BEPP 811
Risk and Crisis Management:
Innovations and Strategy for Developed and Emerging Markets
Wharton School, University of Pennsylvania

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Office Phone: 917 937 3103
Mobile: 203 216 5653
Email: joan.lamm-tennant@guycarp.com
ljoan@wharton.upenn.edu

Class Location: TBD

Global policymakers, business leaders and society at large express concern for the risk contagion attributed to underlying drivers ranging from economic (i.e., highly connected financial systems), environmental (i.e., global climate change) or technical (i.e., cyber risk). Recognizing the heightened concern for risk contagion and the vulnerability of our governments/businesses/societies, BEPP 811 will explore solutions and innovations to develop sustainable business and/or societies. The course is timely given the focus on sustainable development through public / private initiatives such as the United Nations Global Council or World Business Council for Sustainable Development.

While our focus will be on managing risk to building sustainable businesses / societies, we will also explore an industry experiencing disruptive change. Since the 1600s, businesses and governments looked to the insurance industry for risk protection. In the most recent years, the insurance industry is experiencing significant disruption partly driven by technology efficiencies and other efficient market mechanisms but also due to hedge funds / pension funds seeking new risks to boost lagging returns. With the advent of insurance linked securities and catastrophe bonds, the capital markets may displace the insurance industry. Likewise technology and big data is radically changing how we distribute and price risk in order to globally share/layer the consequence of risk. We will study an industry experiencing massive disruption with a focus on how players adapt – some will assume winning strategies others will fail. While our focus will be on the risk industry, it could be generalized to a host of industries experiencing disruptive change and the need for adaptive strategies.

Strategies for building sustainable business and societies are contingent on the current state of development; therefore we will spend emphasis on developed and developing economies. Students will choose a semester project seeking strategies / solutions for advancing sustainability in either an advance economy or a developing economy depending on their area of interest. The following provides an overview of the state of risk management from each economy:

View from Developed Markets: The connectivity of global economies and their markets (financial and non-financial) has given way to risk contagion resulting in heightened uncertainty surrounding organizational decision making. For example, financial problems experienced in one part of the world have implications globally. Likewise, a natural disaster such as the earthquake in Japan resulted in supply chain consequences throughout many continents. The current data breach issues for Target, Fukushima explosion two years ago, BP oil spill three years ago, and the 2008 financial crisis all illustrate the importance of pre and post risk management and the ability to finance the consequences of risk. In the first segment of the class, we will evaluate risk and crisis management from the perspective of corporate risk managers by first understand the underlying drivers of recent events before designing an effective risk and capital management strategy capable of withstanding market shocks. Are calamities due to a failure in risk management? What is the role of regulation? Have values gone astray due to poorly designed incentive structures? Getting the diagnosis correct is important to the design and implementation of a response that will help restore healthy global markets.

Drivers of disruptive change are occurring in the risk financing markets with the innovation of new financing vehicles such as catastrophic risk bonds and insurance linked securities. Pension funds and hedge funds are displacing traditional insurance companies as providers of risk capital. We will discuss these drivers of disruptive change and evaluate how corporate risk managers can embrace these new markets while attaining efficiencies both financial and operational. We will develop the financial and strategic expertise necessary for “future” corporate risk managers – a knowledge base which will be distinctively differently from the past.

View from Developing Markets: Economists have demonstrated that the economic development of a society is highly interdependent with its ability to manage and finance risk. In fact, by removing the uncertainty associated with risk events, motivates investment in a developing nations while subsequently driving employment and wealth creation. In the early stages of development, the underserved rely on charitable organizations following risk events. With development, risk protection is eventually financed via government programs and public / private partnerships. More recently and following the innovation of microcredit, risk protection for the underserved is provided by corporate entities via a new market for microinsurance and thru the capital market instruments via insurance linked securities. We are also experiencing the formation of private equity funds such as Leapfrog dedicated to financing corporate ventures in microinsurance. Following the success of Leapfrog’s first fund, a second fund totaling $350 million was formed in 2014.

At the same time, the microinsurance markets are facing significant challenges in gaining scale. Likewise, the need for product innovation tied directly to the economic inhibitors is necessary if, in fact, financial inclusion is intended to propel the emergence of a middle class. In the second segment of the class, we will focus on recent innovations both public and private enabling risk protection for the underserved. New business models are evolving such as “collaborative innovation” and new products are evolving incenting risk mitigating behavior. Some evidence exists indicating that the development of risk markets for the underserved can and will lead to reverse innovation in the developed world.

Note to Colleagues: Traditionally business schools presented finance, economics, risk management and business strategy as distinct disciplines. In INSR 811, we will link the underlying principles and theory of each discipline to develop a holistic discipline for risk management in both developed and developing markets. BEPP 811 is a survey course and will be taught from the perspective of corporates, governments and individuals – strategies from risk management as well as available capital for risk financing. We will introduce innovations in the market for risk financing such as catastrophic risk bonds and microinsurance. In the second half of the semester, BEPP 812 will be offered and is optional for students interested in a deeper understanding of global risk and the ability to develop “executable”, more complete solutions / business plans. While BEPP 811 will motivate ideas, BEPP 812 will be taught as a practicum allowing students to develop unique business plans that may lead to future opportunities.

