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*March 17–20, 2003
The Warwick Hotel
Houston, TX*

Paradigm Strategy Group, Inc. proudly presents two of our highly rated private programs to the energy professional public.

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Paradigm[®] has conducted seminars for the energy industry since 1996 and has become the preeminent trainer in the specialized area of Energy Risk Management

Energy markets have undergone a meltdown...

- markets are changing
- rules are changing
- market complexity is increasing

...but risks must still be managed.

How do you cope?

Credit Risk Management for Energy Companies

Beyond evaluating the ability to pay, Credit Risk Management includes systems to measure, monitor, and hedge exposures.

8:00am–5:00pm, March 17, 2003

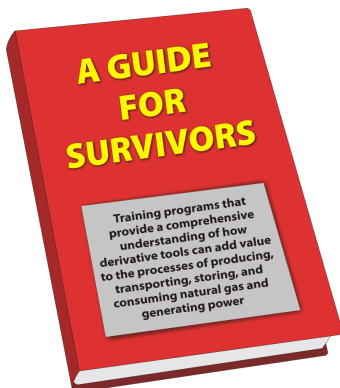
8:00am–3:00pm, March 18, 2003

Value at Risk for Energy Professionals

A practical approach to understanding the methods, capabilities, and significantly, the limitations of VaR as applied to energy.

8:00am–5:00pm, March 19, 2003

8:00am–3:00pm, March 20, 2003



*Signup for
two sessions —
Save \$300!*

Free!
Comprehensive Training
Manuals Included
— \$500 value each! —

Day 1

Credit Risk Issues in Energy

Enterprise Risk

- No riskless position
- Choosing among risk positions
- Price risk
- Credit risk
- Cash liquidity and operating risks

Characteristics of Credit Risk in Energy

- Uncertain exposure amounts
- Liquidated vs. consequential damages
- High volatility
- Weak counterparties
- Sector concentration
- Embedded exposures

Non Performance Risk

- Inability to pay
- Enforceability of contracts
- Suitability
- Political/regulatory risk
- *Force majeure*
- *"Price" majeure*

Risk Measures in Credit Analysis

- Credit exposure vs. credit risk
- CVaR as maximum potential exposure
- Quantifying default risk

Measuring Default Risk

- Credit quality and default probability
- Term structure of default rates
- Expected recovery rate
- Capital requirements

Credit Scoring

- Sources of information
- Comparing credit scoring vs. rating agencies
- Analyzing marketing borrowing spreads
- Estimating recovery rates
- Using market spreads to measure credit risk
- Credit derivative pricing as a risk measure

Group Review

Concepts Underlying Credit Risk Analysis

Evolution of Modern Risk Measures

- Subjective vs. objective risk analysis
- Probability and risk distributions
- The confidence level
- Risk aversion and capital allocation

Measuring Volatility

- Inadequacy of conventional standard deviation
- Path dependency
- Calculating volatility
- Holding period and credit exposure
- Questioning applicability of volatility assumptions to energy
- Types of volatility

Calculating CVaR

- Defining "Credit Value at Risk" (CVaR)
- Formula for CVaR
- CVaR applications
- Aggregating exposure in time buckets
- CVaR for term contracts
- Summing total exposure

Credit Risk Measures and Required Capital

- Variability of default probabilities by term
- Aggregating risk and capital for multiple risk positions
- The role of time buckets
- "Jointly support credits" and "credit uplift"
- Independence vs. correlation

Credit Risk Measures and Required Capital

- Aggregating single party exposure with risk diversification
- Aggregating portfolio credit risk/capital with diversification
- Implications of sector concentration in energy portfolios

Group Review

Day 1

Analysis of Credit Risk in Energy Transactions

Credit Risk in Common Physical and Financial Contracts

- Separating physical from financial
- Fixed price forward, swap and term contracts
- Gas Daily contracts
- Basis Trades

Credit Implications of Exchange-Traded Futures

- Margins
- Cash liquidity risk
- Standard delivery
- Paper hedging
- EFPs & EFSs

Credit Risk in Option Structures

- Option buyers and sellers
- Swaptions
- Cancelable/extendible contracts

Group Review

Financing Embedded in Energy Structures

- Understanding the forward price curve
- Term pricing structures
- Synthetic storage
- Inter-period physical exchanges/swaps

Contracts Priced Off-Market

- Prepays
- Blend & extend swap and physical structures
- Hidden loans embedded in contracts

Group Review

Netting and Risk Offsets

- Transactional netting
- Netting default claims
- Bilateral netting
- “Cherry Picking”
- Master netting agreements
- Cross-affiliate netting

