The Mis Behaviour Of Markets A Fractal View Of Ri

#market misbehavior #fractal view #financial risk #economic anomalies #chaos theory economics

This seminal work explores the unpredictable nature of financial markets, offering a groundbreaking fractal view that challenges traditional economic models. It delves into the inherent misbehavior of markets, revealing how complex, chaotic patterns influence market dynamics and financial risk, providing readers with a deeper understanding of economic phenomena beyond conventional assumptions.

The (Mis)Behaviour of Markets

This international bestseller, which foreshadowed a market crash, explains why it could happen again if we don't act now. Fractal geometry is the mathematics of roughness: how to reduce the outline of a jagged leaf or static in a computer connection to a few simple mathematical properties. With his fractal tools, Mandelbrot has got to the bottom of how financial markets really work. He finds they have a shifting sense of time and wild behaviour that makes them volatile, dangerous - and beautiful. In his models, the complex gyrations of the FTSE 100 and exchange rates can be reduced to straightforward formulae that yield a much more accurate description of the risks involved.

The (mis)behaviour of Markets

From the world-famous inventor of fractal geometry, a revolutionary new theory that turns on its head our understanding of how markets work. Fractal geometry is the mathematics of roughness: how to reduce the outline of a jagged leaf, a rocky coastline or static in a computer connection to a few simple mathematical properties - to make the complex simple. With his fractal tools, Benoit Mandelbrot has got to the bottom of how financial markets really work. He finds they have a shifting sense of time, a unique dimension and a wild kind of behaviour that makes them volatile, dangerous - and also beautiful. In Mandelbrot's fractal models, the complex gyrations of IBM's stock price, the FTSE 100, cotton trading and exchange rates can be reduced to straightforward formulae that yield a much more accurate description of the risks involved.

The Misbehavior of Markets

Mathematical superstar and inventor of fractal geometry, Benoit Mandelbrot, has spent the past forty years studying the underlying mathematics of space and natural patterns. What many of his followers don't realize is that he has also been watching patterns of market change. In The (Mis)Behavior of Markets, Mandelbrot joins with science journalist and former Wall Street Journal editor Richard L. Hudson to reveal what a fractal view of the world of finance looks like. The result is a revolutionary reevaluation of the standard tools and models of modern financial theory. Markets, we learn, are

far riskier than we have wanted to believe. From the gyrations of IBM's stock price and the Dow, to cotton trading, and the dollar-Euro exchange rate--Mandelbrot shows that the world of finance can be understood in more accurate, and volatile, terms than the tired theories of yesteryear.The ability to simplify the complex has made Mandelbrot one of the century's most influential mathematicians. With The (Mis)Behavior of Markets, he puts the tools of higher mathematics into the hands of every person involved with markets, from financial analysts to economists to 401(k) holders. Markets will never be seen as "safe bets" again.

The (mis)behaviour of Markets

From the world-famous inventor of fractal geometry, a revolutionary new theory that turns on its head our understanding of how markets work. Fractal geometry is the mathematics of roughness: how to reduce the outline of a jagged leaf, a rocky coastline or static in a computer connection to a few simple mathematical properties - to make the complex simple. With his fractal tools, Benoit Mandelbrot has got to the bottom of how financial markets really work. He finds they have a shifting sense of time, a unique dimension and a wild kind of behaviour that makes them volatile, dangerous - and also beautiful. In Mandelbrot's fractal models, the complex gyrations of IBM's stock price, the FTSE 100, cotton trading and exchange rates can be reduced to straightforward formulae that yield a much more accurate description of the risks involved.

The (mis)behavior of Markets

Includes material on the market crisis. This book presents models where the complex gyrations of the FTSE 100 and exchange rates can be reduced to straightforward formulae that yield a much more accurate description of the risks involved.

