

# BIBF

مَعهد البَحْرين للذَّراسات المَصْرِفيَّة والماليَّة

Shaping tomorrow's financial leaders today

## ADVANCED RISK MANAGEMENT

*April 19 -22, 2010*



# ADVANCED RISK MANAGEMENT

## COURSE BACKGROUND

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As capital markets become increasingly integrated, shocks transmit easily from one market to another. This has led to a market environment that is increasingly volatile. The proliferation of new derivatives instruments with complex features has led to enhanced investment opportunities but they have also served to increase the volatility and risk of the market environment. The current credit crisis, the increasing volatility of financial markets and a changing regulatory landscape has made Risk Management a critical task. Increasingly it is important to accurately define, measure and manage all forms of financial exposures impacting a bank's on and off balance sheet items.

Advanced Risk Management provides the practicing professional with an overview of the credit crisis, the institutions at the center of the crisis and the latest risk management techniques and models for measuring and managing interest rate risk, equity risk, currency risk, derivatives risk, credit risk and portfolio risk. Methods for assessing and measuring risk using Value at Risk [VAR] and methods for assessing credit risk using CreditMetrics™ is covered in this program. The Basel Committee recommendations on risk management are extensively discussed in the program.

The philosophy behind this course is that the best way to understand theory is to apply it. The focus throughout the course is on understanding theoretical principles and then applying it to actual market data using EXCEL. This course provides good background preparation for those who are planning on taking the CFA (Certified Financial Analyst) and Financial Risk Manager (FRM) examinations. The material covered in this program is useful for all three levels of the CFA program.

## TARGET AUDIENCE

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- Risk Managers
- Portfolio Managers, Fund Managers & Money Managers
- Back Office, Audit, Compliance & Control Personnel
- Derivatives Traders/Dealers
- Treasury & Operations Personnel
- Investment Bankers
- Investment and Financial Analysts
- Controllers & Treasurers
- Regulatory and Compliance Personnel
- Candidates seeking the CFA or FRM Certification

## PROGRAM OUTLINE

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### 1. BACKGROUND: THE CREDIT CRISIS OF 2008

- The Underlying Causes of the Crisis
- The Growth of the Derivatives Markets
- Past History of Financial Crises
- Financial Contagion
- Systemic Risk

### 3. FIXED INCOME RISK MANAGEMENT

- Valuation & Risk Management
- Interest Rate Risk of Fixed Income Instruments
- Macaulay Duration, Modified Duration and Effective Duration
- Duration of Complex Structures
- Convexity
- Term Structure Dynamics: Spot Rates & Forward Rates
- Pricing Plain Vanilla Swaps
- Risk of Swaps
- Hedging Interest Rate Risk using Futures
- CASE STUDY: THE ORANGE COUNTY BANKRUPTCY

### 2. INTRODUCTION TO RISK MANAGEMENT

- Financial Institution Balance Sheets: Assets, Liabilities & Equity
- On and Off-Balance Items
- The Banking Book & Trading Book
- Credit Risk, Interest Rate Risk, Equity Risk, FX & Derivatives Risk
- Risk Measures: Duration, Convexity, Beta & Delta
- Operational Risk

### 4. EQUITY RISK MANAGEMENT

- The Two Asset Portfolio Model
- Portfolio Return & Risk for N-Asset portfolios
- Modeling N-Asset Portfolios using Matrix Algebra
- Unconstrained & Constrained Optimization
- Optimization: The Goal Solver Function in Excel
- Optimal Portfolio Proportions
- Hedging Equity Risk Using Index Futures

## 5. VALUE AT RISK (VAR)

- The Basle Proposals on Risk Management
- VAR for FX Positions, Equity Positions, Bond Positions
- Approaches to Measuring VAR
- Local Valuation Approach: The Delta Normal Method
- Full Valuation Approach: Historical Simulation & Monte Carlo Simulation
- Back Testing & Stress Testing
- CASE STUDY: LONG-TERM CAPITAL MANAGEMENT (LTCM)
- CASE STUDY: BARINGS BANK
- CASE STUDY: FANNIE MAE

## 7. DERIVATIVES RISK MANAGEMENT

- First Generation & Second Generation Derivatives
- Option Pricing: The Binomial & Black-Scholes Models
- BMA Regulations on Capital Charges for Option Positions
- Delta Gamma Hedging
- Value at Risk for Option Positions

## 6. CREDIT RISK MANAGEMENT

- The Traditional Approach to Managing Credit Risk
- Ratio Analysis
- Altman's Z Score Model
- Credit Derivative Structures: Credit Default Swaps, Portfolio Default Swaps
- Credit Spread Options, Credit Linked Notes, Total Return Swaps
- Leverage and Credit Derivatives
- Motivation for Using Credit Derivatives
- Credit Linked Instruments & Structured Notes
- The Portfolio Approach to Credit Risk Management
- CreditMetrics™
- CASE STUDY: LEHMAN BROTHERS



## PROFILE OF COURSE PROVIDER

**Sudhakar Raju** currently holds an appointment as *Professor of Finance* at the *Helzberg School of Management* in the United States. For the last three years he taught graduate courses in *Finance* and *Quantitative Methods* at the *Kennedy School* at *Harvard University*. He has a Ph.D. in Finance and a Master's degree in Public Policy which he received from *Harvard University*.

