

1.0 Schedule

1.1 Time

3 days a week for 4 weeks

3:00 - 7:00 PM on first day of each week

2:00 - 6:00 PM on second and third day

1.2 Dates

Week I - 28th, 29th August, 1st September

Week II - 6, 7, 8th September

Week III - 14th, 15th, 16th September

Week IV - 18th, 19th, 20th and 21st September

1.3 Location

Karachi Marriot Hotel

2.0 Learning objectives

Review the Global Association of Risk Professionals Financial Risk Manager syllabus with a special emphasis on Basel II topics at an advance level. The advance level course builds up on the foundation laid down in the two intermediate workshops. It review the topics covered in earlier workshops in more detail, depth and hands on fashion with an emphasis on exam preparation.

Participation in the Advance preparation workshop is only by invitation and indicates that the invited candidate has completed the requirements of the Intermediate workshop and should be able to follow advance materials presented here.

Participants are requested to arrange a personal laptop with a working edition of Microsoft Excel professional.

3.0 Workshop Outline:

Week	Day	Title	Topics
One	One	Advance Statistics	Introduction. Course objectives. Format. Uniform distribution, normal distribution, log normal, beta, gamma and Poisson distributions. Monte Carlo simulations using statistical distributions and their properties. Risk neutral probabilities. Value at Risk, implementation challenges. Parameter estimation, model fitting, hypothesis testing. Price curve and probabilities.
One	Two	Value at Risk Debate	The Nassim Taleb versus Philippe Jorion debate. Historical Simulation, Variance Covariance. Full Valuation versus Delta Normal models. Value at risk for Fixed Income instruments. The duration and convexity adjustment. Cash Flow Mapping. Fat tails.
One	Three	VaR Applications	Value at risk interpretation. Value at risk and economic capital. The VaR to capital charge transformation. Unexpected loss. Extending

			value at risk from market risk to credit risk. A first look at risk budgeting.
Two	Four	The Derivatives Crash Course	Pricing forwards, futures, call, puts, digital, binaries, path dependent (look back, knock in, knock out), shout, contingent premium and chooser options. Pay off profiles for options. Option strategies. Currency options versus equity options.
Two	Five	A simple Monte Carlo model	Building a simple Monte Carlo model and pricing a European call and put option. Extending the model to price Asians, Look Back and Path dependent options.
Two	Six	Interest Rate Derivatives	Pricing Interest Rate Swaps, Forward Starting Swaps, Forward Rate Agreements, Caps and Floors. Interest rate collars and swap floor parity.
Three	Seven	Credit Risk Modeling	Loss Given Default, Probability of Default Models. Merton's Model - a quick review. Credit Value at Risk. Credit mitigating vehicles and devices. Collateral Management and netting. Creating and tracking loss norms. Using market data for probability of default calculations. Calculating capital charge for credit risk.
Three	Eight	Credit Derivatives and Credit Risk Model Families	Structured credit transactions. Credit derivatives - CDO, CDS, and Total Return Swaps. Special purpose vehicles and Asset Securitization review. Contingent Claims and the KMV Model. JP Morgan's Credit Metrics. CSFB's Credit Risk Model. Credit Risk Models and Back Testing. Internal Risk Rating update.
Three	Nine	Operational Risk.	Operational Risk Concepts. Frequency and Severity Distributions. Op-Value at Risk. Calculation of Capital charge under foundation and advance approaches for Credit and Operational Risk. Correlation between Market, Credit and Operational Risk. Pillar II and Pillar III reporting.
Four	Ten	Integration Issues	Integrating Market, Credit and Operational risk. Capital Allocation and Management. Regulatory Capital versus Dynamic Capital Allocation.
Four	Eleven	Review session	Review of advance topics and questions from earlier sessions
Four	Twelve	Review sessions	Review of advance topics and questions from earlier sessions

4.0 About Alchemy Technologies

Alchemy is an Enterprise Risk advisory firm that has grown annually by more than a hundred percent year-on-year for the last four years. As of the date of this workshop we have picked up two industry and peer awards, conducted more than 35 workshops, employ

25 professionals and in the list of our 35 customers counts the State Bank of Pakistan, the largest life insurance company, the largest reinsurance company, the largest brokerage house, the largest stock exchange, three of the five largest bank treasuries as well as two ten billion dollar regional banks in Dubai and Saudi Arabia. In terms of market share Alchemy customers represent more than 75% of banking and 80% of life insurance assets in Pakistan.

