Intelligent Data Engineering and Automated Learning - IDEAL 2000. Data Mining, Financial Engineering, and Intelligent Agents

Monte Carlo Methods in Financial Engineering

Introduction to the Economics and Mathematics of Financial Markets

Islamic finance contracts

Effektiv C++ programmieren

The relatively new sukuk (or Islamic debt securities) markets have grown to more than US $800 billion over the past decade, and continue to grow at a rate of around 20-30 per cent per year. Arguably the first of its kind, this path-breaking book provides a highly unique reference tool relating to key issues surrounding sukuk markets, which are found in 12 major financial centres, including Kuala Lumpur, London and Zurich. The internationally renowned contributors present an in-depth study of sukuk securities, beginning with a comprehensive definition and history. They go on to discuss Islamic financial concepts and practices that govern how sukuk securities are issued, how markets are carefully regulated to protect investors, and how securities are designed to safeguard invested money. The prospects and challenges of developing sukuk Islamic debt markets across the world are also illustrated. This comprehensive guide to sukuk markets will prove a fascinating and useful reference tool for academics, students, researchers and practitioners with an interest in Islamic finance, and, more specifically, in the nascent field of sukuk markets are carefully regulated to protect investors, and how securities are designed to safeguard invested money. The prospects and challenges of developing sukuk Islamic debt markets across the world are also illustrated. This comprehensive guide to sukuk markets will prove a fascinating and useful reference tool for academics, students, researchers and practitioners with an interest in Islamic finance, and, more specifically, in the nascent field of sukuk
Principles of Financial Regulation

The remarkable growth of financial markets over the past decades has been accompanied by an equally remarkable explosion in financial engineering, the interdisciplinary field focusing on applications of mathematical and statistical modeling and computational technology to problems in the financial services industry. The goals of financial engineering research are to develop empirically realistic stochastic models describing dynamics of financial risk variables, such as asset prices, foreign exchange rates, and interest rates, and to develop analytical, computational and statistical methods and tools to implement the models and employ them to design and evaluate financial products and processes to manage risk and to meet financial goals. This handbook describes the latest developments in this rapidly evolving field in the areas of modeling and pricing financial derivatives, building models of interest rates and credit risk, pricing and hedging in incomplete markets, risk management, and portfolio optimization. Leading researchers in each of these areas provide their perspective on the state of the art in terms of analysis, computation, and practical relevance. The authors describe essential results to date, fundamental methods and tools, as well as new views of the existing literature, opportunities, and challenges for future research.

Superforecasting – Die Kunst der richtigen Prognose

The remarkable growth of financial markets over the past decades has been accompanied by an equally remarkable explosion in financial engineering, the interdisciplinary field focusing on applications of mathematical and statistical modeling and computational technology to problems in the financial services industry. The goals of financial engineering research are to develop empirically realistic stochastic models describing dynamics of financial risk variables, such as asset prices, foreign exchange rates, and interest rates, and to develop analytical, computational and statistical methods and tools to implement the models and employ them to design and evaluate financial products and processes to manage risk and to meet financial goals. This handbook describes the latest developments in this rapidly evolving field in the areas of modeling and pricing financial derivatives, building models of interest rates and credit risk, pricing and hedging in incomplete markets, risk management, and portfolio optimization. Leading researchers in each of these areas provide their perspective on the state of the art in terms of analysis, computation, and practical relevance. The authors describe essential results to date, fundamental methods and tools, as well as new views of the existing literature, opportunities, and challenges for future research.

Financial Engineering for Low-Income Households

A timely update to one of the most well-received books on project financing As an effective alternative to conventional direct financing, project financing has become one of the hottest topics in corporate finance. It's being used more and more frequently—and more successfully—on a wide variety of high-profile corporate projects, and has long been used to fund large-scale natural-resource projects. But the challenges of successful project financing are immense, and the requirements of the process can easily be misunderstood. That's why John Finnerty has returned with the Third Edition of Project Financing. Drawing on his vast experience in the field, Finnerty takes you through the process step by step. Using updated examples and casestudies that illustrate how to apply the analytical techniques described in the book, he covers the rationale for project financing, how to prepare the financial plan, assess the risks, and design the financing mix, raise the funds, and much more. Includes completely new chapters that cover the financing of sustainable projects as well as Sharia-compliant (Islamic) project financing. New material has been added to the discussion of financial modeling and international debt financing.Explores today's most innovative financing techniques and addresses the shortcomings of unsuccessful project financings. Whether you're a corporate finance professional, project planner, or private investor, Project Financing, Third Edition demystifies the complexities of project financing and provides an invaluable guide for anyone who wants to master innovation in corporate finance today.