Sudhakar has conducted programs in *Portfolio Modeling*, *Risk Management*, *Derivatives Markets*, as well as review courses for the *Investment Representative Program* and *Chartered Financial Analyst (CFA)* programs in Bahrain, Kuwait and U.A.E. He has been a Consultant to various organizations including the *World Bank*, *United Nations*, *Chicago Board of Trade* and the exotic options desk at *Aquila Energy*. Sudhakar received the *FRM (Financial Risk Manager)* designation in 2003. He is a recipient of the *Missouri Governor's Award for Excellence in University Teaching*. In 2007, he received the Harvard Kennedy School's Teaching Excellence Award.

### Course Details:

Duration : 4 days  
Venue : BIBF  
Fee : BD 500

### For Registration, contact : The Registrar

Tel: +973 17 815555 / 17 815518  
Fax: +973 17729928/17916420/17916444  
Email: registrar@bibf.com Website: www.bibf.com

# ADVANCED RISK MANAGEMENT

## REGISTRATION FORM

APRIL 19 - 22, 2010

Organization Sponsored

Self Sponsored

Name of the participant (s):

1. (Mr/Mrs/Ms): \_\_\_\_\_

First Name

Middle Name

Last Name

Position

Department

Nationality

Tel

Email

2. (Mr/Mrs/Ms): \_\_\_\_\_

First Name

Middle Name

Last Name

Position

Department

Nationality

Tel

Email

3. (Mr/Mrs/Ms): \_\_\_\_\_

First Name

Middle Name

Last Name

Position

Department

Nationality

Tel

Email

Contact Person

(Mr/Mrs/Ms): \_\_\_\_\_

First Name

Middle Name

Last Name

Position: \_\_\_\_\_ Department: \_\_\_\_\_

Organization: \_\_\_\_\_ Nationality: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

Signature & Stamp: \_\_\_\_\_ Date: \_\_\_\_\_

### Methods of Payment

1.  Please find enclosed a cheque for \_\_\_\_\_ made payable to BIBF

2.  Please debit my credit card: Visa  MasterCard

Card No: \_\_\_\_\_ Expiry date: \_\_\_\_\_

Cardholder's name: \_\_\_\_\_ Signature: \_\_\_\_\_

Please forward this form together with course fee to:

The Registrar

The Bahrain Institute of Banking & Finance – BIBF

P.O. Box 20525, Manama, Kingdom of Bahrain.

Tel: +973 17 815555 / 17 815581/ 17 815579 Fax: +973 17729928/17916420

E-mail: infodesk@bibf.com Website: www.bibf.com

**IMPORTANT NOTICE:**

All courses are subject to demand. The Institute reserves the right to cancel or postpone courses at short notice at no loss or liability where, in its absolute discretion, it deems this necessary.

**CANCELLATION AND REFUND OF FEES:**

In the case of cancellations by delegates, fees will only be refunded if a written notice of cancellation is received by the Institute not less than two weeks prior to the commencement of the course/program in question. Course/program fees already paid or invoiced may not be refunded and invoices will be due and payable. Substitute delegates are permitted.

**VISA PROCEDURES:**

GCC nationals and residents do not require a visa for the Kingdom of Bahrain. All others should have an entry visa, which BIBF can arrange. Should you wish that the Institute obtains an entry visa for you, please mail or Fax (+973 17 916420) our Information Desk, a copy of your passport at least 15 days prior to the course/program starting date. Visa costs will be charged to the participant.

**ACCOMMODATION & TRANSPORTATION:**

Hotel accommodation and transportation costs are the participant's own responsibility. Should you wish that the Institute arrange accommodation for you, please Fax (+973 17 916420) our Information Desk or Email [infodesk@bibf.com](mailto:infodesk@bibf.com) for assistance.

## About BIBF

The Bahrain Institute of Banking and Finance (BIBF) has played a critical role in Bahrain's long-term success as the region's leading financial center. Since its inception in 1981, BIBF has been committed to providing the highest levels of training, education and professional development programs to the financial services industry in the Kingdom of Bahrain and the region.

Its breadth of training, education and professional development programs covers all major business disciplines including Accounting; Banking; Insurance; Islamic Finance; IT; Management and Leadership expertise. BIBF also has a major emphasis in Academic and Executive development.

BIBF also has a global touch point with participants having delivered quality programs in regions such as South East Asia, Africa and the Middle East, and taught to over 50 nationalities here at BIBF. Our faculty is highly qualified and of diverse nationalities whose passion is to advance and enrich the human experience.

BIBF enjoys strategic relationships with internationally recognized professional organizations which deliver programs jointly with BIBF. These include the Darden Graduate School of Business, DePaul University, University of Wales, International Compliance Association, Institute of Chartered Accountants in England and Wales, Association of Chartered Certified Accountants, Chartered Institute of Management Accountants, Chartered Insurance Institute, Chartered Management Institute, Chartered Institute of Personnel and Development, and the Institute of Internal Auditors.

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