

The Economics And Uncertainties Of Nuclear Power

Principles in Health Economics and Policy, second edition, is a concise introduction to health economics and its application to health policy. It introduces the subject of economics, explains fundamental failures in the market for healthcare, and discusses the concepts of equity and efficiency when applied to health and healthcare. This new edition presents a globally-relevant, policy-oriented approach, that emphasizes the application of economic analysis to universal health policy issues in an accessible manner. It explores four key questions currently facing health policy-makers across the globe: How should society intervene in the determinants that affect health? How should health be financed? How should healthcare providers be paid? And, how should alternative healthcare programmes be evaluated when setting priorities? The book is an ideal guide to everyone interested in how the tools of health economics can be applied when shaping health policy.

The current coronavirus pandemic is a recent example of how an unpredictable event can cause uncertainty and affect people, markets and economies worldwide. Economic indicators like the well-known and frequently cited Economic Policy Uncertainty Index, developed by the three economists Scott R. Baker, Nicholas Bloom and Steven J. Davis, try to capture perceptions of uncertainty and use them to generate predictions for the economic future. The index is based on a search term that is employed to select relevant elements from a population of articles. However, previous research contributions criticize the composition of the search term for being too broad and restricted to certain policy areas, thereby missing detections of new or unforeseen sources of economic uncertainty. This research note aims to modify the economists' search term in three different ways. The author introduces the term and concept of "risk", which is not considered in the original search term.

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further policy areas that can cause economic uncertainty, and extends the term "uncertainty" including related terms and synonyms. In order to evaluate the success of the optimized search in selecting relevant articles from a population of articles, all search terms are applied to two randomly drawn samples, derived from an original corpus of 2,723,049 articles and a pre-filtered corpus of 514,297 articles from the German daily newspapers Handelsblatt and Süddeutsche Zeitung. The investigation period ranges from January 1994 to March 2020. For comparison, both samples are also filtered using Baker, Bloom and Davis's original search term. The different selection results are evaluated with the help of the parameters recall and precision. The results are preliminary but encouraging. In both samples, only around every tenth relevant article is selected when Baker, Bloom and Davis's search term is applied. By modifying the original search term, the recall could be increased considerably with little disadvantages in terms of precision. The research process suggests that economic uncertainties can be related to other concepts and policy areas that are not covered by the economists' original search term.

Uncertainty faced by households and firms affects economic activity. The rise in uncertainty since the beginning of the sovereign debt crisis in Greece could be one factor that has contributed to the deep and long-lasting recession. This paper presents a brief empirical analysis quantifying this phenomenon and compares it with developments in Ireland and Portugal. Overall, this analysis suggests that the uncertainty impact on growth has been relatively small in Greece between 2008 and 2013, although stronger than in Ireland or Portugal. This quantification appears to be robust to various specification changes of the vector auto regressive models developed for this exercise. This work is related to the 2013 Economic Survey of Greece (www.oecd.org/eco/surveys/greece). In a world of certainty, the design of environmental policy is relatively straightforward, and both

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down to maximizing the present value of the flow of social benefits minus costs. But the real one of considerable uncertainty -- over the physical and ecological impact of pollution, over the economic costs and benefits of reducing it, and over the discount rates that should be used to calculate present values. The implications of uncertainty are complicated by the fact that most environmental policy problems involve highly nonlinear damage functions, important irreversibilities, and long time horizons. Correctly incorporating uncertainty in policy design is therefore one of the more interesting and important research areas in environmental economics. This paper offers no easy formulas or solutions for treating uncertainty -- to my knowledge, none exist. Instead, I try to clarify the issues, which various kinds of uncertainties will affect optimal policy design, and summarize what we know and don't know about the problem.

Benefits of Flexibility

Affective Decision Making Under Uncertainty

Risk, Uncertainty, and Economics for a Warming World

Understanding the Economic Risks and Uncertainties

Patient Care Under Uncertainty

Uncertain Times

How should firms decide whether and when to invest in new capital equipment, additions to their workforce, or the development of new products? Why have traditional economic models of investment failed to explain the behavior of investment spending in the United States and other countries? In

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this book, Avinash Dixit and Robert Pindyck provide the first detailed exposition of a new theoretical approach to the capital investment decisions of firms, stressing the irreversibility of most investment decisions, and the ongoing uncertainty of the economic environment in which these decisions are made. In so doing, they answer important questions about investment decisions and the behavior of investment spending. This new approach to investment recognizes the option value of waiting for better (but never complete) information. It exploits an analogy with the theory of options in financial markets, which permits a much richer dynamic framework than was possible with the traditional theory of investment. The authors present the new theory in a clear and systematic way, and consolidate, synthesize, and extend the various strands of research that have come out of the theory. Their book shows the importance of the theory for understanding investment behavior of firms; develops the implications of this theory for industry dynamics and for government policy concerning investment; and shows how the theory can be applied to specific industries and to a wide variety of business problems.