Multilateral Netting

- Clearing
- Margining
- The clearinghouse: advantages and limitations

Unwinding Risk Positions

- Reversing transactions
- Buyouts and assignments
- Credit risk in unwinding structures
- Managing credit exposure under netting
- Reliability of netted exposures as a risk measure

Group Review

Mitigating Credit Risk

- Beyond netting
- Bank stand-by letters of credit & guarantees
- Intermediation/sleeving
- Margins
- Establishing margin thresholds
- Assignments and buyouts
- New transaction with negative correlation
- Periodic resets to market
- Bond puts
- Default swaps and options

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Day 1

The Concept of Value at Risk

The Need for VaR

- Evolution of modern VaR
- Inadequacy of earlier risk measures
- Translating subjective probability into statistical probability
- Statistical probability

VaR Advantages

- As an objective quantifier of risk
- To corporations
- To regulators and rating agencies
- Managing risk portfolios

Risk and Maximum Exposure

Exposure to Uncertainty

- Types of risk measures
- Certainty vs. Uncertainty in business
- Assigning an acceptable level of uncertainty

A Simple VaR Calculation

- VaR for a coin toss game
- VaR for multiple coin tosses: the binomial lattice
- Measuring probabilities by counting price paths
- The role of holding periods in VaR measures
- VaR and 'path dependency'

Risks Quantified by VaR

VaR Examines Multiple Risks

- Market risk
- Volumetric risk
- Credit risk
- Asset/liability risk
- Liquidity risk
- Idiosyncratic/business risk

Group Review

Statistical Concepts in Risk Analytics

Risk Distributions

- Constructing probability distributions
- Creating frequency distributions
- Projecting the probability an event will occur

Measures of Central Tendency

- Median
- Mode
- When the mean is not the best measure

Measures of Dispersion

- Range
- Variance
- Calculating standard deviation
- Calculating volatility
- Adjusting volatility for term
- Applicability of volatility to energy risks

Measures of Confidence

- One vs. Two-tailed analysis
- Using Z-statistics
- Using Z with volatility
- Measuring 'tail' risk
- Skewed distributions

Group Review

Aggregating Risks with Multiple Variables

- Aggregating two means
- Aggregating two standard deviations
- Correlation as an element in pricing
- Standard deviation for the sum of two variables
- Standard deviation for spreads between two variables
- Using volatility in aggregating two risk positions
- Non-linear aggregation

Day 2

Implementing VaR

Key Factors in Determining VaR

- Level of risk aversion
- Holding period
- The magnitude and shape of the risk distribution
- How volatility affects VaR
- VaR and return on capital

Different Types of VaR Measures

- VaR for reported earnings
- Cash flow VaR
- VaR of economic value
- Credit exposure VaR

Path Dependency of Volatility

- Inadequacy of conventional calculation of standard deviation
- Using a modified formula to measure volatility
- Converting standard deviation to volatility

Calculating Volatility

- Closed form formula for VaR
- VaR for longer holding periods
- Accounting loss vs. Economic loss vs. Cash flow loss
- VaR and return on capital

Subjective Elements in Risk Modeling

- How probabilistic models work
- Ongoing decisions on the design and inputs of risk models
- Determining the appropriate volatility assumption

Complexities Inherent in Energy Price Volatilities

- Volatility smiles and skews
- Term structure of volatility
- Seasonality

Group Review

Closed-Form VaR Model

- Assumptions
- Risk factors
- Single product VaR
- Two product analytical VaR
- VaR for spread positions

VaR for Asymmetrical Risks

- VaR for option risk positions
- Using delta to determine VaR
- Delta after a large price move
- Gamma and gamma limitations

Historical Simulations

- VaR model assumptions
- Building a historical simulation
- Incorporating correlation in an historical simulation
- Advantages/disadvantages of the historical approach

Monte Carlo Simulations

- Creating random price paths
- Analyzing distribution of price-path outcomes
- Monte Carlo for aggregating multiple risks
- Advantages/disadvantages of Monte Carlo methods
- Monte Carlo vs. Historic method

Using Historical Approach to Create Price Paths

- For single risk VaR
- For multiple risk VaR

Stress Testing

- Identifying model risk
- Divergence of future events from historic pattern
- “Fat tails”

Group Review

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About Paradigm and Our Instructors

Paradigm provides practical non-theoretical training in energy derivatives, and their related risk management technologies. Programs are structured to the specific needs of today's dynamic energy industry and are designed to excite participants by knocking down the myths and mystiques built around derivative products. Paradigm's instructors offer participants a clear understanding of the business potential arising from combining physical energy and financial products.