Grading

The course will be graded on the basis of the following exercises: (1) Review of an emerging risk (i.e. climate change, foods shortage, water, economic uncertainty, cyber risk) with an assessment of its implications on either the developed or developing marketplace; (2) Recommended solution for managing/mitigating and financing the risk including a preliminary approach for executing. The final grade will be base on the following weights:

Emerging Risk Review	20%
Recommend Solution and Business Plan	60%
Class Participation	20%

Emerging Risk Review
Working in a team of 3 colleagues, students will select a risk from the Global Risk 2014, Ninth Edition, World Economic Forum Report. Before selecting a risk, identify if your focus will be on the developed or emerging markets. Then think carefully and select a risk that has a significant impact on the economy of choice – for example, if you are more interested in developed markets, cyber risk or heightened economic uncertainty are likely choices. Alternatively if you are more interested in emerging markets, food or water shortage may more relevant. Some risks such as climate change apply to both economies, although you will evaluate the risk relevant to the economy of interest.

You will present your research in class on Tuesday, September 16th. Slides supporting your presentation will be posted on Canvas by noon on September 15th.

Recommended Solution and Business Plan
Continuing to work with your Emerging Risk Review team and potentially with direct access to business leaders arranged by Professor Lamm-Tennant, you will identify a strategy for addressing the risk, eliminating its contagion resulting in more sustainable businesses / governments. In addition, you will prepare a preliminary plan for execution. Your plan may include the following

1. What stakeholders or unique partnerships are needed and a strategy for securing support
2. General design of product innovation or policy innovation
3. Game plan for executing

A written report is due on October 14th. Your solution and business plan will be presented in class on October 7th with slides to support your presentation posted on Canvas by noon on October 6th.

Background
By way of introduction I have attached my professional biography. I look forward to working with you throughout the summer. Please do post your biography as well. Appreciate receiving your background information prior to the semester.

Schedule of Classes

September 2, 2014 (3:00 pm to 6:00 pm)
Risk and Crisis Management: Lessons Learned
We begin by evaluating the role of risk management (or lack thereof) in recent failures with attention towards needed changes. The assigned readings provide background for discussion around recent events where risk management failed. We will discuss lessons learned from case examples – 2008 Financial Crisis, Deepwater Horizon, Japanese Earthquake and Storm Sandy. This will set the stage for the semester as we explore new and evolving risk management disciplines, regulation in light of systemic risk and the role of leadership in crisis

Assigned Reading
Robert O'Harrow and Brady Dennis, "The Beautiful Machine", Washington Post, December 29th, 2008.

Joseph Cyriac, Tim Koller, Jannick Thomsen, Testing the Limits of Diversification, McKinsey Quarterly, February 2012.

David Chinn, James Kaplan and Allen Weinberg, "Risk and Responsibility in a Hyperconnected World: Implications for Enterprises, McKinsey Report, 2014.

Economic of Uncertainty and Behavioral Biases
Common economic problems such as moral hazard and information asymmetry must be resolved when contracting under uncertainty. Also behavioral issues become important considerations such as framing, anchoring, and referencing. We will review these concepts, illustrate through case examples the consequences and discuss solutions.

Assigned Reading
McKinsey Quarterly, "Strategic Decisions: When can you trust your gut?"

John Hammond, Ralph Keeney and Howard Raiffa, "The Hidden Traps in Decision Making".

Organizational Session
We will take a 30 break to organize for the semester project **-** Emerging Risk Review; Solution and Business Plan

September 9, 2014 (3:00 pm to 6:00 pm)
Enterprise Risk Management – Evolving Risk Management Disciplines
We will turn to financial/risk theory and explore how risk management can create value as a basis for discussion of enterprise risk management (ERM). Understanding a firm's enterprise risk profile and structuring capital accordingly to finance the risk profile is evolving as best practices. Financial and non-financial firms are actively attempting to develop ERM disciplines and embed these disciplines within the organization structure and culture. Likewise, ERM has gained the attention of regulatory authorities and rating agencies. We will break down the various stages of ERM, demonstrate the technological advancements needed to support ERM and provide case evidence of the organizational/behavioral changes necessary to achieve effective ERM.

Assigned Reading
Harvard Business School, "Why Manage Risk?"

KPMG, "Enterprise Risk Management: An Emerging Model for Building Shareholder Value", 2001.

Accenture, "Report on the Accenture 2011 Global Risk Management Survey", 2011.

Integration of Business Strategy, Risk and Capital Management
Maximizing value and achieving capital efficiencies requires the integrations of strategy with risk and capital management. Nevertheless, management teams tend to evaluate strategic choices such as business growth initiatives independently from financing decisions such as dividend policy.

Assigned Reading
Marc Zenner, Tomer Berkovistz, John Clark, "Creating Value Through Best-In-Class Capital Allocation", Journal of Applied Corporate Finance, Fall 2009.