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This book is an exploration of the ubiquity of ambiguity in decision-making under uncertainty. It presents various essays on behavioral economics and behavioral finance that draw on the theory of Black Swans (Taleb 2010), which argues for a distinction between unprecedented events in our past and unpredictable events in our future. The defining property of Black Swan random events is that they are unpredictable, i.e., highly unlikely random events. In this text, Mandelbrot's (1972) operational definition of risky random unpredictable events is extended to Black Swan assets – assets for which the cumulative probability distribution or conditional probability distribution of random future asset returns is a power distribution. Ambiguous assets are assets for which the uncertainties of future returns are not risks. Consequently, there are two disjoint classes of Black Swan assets: Risky Black Swan assets and Ambiguous Black Swan assets, a new class of ambiguous assets with unpredictable random future outcomes. The text is divided into two parts, the first of which focuses on affective moods, introduces affective utility functions and discusses the ambiguity of Black Swans. The second part, which shifts the

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spotlight to affective equilibrium in asset markets, features chapters on affective portfolio analysis and Walrasian and Gorman Polar Form Equilibrium Inequalities. In order to gain the most from the book, readers should have completed the standard introductory graduate courses on microeconomics, behavioral finance, and convex optimization. The book is intended for advanced undergraduates, graduate students and post docs specializing in economic theory, experimental economics, finance, mathematics, computer science or data analysis. Much economic advice is bogus quantification, warn two leading experts in this essential book, now with a preface on COVID-19. Invented numbers offer a false sense of security; we need instead robust narratives that give us the confidence to manage uncertainty. "An elegant and careful guide to thinking about personal and social economics, especially in a time of uncertainty. The timing is impeccable." – Christine Kenneally, New York Times Book Review Some uncertainties are resolvable. The insurance industry's actuarial tables and the gambler's roulette wheel both yield to the tools of probability theory. Most situations in life, however, involve a deeper kind of

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uncertainty, a radical uncertainty for which historical data provide no useful guidance to future outcomes. Radical uncertainty concerns events whose determinants are insufficiently understood for probabilities to be known or forecasting possible. Before President Barack Obama made the fateful decision to send in the Navy Seals, his advisers offered him wildly divergent estimates of the odds that Osama bin Laden would be in the Abbottabad compound. In 2000, no one—not least Steve Jobs—knew what a smartphone was; how could anyone have predicted how many would be sold in 2020? And financial advisers who confidently provide the information required in the standard retirement planning package—what will interest rates, the cost of living, and your state of health be in 2050?—demonstrate only that their advice is worthless. The limits of certainty demonstrate the power of human judgment over artificial intelligence. In most critical decisions there can be no forecasts or probability distributions on which we might sensibly rely. Instead of inventing numbers to fill the gaps in our knowledge, we should adopt business, political, and personal strategies that will be robust to alternative futures and

resilient to unpredictable events. Within the security of such a robust and resilient reference narrative, uncertainty can be embraced, because it is the source of creativity, excitement, and profit.

A must-read for anyone who makes business decisions that have a major financial impact. As the recent collapse on Wall Street shows, we are often ill-equipped to deal with uncertainty and risk. Yet every day we base our personal and business plans on uncertainties, whether they be next month's sales, next year's costs, or tomorrow's stock price. In *The Flaw of Averages*, Sam Savage known for his creative exposition of difficult subjects describes common avoidable mistakes in assessing risk in the face of uncertainty. Along the way, he shows why plans based on average assumptions are wrong, on average, in areas as diverse as healthcare, accounting, the War on Terror, and climate change. In his chapter on Sex and the Central Limit Theorem, he bravely grasps the literary third rail of gender differences. Instead of statistical jargon, Savage presents complex concepts in plain English. In addition, a tightly integrated web site contains numerous animations and simulations to further connect