The (mis)behaviour of Markets

This practical introduction explains the field of Blockchain Economics, the economic models emerging with the implementation of distributed ledger technology. These models are characterized by three factors: open platform business models, cryptotoken money supplies, and Initial Coin Offerings as a new and official form of financing. The book covers a variety of approaches from a business and academic perspective, ranging from financial theory, complexity, and open innovation networks to behavioral economics, self-determination theory, public policy, and financial inclusion.Unlike existing titles, this book draws on worldwide blockchain industry experts to define the new discipline of Blockchain Economics and provide novel theoretical and conceptual resources for the future of this fast-developing economy. The primer also highlights the wider theme of blockchain as an institutional technology, in that many value transfer interactions might be shifted to automated networks, decreasing the number of human-operated institutions.As well as stimulating further research, and implementation by business innovators and public policy strategists, the book can also be used as a foundational textbook in courses on Blockchain Economics. remove

Blockchain Economics: Implications Of Distributed Ledgers - Markets, Communications Networks, And Algorithmic Reality

This book is a masterpiece. It combines a clear historical analysis of issues and causes of past international instability with a contemporary discussion of how to avoid future occurrences. It is a very informative book that caters to the need of the savvy and the uninformed. It reviews in a rigorous manner the core obstacles to achieving a durable global financial stability. The presentation is clear, simple and well organised. . . Saccomanni demonstrated a great understanding of monetary and financial matters. The book could not have been better timed given the deepening recession caused by the global financial meltdown. I am very delighted to recommend it. Chika B. Onwuekwe, Journal of International Banking Law and Regulation . . . the timing of this publication could not have been better, Fabrizio Saccomanni provides the reader with a well-written analytical and historical survey of the causes and consequences of international financial crisis and possible solutions. . . the book is enjoyable, compendious and concise. . . the book is worth reading by anyone who is interested in understanding the global financial system and is looking for a critical appraisal of its performance. In particular, students and academics of international economics can get a good overview on the issue of international financial stability, since the book bridges the gap between theoretical models and practical policy implications. . . Saccomanni s book is a well-written and valuable contribution to the debate as already said before the timing of its publication could hardly be better. Ralf Fendel, Journal

of Economics and Statistics Recurrent instability has characterized the global financial system since the 1980s, eventually leading to the current global financial crisis. This instability and the resultant disruptions sovereign debt defaults, exchange rate misalignments, financial market illiquidity and asset price bubbles are linked, in this book, to the shortcomings of the global financial system which tends to generate cycles of boom and bust in credit flows. These cycles are set in motion by the monetary impulses of major industrial countries and are amplified and propagated through the operation of global financial markets. Fabrizio Saccomanni argues that to counter such systemic instability requires that national authorities give adequate weight to financial stability objectives when formulating their monetary and regulatory policies. He maintains that appropriate multilateral strategies to deal with unsustainable trends in credit aggregates and asset prices should be devised in the International Monetary Fund in the context of a strengthened framework to deal with global payments imbalances and exchange rate misalignments. Providing a comprehensive historical and analytical survey of the causes, consequences and possible cures of international financial instability, this book will be of great interest to students and academics of international economics and finance. It will also appeal to financial market participants and analysts, government officials and central bankers as a comprehensive survey of the relevant academic literature and of the state of the policy debate.

Managing International Financial Instability

This book aims to shine a light on some of the issues of mathematical creativity. It is neither a philosophical treatise nor the presentation of experimental results, but a compilation of reflections from top-caliber working mathematicians. In their own words, they discuss the art and practice of their work. This approach highlights creative components of the field, illustrates the dramatic variation by individual, and hopes to express the vibrancy of creative minds at work. Mathematicians on Creativity is meant for a general audience and is probably best read by browsing.

Mathematicians on Creativity

Economists broadly define financial asset price bubbles as episodes in which prices rise with notable rapidity and depart from historically established asset valuation multiples and relationships. Financial economists have for decades attempted to study and interpret bubbles through the prisms of rational expectations, efficient markets, and equilibrium, arbitrage, and capital asset pricing models, but they have not made much if any progress toward a consistent and reliable theory that explains how and why bubbles (and crashes) evolve and can also be defined, measured, and compared. This book develops a new and different approach that is based on the central notion that bubbles and crashes reflect urgent short-side rationing, which means that, as such extreme conditions unfold, considerations of quantities owned or not owned begin to displace considerations of price.

Financial Market Bubbles and Crashes, Second Edition

In this unique and dramatic account of the rise of neoliberalism Howard and King consider the major features of historical materialism, the factors which resulted in 19th and 20th century thinkers incorrectly predicting the long-term decline of the market, and the prospects for a reversal of neoliberalism in the 21st century.

The Rise of Neoliberalism in Advanced Capitalist Economies

Written in a style that is accessible to a wide audience, The Fractal Geometry of Nature inspired popular interest in this emerging field. Mandelbrot's unique style, and rich illustrations will inspire readers of all backgrounds.