The Islamic Debt Market for Sukuk Securities

WILEY CIAexcel EXAM REVIEW 2018 THE SELF-STUDY SUPPORT YOU NEED TO PASS THE CIA EXAM Part 3: Internal Audit Knowledge Elements Provides comprehensive coverage based on the exam syllabus, along with multiple-choice practice questions with answers and explanations. Deals with governance and business ethics, risk management, information technology, and the global business environment. Features a glossary of CIA Exam terms—good source for candidates preparing for and answering the exam questions. Assists the CIA Exam candidate in successfully preparing for the exam. Based on the CIA body of knowledge developed by The Institute of Internal Auditors (IIA). Wiley CIAexcel Exam Review 2018: Learning system provides a student-focused and learning-oriented experience for CIA candidates. Passing the CIA Exam on your first attempt is possible. We'd like to help. Features section examines the topics of Governance and Business Ethics, Risk Management, Organizational Structure and Business Processes and Risks, Communications, Management and Leadership Principles, IT and Business Continuity, Financial Management, and Global Business Environment.

Project Financing

A practical guide to the inside language of the world of derivative instruments and risk management. Financial engineering is where technology and quantitative analysis meet on Wall Street to solve risk problems and find investment opportunities. It evolved out of options pricing, and, at this time, is primarily focused on derivatives since they are the most difficult instruments to price and are also the riskiest. Not only is financial engineering a relatively new field, but by its nature, it continues to grow and develop. This unique dictionary explains and clarifies for financial professionals the important terms, concepts, and sometimes arcane language of this increasingly influential world of high finance and potentially high profits. John F. Marshall (New York, NY) is a Managing Partner of Marshall, Tucker & Associates, a New York-based financial engineering and consulting firm. Former Executive Director of the International Association of Financial Engineers, Marshall is the author of several books, including Understanding Swaps.

Financial Engineering Principles

This book presents an overview of fundamental concepts in mathematics and how they are applied to basic financial engineering problems, with the goal of teaching students to use mathematics and engineering tools to understand and solve financial problems. Part I covers mathematical preliminaries (set theory, linear algebra, sequences and series, real functions and analysis, numerical approximations and computations, basic optimization theory, and stochastic processes), and Part II addresses financial topics ranging from low- to high-risk investments (interest rates and value of money, bonds, dynamic asset modeling, portfolio theory and optimization, option pricing, and the concept of hedging). Based on lectures for a master’s program in financial engineering given by the author over 12 years at the University of Southern California, Mathematics and Tools for Financial Engineering contains numerous examples and problems, establishes a strong general mathematics background and engineering modeling techniques in a pedagogical fashion, and covers numerical techniques with applications to solving financial problems using different software tools. This textbook is intended for graduate and advanced undergraduate students in finance or financial engineering and is useful to readers with no prior knowledge in finance who want to understand some basic mathematical tools and theories associated with financial engineering. It is also appropriate as an overview of many mathematical concepts and engineering tools relevant to courses on numerical analysis, modeling and data science, numerical optimization, and approximation theory.

Information Systems and New Applications in the Service Sector: Models and Methods

The Stability of Islamic Finance main focus is on the question of the sources of financial instability which is inherent in the conventional system. As a core component of this focus, the book will consider episodes of turbulence and instability in a historical context recalling the occurrence of such events from mid-19th century to the present. It will present various theoretical explanations along with solutions and alternative financial systems that avoid instability provided by various scholars dating back to mid-19th century to the present. The book then will present and discuss the architecture of an Islamic financial system and show that at its core, this systems shares many characteristics of an Islamic financial system as opposed to Western scholars throughout history to avoid the inherent instability of the present dominant system. Particular emphasis will be placed on the present financial crisis and its causes as well as the financial crisis of the 1997 in Southeast Asia, Russia, and Latin America relating these episodes to the fundamental features of the dominant system. The debt crisis of the low income countries will also be part of this discussion. It will then argue that these crises could be mitigated under an Islamic system or any other system with similar architecture.

