

SOX

FASB 133

Dodd Frank

VAR

Trading Controls



BEST PRACTICES & FINANCIAL RISK

Presented by Energy Management Institute



Understand and successfully measure, monitor and manage financial risk. **Includes a detailed look at the implications of Dodd-Frank on the trading of OTC energy derivatives.**

COURSE DATES & LOCATIONS

■ April 25-26, 2017: Houston, TX

REGISTER TODAY!

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DETAILS INSIDE

Includes implications of Dodd-Frank on the trading of OTC energy derivatives. Plus participate in a real-time portfolio risk trading simulation!

This critical 2-day course will give you an integrated framework to understand various types of financial risk and how to measure, monitor and manage them.

Best Practices & Financial Risk provides attendees with a practical yet rigorous understanding of business ethics and reputation risk, compliance and regulatory risk (including Sarbanes-Oxley Act of 2002 and FASB 133 compliance issues), legal risk, systemic risk, operational risk, market risk, liquidity risk and credit risk. In addition, the course covers tools for managing market risk (including Value-at-Risk and stress testing), implementation of broad-based and specific best practices and trading controls. Finally the course provides detailed case studies of both failures in trading controls as well as a SOX compliance case study.

The course is designed to help management, traders, risk managers and back-office personnel in the energy industry gain a thorough understanding of what these financial risks are and how they can be managed successfully.

By gaining a thorough understanding of these various types of financial risk as well as the tools used to monitor and manage these risks clients can identify and avoid the pitfalls that led to spectacular disasters both within and beyond the energy industry. Consequently it is vital for corporate officers, back office personnel, traders and risk managers to be knowledgeable about the latest tools, techniques and tactics for risk management and mitigation.

What You Will Learn

- How to measure, monitor and manage market risk and credit risk.
- Which types of risk management models are best suited to specific types of trading and hedging portfolios.
- How to manage risks that elude measurement via quantitative models (such as liquidity risk, operational risk, systemic risk, regulatory/legal risk and reputation risk).
- How to measure a portfolio's VaR using various models.
- The importance of accounting for paradigm shifts and price shocks in stress tests of a portfolio.
- How and why major corporations such as Barings Bank and Enron failed.
- How to avoid such failures within your own corporation and how to identify the warning signs of these types of financial risks among your counterparties.

You will leave this course with a solid and immediately useful understanding of:

- History of the Securities and Exchange Commission and how it led to the Sarbanes-Oxley Act.
- ***Implications of Dodd-Frank on trading of OTC energy derivatives.***
- Cutting-edge issues in compliance and regulatory risk including FASB 133 and an in-depth study of SOX.
- What legal and systemic risk are and how these issues affect companies within the energy industry.

(continued on next page)

COURSE DATES & LOCATIONS

■ **April 25-26, 2017 - Houston, TX**
Regus Conference Center
8am - 4:30pm both days

See last page for venue addresses.

REGISTER ONLINE

EMI CERTIFICATION CREDIT



This course earns 6 credits towards EMI Certification.

REGISTRATION FEES

1st delegate: \$1,995
2nd delegate: \$1,795
3rd delegate: \$1,600

- Different types of market risk and how hedging of outright price risk results in basis and optionality risks.
- The “Greeks.”
- All of the tools at your disposal to manage market risk including traditional, position-based tools such as stop loss placement and volumetric limits as well as portfolio-based tools such as mark-to-market, Value-at-Risk, stress testing and fixed fractional money management.
- Application of statistical theories and how they relate to calculation of Value-at-Risk including assumptions of a normal distribution as well as how non-normal distributions (skewness, kurtosis and stable Paretian distribution) effect Value-at-Risk calculations. Included are tools such as Extreme Value Theory and GARCH which are specifically designed for measuring the tail of a stable Paretian distribution.

