



TOWERS
PERRIN

Modern Operational Risk Management

A Comprehensive Two-Day Seminar
Led by Ali Samad-Khan and Prakash Shimpi
Hartford, June 25 – 26, 2008

SEMINAR OBJECTIVES

Alarmed by catastrophic losses in the financial services industry, many organizations are reevaluating their risk management programs. Operational failures behind the U.S. subprime crises and recent instances of unauthorized trading suggest that existing risk management paradigms just don't work.

Managing the major risks requires a new approach. Specifically, a new approach to managing operational risk — which is increasingly being recognized as one of the most significant risks organizations face. Traditional operational risk management (ORM) was designed to address control weaknesses and improve process efficiencies, but this audit-based approach does little to improve the management of material risks. Modern ORM focuses directly on risk issues and employs methods such as risk-based pricing and risk-adjusted performance measures to ensure that risks are managed in conformity with the tolerance levels of the stakeholders. As excessive risk exposure can quickly lead to major losses, establishing a robust modern ORM program has become a strategic imperative for many organizations.

To learn more about the methodology, core concepts and key issues underlying this evolving discipline, please join us for this seminar to share in the unique insight and knowledge of Towers Perrin's operational risk experts, Ali Samad-Khan and Prakash Shimpi. The opportunity to explore ORM in depth through an intensive two-day event with two of the world's leading risk experts is an experience you will not want to miss. We look forward to receiving your confirmed registration.

SEMINAR TOPICS WILL INCLUDE:

- Why are there so many definitions of the term “risk?” Which are appropriate in the context of modern ORM?
- What is risk and control self-assessment (RCSA), and how should it be implemented?
- What is risk tolerance? Who should determine an organization's level of risk tolerance, and how should it be expressed? How should an organization's business strategy align with its stated operational risk/loss tolerance?
- What is scenario analysis? How can it be used to measure operational risk exposure, identify potential control weaknesses and/or address broader risk management objectives?
- A holistic ORM program requires both qualitative and quantitative information, but how can organizations integrate risk self-assessment, control self-assessment, internal loss data, external loss data, VaR modeling, scenario analysis, audit issues, indicators, etc., into a common framework that supports managerial decision making?
- How can actuarial science techniques model operational risk? What assumptions underlie these mathematical techniques? What are the advantages and disadvantages of using “expert judgment” instead of empirical methods?

Understand the Fundamentals of Operational Risk

- **Defining and Classifying Risk**
- **Risk Tolerance**
- **Risk Assessment**
- **Control Assessment**
- **Integrated Framework**
- **Expected Loss**
- **Unexpected Loss**
- **Key Risk Indicators and Predictive Analysis**
- **Scenario Analysis**
- **Value at Risk (VaR) Modeling**

Who Should Attend?

- **Chief Risk Officers**
- **Chief Financial Officers**
- **Chief of Operations**
- **Operational Risk Department Heads and Managers**
- **Compliance Officers and Auditors**
- **Line-of-Business Heads and Managers**

- Is your organization keeping pace with the evolving standard for industry best practices? How do you pass the “use test” under Basel II and Solvency II, and what programs do you need to put in place today to ensure that you will continue to pass this test in the coming years?

AGENDA — DAY 1

8:00 a.m.

Registration and Continental Breakfast

8:30 a.m.

Welcome and Introductions

9:00 a.m.

ERM and ORM — Secrets to Success

Implementing a viable enterprise risk management/operational risk management (ERM/ORM) program and demonstrating its effectiveness can be a daunting task. In this session, we will outline the five key elements of a successful ERM/ORM program. These core elements will be expanded upon during the seminar with practical examples, showing how companies across all industries can reduce losses and improve financial performance through effective risk management.

9:45 a.m.

ORM General Principles and Key Concepts

What exactly is modern ORM? How did it evolve, and what is its relevance beyond regulatory compliance? In this introductory session, you will learn the fundamental principles underlying modern ORM, and the history and evolution of this discipline, including the factors that led to the Basel II and Solvency II regulations. We will also discuss key concepts such as the true meaning of risk, specifically addressing how use of this term in casual conversation differs significantly from its formal usage.

10:30 a.m.

Morning Break

10:45 a.m.

Defining and Classifying Operational Risks

A structured approach to ORM requires a sound taxonomy. But this is a significant challenge because operational risks encompass causes (lack of supervision), events (fraud) and consequences (lawsuits). How can one incorporate all these elements into a single comprehensive definition, and how will doing so facilitate better managerial decision making? In this session, you will learn the fundamental issues surrounding loss data classification, the evolution of thinking in this field over the past decade, the different approaches used, as well as which methods best support an advanced measurement and management framework.

12:30 p.m.

Networking Luncheon

1:30 p.m.