Handbooks in Operations Research and Management Science: Financial Engineering

An innovative textbook for use in advanced undergraduate and graduate courses; accessible to students in financial mathematics, financial engineering and economics. Introduction to the Economics and Mathematics of Financial Markets fills the longstanding need for an accessible yet serious textbook treatment of financial economics. The book provides a rigorous overview of the subject, while its flexible presentation makes it suitable for use with different levels of undergraduate and graduate students. Each chapter presents mathematical models of financial problems at three different levels of sophistication: single-period, multi-period, and continuous-time. The single-period and multi-period models require only basic calculus and an introductory probability/statistics course, while an advanced undergraduate course in probability is helpful in understanding the continuous-time models. In this way, the material is given complete coverage at different levels; the less advanced student can stop before the more sophisticated mathematics and still be able to grasp the general principles of financial economics. The book is divided into three parts. The first part provides an introduction to basic securities and financial market organization, the concept of interest rates, the main mathematical models, and quantitative ways to measure risks and rewards. The second part treats option pricing and hedging; here and throughout the book, the authors emphasize the Martingale or probabilistic approach. Finally, the third part examines equilibrium models—an area often neglected by other texts in financial mathematics, but included here because of the qualitative insight it offers into the behavior of market participants and pricing.

Economic Principles

The Routledge Companion to Banking Regulation and Reform provides a prestigious cutting edge international reference work offering students, researchers and policy makers a comprehensive guide to the paradigm shift in banking studies since the historic financial crisis in 2007. The transformation in banking over the last two decades has not been authoritatively and critically analysed by the mainstream academic literature. This unique collection brings together a multi-disciplinary group of leading authorities in the field to analyse and investigate post-crisis regulation and reform. Representing the wide spectrum of non-mainstream economics and finance, topics range widely from financial...
Innovation to misconduct in banking, varieties of Eurozone banking to reforming dysfunctional global banking as well as topical issues such as off-shore financial centres, Libor fixing, corporate governance and the Dodd-Frank Act. Bringing together an authoritative range of international experts and perspectives, this invaluable body of heterodox research work provides a comprehensive compendium for researchers and academics of banking and finance as well as regulators and policy makers concerned with the global impact of financial institutions.

**Die Prinzipien des Erfolgs**

The financial crisis of 2007-9 revealed serious failings in the regulation of financial institutions and markets, and prompted a fundamental reconsideration of the design of financial regulation. As the financial system has become ever more complex and interconnected, the pace of evolution continues to accelerate. It is now clear that regulation must focus on the financial system as a whole, but this poses significant challenges for regulators. Principles of Financial Regulation describes how to address those challenges. Examining the subject from a holistic and multidisciplinary perspective, Principles of Financial Regulation considers the underlying policies and the objectives of regulation by drawing on economics, finance, and law methodologies. The volume examines regulation in a purposive and dynamic way by framing the book in terms of what the financial system does, rather than what financial regulation is. By analysing specific regulatory measures, the book provides readers to the opportunity to assess regulatory choices on specific policy issues and encourages critical reflection on the design of regulation.

**Principles of Financial Engineering**

**New Issues in Islamic Finance and Economics**

The Nationally Appropriate Mitigation Action (NAMA) is the new kid on the block in the battle against climate change. The NAMA is the most decisive instrument devised to address the fact that today the only source of growing emissions are the world’s developing countries. But as it is based purely on voluntarism it crucially depends on financing models that can lift the concept off the ground. This book provides the first insights as to how this concept can deliver on its promise – and challenges some of the fundamental mantras in international climate change collaboration.

**Islamic Capital Markets**

A comprehensive text and reference, first published in 2002, on the theory of financial engineering with numerous algorithms for pricing, risk management, and portfolio management.