Who Should Attend

The course is applicable to all levels of the energy infrastructure, oil, natural gas, electricity & coal. Individuals in every functional area of responsibility in all energy industries whose decisions have significant financial impact will benefit from this program. Managers from areas such as trading, risk management, compliance, human resources, ethics, credit, contracts, operations, marketing, sales, supply & distribution, purchasing, financial & accounting will find the course highly beneficial. Some of the more specific areas follow:

- Traders of any of the Energy products
- Wholesale/Marketing Companies
- Jobbers
- Retailer
- End-Users
 - Commercial Fleet Managers
 - Government agencies – Federal - State - Municipal
 - Transportation companies
- Major Oil & Large Independents:
 - Refiners
 - Marketers
 - Supply & Distribution personnel
 - Exchange Personnel
 - Terminal managers
 - Risk Managers
 - Wholesale and Commercial managers
 - Retail Branded & unbranded managers
 - Traders
- Lenders to the Energy Industry
- Futures & OTC Brokers – especially brokers catering to the above companies
- Utilities & Power marketers
- Nat Gas Marketers
- Accounting & financial personnel
- Back Office administrators of trading & hedging operations

CPE CREDITS



This course earns 14 CPE credits. Energy Management Institute is registered with the National Association of State Boards of Accountancy (NASBA) as a sponsor of continuing professional education on the National Registry of CPE Sponsors.



State boards of accountancy have final authority on the acceptance of individual courses for CPE credit. Complaints regarding registered sponsors may be addressed to the National Registry of CPE Sponsors, 150 Fourth Avenue North, Suite 700, Nashville, TN, 37219-2417. Web site: www.learningmarket.org.

Course Syllabus: DAY ONE

Overview of Financial Risks: Regulatory, Compliance, Legal, Systemic, Operational & Market Risks

Session 1: Overview of Course, Business Ethics & Reputation Risk

Discusses the six major categories of financial risk that are experienced by all corporations that are involved in trading. Types of financial risk experienced by entities that do not trade as well as a definition of basic terms such as “best practices” and “front”, “mid” and “back” offices are also covered. This section also provides attendees with an overview of the history of business ethics as well as two contrasting schools of thought regarding business ethics and reputation risk, namely the “utilitarian” model and the “corporate social responsibility” model.

Session 2: Overview of the SEC & Sarbanes-Oxley Act of 2002

This section covers the history of the SEC including the background leading to its formation and the philosophy governing its method of operation (e.g. “disclosure”). In addition we examine the Sarbanes-Oxley Act of 2002 including the history leading up to the passage of this SEC legislation, what the legislation entails including detailed coverage of internal controls and COSO as well as best practices and COBIT and penalties for non-compliance. Finally we examine the costs, long-term strategy guidelines and a call for reform including an examination of the cost of SOX compliance, examines impediments to implementation of a long-term SOX compliance strategy and discusses the current movement to reform SOX.

Session 3: Dodd-Frank Act of 2010

This section covers the Dodd-Frank Act including broad goals of the Act, the Dodd-Frank regulatory hierarchy for derivatives (along with the potential for future “regulatory creep” as well as regulatory turf wars) and new regulatory terminology. Particular emphasis is placed on the key points of the Act and how these points specifically relate to the trading of OTC energy derivatives (including Title VII as well as sections 722, 750, 751 and 753).

Session 4: FASB 133 Derivatives Accounting, Legal, Systemic & Operational Risks

In this section we examine FAS 133 in terms of “fair value” and “cash flow” hedging, specific criteria to determine the “effectiveness” of a hedge, “hedge inception” and “on-going hedges”. Then we analyze the pros and cons of “qualifying for hedge exemption”. Next we provides attendees with an overview of how various kinds of legal risks can adversely affect a corporation and it examines how the failure of one player within

Session 4 Continued

the industry can adversely affect others participants within that industry. Finally we examine Operational Risk by dividing the topic into two segments, human and non-human centered operational risks. Regarding both subsections, specific emphasis is placed on how these risks relate to a trading operation.

Session 5: Case Study – Barings Bank

Through an in-depth study of the operational and trading controls failures at Barings Bank we integrate the theories of operational risk (covered in the previous section) into the real-world specifics experienced England’s oldest Merchant Bank. Particular emphasis is placed on conflicts of interest, the breakdown in separation of duties and a lack of adherence to basic principles of financial risk management.

Session 6: Market Risk

This section examines the basic flavors of market risk including outright price risk, basis risk and optionality risk. In addition, it looks at how the use of options as an instrument to hedge outright price risk in turn creates non-linear market risks including delta, gamma, theta, vega and rho.