The Fractal Geometry of Nature

Mandelbrot is world famous for his creation of the new mathematics of fractal geometry. Yet few people know that his original field of applied research was in econometrics and financial models, applying ideas of scaling and self-similarity to arrays of data generated by financial analyses. This book brings together his original papers as well as many original chapters specifically written for this book.

Fractals and Scaling in Finance

Now shortlisted for the 2012 Financial Times Business Book of the Year Award and the Wellcome Trust Book Prize, The Hour Between Dog and Wolf is a resonant exploration of economic behaviour and its consequences.

The Hour Between Dog and Wolf: Risk-taking, Gut Feelings and the Biology of Boom and Bust

Valuation is a topic that is extensively covered in business degree programs throughout the country. Damodaran's revisions to "Investment Valuation" are an addition to the needs of these programs.

Investment Valuation

Geometry -- Grief -- Beauty -- Story -- Fractal -- Beyond -- Appendix: More Math.

Geometry of Grief

Here is the remarkable life story of Benoit Mandelbrot, the creator of fractal geometry, and his unparalleled contributions to science mathematics, the financial world, and the arts. Mandelbrot recounts his early years in Warsaw and in Paris, where he was mentored by an eminent mathematician uncle, through his days evading the Nazis in occupied France, to his education at Caltech, Princeton, and MIT, and his illustrious career at the IBM Thomas J. Watson Research Center. An outside to mainstream scientific research, he managed to do what others had thought impossible: develop a new geometry that combines revelatory beauty with a radical way of unfolding formerly hidden scientific laws. In the process he was able to use geometry to solve fresh, real-world problems. With exuberance and an eloquent fluency, Benoit Mandelbrot recounts the high points of his fascinating life, offering us a glimpse into the evolution of his extraordinary mind. With full-color inserts and black-and-white photographs throughout.

The Fractalist

The definitive guide to valuation written by a who's who of today's top practitioners The Valuation Handbook differs significantly from other related books on this topic because the contributors are practitioners, academics, and investment firms that explain how they value companies and other assets. It concentrates on specific and innovative valuation techniques, rather than the theoretical approaches more generally accepted and discussed. Given the extreme volatility of the stock market, valuation is a critical issue for analysts, investors, and businesses. Here, various professional contributors explain how their firms approach the valuation process, while academic contributors share their valuation consulting and research experience. Examines how to value assets in today's dynamic market setting Offers a broad spectrum of ideas from some of the top practitioners and academics in this field Highlights state-of-the-art approaches to company valuation Filled with in-depth insights and expert advice, The Valuation Handbook puts this difficult discipline in perspective.

The Valuation Handbook

This third volume of the Selected Works focusses on a detailed study of fraction Brownian motions. The fractal themes of "self-affinity" and "globality" are presented, while extensive introductory material, written especially for this book, precedes the papers and presents a number of striking new observations and conjectures. The mathematical tools so discussed will be valuable to diverse scientific communities.

Gaussian Self-Affinity and Fractals

The purpose of the Special Issue “Quantitative Methods in Economics and Finance” of the journal Risks was to provide a collection of papers that reflect the latest research and problems of pricing complex derivates, simulation pricing, analysis of financial markets, and volatility of exchange rates in the international context. This book can be used as a reference for academicians and researchers who would like to discuss and introduce new developments in the field of quantitative methods in economics and finance and explore applications of quantitative methods in other business areas.

Quantitative Methods in Economics and Finance

An essential discussion of the popular science and mathematics behind fractals reveals how fractal shapes can be found everywhere in nature from clouds to coastlines, explaining how basic concepts in

fractal geometry produced a revolution in mathematical understandings of patterns in the 20th century. Original.