**Electronic Services: Concepts, Methodologies, Tools and Applications**


**Die Grenzen des Wachstums**

For nearly ten years, the readers of the Sunday Boston Globe and newspapers around America have delighted in David Warsh’s column, “Economic Principals.” This collection shows why. Taken as a whole, Warsh’s writings amount to a vast and colorful portrait of the personalities who dominate modern economics – from the luminaries to unknown soldiers to eccentrics who add sparkle to the tapestry. Partly a history of controversies in economics, partly an essay on the evolution of the field, Economic Principals offers a glimpse of one of the most important stories of our time: the metamorphosis of a priestly class of moral philosophers into the mathematical mandarins of today, whose ideas are reshaping society even as they reveal its workings in ever more subtle detail. Warsh first recounts the rise of the economic paradigm, deftly treating the rediscovery of Adam Smith and the centrality of markets. He then turns to the generation of economists for whom the Nobel Prize was created in 1969, the men who forged the modern field in a few years during and after World War II. Some, like Paul Samuelson and Milton Friedman, are well known to the public; others, like Trygve Haavelmo and George Dantzig, are less quickly recognized. But all have interesting stories which Warsh brings to light. Tracing the high tech revolution to the current generation, he sketches younger scholars such as Jeffrey Sachs, Martin Feldstein, and others less popularly known, who rule the field today. Marking the most powerful applications of modern economics, Warsh explains how the ingenious “rocket scientists” of Wall Street are creating new markets and the business school wizards and leading corporate executives are reinventing the organization. Finally, in exploring the implications of modern economics, Warsh introduces us to scholars operating on the boundaries of the field, from Jane Jacobs to Noam Chomsky, and to the critics, like Donald McCloskey and Robert Reich, who have brought a bit of moral philosophy back into the economist’s brave new world. At every step, Warsh maps the field with the journalist’s eye for detail. Readers will see why he is considered one of the most consistently stimulating economic journalists in America today.

**Monte Carlo Methods in Financial Engineering**

“This book deals with an old subject, Islamic Finance contracts. Yet, it is very new and unique in its approach, ideas and arguments. The book classifies Islamic finance contracts in three categories; the first category consists of seven...
classical finance contracts whose details are given in the classical writings of Islamic jurisprudence (Fiqh), although in no other Fiqh publication these contracts are depicted and distinguished as specifically financing contracts. The second category consists of what I call traditional hybrid Islamic contracts which came about as a result of the 1970’s startup stage of Islamic banking and the search of Shari’ah compliant contracts which fit a process of financial intermediation. The third category consists of Islamic finance contracts which came about during the takeoff and open expansion stage of Islamic banking especially in the first decade of the new millennium. The uniqueness of the book comes from its approach of blending the legal description, conditions and requirements of each Islamic Finance contract with the economic and financial circumstances within which the contract fits and also from the emphasis on the financial consequences of each of the Islamic finance contracts. The book is also unique in bringing about comparison with contracts used in the conventional Western style finance transactions. It is an attempt of formulating the main elements of a general theory of Islamic finance which is internally coherent and also consistent with other components of Islamic economics. “

The Routledge Companion to Banking Regulation and Reform

Stock, bonds, cash . . . the investment mind is often programmed. The reality is that most investors think in terms of single asset classes, and allocate money to them accordingly. The unique contribution of First Principles: An Investor's Guide to Building Bridges Across Financial Products is that, for the first time, a single unified valuation approach is available to use for all financial products. This book shows you how to focus on the dynamics of processes and interrelationships of different investment choices, providing the reader with a financial toolbox to equip any investor with the knowledge to de-construct and value any financial product, making it a must if you're a portfolio manager or an individual investors interested in building the optimal portfolio.  

Inventories are prevalent everywhere in the commercial world, whether it be in retail stores, manufacturing facilities, government stockpile material, Federal Reserve banks, or even your own household. This textbook examines basic mathematical techniques used to sufficiently manage inventories by using various computational methods and mathematical models. The text is presented in a way such that each section can be read independently, and so the order in which the reader approaches the book can be inconsequential. It contains both deterministic and stochastic models along with algorithms that can be employed to find solutions to a variety of inventory control problems. With exercises at the end of each chapter and a clear, systematic exposition, this textbook will appeal to advanced undergraduate and first-year graduate students in operations research, industrial engineering, and quantitative MBA programs. It also serves as a reference for professionals in both industry and government worlds. The prerequisite courses include introductory optimization methods, probability theory (non-measure theoretic), and stochastic processes.