Session 7: Measuring Market Risk

An Overview, VaR & Statistics: This overview to the topic of measuring market risk examines the “two schools” of market risk management: the “traditionalist” school which employs tools like stop losses and volumetric exposure limits, and the “portfolio analysis” school which uses mark-to-market, volatilities and correlations of assets within the portfolio. We then look at how statistical analysis applies to the measurement of Value-at-Risk. Specifically attendees will examine volatility, correlations, normal distribution, lognormal distribution, skewness, kurtosis and the stable Paretian distribution.

Portfolio Risk Trading Simulation

This real-time trading simulation will enable participants to examine market risk of a hypothetical portfolio and so allow attendees to familiarize themselves with correlation risk, standard deviations of linear assets, as well as risks of various options held within a portfolio.

Course Syllabus: DAY TWO

Best Practices and the Measuring, Monitoring & Mitigation of Market, Liquidity & Credit Risks

Session 8: Measuring Market Risk: Fat-Tails & VaR

This portion of the course examines the problems with the assumption of a normal distribution in modeling for VaR and how tools like Extreme Value Theory can address the limitation of normal distribution tail assumptions. This section also examines the pros and cons of various methods of tail measurement.

Session 9: Measuring Market Risk: Calculating VaR

In this section attendees will look at the six VaR model inputs (prices, volumes, holding period, confidence level, volatility and correlations) and together the group will walk through the calculation of a portfolio's VaR using the linear model. Then we will look at the pros and cons of using other VaR models (delta-gamma, historical simulation and Monte Carlo simulation).

Session 10: Financial Theory of Value-at-Risk & the Risk Management Pyramid

This section discusses the differences between a VaR measure, VaR model and VaR metric. The section also covers the three procedures common to VaR measures: portfolio remapping (according to key factors), inference of historical data (based on weighting factors and GARCH) and transformation procedures. We then examine stress testing issues for VaR as well a review of the theories of managing and modeling market risk including traditionalist school measures and portfolio analysis theory. To these theories of risk management we then add other tools such as fixed fractional money management techniques. Finally the section includes a discussion of issues such as price shocks and paradigm shifts and how these changes in the character of market volatility can be managed.

Session 11: Liquidity & Credit Risk

Included in this segment of the course is a definition of various types of liquidity risk and how to identify and manage such risks. In addition we examine Credit Risk by providing attendees with an overview of credit risk management issues including best practice implications of credit risk issues including the establishment and adherence to credit risk limits and the establishment of a credit evaluation process. In addition the section includes procedures for credit risk quantification based on various credit risk models including CVaR, Z-Score, KMV, Econometric, Actuarial and Ratings-based methodologies. Finally we examine various risk mitigation tools for credit risk including collateral, bond insurance, guarantees, letters of credit, netting agreements and credit derivatives.

Session 12: Risk Management Procedures and Trading Controls & Specific Best Practices Recommendations

This section includes specific best practices and trading controls recommendations to prevent problems in operational risk. These recommendations include separation of duties between front, mid and back office personnel as well as adherence to the stated risk-reward tolerances of the corporation. We then cover specific recommendations for trading organizations to employ in order to avoid breakdowns in trading controls. Included are specific trading room suggestions that are employed by brokerage firms (such as taping of all conversations, time stamping of all orders and immediate entry of all trade into the trading controls system).

Session 13: Case Study: Enron

This case study documents the rise and fall of Enron while placing particular emphasis on the breakdown of disciplined adherence to GAAP, incentive bonuses based on ability to close deals as opposed to profitability and the breakdown in independence of mid and back office due to ill-advised human resource evaluation procedures. In addition, the case study examines the ability of Enron to dismantle the independence of external auditors and Wall Street brokerage analysts.



Learn From the Experts that Experts Trust

EMI experts are frequent editorial contributors to petroleum magazines & are trusted by today's leading news sources.

Our experts have been featured in:

Futures Magazine • The Wall Street Journal • USA Today • The New York Times • The Washington Post • Journal of Commerce • CNN • NBC • CBS • ABC • Bloomberg • Reuters

EMI's leading industry experts have an average of over 30 years of knowledge and experience in:

**Energy • Commodity trading • Risk management
• Education • Consulting • Financial services**

Plus many years of managing marketing, international trading, manufacturing, consulting, start-up operations and project finance operations of well-known companies; integrated major oil companies as well as international trading companies.

