BEPP 811 001
Risk and Crisis Management
Wharton School, University of Pennsylvania

Fall 2012

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Class Location: SHDH 1203

As we look back on recent financial/physical calamities, it is important we first ask why and then identify necessary market changes and new management disciplines to support sustainability given heightened economic uncertainty and increased natural/man made calamities. The connectivity of global economies and their financial markets has given way to risk contagion resulting in increased volatility and the ever increasing demand for risk capital, both in terms of amount and structure. Understanding the drivers or risk contagion and anticipating needed changes going forward is important to the design and implementation of responses that will help restore confidence in worldwide markets for pure and financial risk. Only then can corporate and financial entities deliver value to clients while meeting their shareholder expectations.

We begin the semester by evaluating recent financial and pure risk events - for example, sovereign debt crisis, continued heightened financial volatility, Japanese earthquake, BP Deepwater Horizon. Our interest is in how these events are being financed in the capital markets and/or insurance markets as well as the underlying consequences and recent innovations. Our discussion will reinforce the role of risk management in the preservation and creation of value. Value creation arises when a firm is able to identify, measure, manage/finance and monitor risk such that investments are executed and sustained resulting in a risk-adjusted return (or return on risk-adjusted capital) which exceeds the cost of capital. We will explore the underlying theory of the value creation drivers from the perspective of financials and non financials; and identify effective enterprise risk management strategies to achieve value creation.

A key focus in the course will be the practical implementation of effective risk management/financing given the evolving new regulation and governance standards. We will explore new techniques for identifying, managing and financing enterprise wide risk. By integrating capital management with enterprise wide risk management, firms are capable of sustaining shocks due to financial volatility and or physical calamities which will enable value creation - sustainable returns, capital efficiencies and confidence/transparency in the financial markets.

In addition we will look at opportunities for corporate growth as well as social, political and economic development if we address emerging risk either within corporate entities or through public/private partnerships. Lastly we will turn our attention to developing markets and the role of risk management in the emergence of a large and influential middle class demanding unique forms of risk transfer/financing.

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 to support corporate development. INSR 811 will focus on ERM and risk emergence from the demand perspective – that is, the theory and process that drives corporations to manage/transfer/insure/finance risk resulting in a demand for risk capital. We will also focus on the management/strategy of the suppliers of risk capital in response to ERM.

Grading

The course will be graded on the basis of team case analysis, 5-page essay on risk-related topic of your choice and class participation. The final grade will be base on the following weights:

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Team Case Analysis	40%	Presentation: Oct. 15 or 17 Written Case due Oct. 19th
Risk Related Essay (3 -5 pages, on risk topic of choice)	40%	Paper due Oct. 22nd
Class Participation	20%	

Team Projects

The team projects will be centered on the World Economic Forum Risk Reports and the identification of five centers of gravity identified in this report:

1. Fiscal imbalances (economic risk)
2. Greenhouse gas emissions (environmental risk)
3. Governance failures (geopolitical risk)
4. Unsustainable population growth (societal risk)
5. Critical systems failure (technological risk)

The teams will identify either (a) company, either financial or non financial, (b) industry sector, or (c) a geographic region. Each team will prepare a case study identifying both the threats and opportunities resulting from the centers of gravity and relative to their selection. Other aspects of their report will include the following

1. What are the implications (positive and negative) of these centers of gravity on your company/industry sector/region? Be specific as to the contagion effect and the magnitude of the consequences.

2. How prepared is the company/industry/region in addressing the threats and capitalizing on the opportunity.
3. What needs to change – how well is risk management institutionalized as a value driver
4. Summary of recent innovations to address the risk and suggestions from the team regarding future innovations.

The teams will facilitate a 30 minute discussion of the case during class on October 15th or October 17th. The key component of your presentation will be to facilitate a discussion regarding what innovations are needed to develop sustainable positive results in the company/industry sector/region given the centers of gravity.

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. I would appreciate knowing your background prior to the semester.

Schedule of Classes

Monday, September 10th (3 to 6 pm)

Session 1 *Course Introduction; Coordination of Team Case Analysis*

Session 2 *Looking Back … Looking Forward: Overview of Risk Management and the Resulting Economic Uncertainty*

We begin the semester by evaluating the role of risk management (or lack thereof) in recent failures with attention towards what changes is needed going forward. The assigned readings provide background for discussion around recent events where risk management failed. We will discuss lessons learned from a series of case examples. 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

Global Risk 2012, Seventh Edition, World Economic Forum Report

Monday , September 17th (3 to 6 pm)

Session 1 ***Review of Financial Theory and the Corporate Demand for Risk Management***

By revisiting financial theory, we will build an understanding of the role risk management is rendering optimal capital decisions. We will also review empirical evidence regarding how and when risk management creates value.

Assigned Reading

Adams, Don, "Why Corporations Should Hedge?"

Smithson, Charles and Betty Simkins, 2005, "Does Risk Management Add Value? A Survey of Evidence", Journal of Applied Corporate Finance, 8 – 17

Session 2 *Enterprise Risk Management – Financials and Non Financials*

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

Neil Doherty and Joan Lamm-Tennant, Lessons from the Financial Crisis On Risk and Capital Management: The Case of the Insurance Companies, Journal of Applied Corporate Finance, Fall 2009. (Cross Referenced with INSR 811)

Monday, September 24th (3 to 6 pm)
Session 2: Supply of Risk Capital (Insurance and Reinsurance Markets)

Risk capital is provided by the insurance/reinsurance and retrocessional markets. We will discuss the structure, growth and globalization of risk financing. The insurance markets are undergoing disruptive change due to technology and the innovations from the capital markets. We will discuss these changes which will set up a session later in the semester

Assigned Reading
Swiss Re, Sigma, "World Insurance in 2011: Premiums Dipped, But Industry Capital Improved", 2011.