Mathematics and Tools for Financial Engineering

This book is the Proceedings of the International Workshop on Finance 2011, held in Kyoto in the summer of 2011 with the aim of exchanging new ideas in financial engineering among researchers from various countries from both academia and industry. The workshop was held as a successor to the Daiwa International Workshop (2004–2008), and the KIER-TMU International Workshop (2009–2010). This workshop was organized by the Center for Advanced Research in Finance (CARF), Graduate School of Economics, the University of Tokyo, and Graduate School of Social Sciences, Tokyo Metropolitan University — and co-organized by Life Risk Research Center, Doshisha University. The workshop serves as a bridge between academic researchers and practitioners. This book contains about fifteen papers, all refereed, representing the presentations at the workshop. The papers address state-of-the-art techniques in financial engineering.

Principles of Financial Engineering

McKinsey & Company’s #1 best-selling guide to corporate valuation—the fully updated seventh edition Valuation has been the foremost resource for measuring company value for nearly three decades. Now in its seventh edition, this acclaimed volume continues to help financial professionals around the world gain a deep understanding of valuation and help their companies create, manage, and maximize economic value for their shareholders. This latest edition has been carefully revised and updated throughout; and includes new insights on topics such as digital, ESG (environmental, social and governance), and long-term investing, as well as fresh case studies. Clear, accessible chapters cover the fundamental principles of value creation, analyzing and forecasting performance, capital structure and dividends, valuing high-growth companies, and much more. The Financial Times calls the book “one of the practitioners’ best guides to valuation.” This book: Provides complete, detailed guidance on every crucial aspect of corporate valuation Explains the strategies, techniques, and nuances of valuation every manager needs to know Covers both core and advanced valuation techniques and management strategies Features/Includes a companion website that covers key issues in valuation, including videos, discussions of trending topics, and real-world valuation examples from the capital markets. For over 90 years, McKinsey & Company has helped corporations and organizations make substantial and lasting improvements in their performance. Through seven editions and 30 years, Valuation: Measuring and Managing the Value of Companies, has served as the definitive reference for financial professionals, including investment bankers, financial analysts, CFOs and corporate managers, venture capitalists, and students and instructors in all areas of finance.

Optionen, Futures und andere Derivate

This is an extremely valuable book written by three highqualified scholars whose credentials for writing such a book aredifficult to match. The timing of the book is also perfect, havingcome at a time when the worst financial crisis in living memory hasintensified the quest for reform of the international architecture. The proposals made by the authors should go a long way in not only reforming the system but also in accelerating the move toward financial globalization and convergence of the conventional and Islamic financial systems. Dr. Umer Chapra Prominent Scholar of Islamic Economics and currently ResearchAdvisor Islamic Research and Training Institute (IRTI), Islamic Development Bank (IDB) Globalization and Islamic Finance, by three well-respected authors in Islamic finance, provides a thought provoking analysis of an important and topical issue, particularly, given the global impact of the current financial and economic crises. The book is the first attempt to make a compelling case of convergence between globalization and Islamic finance. Erkow, Iqbal and Mirakhor should be praised for this serious effort, which is a must-read for academics and practitioners interested in Islamic finance. Professor Rifaat Ahmed Abdel Karim Secretary General Islamic Financial Services Board (IFSB) This book has a robust discussion of the growth and spread of Islamic finance within the umbrella of globalization. The book provides a unique view of Islamic finance, not only from the perspective of how Islamic finance fits within globalization of finance, but also in terms of actual implementation. This is a must-read for anyone interested in the complex and complicated world of Islamic finance.

Washington University I have not come across any literature that has delved soinsistently in financial globalization, in particular Islamicfinance. Due to this reason, I would encourage all interested inhiss area to read this book. Hajah Salma Latiff Managing Director, Crescent Sdn. Bhd. Former Director, Centre for Islamic Banking, Finance and Management(CIBFM), Universiti Brunei Darussalam The recent crisis has evoked wide interest in Islamic finance publications. Globalization and Islamic Finance is both timely and needed. Sari Hamid Director, Wealth Management Financial Alliance (Singapore)

**Principles of Project Finance**

**Financial Engineering and Computation**

The sixth edition of Financial Management provides students with an overview of financial management suited to the first course in finance. The focus of the text is on the big picture, providing an introduction to financial decision making grounded in current financial theory and the current state of world economic conditions. Attention is paid to both valuation and capital markets, as well as their influence on corporate financial decisions. The 10 basic principles of finance are introduced in the first chapter and woven throughout the text, to give students a solid foundation from which to build their knowledge of finance. The goal of this text is to go beyond teaching the tools of a discipline or a trade and help students gain a complete understanding of the subject. This will give them the ability to apply what they have learnt to new and as yet unforeseen problems—in short, to educate students in finance.

