

**Columbia-Wharton/Penn Roundtable on  
“Risk Management Strategies in an Uncertain World”**

**April 12-13, 2002  
IBM Palisades Executive Conference Center  
Palisades, New York**

**Hosts:  
Wharton Risk Management and Decision Processes Center  
Columbia Center for Hazards and Risk Research  
Columbia Earth Institute**

The terrorist attacks on the World Trade Center and the Pentagon are likely to change the way both the public and private sectors deal with extreme events. Prior to September 11<sup>th</sup> there was a concern with terrorism but there was also a feeling that “it will not happen here”. The private sector (e.g. the airline industry) was expected to invest in their own protective measures rather than being subsidized by the government. The prevailing view in Washington, DC was for less involvement by the public sector and more private market-based initiatives.

The pendulum seems to have swung to considerably more public sector involvement to deal with these extreme events for several reasons that can be illustrated using examples from airline travel:

- (1) Government feels the need to bail out the airline industry where many firms are on the verge of bankruptcy.
- (2) Government recognizes that the lack of protection on airplanes endangers far more lives than just the passengers on the plane and hence is likely to require safer airplanes.
- (3) Issues of security at airports and other public places will require federal oversight if not direct control.

On a much broader level, the events of September 11<sup>th</sup> have raised the question as to what are the appropriate roles of the private and public sectors in mitigating the possible consequences of future catastrophes, whether they are malevolent or random occurrences, and providing funds for recovery. This Roundtable will address the following questions:

- Are there lessons from natural and technological disasters that shed light on public-private partnerships that are relevant for dealing with terrorism, and *vice versa*? How does the scale of the event play a role in suggesting the types of programs that would be appropriate for dealing with extreme events?
- How can one utilize techniques of risk assessment for reducing the uncertainty of these events and developing a risk management strategy?

- What role does risk perception play in communicating information on alternative ways of coping with the extreme event problem? For example, what types of data on the nature of the risk should be presented, and in what form?
- How should one address the public's fear and other emotional concerns associated with these events?
- What methodologies are useful for developing different strategies and their impacts? Does game theory have a role to play in designing different options and alternatives?
- What are the appropriate programs and policies for reducing the likelihood and consequences of these events? What role can insurance/reinsurance/capital markets play in providing financial protection from future events? What role should the government play in dealing with catastrophic losses from these events?
- What type of benefit-cost analyses should be undertaken to evaluate proposed programs and strategies? How does one incorporate in these analyses the uncertainties associated with the risk? How does one measure and evaluate the impacts of a direct nature (e.g. damage to buildings; deaths and fatalities) and those that are more indirect (e.g. business interruption, social stress)?

The April 12<sup>th</sup> -13<sup>th</sup> 2002 Roundtable is the first of a possible series of meetings planned by Columbia University and the Wharton School/University of Pennsylvania on *Risk Management Strategies in an Uncertain World*. This small, invitational meeting will explore issues of vulnerability, risk assessment, risk perception, and risk management, in the context of such catastrophic risks as terrorism, accidents from power generation and chemical facilities, and environmental and natural hazards.

White papers in each of these areas will be solicited from leading researchers in the field. In addition, each participant will be asked to provide his/her perspective in a 3-4-page note. Both the white papers and the notes from participants will be distributed to attendees in advance of the meeting. This material will form the basis of discussions during the first day between researchers and representatives from the public and private sectors.

Small group discussions in the first evening will help to summarize key issues arising from the day's activities and will set the stage for the second day. The morning of the second day will be devoted to analyses of specific sectors with specific emphases on the following questions:

- How can the operation of the specific sector be improved in the light of the events of September 11<sup>th</sup>?
- What types of investments in protection and mitigation are appropriate?
- What types of public-private partnerships should be considered?

The specific problem areas to be discussed include:

- Urban development and design
- Construction and engineering
- Insurance
- Financial institutions
- Supply chain management

Other problem areas may be added as appropriate.

The afternoon of the second day will be devoted to the following information management and communication challenges:

- Information and public services
- Communications and media

Questions related to these challenges include:

- How can information technology contribute to rapid and targeted delivery of public services?
- What advances in decision support systems are required to support public services?
- What are the critical data needs of public services? How can real-time acquisition of critical data be incorporated into decision support systems?
- How does the scale of social decision-making influence the application information technology?
- How are uncertainties communicated to the public? What is the affect/impact of different media channels on risk perception?
- Can mitigation goals be achieved by effective use of different communications media?

The Roundtable will end with a discussion of future activities. The results of the Roundtable will be incorporated into a publication for wide distribution.

The Co-Conveners of the Roundtable are Howard Kunreuther, Co-Director of the Wharton Risk Management and Decision Processes Center and Visiting Research Scientist at Columbia University, and Arthur Lerner-Lam, Interim Director of the Columbia Center for Hazard and Risk Research. A steering committee has been formed to guide the conveners in the development of the agenda and the selection of participants. Steering committee members and their affiliations are given below.

Additional information may be obtained from Bonnie Mayer, Roundtable Coordinator. Information regarding travel and hotel arrangements will be sent to attendees as it becomes available. Ms. Mayer will be responsible for coordinating the collection and distribution of white papers and additional documents. Up-to-date information on all aspects of the roundtable will be maintained on the Columbia hazards center web site:

Roundtable Website: <http://www.ldeo.columbia.edu/CHRR/Roundtable>

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## Steering Committee Members

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