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the seat of the reader's intellect to the seat of their pants. The Flaw of Averages typically results when someone plugs a single number into a spreadsheet to represent an uncertain future quantity. Savage finishes the book with a discussion of the emerging field of Probability Management, which cures this problem through a new technology that can pack thousands of numbers into a single spreadsheet cell. Praise for The Flaw of Averages "Statistical uncertainties are pervasive in decisions we make every day in business, government, and our personal lives. Sam Savage's lively and engaging book gives any interested reader the insight and the tools to deal effectively with those uncertainties. I highly recommend The Flaw of Averages." –William J. Perry, Former U.S. Secretary of Defense "Enterprise analysis under uncertainty has long been an academic ideal. . . . In this profound and entertaining book, Professor Savage shows how to make all this practical, practicable, and comprehensible." –Harry Markowitz, Nobel Laureate in Economics

MANAGING Fertilizer During Periods of Economic Uncertainty
The Economics of Common Versus Independent Causes
Nuclear Power

The Flaw of Averages

Risk, Uncertainty and Profit

How the World Can Adapt to a Riskier Future

As Artificial Intelligence (AI) seizes all aspects of human life, there is a fundamental shift in the way in which humans are thinking of and doing things. Ordinarily, humans have relied on economics and finance theories to make sense of, and predict concepts such as comparative advantage, long run economic growth, lack or distortion of information and failures, role of labour as a factor of production and the decision making process for the purpose of allocating resources among other theories. Of interest though is that literature has not attempted to utilize these advances in technology in order to modernize economic and finance theories that are fundamental in the decision making process for the purpose of allocating scarce resources among other things. With the simulated intelligence in machines, which allows machines to act like humans and to some extent even anticipate events better than humans, thanks to their ability to handle massive data sets, this book will use artificial intelligence to explain what these economic and finance theories

mean in the context of the agent wanting to make a decision. The main feature of finance and economic theories is that they try to eliminate the effects of uncertainties by attempting to bring the future to the present. The fundamentals of this statement is deeply rooted in risk and risk management. In behavioural sciences, economics as a discipline has always provided a well-established foundation for understanding uncertainties and what this means for decision making. Finance and economics have done this through different models which attempt to predict the future. On its part, risk management attempts to hedge or mitigate these uncertainties in order for “the planner” to reach the favourable outcome. This book focuses on how AI is to redefine certain important economic and financial theories that are specifically used for the purpose of eliminating uncertainties so as to allow agents to make informed decisions. In effect, certain aspects of finance and economic theories cannot be understood in their entirety without the incorporation of AI.

Offering a cutting-edge analysis of competitive balance and outcome uncertainty, this book explores the topic from multiple

perspectives. Chapters address competitive balance and outcome uncertainty in different sports in a range of countries to help understand its significance. Highlighting important new insights into previously unexplored dimensions, the book also provides a rich context for better understanding why fans, teams and leagues value competitive balance. It challenges readers to think about the topic in a broad and rigorous way, and in some cases to question widely held beliefs about how outcome uncertainty motivates competitive balance and how sports fans actually view competitive balance. Key case studies and the use of new data in the chapters makes this an interesting read for sports economics researchers and students looking for current analysis of the topic. Managers of sports organizations will also appreciate the insights that the book gives into what their customers value.

NATIONAL BESTSELLER From the former Governor of the Bank of Canada, a far-seeing guide to the powerful economic forces that will shape the decades ahead. The economic ground is shifting beneath our feet. The world is becoming more volatile, and people are understandably worried about their financial futures.

In this urgent and accessible guide to the crises and opportunities that lie ahead, economist and former Governor of the Bank of Canada Stephen Poloz maps out the powerful tectonic forces that are shaping our future, and the ideas that will allow us to master them. These forces include an aging workforce, mounting debt, and rising income inequality. Technological advances, too, are adding to the pressure, putting people out of work, and climate change is forcing a transition to a lower-carbon economy. It is no surprise that people are feeling uncertain. The implications of these tectonic tensions will cascade throughout every dimension of our lives—the job market, the housing market, the investment climate, as well as government and central bank policy, and the role of the corporation within society. The pandemic has added momentum to many of them. Poloz skillfully argues that past crises, from the Victorian Depression in the late 1800s to the more recent downturn in 2008, give a hint of what is in store for us in the decades ahead. Unlike the purely destructive power of earthquakes, the upheaval that is sure to come in the decades ahead will offer unexpected opportunities for renewal and

growth. Filled with takeaways for employers, investors, and policymakers, as well as families discussing jobs and mortgage renewals around the kitchen table, The Next Age of Uncertainty is an indispensable guide for those navigating the fault lines of the risky world ahead.