Understanding Risk Assessment Issues

Organizations have been conducting risk assessments for decades, but are the traditional methods valid in the context of modern ORM? There are many issues to consider. For example, do traditional and modern ORM follow the same risk definition? Should risks be assessed before controls, in the absence of controls or after controls? Should risks and controls be assessed jointly or independently? How can one use loss data and other information to improve the robustness of the risk and control assessments? In this session, you will gain a solid understanding of the underlying issues in risk assessment, and the pros and cons of the different approaches.

3:00 p.m.

Afternoon Break

3:30 p.m.

Understanding Control Assessment Issues

After identifying and assessing its major risks, an organization needs to assess the quality of its corresponding internal controls to determine whether it is over-controlled, under-controlled or adequately controlled in the context of its risk appetite and risk tolerance standards. But assessing controls is a very subjective process. How can one make this process more objective so that the results are meaningful and can be turned into metrics to be monitored on a continuous basis? In this session, you will gain an understanding of the issues one has to address in developing a viable control assessment program.

4:00 p.m.

The Evolution of Industry Best Practices in ORM

Banks are currently following a wide variety of approaches to managing operational risk. What's driving this diversity in views? Where there is commonality in thinking, has the industry really converged to the "right" standards? What are the evolving trends, both in terms of industry best practices and bank regulation? In this session, you will learn what leading institutions and regulators have learned about ORM during the past 10 years and what impact this will have on the future direction of the industry.

4:30 p.m.

Daily Summary, Conclusions and Q&A

4:45 p.m.

Closing Comments and Adjourn

5:30 p.m.

Networking Cocktail Reception

AGENDA — DAY 2

8:00 a.m.

Buffet Breakfast

8:30 a.m.

Review of Topics Covered on Day One

9:00 a.m.

What Are Expected and Unexpected Loss?

There has been a lot of discussion in the industry about how to define and calculate expected loss and unexpected loss, and there are many opinions on the subject. Some believe that expected losses are the smaller losses and unexpected losses are the larger losses. Clearly, these definitions are not very practical, because it would be very difficult to determine the point at which a loss becomes large enough to move from the expected to the unexpected realm. In this session, you will learn what these terms mean and why they are important in the context of pricing and budgeting.

9:45 a.m.

Understanding Risk Indicators and Predictive Analysis

Many believe that identifying and monitoring predictive risk indicators is a prerequisite to proactively managing operational risk. But those who are familiar with such information know that legitimate risk indicators are few and far between. In this session, you will learn how to identify and validate such indicators, and how to transform raw and derivative indicators into metrics that support the effective management of operational risk.

10:30 a.m.

Morning Break

10:45 a.m.

Understanding Loss Data Issues

Historical loss data are the only objective source of information on operational risks, but internal loss data are often insufficient, and external loss data are often irrelevant. In this session, you will learn about the four types of loss data (internal data and external public, consortium and insurance data), the advantages and disadvantages of using the different types of loss data, how to establish a program for collecting internal loss data, whether to acquire external loss data and which vendors have the best products, the many uses and misuses of historical loss data, how to scale external loss data to the size of your organization and many other valuable lessons.

12:00 p.m.

Networking Luncheon

1:30 p.m.

A Conceptual Overview of Modeling and Scenario Analysis

Measuring operational risk is a huge challenge. Traditional models require significant amounts of data, but in ORM very little data are available. Consequently, a variety of approaches have emerged, ranging from pure actuarial models and hybrid models, to measurement methods that rely on risk self-assessment and expert opinion, to methods that use scenario-generated loss data. Which of these methods are theoretically valid, and which are practical or feasible in the context of ORM? In this session, you will learn what approaches are commonly used today, their underlying assumptions, how they compare conceptually and practically, as well as the pros and cons of each alternative.

3:00 p.m.

Afternoon Break

3:15 p.m.

Modeling in Depth: Theory and Practice

What key issues need to be addressed when modeling operational risk under an actuarial approach? What are the fundamental assumptions underlying actuarial theory, and how can they be applied to ORM? Can one reasonably “fit” operational loss data to the traditional frequency and severity distributions? What systematic biases exist in external data (e.g., size, controls, high threshold, data capture), and how can they be overcome? How can one combine internal and external data, and what is the amount of data required to estimate VaR at a 99.9% confidence level? In this session, you will learn the practical aspects of modeling using objective, theoretically valid methods.

4:00 p.m.

Daily Summary, Conclusions and Q&A

4:30 p.m.

Closing Comments and Adjourn

FACULTY



Ali Samad-Khan

Ali Samad-Khan is Global Operational Risk Practice Leader at Towers Perrin. He has over 10 years' experience in operational risk measurement and management, and more than 20 years of experience in financial services. Ali has advised more than 50 of the world's leading banks, insurance companies, and energy and transportation companies on the full range of operational risk measurement and management issues. He has also advised leading bank regulators and multilateral organizations, including the Risk Management Group of the Basel Committee, the Federal Reserve Board, the Bundesbank, the U.K. Financial Services Authority, the World Bank and the International Monetary Fund.