Swiss Re, Sigma, "Understanding Reinsurance: How Reinsurance Creates Value and Manages Risk".

Session 2: *Integrating Enterprise Risk Management and Capital Management*

Financing risk with capital is critical to seucre a sound global financial system. Banks and insurance companies are in the midst of new, more stringent risk based capital requirements with the evolution of Basil III and Solvency II. We will evaluate these pending regulatory changes and look at how one company, Scor (French Insurer/Reinsurer) is not only complying but embedding the basics of risk financing throughout the organization.

Assigned Reading
Scor, "Enterprise Risk Management: A Risk-Based Approach to the Management of a (Re)Insurance Company", November 2010

Monday, October 1st (3 to 6 pm)
Sessions 1 and 2: *Innovations in Risk Management – Securitization*

As risk capital becomes strained or expensive, new structures enter the market – the securitization of pure risk. We will evaluate the legitimacy of the structure, unintended consequences and general trends. Catastrophic bonds become a new asset class for investors while providing new avenues of risk capital for corporates and financials.

Assigned Reading
Financial Innovations for Catastrophic Risk: Cat Bonds and Beyond, Financial Innovations Lab Report, Milken Institute, 2008

Convergence of Insurance and Capital Markets, World Economic Forum, Oct.2008

Monday, October 8th (3 to 6 pm)
There will be not class, although the make up session is scheduled on Wednesday, October 17th

Monday, October 15th (3 to 6 pm)
Session 1: Team Presentations

Session 2: *Emerging Markets*
Microinsurance is following innovation of microfinance, although there are many inhibitors to sustainability. We will overview the inhibitors and discuss recent private/public partnerships. The potential for achieving a "double bottom line" is significant.

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

Wednesday, October 17th (3 to 6 pm)
Session 1: Team Presentations

Session 2: Natural Disasters and Terrorism – Trends and Implications
The frequency and severity of natural disasters and man made disasters has increased significantly. Communities ability to develop an economic base for growth and sustainably are severely impacted. We will review the facts and discuss innovations for change.

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

Michael Lewis, "In Nature's Casino", New York Times, 2007.

Joan Lamm-Tennant, PhD

Global Chief Economist & Risk Strategist, Guy Carpenter

Lawrence and Susan Hirsch Adjunct Professor of International Business, Wharton

Joan Lamm-Tennant is the Global Chief Economist and Risk Strategist of Guy & Carpenter Company, LLC, a subsidiary of Marsh & McLennan Companies. As a member of the Specialty Executive Group, Joan coordinates and implements aspects of the global business plan delivering on Guy Carpenter's vision of being the preeminent risk and capital advisor and execution agent. Joan also serves Marsh & McLennan Companies, Inc as the Head of Enterprise Risk Management and leads the ERM efforts for all of MMC and its operating companies.

Prior to joining Guy Carpenter, Joan was a Senior Vice President of General Reinsurance and the President of General Re Capital Consultants (GRCC) – an independent consulting group capitalized by General Reinsurance Corporation who advises insurance companies on enterprise risk and capital management. Joan and her team of senior consultants work with management teams and Boards in developing/implementing enterprise wide disciplines for supporting strategic decisions such as capital needs assessments, capital allocation, risk-adjusted performance benchmarking, acquisition analysis, asset allocation, reinsurance strategy and product assessment.

When initially joining General Reinsurance Corporation in 1997, Joan served as a portfolio strategist for the asset management operations of General Reinsurance, serving both internal and external accounts. As a portfolio strategist she assisted the Chief Investment Officer and the Board of Directors for General Reinsurance Corporation (prior to acquisition by Berkshire Hathaway) in setting asset allocation guidelines and a risk-adjusted performance benchmarking system for their $25 billion portfolio of equities, fixed income instruments and alternative investments. She designed/implemented risk management disciplines as well as asset allocation policy for third party asset management accounts of both life and property-casualty insurers.

Prior to her career in industry, Joan was the Thomas G. Labrecque Chair in Business and Professor of Finance at Villanova University. Joan spent 18 years as a Professor during which time she lectured and published extensively on investments, portfolio theory and risk management. Her publications appear in such journals as the *Journal of Business, Journal of Banking and Finance, Journal of Risk and Uncertainty* and *Journal of Risk and Insurance*. During these years she also consulted with numerous insurance companies, actuarial firms, accounting firms, consulting firms on risk and capital management. Joan also served as an expert witness in the Executive Life/Drexel Burnham litigation.

Joan serves as a Director of Selective Insurance (1994-present) and was Chairperson of the Audit Committee during SOX compliance initiatives. She is a Director of Ivans (privately technology company serving the insurance industry). Other prior Board assignments were Turner Investment Partners (mutual fund family), Focus Fund, Philadelphia Financial Analysts Society, American Risk and Insurance Association and Charter Oak State College.

Joan is currently the Lawrence and Susan Hirsch Adjunct Professor of International Business at the Wharton School, University of Pennsylvania. She is a frequent invited speaker at industry events and hosts quarterly webcasts for Chubb Insurance on *Trends in the Insurance Industry*. She is an active in the National Bureau of Economic Research, Cambridge, Massachusetts; The Brookings Institute, Washington D C and the International Insurance Society.

From 1970 to 1979, she worked in finance and systems at United States Automobile Association. Joan received a B.B.A. in accounting and a M.B.A. in finance from St. Mary's University. She also received a Ph.D. in finance, investments and insurance from the University of Texas at Austin.