Session 1 Program Overview and CPE Credits (Credit Risk Management for Energy Companies)

The management of credit risk has for energy companies in recent times become a greater focus on attention. Along with that focus has come increased sophistication in the methods of measuring, monitoring, and managing credit related risks. This program provides participants with a solid foundation of the concepts and methodologies currently employed by energy companies in managing default risks. This is not a course on how to analyze the creditworthiness of a company. Its scope is broader, showing how differing degrees of credit quality are incorporated and analyzed in a credit risk management system. *CPE Credits: Accounting & Auditing 2; Consulting Services 1; Management 1; Specialized Knowledge & Applications 12.*

Session 2 Program Overview and CPE Credits (Value at Risk for Energy Professionals)

The Value at Risk (VaR) seminar introduces participants to this important concept that is rapidly becoming an integral business tool. The first session of this seminar provides participants with an overview of the Value at Risk concept including the vital business needs that motivated its creation. This overview is followed by a focused review of those statistical concepts necessary for a working understanding of VaR. The program then moves on to identify examples of the context in which clients are using VaR in their business decisions, with a particular emphasis on the complexities of risk unique to the energy business. *CPE Credits: Accounting & Auditing 2; Consulting Services 1; Management 1; Specialized Knowledge & Applications 12.*

Our Instructors

Paradigm's instructors bring to the classroom the hands-on experience of working in related business areas. Combining this extensive knowledge with their experience in conducting dedicated training for thousands of executives insures that our seminars feature lively interaction between participants and the instructor.

Frank H. Ribeiro

Frank began his career in the energy sector as an Economist with the Federal Power Commission. He has managed profit-generating deal origination and structuring teams at major international institutions. Since 1994 he has worked in close association with leading natural gas and power marketers, researching the emerging trading and deal structuring techniques evolving in these rapidly deregulating industries, and developing application-based training programs for electric utilities and energy marketers.

John A. Doble

John's career spans the spectrum from trading and developing special applications for derivative products, through to actual corporate treasury responsibilities where managing risk positions and working with Value at Risk are a priority. John has considerable experience in the field of training and he has developed and delivered seminars on derivative products and the mechanics and uses of Value at Risk concepts. These courses are noted for being extremely practical in nature, and impart a sound knowledge of Value at Risk without involving complex mathematics. John has also managed the aspects of designing and implementing risk management systems for trading rooms.

Registration Form and Related Information

Session 1

Credit Risk Management for Energy Companies

March 17–18, 2003

Session 2

Value at Risk for Energy Professionals

March 19–20, 2003

The Warwick Hotel • Houston, TX

Fees

Session 1:	\$1,400.00
Session 2:	\$1,400.00
Special Combination Price (1&2):	\$2,500.00 (\$300 Discount)

All fees include a comprehensive manual, continental breakfast, lunch and snacks.

CPE Credits

Session 1:	Accounting & Auditing 2; Consulting Services 1; Management 1; Specialized Knowledge & Applications 12
Session 2:	Accounting & Auditing 2; Consulting Services 1; Management 1; Specialized Knowledge & Applications 12

Click Here to Register Online

**Register by Fax or Mail for Paradigm's
Credit Risk Management and VaR Programs**

Name: _____

Title: _____

Organization: _____

Street Address: _____

City: _____ State: _____ Zip Code: _____

Work Phone: _____ Fax: _____

E-mail: _____

Check the courses you will attend:

Session 1 (\$1,400.00) Session 2 (\$1,400.00)

Sessions 1&2 Special (\$2,500.00 = \$300 Discount)

Your credit card will be charged based upon your selections above.

Credit Card Type: Visa MasterCard American Express

Cardholder Name: _____

Card Number: _____ Exp. Date: _____

Signature: _____

Hotel Accommodations

The Warwick Hotel
5701 Main Street
Houston, TX 77005
(713) 526-1991



Paradigm has made a special arrangement with the Hyatt Regency Bethesda for accommodations. In order to receive the group rate, callers must identify their affiliation with Paradigm Strategy Group, Inc.. Rates cannot be changed at check-in or checkout for guests who failed to identify their affiliation at the time the reservation is made. The reserved block of rooms will be held through the cut-off date of February 20, 2003. Reservation requests after the cut-off date will be honored on a space-and-rate availability basis. Should a reservation not be canceled by 4:00PM Central Standard Time, or should an individual fail to check into the hotel on the specified arrival date, there will be a charge of one night's room and tax applied their credit card.

Contact Paradigm (you may register via these contacts)

Phone: 866.637.1092
Fax: 203.637.5927
E-mail: info@paradigmtraining.com
Website: www.paradigmtraining.com

Cancellation Policy

Should you be unable to attend, a substitute participant from within you company is welcome at no extra charge. For cancellations received in writing (letter of facsimile), 30 days or more prior to the program, we will make a prompt refund less an administrative charge of \$100. We regret that no refunds can be made for cancellations received within 30 days of the program start date.



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