Recognized globally as a thought leader in the risk management space, Ali's provocative articles and white papers have served as a catalyst for change in the way organizations manage risk. For his pioneering work in

this field, Ali was named "one of the 100 most influential people in finance" by *Treasury & Risk* magazine.

Prior to joining Towers Perrin, Ali was founder and President of OpRisk Advisory, which was assimilated into Towers Perrin in 2007. Prior to founding OpRisk Advisory, Ali was President of OpRisk Analytics LLC, which was acquired by SAS. Previously, he worked at PricewaterhouseCoopers (PwC) in New York, where he headed the Operational Risk Group within the Financial Risk Management Practice. He has also worked in the Operational Risk Management Department at Bankers Trust, as well as at the Federal Reserve Bank of New York and the World Bank.

He holds a B.A. in quantitative economics from Stanford University and an M.B.A. in finance from Yale University.



Prakash Shimpi

Prakash Shimpi is Managing Principal of Towers Perrin in New York with global responsibility for enterprise risk management (ERM). He joined Towers Perrin in 2004 to head the firm's ERM practice, covering both financial and nonfinancial institutions, and has built market-leading positions with the insurance and energy industries.

Immediately before joining Towers Perrin, Prakash was President of Fraime LLC, an ERM consulting boutique. Until June 2003, he was President and CEO of Swiss Re Financial Services Corporation and a member of the Executive Committee of its global Financial Services Business Group. He was the founding President and CEO of Swiss Re Financial Products, Swiss Re Capital Markets and European Finance Re. He formed and built the company's structured finance and capital markets groups, pioneering the development of alternative risk transfer (ART) products such as contingent capital and insurance-linked securities, launching the market's first California Earthquake and Tokyo Earthquake securitizations. He also started up the interest-rate, credit and weather derivatives businesses. Previously, Prakash was Managing Director in the Global Insurance Corporate

Finance Division of Chase Manhattan Bank and VP/Manager of the Insurance Portfolio Strategies Group at Drexel Burnham Lambert.

Prakash has worked across academic disciplines and professional associations to develop both the theory and practice of ERM. He was editor and principal author of *Integrating Corporate Risk Management*, which is recognized as a practitioner's reference book on the convergence of insurance and capital markets. He has held visiting Fellowships at Wharton, the London School of Economics and Peking University. In addition, he has served on the Corporate Governance Task Force of the CFA Institute, and has represented the Society of Actuaries in several ERM forums and chaired its Investment Section.

Prakash earned a first-class honors B.Sc. degree in economics and statistics and a distinction in his M.Sc. in operational research from the London School of Economics and Political Science, and an M.B.A. in finance and international business from the University of Chicago. He is a Fellow of the Society of Actuaries and a CFA charterholder.

REGISTRATION FORM

Modern Operational Risk Management

Hartford, June 25 – 26, 2008

Capital 3 Room, Marriott Hartford Downtown

A Comprehensive Two-Day Interactive Seminar
Led by Ali Samad-Khan and Prakash Shimpi, Towers Perrin

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Note: Space is limited. Please RSVP by June 24.

Seminar Fees

Register now for the early-bird discount price of \$1,800 until May 9. After May 9, the registration fee for this event is \$2,000, which includes a set of seminar materials, breakfast and lunch, and morning and afternoon refreshments on both days. This price does not include hotel accommodations. To register for this seminar, please complete the registration form on this page.

Special Group Rates

We offer special discounts for groups of three or more persons. For more information, please contact Rose Tashiro at rose.tashiro@towersperrin.com or 312.201.5690.

Cancellations

A refund of registration fees will be made if notice of cancellation is received no later than two weeks prior to the date of the event. If notice of cancellation is received within two weeks of the seminar, we will deduct \$200 for committed costs and refund the remainder of your registration fee. Registration is transferable, and attendee substitutions can be made at no charge.

Hotel Accommodations

Towers Perrin has reserved a block of rooms at the Marriott Hartford Downtown for seminar attendees. Please call the Marriott's toll-free reservation line at 866-373-9806 and request the "Towers Perrin Operational Risk Seminar" room block in order to secure the group preferred rate. Reservations must be made on or before Tuesday, June 3, 2008 to receive the group rate. Towers Perrin is not responsible for making hotel reservations for individual seminar participants.

Marriott Hartford Downtown

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www.marriott.com

Hotel room rate: \$195 + tax, per night, per guest room

About Towers Perrin

Towers Perrin is a global professional services firm that helps organizations improve performance through effective people, risk and financial management. The firm provides innovative solutions in the areas of human capital strategy, program design and management, and in the areas of risk and capital management, reinsurance intermediary services and actuarial consulting.

Towers Perrin has offices and alliance partners in the world's major markets. More information about Towers Perrin is available at www.towersperrin.com.