice is a collection of exercises accompanied by the relevant financial theory, covering key topics that include: present value, arbitrage pricing, portfolio theory, derivates pricing, delta-hedging and the BlackScholes model. As well as being ideally placed to complement undergraduate and postgraduate studies, Finance and Derivatives: Theory and Practice is also highly valuable as a self-study guide for practitioners. Key Features: * No prior finance background is required, as the book starts with basic notions and gradually increases in difficulty through each chapter, ending with more advanced concepts. * Students can make progress at their own pace as each chapter includes course notes, exercises and solutions. * The authors have an excellent knowledge of both the academic environment and the finance industry, making the book well balanced between theory and practice. * Supplementary material for readers and lecturers is provided on an accompanying website.

Analytical Finance: Volume I - Jan R. M. Röman 2017-02-07

This book provides an introduction to the valuation of financial instruments on equity markets. Written from the perspective of trading, risk management and quantitative research functions and written by a practitioner with many years’ experience in markets and in academia, it provides a valuable learning tool for students and new entrants to these markets. Coverage includes: ·Trading and sources of risk, including credit and counterparty risk, market and model risks, settlement and Herstatt risks. ·Numerical methods including discrete-time methods, finite different methods, binomial models and Monte Carlo simulations. ·Probability theory and stochastic processes from the financial modeling perspective, including probability spaces, sigma algebras, measures and filtrations. ·Continuous time models such as Black-Scholes-Merton; Delta-hedging and Delta-Gamma-hedging; general diffusion models and how to solve Partial Differential Equation using the Feynmann-Kac representation. ·The trading, structuring and hedging several kinds of exotic options, including: Binary/Digital options; Barrier options; Lookbacks; Asian options; Chooses; Forward options; Ratchets; Compounded options; Basket options; Exchange and Currency-linked options; Pay later options and Quantos. ·A detailed explanation of how to construct synthetic instruments and strategies for different market conditions, discussing more than 30 different option strategies. With source code for many of the models featured in the book provided and extensive examples and illustrations throughout, this book provides a comprehensive introduction to this topic and will prove an invaluable learning tool and reference for anyone studying or working in this field.

Quantitative Modeling of Derivative Securities - Peter Laurence 2017-11-22

Quantitative Modeling of Derivative Securities demonstrates how to take the basic ideas of arbitrage theory and apply them - in a very concrete way - to the design and analysis of financial products. Based primarily (but not exclusively) on the analysis of derivatives, the book emphasizes relative-value and hedging ideas applied to different financial instruments. Using a ""financial engineering approach,"" the theory is developed progressively, focusing on specific aspects of pricing and hedging and with problems that the technical analyst or trader has to consider in practice. More than just an introductory text, the reader who has mastered the contents of this one book will have breached the gap separating the novice from the technical and research literature.

Financial Derivatives in Theory and Practice - P. J. Hunt 2000-05-31

This text primarily discusses the pricing and hedging of derivatives and the determination of risks associated with writing options. Part 4 includes a compendium of examples, many providing solutions to problems set earlier in the text.