September 16, 2014 (3:00 pm to 6:00 pm)
Student Presentations: Emerging Risk Review
Referencing the Risk Report from the World Economic Forum in Davos, we will turn our attention to emerging risks – their impactions, the need for innovations in risk management and/or public private partnerships. Teams will present a 10 minute overview of their selected risk.

Assigned Reading
"Global Risk 2014", Ninth Edition, World Economic Forum Report.

Natural Disasters and Terrorism – Trends and Implications
The frequency and severity of natural disasters and man made disasters has increased significantly. Catastrophe risk is currently being securitized and is not a common investment for pension funds, hedge funds and private equity firms. What will be the implications?

Assigned Readings
Swiss Re Sigma, "Natural Catastrophes and Man-Made Disasters in 2012"

Deutsche Bank Research, "Insurance Linked Securities – A Niche Market Expanding", October 2010.

September 23, 2014 (3:00 am to 6:00 pm)
Vulnerability of Emerging Markets to National Disasters – Public /Private Response
Innovations and new public private partnerships are being formed to respond to the increasing severity and frequency of natural catastrophes is driving up the cost of disaster relief and reconstruction. The gap between the actual economic loss and the insured loss is large, especially in developing and emerging markets which are those most hurt and the least prepared. New forms of public-private partnerships can help countries absorb the financial consequences of catastrophic events and can make them more resilient. Using real life case examples, we will discuss the mechanisms and advantages of such solutions.

Assigned Readings
Swiss Re, Sigma, "Closing the Financial Gap: New Partnerships Between the Public and Private Sectors to Finance Disaster Risks", 2011

Swiss Re, Sigma, "Weathering Climate Change: Insurance Solutions for Market Resilient Communities", 2010

September 30, 2014
Microinsurance – Addressing the Risk Needs of the Underserved
Emerging consumers are exposed to significant risk partly due because of exposure to natural disasters and also due to the lack of financial inclusion circumventing their ability to pre-fund disasters. We will provide context to microinsurance but overviewing early funding from the Gates Foundation which lead to financing many initiative – some successful others lacking scale. By understanding the inhibitors to success, we will look at unique business initiatives, product designs and distribution channels intended to achieve the double bottom line.

Assigned Reading
Allianz, "Learning to Insure the Poor: Microinsurance Report, 2011.

Swiss Re,Sigma, "Insurance in Emerging Markets: Sound Development, Greenfield for Agriculture Insurance, 2007

October 7, 2014
Student Presentations – Recommended Solutions and Business Plans

October 14, 2014
Course Overview and Guest Speaker

Joan Lamm-Tennant, PhD

Joan Lamm-Tennant is the Global Chief Economist and Risk Strategist of Guy Carpenter & Company, LLC, the reinsurance and risk advisory operating company of Marsh & McLennan Companies. She serves as an advisor to C-Suite Executives and Board Members of Guy Carpenter's most significant clients. Her expertise includes enterprise risk modeling, implementation of risk-based decision processes and high value strategies resulting in capital efficiencies and profitable growth. In 2009, Joan served as a risk strategist for Marsh & McLennan and formalized the enterprise wide risk oversight function resulting in the appointment of a Chief Risk Officer and a dedicated Risk Committee of the Board. Since 2012, Joan has been focusing on an emerging market strategy for Marsh & McLennan by designing an industry-owned facility intended to create a competitive market for microinsurance. She secured the financial and intellectual commitment from six global financial institutions and is currently leading the execution of the plan. Joan is the recipient of the 2013 APIW Insurance Woman of the Year and the 2012 International Insurance Society Kenneth Black Award for service and commitment to the advancement of the global industry.

Prior to joining Guy Carpenter in 2007, Joan was the founding President of General Reinsurance Capital Consultants (GRCC). When she initially joined General Reinsurance in 1997, Joan was an advisor to the Chief Investment Officer and the Board on setting risk guidelines. She also supported GenRe New England Asset Management, a subsidiary of General Reinsurance, in the design and delivery of risk and capital advisory services to insurers worldwide.

Prior to her executive positions in industry, Joan had a successful academic career. She advanced from Assistant Professor of Finance and Investments to the Thomas Labrecque Professor at Villanova University. As a tenured scholar, Joan was a prolific author in academic and business journals and recipient of numerous awards for innovations in risk and capital management. Today, Joan remains on the faculty of the Wharton School, University of Pennsylvania and holds the Laurence and Susan Hirsch Chair in International Business. Joan also holds an Adjunct Professorship at the University of Wisconsin.

Joan has extensive experience on public and professional boards. She currently serves on the Board of Directors of Selective Insurance Group and the International Insurance Society. Joan served on the Board of Ivans (an insurance technology provider) from 2001 to 2013 and was instrumental in the sale of Ivans to Ability, a portfolio company of Bain Capital. Prior Board experience includes Turner Investment Advisors and Focus Trust Fund, American Risk and Insurance, and Financial Analyst Society.

Joan holds a Ph.D. in Finance and Investments from the University of Texas, Austin. In addition Joan holds an M.B.A. in Finance from St. Mary's University, San Antonio, Texas and a B.B.A. with Honors in Accounting from St. Mary's University, San Antonio, Texas.