We construct the first news-based economic uncertainty index for Chile, which allowed us to rebuild 23 years of the economic uncertainty history of the country and quantify its impact over the economy. We find that an increase in economic uncertainty conveys a fall in GDP, investment and employment even after accounting for the small open economy nature of Chile. In contrast to previous studies for important and developed economies, we do not find evidence of an overshooting effect when uncertainty dissipates; therefore, increases in economic uncertainties have negative effects over the economy even in the long-run. Our estimates suggest that these impacts range from: 10 to 20 percent for aggregate investment, 2.5 and 5 percent for GDP and 1.3 to 4.2 for employment. Extensions suggest that both mining and non-mining investment are affected by economic uncertainty with the former showing a more pronounced decline.

We also find that the bulk of the economic uncertainty effect over aggregate investment is via private investment, with some short-run impacts in public investment. Moreover, compared to the GDP response, aggregate consumption responds in almost the same way to an economic uncertainty shock.

How American Families Cope in a World of Uncertainty

Economic Uncertainty Impact in a Small Open Economy

Banking and Finance

Economic Effects of COVID-19 Related Uncertainty Shocks

Challenges of Transformation

An in-depth and balanced economic analysis of the costs, hazards, regulation and politics of nuclear power.

DIVThis enduring economics text provided the theoretical basis of the entrepreneurial American economy during the post-industrial era. A revolutionary work, it taught the world how to systematically distinguish between risk and uncertainty. /div

"Although uncertainty is common in patient care, it has not been largely addressed in research on evidence-based medicine. Patient Care Under Uncertainty strives to correct this huge omission. For the past few years, renowned economist Charles Manski has been applying the statistical tools of

economics to decision making under uncertainty in the context of patient health status and response to treatment. In the precise language of econometrics, "uncertainty" means that the available evidence and knowledge do not suffice to yield precise probabilistic predictions. In the health-care sphere, the most common example is a choice between periodic surveillance or aggressive treatment of patients at risk of a potential disease. Manski examines the subject by applying the economic principals of personalized risk assessment to research on treatment response. Through his work as an econometrician, Manski shows how statistical imprecision and identification problems affect empirical research in the patient care sphere. In the book, Manski reviews continuing discourse in medicine and critiques how evidence from randomized clinical trials has been used to inform decision making. He describes research on identification, develops decision-theoretic principles for reasonable care under uncertainty, and offers suggestions for sensible decision-making with sample data from randomized trials. Manski ends by reviewing patient care from a public-health perspective and considering management of uncertainty in drug approval. In terms of patient care, Manski seeks to help clinicians, public health planners, and patients recognize and cope with uncertainty when making decisions about patient care"--Provided by publisher.

The report has two purposes. The first is to describe in depth various techniques for treating uncertainty and risk in project evaluation. The second is to describe advantages and disadvantages of each technique to help the decision maker

choose an appropriate one for a given problem. Although the focus is on buildings and building components, the techniques described in this report are equally applicable to non-building investments. These same principles apply in the evaluation of any capital budget expenditure whose future stream of benefits, revenues, savings, or costs is uncertain. Investments in long-lived projects such as buildings are characterized by uncertainties regarding project life, operation and maintenance costs, revenues, and other factors that affect project economics. Since future values of these variable factors are generally not known, it is difficult to make reliable economic evaluations. The traditional approach to project investment analysis is to apply economic methods of project evaluation to "best estimates" of project input variables as if they were certain estimates and then to present results in single-value, deterministic terms. When projects are evaluated without regard to uncertainty of inputs to the analysis, decision makers have insufficient information to measure and evaluate the risk of investing in a project having a different outcome from what is expected. Although the technical literature treats uncertainty and risk analysis extensively, a recent survey shows that applications are still far behind theoretical capabilities. Several reasons might be hypothesized for this lag in implementation. First, practicing analysts anticipate high costs and time-consuming analyses in evaluating risk. Yet computers reduce considerably the costs and time for risk analysis. Second, analysts are concerned about the lack of data. The more uncertain the input data, however, the more helpful it would be to account for the uncertainty and to

evaluate the associated risk. Third, decision makers, particularly top managers in corporations or government agencies, are reluctant to accept these techniques because they are not confident that the techniques will help them make better decisions. This reluctance may stem in part from a lack of understanding of the techniques. A comprehensive examination of the different approaches to treating uncertainty and risk in project evaluation would show how the application of risk analysis techniques to uncertain data can improve management decision making. This report is intended as the basis for a new ASTM standard on how to account for uncertainty and risk in economic evaluations of buildings and building components. The approach is tutorial and relatively comprehensive to build understanding of the appropriate concepts and techniques among engineers, architects, and economists of the American Society for Testing and Materials (ASTM) Subcommittee who will develop the new standard. The report is also intended for professionals, educators, students, and managers who are interested in applying these techniques to the economic evaluation of buildings.