EMI's industry experts have also provided risk and value management analysis, advice, information, and services to a variety of companies in the electric power industry. Clients have included power marketers, integrated utilities, retail power providers, hedge funds, and power plants.

Highlights of our instructors' experience include: • Developing a suite of models for a variety of power markets that quantify value and risk • Managing spark spread portfolios for hedge funds in the power markets • Operating in futures trading pits as a market observer in the power markets • Developing working papers for investigations and performing compliance audits in the power industry • Helping Texaco initiate its first use of futures exchanges as an integral part of hedging/trading strategy • Chief Operating Officer of Triwell Marketing and refining • Director of OPIS, Oil Price Information Service, a management-consulting and educational services group that solely focused on the downstream energy industry • Member of Board of Directors of Longview Refinery • Member of the New York Mercantile Exchange Petroleum Advisory Board • Expert witness for a hearing before the subcommittee on surface transportation for the Commerce, Science, and Transportation Committee of the US Senate • Supplied expert testimony to a US Senate sub-committee hearing on diesel petroleum product pricing • Supplied testimony to the Federal Highway Administration regarding fuel tax evasion • Expert witness in a MTBE litigation against the major oil companies • Publishers of The Daily Hedger, BTU's Daily Gas Wire and BTU's Daily Power Report, which advise thousands of petroleum professionals daily.

Our instructors are frequent expert speakers for numerous petroleum industry events and trade associations including: • DOE DESC World Energy Conference • OPIS Fleet Fueling • CME NYMEX • Fuel Management University • NATSO • ATA • AAA • Dairy Distribution • eyeforEnergy eCommerce • OPIS Supply Summit • CIOMA • American Society of Mechanical Engineers • American Society of Lubricating Engineers • Ambrust Aviation • NACHA.

Over the years EMI has developed a series of intensive courses covering all aspects of Energy from production all the way to managing the impact price and volatility on the margin of end-users, resellers, traders, marketers, shippers, retailers and refiners. Our instructors have had the privilege to instruct thousands of professionals representing all aspects of the energy industry, including every major oil company (i.e. Exxon Mobil, BP, Shell, Equilon, Motiva) major power utilities (i.e. Sempra, Edison Mission, Berkley, Toronto Hydro, Dominion, Conectiv) small marketers (i.e. Sprague, Getty, Southern Counties, Western Petroleum) trucking fleets from 50 to 10,000 (i.e. UPS, U.S. Postal Service, Yellow, Pepsi, Werner), gasoline-powered fleets hyper-markets (i.e. The Pantry, Wawa, BJs Wholesale) and many fortune 500 energy consumers.

REGISTER ONLINE

Registration Fees:

1st Attendee: \$1,995 for full program

2nd Attendee: \$1,795

3rd Attendee: \$1,600

1 CHOOSE YOUR COURSE DATE/LOCATION

- April 25-26, 2017**
Regus Conference Center
Downtown Houston
Two Allen Center
1200 Smith Street, 16th Floor
Houston, TX 77002
PH: 713.353.4600

Hotel recommendations for select course locations available online at www.energyinstitution.org/hotels

2 ENTER ENROLLMENT DETAILS

First Name: _____ Last Name: _____

Company Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email Address: _____

3 MAKE PAYMENT CHOICE

Please make checks payable to: "PMA"

Please invoice my company (payment must be received prior to course date)

Pay by credit card (circle one): Mastercard Visa American Express

Card Number: _____ Expiration Date: / /

Card Holder Name: _____

Card Holder Signature: _____

4 SUMBIT REGISTRATION FORM

EMAIL: Send form to register@pmaconference.com.

TEL: Call PMA Conference Management at 201.871.0474

FAX: 253.663.7224

POST: PMA Conference Management
POB 2303
Falls Church, VA 22042

REFUND/CANCELLATION POLICY

Attendees may reschedule for a different date or course with no penalty. Attendees may substitute a colleague in place of themselves as long as prior notice is given to EMI.

Course fees are 100% refundable up to 14 days prior to course date, 80% refundable up to 5 days prior to course date and 50% refundable up to 2 days prior to course date. Cancellations are non-refundable thereafter.