**2017 Impact Estimation Of Exchange Rate On Foreign Direct Investment Inflows And Annual Update Of Competitiveness Analysis For 34 Greater China Economies**

Financial Engineering for Low-Income Households is an edited compilation of articles that focus on using financial engineering-a multidisciplinary field that uses technical methods from the fields of finance, mathematics and economics-to design financial services for low-income households. The book aims to provide an understanding of the various risk-reward trade-offs facing low-income households and how principles of financial engineering can be best applied to understand and manage the complete suite of financial and non-financial assets, including human capital, insurance, annuities and loans. This compilation connects the fundamental concepts in finance and financial engineering with the relatively new field of financial services delivery to low-income households. Its applied nature will help the reader grasp the implications of theoretical principles in finance on practical product-design considerations. It has several illustrations, caselets, and exercises to facilitate learning and in order to develop a full understanding of the underlying concepts. The book will be a valuable tool for students and practitioners interested in the design and delivery of financial services to low-income households.

**Wiley CIAexcel Exam Review 2018, Part 3**

From the reviews: “Paul Glasserman has written an astonishingly good book that bridges financial engineering and the Monte Carlo method. The book will appeal to graduate students, researchers, and most of all, practicing financial engineers [] So often, financial engineering texts are very theoretical. This book is not.” —Glyn Holton, Contingency Analysis

**Computational Methods in Financial Engineering**

This book is the fifth annual project of the Asia Competitiveness Institute studying competitiveness at the sub-national level of Greater China. ACI's flagship competitiveness study adopts a comprehensive framework to measure competitiveness by incorporating 102 indicators under four environments and 11 sub-environments. By undertaking the study at the sub-national level, it accounts for the considerable disparities within a large economy like Greater China. The study's unique methodology incorporates comparative strengths and weaknesses, and what-if policy simulations aimed at policy suggestions for each sub-national economy and region. A new feature of this competitiveness study introduces the concept of Shapley value for the assignment of weights to the various indicators that constitute competitiveness. This methodological innovation not only adds an element of objectivity in terms of the assignment of weights, but also validates the robustness of results obtained from the competitiveness studies over the past years. Moreover, the empirical research featured in this book attempts to understand the drivers of FDI inflows to Mainland China, with a specific focus on exchange rate movements and volatility. Nowadays with the international flows of goods and capital becoming ubiquitous and comprising an important aspect of national competitiveness, the role of exchange rate is drawing much more policy attention. In view of this, the research findings presented in this book make an important academic and policy contribution by empirically examining the relationship between FDI inflows and exchange rate. Finally, the timing of this publication makes it indispensable to include the interpretation and reconciliation of policy development of China after the 19th National Congress of the Communist Party of China held in October 2017. With the growing prosperity of its people and the improvement of its international status, China would “realise the Chinese Dream of national rejuvenation and see the people realise their aspirations for a better life.” As such, China has achieved the transformation from regaining dignity to becoming prosperous and growing strong to be a great modern socialist country visualised by President Xi Jinping. This book attempts to investigate the vision of “growing strong to be a great modern socialist country” from different aspects.

**Valuation**

The Second Edition of this best-selling introduction for practitioners uses new material and updates to describe the changing environment for project finance. Integrating recent developments in credit markets with revised insights into making project finance deals, the second edition offers a balanced view of project financing by combining legal, contractual, scheduling, and other subjects. Its emphasis on concepts and techniques makes it critical for those who want to succeed in financing large projects. With extensive cross-references and a comprehensive glossary, the Second Edition presents anew a guide to the principles and practical issues that can commonly cause difficulties in commercial and financial negotiations. Provides a basic introduction to project finance and its relationship with other financing techniques Describes and explains: sources of project finance; typical commercial contracts (e.g., for construction of the project and sale of its product or services) and their effects on project-finance structures; project-finance risk assessment from the points of view of lenders, investors, and other project parties; how lenders and investors evaluate the
Globalization and Islamic Finance