Optimal Timing Problems in Environmental Economics

Handbook of the Economics of Risk and Uncertainty

Robust Solutions

Horizontal Equity, Uncertainty, and Economic Well-being

Radical Uncertainty: Decision-Making Beyond the Numbers

Taming Uncertainty

Support for addressing the on-going global changes needs solutions for new science

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which in turn require new concepts and tools. A key issue concerns a vast variety of uncertainties, including extreme events of high multidimensional consequences, e.g. climate change. The dilemma is concerned with enormous costs versus massive uncertain impacts. Traditional scientific approaches rely on real observations and experiments; sufficient observations exist for new problems, and "pure" experiments, and learning may be expensive, dangerous, or impossible. In addition, the available historical observations are often contaminated by past actions, and policies. Thus, tools are presented for the treatment of uncertainties using "synthetic" information composed of available "historical" observations, the results of possible experiments, and scientific facts, as well as data from experts' opinions, and scenarios.

Climate change is profoundly altering our world in ways that pose major risks to human societies and natural systems. We have entered the Climate Casino and are rolling the warming dice, warns economist William Nordhaus. But there is still time to turn around and walk back out of the casino, and in this essential book the author explains how. *Dividing the Pie: Bringing together all the important issues surrounding the climate debate, Nordhaus describes the science, economics, and politics involved—and the steps necessary to avert the perils of global warming. Using language accessible to any concerned citizen and taking present different points of view fairly, he discusses the problem from start to finish: from the beginning, where warming originates in our personal energy use, to the end, where we employ regulations or taxes or subsidies to slow the emissions of gases responsible*

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change./DIVdiv /DIVdivNordhaus offers a new analysis of why earlier policies, such as the Kyoto Protocol, failed to slow carbon dioxide emissions, how new approaches can be developed, and which policy tools will most effectively reduce emissions. In short, he clarifies a deep problem of our times and lays out the next critical steps for slowing the trajectory of global warming./DIV

The result of a National Bureau of Economic Research Income and Wealth conference held in December 1983, this volume looks at the concept of "economic well-being" and the various ways analysts have tried to measure it. In addition to income, economists have begun to consider other factors as pensions, wealth, health, and environment when measuring the well-being of a particular group. They have also begun to measure how consumers respond, successfully or unsuccessfully, to such economic uncertainties as inflation, divorce, and retirement. Using real data and techniques, the contributors to this book concentrate on issues of uncertainty and horizontal equity (the equal treatment of individuals within a defined group). Their goal is to find better ways of determining how various groups in a society are faring relative to other groups. Economists and policy analysts, therefore, will be in a better position to determine when government programs should be applied when well-being is used as a test.

Why is uncertainty so important to politics today? To explore the underlying reasons and challenges, this book's chapters address finance and banking, insurance, technology, and critical infrastructures, as well as climate change, infectious disease responses, natural disasters, migration, crime and security and spirituality and religion. The book argues

uncertainties must be understood as complex constructions of knowledge, material experience, embodiment and practice. Examining in particular how uncertainties are experienced in contexts of marginalisation and precarity, this book shows how sustainability and development are not just technical issues, but depend deeply on political value choices. What burgeoning uncertainties require lies less in escalating efforts at control, more in a new – more collective, mutualistic and convivial – politics of responsibility. If hopes of much-needed progressive transformation are to be realised, then current understandings of uncertainty need to be met with renewed democratic struggle. In an accessible style and illustrated by multiple case studies from across the world, this book will appeal to a wide cross-disciplinary audience in fields ranging from economics to law, political studies to sociology to anthropology and geography, as well as professionals working in risk management, disaster risk reduction, emergencies and wider public policy fields.

The Politics of Uncertainty

Modeling Uncertainty in Climate Change

All Wind Farm Uncertainty is Not the Same

The Role of Uncertainties in the Economic Evaluation of Water-resources Projects

Economics of Nuclear Power

Outcome Uncertainty in Sporting Events

The compilation of ground-breaking papers contained in this collection offers a complete description of the evolution of knowledge in the economics of risk

and time, from its early twentieth-century explorations to its current diversity of approaches. The papers focus first on the basic decisions under uncertainty, and then on asset pricing. They cover both classical expected utility approach and its non-expected utility generalizations, with applications to dynamic portfolio choices, insurance, risk sharing, and risk prevention. Prefaced by an original introduction from the editor, this collection will be valuable for scholars in finance and macroeconomics, particularly those with an interest in the modeling foundations of consumer and investor decisions under uncertainty.