5.0 Facilitator Profile

Jawwad Ahmed Farid

**Fellow Society of Actuaries,
MBA, Columbia Business School,
BCS, FAST ICS**

Chief Executive and Actuary

Alchemy Associates / Alchemy Technologies



Jawwad is the Chief Executive and Actuary at Alchemy Associates, a fast growing boutique risk management and financial advisory firm. He is a Fellow Society of Actuaries, an MBA from Columbia Business School (New York City) and a computer science graduate (FAST ICS). During the last thirteen years, he has worked as a consultant in North America, Pakistan and the United Kingdom with a number of blue chip clients including Hartford Life, Aegon, American General, Goldman Sachs, ING, Manu Life, Safeco, Merrill Lynch, Met Life, Sun America, Nationwide, Phoenix Life, Sumitomo Mitsui Bank, Sun Life of Canada, Pacific Life, AllState, Fidelity Investments, Transamerica, Skandia, GE Financial Assurance, Lincoln National, Ohio National, AXA Equitable, Washington Mutual Bank, Riyadh Bank, and Dubai Islamic Bank. His domestic client list includes State Bank of Pakistan, State Life Insurance Corporation of Pakistan, National Bank of Pakistan, Muslim Commercial Bank, Pakistan Kuwait Investments, Union Bank, Crescent Commercial Bank, Prime Bank, KASB Bank, Shell Pakistan, JSIBL and others.

Jawwad's core areas of expertise include Asset/Risk Management, Investments, Contingent liabilities, Product design and development, Derivative instruments, the financial services Middle Office and the Basel Regulatory Frame work. He blends a rare combination of information systems, international standards, business and product development skill set side by side with his actuarial expertise. Some of his assignments include:

- ❖ Design, development, marketing and deployment of an Enterprise Risk Management product that complies with domestic central bank's Market Risk Capital as well as Basel (BIS) Risk Capital requirements for regional markets as per the 1996 amendments to the Capital Accord and the Basel II Guidelines as per the Revised Framework for Market, Credit and Operational Risk Capital. The product is now **live at three midsize** banks in Pakistan, has been exhibited at multiple regional technology shows and has won two industry awards.
- ❖ Appointed actuary for the largest life insurance company in Pakistan with more than two billion dollars in assets under management, six million covered lives and branch network in Middle East and Pakistan.

Responsibilities include oversight for valuation, regulatory reporting, investment policy, product development and portfolio management.

- ❖ Middle Office Risk assessment, model validation, the central bank's risk management framework and Basel II gap analysis for a number of domestic banks and treasuries in Pakistan with balance sheets ranging from five hundred million dollars to five billion dollars.
- ❖ Design and conduct thirty five workshops on Basel II, Derivative Pricing, Risk Management, Market Risk Management, Interest Rate Derivatives, Currency Options, Portfolio Optimization and Interest Rate Modeling. Participants have included 700 plus senior banking and treasury professionals from client institutions in Pakistan, Saudi Arabia and UAE, with 750 logged instruction hours and an average score of 4 out of 5 on learning experience, facilitator knowledge, communication and market relevance.
- ❖ Risk management and pricing consultations on Interest Rate Swaps, Interest Rate Caps and currency options transactions in the Pakistan to both payer and receiver counter parties.
- ❖ Comprehensive analysis & extension of risk exposure measurement & management system for the hedge fund margin lending business of a bulge bracket investment bank and brokerage institution in Western Europe.
- ❖ Review of capital adequacy rules and framework for insurance and reinsurance organizations in a financial services free zone in the Middle East.
- ❖ Value added actuarial advisory services for employee benefit plans, life insurance companies and M&A transactions.
- ❖ Initial feasibilities, projections, evaluation and business plans for traditional and micro pensions, micro insurance, low income housing finance, interest rate options, inflation indexed products, equity indexed products, foreign exchange, lifestyle ideas, mutual funds and insurance distribution solutions as well as their presentation in front of representatives of Multi-lateral Donor agency, project sponsors and boards of directors.
- ❖ The launch of 100 plus tax advantaged savings products across 6 broker dealers, banks and 25 insurance carriers in 10 months in North America on a platform averaging 30,000 transactions per month with an average transaction volume of one billion dollars a month.

For more information, please contact

Jawwad Farid / Mujtaba Iqbal at:

Alchemy Technologies (Pvt.) Ltd.

103 - 104, 1st Floor, Amber Estate, Main Shara e Faisal, Karachi, Pakistan

Phone: 455 64 31 / 47 / 52

Cell: +92300 251 9368

Email: jawwad@alchemy.com, Mujtaba@alchemy.com

Web: www.alchemy.com