Fractals: A Very Short Introduction

A thorough guide to correlation risk and its growing importance in global financial markets Ideal for anyone studying for CFA, PRMIA, CAIA, or other certifications, Correlation Risk Modeling and Management is the first rigorous guide to the topic of correlation risk. A relatively overlooked type of risk until it caused major unexpected losses during the financial crisis of 2007 through 2009, correlation risk has become a major focus of the risk management departments in major financial institutions, particularly since Basel III specifically addressed correlation risk with new regulations. This offers a rigorous explanation of the topic, revealing new and updated approaches to modelling and risk managing correlation risk. Offers comprehensive coverage of a topic of increasing importance in the financial world Includes the Basel III correlation framework Features interactive models in Excel/VBA, an accompanying website with further materials, and problems and questions at the end of each chapter

Correlation Risk Modeling and Management

This unique book brings together a comprehensive set of papers on the background, theory, technical issues and applications of agent-based modelling (ABM) within geographical systems. This collection of papers is an invaluable reference point for the experienced agent-based modeller as well those new to the area. Specific geographical issues such as handling scale and space are dealt with as well as practical advice from leading experts about designing and creating ABMs, handling complexity, visualising and validating model outputs. With contributions from many of the world’s leading research institutions, the latest applied research (micro and macro applications) from around the globe exemplify what can be achieved in geographical context. This book is relevant to researchers, postgraduate and advanced undergraduate students, and professionals in the areas of quantitative geography, spatial analysis, spatial modelling, social simulation modelling and geographical information sciences.

Agent-Based Models of Geographical Systems

Quantitative methods have revolutionised the area of trading, regulation, risk management, portfolio construction, asset pricing and treasury activities, and governmental activity such as central banking. One of the original contributions in this area is the classic by Cootner entitled 'The Random Nature of Stock Market Prices'. This work investigated the statistical properties of asset prices and was one of the first works to investigate this area in a rigorous manner. Much has happened in this field in the last 35 years and 'Return Distributions in Finance' contains much new information that reflects this huge growth. The authors combined experience reflects not only the new theory but also the new practice in this fascinating area. The rise of financial engineering now allows us to change the nature of asset returns to whatever pattern we desire, albeit at a cost. Benefits and costs can only be understood if we understand the underlying processes. 'Return Distributions in Finance' allows us to gain that understanding. Assists in understanding asset return distributions Provides a full overview of financial risk management techniques in asset allocation Demonstrates how to use asset return forecast applications

Return Distributions in Finance

In this book, we want to deliver you the strong message on how beneficial the Price Action and Pattern Trading is in comparison to the technical indicators used last few decades. This book heavily focuses on tradable patterns in the financial market. The patterns include Fibonacci patterns, Elliott Wave patterns, Harmonic patterns, and many other price patterns for your trading. We share useful insight behind the financial market dynamics and price patterns from our computerized research. We have put numerous trading strategies under five categories (i.e. five regularities) to make your life simpler. We present the systematic view on market dynamics and price patterns to improve your knowledge in your financial trading. Most importantly, this book will help you to understand trend, cycle, and fractal wave. You will learn how to attach them to your trading strategy. After this book, you will be able to use the wisdom of trend, cycle and fractal wave at your advantage for your trading. At the latter part of this book, we also provide some useful information towards your trading management. We provide practical knowledge on risk management and portfolio management. You might need the Peak Trough Analysis tool to follow some of the chapters in this book. You can freely download the Peak Trough Analysis tool from the

Publisher’s website. Finally, reader should note that this book contains some strong technical language. We hope you to get the full benefits from many brand new knowledge introduced in this book for your financial trading. Before reading this book, we recommend to read "Profitable Patterns in Forex and Stock Market" and "Guide to Precision Harmonic Pattern Trading" to get some prior knowledge in Price Action and Pattern Trading.

Scientific Guide To Price Action and Pattern Trading

Like sharks, epidemic diseases always lurk just beneath the surface. This fast-paced history of their effect on mankind prompts questions about the limits of scientific knowledge, the dangers of medical hubris, and how we should prepare as epidemics become ever more frequent. Ever since the 1918 Spanish influenza pandemic, scientists have dreamed of preventing catastrophic outbreaks of infectious disease. Yet, despite a century of medical progress, viral and bacterial disasters continue to take us by surprise, inciting panic and dominating news cycles. From the Spanish flu and the 1924 outbreak of pneumonic plague in Los Angeles to the 1930 'parrot fever' pandemic and the more recent SARS, Ebola, and Zika epidemics, the last 100 years have been marked by a succession of unanticipated pandemic alarms. Like man-eating sharks, predatory pathogens are always present in nature, waiting to strike; when one is seemingly vanquished, others appear in its place. These pandemics remind us of the limits of scientific knowledge, as well as the role that human behaviour and technologies play in the emergence and spread of microbial diseases.