This volume revisits the Nobel Prize-winning economist Kenneth Arrow ' s classic 1963 essay “ Uncertainty and the Welfare Economics of Medical Care ” in light of the many changes in American health care since its publication. Arrow ' s groundbreaking piece, reprinted in full here, argued that while medicine was subject to the same models of competition and profit maximization as other industries, concepts of trust and morals also played key roles in understanding medicine as an economic institution and in balancing the asymmetrical relationship between medical providers and their patients. His conclusions about the medical profession ' s failures to “ insure against uncertainties ” helped initiate the reevaluation of insurance as a public and

private good. Coming from diverse backgrounds—economics, law, political science, and the health care industry itself—the contributors use Arrow ' s article to address a range of present-day health-policy questions. They examine everything from health insurance and technological innovation to the roles of charity, nonprofit institutions, and self-regulation in addressing medical needs. The collection concludes with a new essay by Arrow, in which he reflects on the health care markets of the new millennium. At a time when medical costs continue to rise, the ranks of the uninsured grow, and uncertainty reigns even among those with health insurance, this volume looks back at a seminal work of scholarship to provide critical guidance for the years ahead. Contributors Linda H. Aiken Kenneth J. Arrow Gloria J. Bazzoli M. Gregg Bloche Lawrence Casalino Michael Chernew Richard A. Cooper Victor R. Fuchs Annetine C. Gelijns Sherry A. Glied Deborah Haas-Wilson Mark A. Hall Peter J. Hammer Clark C. Havighurst Peter D. Jacobson Richard Kronick Michael L. Millenson Jack Needleman Richard R. Nelson Mark V. Pauly Mark A. Peterson Uwe E. Reinhardt James C. Robinson William M. Sage J. B. Silvers Frank A. Sloan Joshua Graff Zivin

The economics of climate change involves a vast array of uncertainties, complicating both the analysis and development of climate policy. This study presents the results of the first comprehensive study of uncertainty in climate

change using multiple integrated assessment models. The study looks at model and parametric uncertainties for population, total factor productivity, and climate sensitivity. It estimates the pdfs of key output variables, including CO₂ concentrations, temperature, damages, and the social cost of carbon (SCC). One key finding is that parametric uncertainty is more important than uncertainty in model structure. Our resulting pdfs also provide insights on tail events.

There is uncertainty in the performance of wind energy installations due to unknowns in the local wind environment, machine response to the environment, and the durability of materials. Some of the unknowns are inherently independent from machine to machine while other uncertainties are common to the entire fleet equally. The FAROW computer software for fatigue and reliability of wind turbines is used to calculate the probability of component failure due to a combination of all sources of uncertainty. Although the total probability of component failure due to all effects is sometimes interpreted as the percentage of components likely to fail, this perception is often far from correct. Different amounts of common versus independent uncertainty are reflected in economic risk due to either high probabilities that a small percentage of the fleet will experience problems or low probabilities that the entire fleet will have problems. The average, or expected cost is the same as

would be calculated by combining all sources of uncertainty, but the risk to the fleet may be quite different in nature. Present values of replacement costs are compared for two examples reflecting different stages in the design and development process. Results emphasize that an engineering effort to test and evaluate the design assumptions is necessary to advance a design from the high uncertainty of the conceptual stages to the lower uncertainty of a well engineered and tested machine.

Economics of Climate Change Under Uncertainty

Economic Policy Uncertainty Index

The Case of Chile

Economic Uncertainties and Their Impact on Activity in Greece Compared with Ireland and Portugal

The Climate Casino

Winning, Losing and Competitive Balance

The banking and finance industry plays a significant role in the economy of a nation. As such, continuous research and up-to-date feeds are necessary for it to stay competitive and resilient. Due to its revolving and dynamic nature as well as its significance and interlinkages with other industries, a well-functioning banking and

finance system is vital in safeguarding the interest of all stakeholders. Banking and Finance covers a wide range of essential topics highlighting major issues related to banking and finance. The book is rich with empirical evidence, scientific researches, best practices, and recommendations, making it a compact yet handy reference for readers, especially those who are in the field of banking and finance. The Economics and Uncertainties of Nuclear Power Cambridge University Press

The economics of crop management change continually with market fluctuations, weather uncertainties, and an individual farmer's financial position.

