

Effective Corporate Leadership and Governance Practices in Catastrophic Risk Management

A joint collaboration of the Wharton Risk Management Center and the Wharton Center for Leadership and the Travelers Companies is conducting groundbreaking investigation in risk management leadership and policy. The project, *Effective Corporate Leadership and Governance Practices in Catastrophic Risk Management*, is examining the risk management practices of large, publicly traded companies to identify effective strategies for detecting, preparing for and coping with catastrophic events.

An important outcome of this research will be business and policy guidelines and related leadership strategies to manage catastrophic risk in large companies. The research encompasses a range of qualitative and quantitative measures, including *interviews with S&P 500 senior executives* on major adverse events impacting their firm and what they learned from those events, *analysis of S&P 500 stock price events* to assess significant price drops/gains that can be correlated to catastrophic events; and *analysis of SEC Form 10-K filings* with an interest in the specific risks that firms report in their 10-Ks.

Interviews with S&P 500 Senior Executives

We have conducted interviews of more than 100 senior risk managers in S&P 500 companies. These corporate leaders provided information on a variety of topics related to catastrophic risk management in their companies, such as how risk management is formally structured in the organization, and the activities and strategies the company uses to mitigate risks. We will use this analysis to determine the characteristics of the most successful firms at managing catastrophic risks, including specific risk assessment activities and strategies. This research has yielded several key insights, including a need for improved risk assessment, advantages of experience, and benefits of proactive boards.

Analysis of S&P 500 Stock Price Events

This aspect of the research attempts to understand and quantify (1) how stock prices of S&P 500 companies have historically reacted to specific catastrophic events from 2000 to 2011; (2) the categories of risk to which S&P 500 firms are most vulnerable; (3) how long it takes for these firm to bounce back after suffering a major drop (and how this varies over type of risk, industry, etc.); and (4) how their 10-K reports correlate with large shifts in their stock prices. We are using this data to better understand what steps S&P 500 companies can take to increase financial resiliency based on historically successful strategies that they and their competitors have implemented over time.

Analysis of SEC 10-K Filings

Using the risk factors section of the SEC 10-K filings (Item 1A) for 2007 and 2011, we have identified the twenty-one most frequently mentioned risks for the 100 firms in our interview sample. We will use this data to find variations in risk focus within and across industries, examine changes in risk emphasis over time, and compare the risks listed in firms' 10-Ks with the actual risk factors mentioned in the interviews and that impact those firms' stock prices historically. The next step in the research will be to analyze the quality of the disclosures, the similarity and differences of disclosures within and across industries, and how firms quantify and manage risk differently from their counterparts.

PROJECT DIRECTORS:



Howard Kunreuther is the James G. Dinan Professor; Professor of Decision Sciences and Business and Public Policy at the Wharton School, and co-director of the Wharton Risk Management and Decision Processes Center. He has a long-standing interest in ways that society can better manage low-probability, high-consequence events related to technological and natural hazards. Professor Kunreuther is a Fellow of the American Association for the Advancement of Science and a Distinguished Fellow of the Society for Risk Analysis, receiving the Society's Distinguished Achievement Award in 2001. He recently served on the National Academy of Science / National Research Council's panel on *Increasing National Resilience to Hazards and Disasters*, and on the New York City Panel on Climate Change (NPCC) as part of the *Special Initiative for Rebuilding and Resiliency (SIRR)*, and the report released by the New York City Mayor's Office in June 2013. He is also a Coordinating Lead Author for the Intergovernmental Panel on Climate Change (IPCC)'s 5th Assessment Report, Working Group 3, Chapter 2, "Integrated Risk and Uncertainty Assessment of Climate Change Response Policies." Recent books include *Insurance and Behavioral Economics: Improving Decisions in the Most Misunderstood Industry* (with Mark Pauly and Stacey McMorro, Cambridge University Press, 2013); *At War with the Weather* (with Erwann Michel-Kerjan, MIT Press 2011) which received the Kulp-Wright award for the most influential book on risk management; and *Learning from Catastrophes* (with Mike Useem, Financial Times Press, 2010). Email: kunreuther@wharton.upenn.edu



Erwann Michel-Kerjan is Managing Director of the Wharton School's Center for Risk Management and Decision Processes, and teaches in Wharton School's graduate program. He is also Chairman of the OECD Secretary-General Board on Financial Management of Catastrophes, which advises its thirty-four OECD member countries on these issues. Dr. Michel-Kerjan was named a Young Global Leader (YGL) by the World Economic Forum (Davos), an honor bestowed to recognize and acknowledge the most extraordinary leaders of the world under the age of 40. He has worked extensively on improving financial protection solutions to extreme events, from natural disasters to terrorism, and how to strengthen resilience. He has testified before the U.S. Congress on these issues, recently addressed the G20 and currently advises several corporations, foundations and heads of state. Dr. Michel-Kerjan is the author of several acclaimed books, including, most recently, *The Irrational Economist* (PublicAffairs Books, with P. Slovic) and *At War with the Weather* (MIT Press, with H. Kunreuther) which received the prestigious Kulp-Wright award for the most influential book on risk management. He is a regular contributor in the media and has given over 150 public speeches. He has studied at the prestigious Ecole Polytechnique in France, McGill and Harvard. Email: erwannmk@wharton.upenn.edu



Michael Useem is the William and Jacalyn Egan Professor of Management, and Director of the Center for Leadership and Change Management at the Wharton School. Professor Useem has completed several studies of corporate organization, ownership, governance, restructuring, and leadership. He is the author of many books among them *Learning from Catastrophes* (Wharton School Publishing, 2009); *The Go Point: When It's Time to Decide* (Random House, 2006); and *The Leadership Moment: Nine True Stories of Triumph and Disaster and Their Lessons for Us All* (Random House, 1998). He has presented programs and seminars on leadership and change with a large number of major companies and NGOs in the U.S. and abroad, and has consulted on governance with Fannie Mae, HealthSouth, Tyco International, and other companies; and on organizational development and change with the U.S. Agency for International Development, U.N. Food and Agriculture Organization, Organization of American States, and other agencies in Latin America, Asia, and Africa. His university teaching includes MBA and executive-MBA courses on leadership and change management, and he offers programs on leadership, teamwork, governance, and decision making for managers in the U.S., Asia, Europe, and Latin America. Email: useem@wharton.upenn.edu