The Pandemic Century

What happens when the bottlenecks that stand between supply and demand in our culture go away and everything becomes available to everyone? "The Long Tail" is a powerful new force in our economy: the rise of the niche. As the cost of reaching consumers drops dramatically, our markets are shifting from a one-size-fits-all model of mass appeal to one of unlimited variety for unique tastes. From supermarket shelves to advertising agencies, the ability to offer vast choice is changing everything, and causing us to rethink where our markets lie and how to get to them. Unlimited selection is revealing truths about what consumers want and how they want to get it, from DVDs at Netflix to songs on iTunes to advertising on Google. However, this is not just a virtue of online marketplaces; it is an example of an entirely new economic model for business, one that is just beginning to show its power. After a century of obsessing over the few products at the head of the demand curve, the new economics of distribution allow us to turn our focus to the many more products in the tail, which collectively can create a new market as big as the one we already know. The Long Tail is really about the economics of abundance. New efficiencies in distribution, manufacturing, and marketing are essentially resetting the definition of what's commercially viable across the board. If the 20th century was about hits, the 21st will be equally about niches.

The Long Tail

This book is to explores a variety of facets of online learning environments to understand how learning occurs and succeeds in digital contexts and what teaching strategies and technologies are most suited to this format. Business, health, government and education are some of the core sectors of society which have been experiencing deep transformations due to a generalized digitalization. While these changes are not novel, the swift progress of technology and the rising complexity of digital environments place a focus on the need for further research and novel strategies. In the context of education, the promise of increased flexibility and broader access to educational resources is impelling much of higher education’s course offerings to online environments. The 21st century learner requires an education that can be pursued anytime and anywhere and that is more aligned with the demands of a digital society. Online education not only assists students to success-fully integrate a workforce that is increasingly digital, but it helps them to become more comfortable with the use of technology in general and, hence, more prepared to be prolific digital citizens. The variety of settings portrayed in this volume attest to the unlimited opportunities afforded by online learning and serve as valuable evidence of its benefit for students’ educational experience. Moreover, these research efforts assist a more comprehensive reflection about the delivery of higher education in the context of online settings.

Online Teaching and Learning in Higher Education

Testimonios brings together first-person narratives from the vibrant, diverse, and complex Latinx and Hispanic mathematical community. Starting with childhood and family, the authors recount their own

individual stories, highlighting their upbringing, education, and career paths. Their particular stories, told in their own voices, from their own perspectives, give visibility to some of the experiences of Latinx/Hispanic mathematicians. Testimonios seeks to inspire the next generation of Latinx and Hispanic mathematicians by featuring the stories of people like them, holding a mirror up to our own community. It also aims to provide a window for mathematicians (and aspiring mathematicians) from all ethnicities, with the hope of inspiring a better understanding of the diversity of the mathematical community.

Testimonios: Stories of Latinx and Hispanic Mathematicians

A look at the rebellious thinkers who are challenging old ideas with their insights into the ways countless elements of complex systems interact to produce spontaneous order out of confusion

Complexity

The Golden Ratio examines the presence of this divine number in art and architecture throughout history, as well as its ubiquity among plants, animals, and even the cosmos. This gorgeous book—with layflat dimensions that closely approximate the golden ratio—features clear, enlightening, and entertaining commentary alongside stunning full-color illustrations by Venezuelan artist and architect Rafael Araujo. From the pyramids of Giza, to quasicrystals, to the proportions of the human face, the golden ratio has an infinite capacity to generate shapes with exquisite properties. This book invites you to take a new look at this timeless topic, with a compilation of research and information worthy of a text book, accompanied by over 200 beautiful color illustrations that transform this into the ultimate coffee table book. Author Gary Meisner shares the results of his twenty-year investigation and collaboration with thousands of people across the globe in dozens of professions and walks of life. The evidence will close the gaps of understanding related to many claims of the golden ratio’s appearances and applications, and present new findings to take our knowledge further yet. Whoever you are, and whatever you may know about this topic, you’ll find something new, interesting, and informative in this book, and may find yourself challenged to see, apply, and share this unique number of mathematics and science in new ways.

The Golden Ratio

Mathematics forms bridges between knowledge, tradition, and contemporary life. The continuous development and growth of its many branches, both classical and modern, permeates and fertilizes all aspects of applied science and technology, and so has a vital impact on our modern society. The book will focus on these aspects and will benefit from the contribution of several world-famous scientists from mathematics and related sciences, such as: Ralph Abraham, Andrew Crumey, Peter Markowich, Claudio Procesi, Clive Ruggles, Ismail Serageldin, Amin Shokrollahi, Tobias Wallisser.