Drawing on the groundbreaking U.S. Financial Diaries project (<http://www.usfinancialdiaries.org/>), which follows the lives of 235 low- and middle-income families as they navigate through a year, the authors challenge popular assumptions about how Americans earn, spend, borrow, and save-- and they identify the true causes of distress and inequality for many working Americans.

The Economics of Risk and Uncertainty

The Economics and Uncertainties of Nuclear Power

*Uncertainties Over the Economic Recovery of the United States
Extension and Optimization of Scott R. Baker, Nicholas Bloom and
Steven J. Davis's Search Term
Risk, Ambiguity and Black Swans
Investment under Uncertainty*

This thesis adds to the resolution of two problems in finance and economics: i) what is macro-financial uncertainty? : How to measure it? How is it different from risk? How important is it for the financial markets? And ii) what sort of asymmetries underlie financial risk and uncertainty propagation across the global financial markets? That is, how risk and uncertainty change according to factors such as market states or market participants. In Chapter 2, which is entitled "Momentum Uncertainties", I study the relationship between macroeconomic uncertainty and the abnormal returns of a momentum trading strategy in the stock market. I show that high levels of uncertainty in the economy impact negatively and significantly the returns of a portfolio of stocks that consist of buying past winners and selling past losers. High uncertainty reduces below zero the abnormal returns of momentum, extinguishes the Sharpe ratio of the momentum strategy, while increases the probability of momentum crashes both by increasing the skewness and the kurtosis of the momentum return distribution. Uncertainty acts as an economic regime that underlies abrupt changes over time of the returns generated by momentum strategies. In Chapter 3, "Measuring Uncertainty in the Stock Market", I propose a new index for measuring stock market uncertainty on a daily basis. The index considers the inherent differentiation

between uncertainty and the common variations between the series. The second contribution of chapter 3 is to show how this financial uncertainty index can also serve as an indicator of macroeconomic uncertainty. Finally, I analyze the dynamic relationship between uncertainty and the series of consumption, interest rates, production and stock market prices, among others. In chapter 4: "Uncertainty, Systemic Shocks and the Global Banking Sector: Has the Crisis Modified their Relationship?", I explore the stability of systemic risk and uncertainty propagation among financial institutions in the global economy, and show that it has remained stable over the last decade. Additionally, I provide a new simple tool for measuring the resilience of financial institutions to these systemic shocks. My contribution to the literature in this essay is mainly the examination of the characteristics and stability of systemic risk and uncertainty, in relation to the dynamics of the banking sector stock returns. This sort of evidence is new to the literature and is supportive of past claims, made in the field of macroeconomics, which hold that during the global financial crisis the financial system may have faced stronger versions of traditional shocks rather than a new type of shock. In chapter 5, "Currency downside risk, liquidity, and financial stability", I analyze downside risk propagation across global currency markets and the ways in which it is related to liquidity. I make two primary contributions to the literature. First, I estimate tail-spillovers between currencies in the global FX market. This index is easy to build and does not require intraday data, which constitutes an important advantage. Second, I show that turnover is related to risk spillovers in global currency markets. Chapter 6 is entitled "Spillovers from the United States to Latin American and G7 Stock Markets: A VAR-Quantile Analysis". This essay contributes to the

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studies of contagion, market integration and cross-border spillovers during both regular and crisis episodes by carrying out a multivariate quantile analysis. I focus the analysis carried out in this chapter on Latin American stock markets, which have been characterized by a highly positive dynamic in recent decades, in terms of market capitalization and liquidity ratios, after a far-reaching process of market liberalization and reforms to pension funds across the continent during the 80s and 90s. I documented smaller dependences between the LA markets and the US market than those between the US and the developed economies, especially in the highest and lowest quantiles. -- TDX. Because of the uncertainties and irreversibilities that are often inherent in environmental degradation, its prevention, and its economic consequences, environmental policy design can involve important problems of timing. I use a simple two-period model to illustrate these optimal timing problems and their implications for environmental policy. I then lay out and solve a continuous-time model of policy adoption in which the policy itself entails sunk costs, and environmental damage is irreversible. The model has two stochastic state variables; one captures uncertainty over environmental change, and the other captures uncertainty over the social costs of environmental damage. Solutions of the model are used to show the implications of these two types of uncertainty for the timing of policy adoption. A must-read for anyone who makes business decisions that have a major financial impact. As the recent collapse on Wall Street shows, we are often ill-equipped to deal with uncertainty and risk. Yet every day we base our personal and business plans on uncertainties, whether they be next month's sales, next year's costs, or tomorrow's stock price. In *The Flaw of Averages*, Sam Savage known for his creative exposition of