Principles of Inventory Management

Islamic Engineering of Climate Investment in Developing Countries

Islamic Finance has experienced rapid growth in recent years, showing significant innovation and sophistication, and producing a broad range of investment products which are not limited to the complete replication of conventional fixed-income instruments, derivatives and fund structures. Islamic Finance represents an elemental departure from traditional interest-based and speculative practices, relying instead on real economic transactions, such as trade, investment based on profit sharing, and other solidarity ways of doing business, and aims to incorporate Islamic principles, such as social justice, ecology and kindness, to create investment products and financial markets which are both ethical and sustainable. Products created according to Islamic principles have shown a low correlation to other market segments and are relatively independent even from market turbulences like the subprime crisis. Therefore, they have become increasingly popular with secular Muslims and non-Muslim investors, as highly useful alternative investments for the diversification of portfolios. In Islamic Capital Markets: Products and Strategies, international experts on Islamic Finance and Sharia’a Law focus on the most imminent issues surrounding the evolution of Islamic capital markets and the development of Sharia’a-compliant products. The book is separated into four parts, covering: General concepts and legal issues, including Fahn concepts in Saudi Arabia, the Sharia’a process in product development and the integration of social responsibility in financial communities; Global Islamic capital market trends, such as the evolution of Takaful products and the past, present and future of Islamic derivatives; National and the risks and strengths of Islamic capital markets compared to the conventional system, financial engineering from an Islamic perspective, Sharia’a-compliant equity investments and Islamic microfinance. Islamic Capital Markets: Products and Strategies is the complete investors’ guide to Islamic finance.

Financial Management: Principles and Applications

Computational models and methods are central to the analysis of economic and financial decisions. Simulation and optimisation are widely used as tools of analysis, modelling and testing. The focus of this book is the development of computational methods and analytical models in financial engineering that rely on computation. The book contains eighteen chapters written by leading researchers in the area on portfolio optimization and option pricing; estimation and classification; banking; risk and macroeconomic modelling. It explores and brings together current research tools and will be of interest to researchers, analysts and practitioners in policy and investment decisions in economics and finance.

Dictionary of Financial Engineering

Principles of Financial Engineering, Third Edition, is a highly acclaimed text on the fast-paced and complex subject of financial engineering. This updated edition describes the "engineering" elements of financial engineering instead of the mathematics underlying it. It shows how to use financial tools to accomplish a goal rather than describing the tools themselves. It lays emphasis on the engineering aspects of derivatives (how to create them) rather than their pricing (how they act) in relation to other instruments, the financial markets, and financial market practices. This volume explains ways to create financial tools and how the tools work together to achieve specific goals. Applications are illustrated using real-world examples. It presents three new chapters on financial engineering in topics ranging from commodity markets to financial engineering applications in hedge fund strategies, correlation swaps, structural models of default, capital structure arbitrage, contingent convertibles, and how to incorporate counterparty risk into derivatives pricing. Poised midway between intuition, actual events, and financial mathematics, this book can be used to solve problems in risk management, taxation, regulation, and above all, pricing. A solutions manual enhances the text by presenting additional cases and solutions to exercises. This latest edition of Principles of Financial Engineering is ideal for financial engineers, quantitative analysts in banks and investment houses, and other financial industry professionals. It is also highly recommended to graduate students in financial engineering and financial mathematics programs. The Third Edition presents three new chapters on financial engineering in commodity markets, financial engineering applications in hedge fund strategies, correlation swaps, structural models of default, capital structure arbitrage, contingent convertibles and how to incorporate counterparty risk into derivatives pricing, among other topics. Additions, clarifications, and illustrations throughout the volume show these instruments at work instead of explaining how they should act. The solutions manual enhances the text by presenting additional cases and solutions to exercises.

The Stability of Islamic Finance

New Issues in Islamic Finance & Economics: Progress and Challenges provides a review of the main issues and challenges facing Islamic finance. The application of Islamic finance is currently limited to banking. This book starts with an overview of the factors and motives behind the development of Islamic finance after the global financial crisis, analysis of the strengths and weaknesses of Islamic capital markets compared to the conventional system, financial engineering from an Islamic perspective, Sharia’a-compliant equity investments and Islamic microfinance. Islamic Capital Markets: Products and Strategies is the complete investors’ guide to Islamic finance.