MATHKNOW

If we lived in a liquid world, the concept of a "machine" would make no sense. Liquid life is metaphor and apparatus that discusses the consequences of thinking, working, and living through liquids. It is an irreducible, paradoxical, parallel, planetary-scale material condition, unevenly distributed spatially, but temporally continuous. It is what remains when logical explanations can no longer account for the experiences that we recognize as part of "being alive."Liquid Life references a third-millennial understanding of matter that seeks to restore the agency of the liquid soul for an ecological era, which has been banished by reductionist, "brute" materialist discourses and mechanical models of life. Offering an alternative worldview of the living realm through a "new materialist" and "liquid" study of matter, Armstrong conjures forth examples of creatures that do not obey mechanistic concepts like predictability, efficiency, and rationality. With the advent of molecular science, an increasingly persuasive ontology of liquid technologies can be identified. Through the lens of lifelike dynamic droplets, the agency for these systems exists at the interfaces between different fields of matter/energy that respond to highly local effects, with no need for a central organizing system.Liquid Life seeks an alternative partnership between humanity and the natural world. It provokes a re-invention of the languages of the living realm to open up alternative spaces for exploration, including contributor Rolf Hughes' "angelology" of language, which explores the transformative invocations of prose poetry, and Simone Ferracina's graphical notations that help shape our concepts of metabolism, upcycling, and designing with fluids. A conceptual and practical toolset for thinking and designing, liquid life reunites

us with the irreducible "soul substance" of living things, which will neither be simply "solved," nor go away.

Liquid Life

"One of the themes of the book is how to have a fulfilling professional life. In order to achieve this goal, Krantz discusses keeping a vigorous scholarly program going and finding new challenges, as well as dealing with the everyday tasks of research, teaching, and administration." "In short, this is a survival manual for the professional mathematician - both in academics and in industry and government agencies. It is a sequel to the author's A Mathematician's Survival Guide."--BOOK JACKET.

The Survival of a Mathematician

Although Islamic finance is one of the fastest growing segments of emerging global financial markets, its concepts are not fully exploited especially in the areas of economic development, inclusion, access to finance, and public policy. This volume is to improve understanding of the perspective of Islamic finance on economic development, social and economic justice, human welfare, and economic growth.

Economic Development and Islamic Finance

Analyses new political economy theory and its role in bringing about radical social change

The Beginning of History

In One Economics, Many Recipes, leading economist Dani Rodrik argues that neither globalizers nor antiglobalizers have got it right. While economic globalization can be a boon for countries that are trying to dig out of poverty, success usually requires following policies that are tailored to local economic and political realities rather than obeying the dictates of the international globalization establishment. A definitive statement of Rodrik's original and influential perspective on economic growth and globalization, One Economics, Many Recipes shows how successful countries craft their own unique strategies--and what other countries can learn from them. To most proglobalizers, globalization is a source of economic salvation for developing nations, and to fully benefit from it nations must follow a universal set of rules designed by organizations such as the World Bank, the International Monetary Fund, and the World Trade Organization and enforced by international investors and capital markets. But to most antiglobalizers, such global rules spell nothing but trouble, and the more poor nations shield themselves from them, the better off they are. Rodrik rejects the simplifications of both sides, showing that poor countries get rich not by copying what Washington technocrats preach or what others have done, but by overcoming their own highly specific constraints. And, far from conflicting with economic science, this is exactly what good economics teaches.

One Economics, Many Recipes

The worlds of visual art and mathematics beautifully unite in this spectacular volume by award-winning writer Stephen Ornes. He explores the growing sensation of math art, presenting such pieces as a colorful crocheted representation of non-Euclidian geometry that looks like sea coral and a 65-ton, 28-foot-tall bronze sculpture covered in a space-filling curve. We learn the artist's story for every work, plus the mathematical concepts and equations behind the art.

Math Art

A Harvard scholar argues that mathematical models can provide solutions to current economic challenges, explaining that the economic meltdown of 2008 was based on a misunderstanding of scientific models rather than on the models themselves.

The Physics of Wall Street

The Crest of the Peacock