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difficult subjects describes common avoidable mistakes in assessing risk in the face of uncertainty. Along the way, he shows why plans based on average assumptions are wrong, on average, in areas as diverse as healthcare, accounting, the War on Terror, and climate change. In his chapter on Sex and the Central Limit Theorem, he bravely grasps the literary third rail of gender differences. Instead of statistical jargon, Savage presents complex concepts in plain English. In addition, a tightly integrated web site contains numerous animations and simulations to further connect the seat of the reader's intellect to the seat of their pants. The Flaw of Averages typically results when someone plugs a single number into a spreadsheet to represent an uncertain future quantity. Savage finishes the book with a discussion of the emerging field of Probability Management, which cures this problem through a new technology that can pack thousands of numbers into a single spreadsheet cell. Praise for *The Flaw of Averages* "Statistical uncertainties are pervasive in decisions we make every day in business, government, and our personal lives. Sam Savage's lively and engaging book gives any interested reader the insight and the tools to deal effectively with those uncertainties. I highly recommend *The Flaw of Averages*." —William J. Perry, Former U.S. Secretary of Defense "Enterprise analysis under uncertainty has long been an academic ideal. . . . In this profound and entertaining book, Professor Savage shows how to make all this practical, practicable, and comprehensible." —Harry Markowitz, Nobel Laureate in Economics

An examination of the cognitive tools that the mind uses to grapple with uncertainty in the real world. How do humans navigate uncertainty, continuously making near-effortless decisions and predictions even under conditions of imperfect knowledge, high complexity,

and extreme time pressure? Taming Uncertainty argues that the human mind has developed tools to grapple with uncertainty. Unlike much previous scholarship in psychology and economics, this approach is rooted in what is known about what real minds can do. Rather than reducing the human response to uncertainty to an act of juggling probabilities, the authors propose that the human cognitive system has specific tools for dealing with different forms of uncertainty. They identify three types of tools: simple heuristics, tools for information search, and tools for harnessing the wisdom of others. This set of strategies for making predictions, inferences, and decisions constitute the mind's adaptive toolbox. The authors show how these three dimensions of human decision making are integrated and they argue that the toolbox, its cognitive foundation, and the environment are in constant flux and subject to developmental change. They demonstrate that each cognitive tool can be analyzed through the concept of ecological rationality—that is, the fit between specific tools and specific environments. Chapters deal with such specific instances of decision making as food choice architecture, intertemporal choice, financial uncertainty, pedestrian navigation, and adolescent behavior.

Essays on Risk and Uncertainty in Economics and Finance

The Financial Diaries

Artificial Intelligence in Economics and Finance Theories

Uncertainty in Environmental Economics

Techniques for Treating Uncertainty and Risk in the Economic Evaluation of Building Investments

A Multi-model Comparison

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The need to understand the theories and applications of economic and finance risk has been clear to everyone since the financial crisis, and this collection of original essays proffers broad, high-level explanations of risk and uncertainty. The economics of risk and uncertainty is unlike most branches of economics in spanning from the individual decision-maker to the market (and indeed, social decisions), and ranging from purely theoretical analysis through individual experimentation, empirical analysis, and applied and policy decisions. It also has close and sometimes conflicting relationships with theoretical and applied statistics, and psychology. The aim of this volume is to provide an overview of diverse aspects of this field, ranging from classical and foundational work through current developments. Presents coherent summaries of risk and uncertainty that inform major areas in economics and finance Divides coverage between theoretical, empirical, and experimental findings Makes the economics of risk and uncertainty accessible to scholars in fields outside economics

This book is a unique introduction to the economic costs of nuclear power. It examines the future of the nuclear power industry and unpacks the complicated relationships between its technical, economic and political variables. It does so by modelling the costs, risks and uncertainties of one of the world's most opaque industries using micro-econometrics, econometrics, and cost engineering. Economics of Nuclear Power examines the very important costs of externalities (storing of nuclear waste and the impact of a Chernobyl or Fukushima event) and compares those to the externalities of alternative carbon based energies (oil, coal, natural gas). With over 100 tables and figures this book details nuclear power production around the world - present and planned, providing a completely global focus. It also includes an overview of the past 70 years of international nuclear power developments. This book is essential reading for students, scholars

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and professionals interested in energy economics, nuclear engineering and energy policy.

The Next Age of Uncertainty

Kenneth Arrow and the Changing Economics of Health Care

Coping with Uncertainty

Principles in Health Economics and Policy

Essays on the Economic Implications of Climate Change Uncertainties

Why We Underestimate Risk in the Face of Uncertainty