

The Risk and Derivative Pricing 4 x 4 crash course

4 Saturdays across **4** weeks

2 days of risk and pricing foundations

2 days of applied derivative pricing

24 hours of instruction, **2** capstone cases

(The Alchemy Campus, Karachi,
17TH, 24TH, 31ST October & 7th November 2009)

The Risk and Derivative pricing 4 x 4 crash course

1.0 Learning objectives

Risk management and derivative pricing concepts are closely interlinked. As practitioners in the local market we come across a wide range of issues that sit at the intersection of both subjects. A first of its kind event, the 4 x 4 workshop format compresses the content of a semester long course across 4 Saturdays. An integrated skill building exercise that is aimed at professionals who deal with pricing, valuation, risk, policy and reporting issues related to structured fixed income and foreign exchange transactions in Pakistan.

At the end of this workshop you will be able to:

- a) Understand the basis behind pricing and valuation models for both exotic and vanilla fixed income and foreign exchange transactions.
- b) Optimize risk and pricing frameworks using quantitative and behavioral trends.
- c) Review risk policy documents for effectiveness and impact.
- d) Use risk management tools such as Value at Risk within your limit management framework.
- e) Read, utilize and present risk reports with the same confidence as a quant.

2.0 Workshop schedule and Location

The Alchemy Campus and Labs at 166 Block 7/8, KMCHS, Karachi

09:00 am – 09:15 pm – Registration, feedback & networking

09:15 am – 11:15 am – First Session

11:15 am – 11:30 am – Tea break

11:30 am – 01:30 pm – Second Session

01:30 pm – 02:30 pm – Lunch break

02:30 pm – 04:30 pm – Third Session

3.0 Workshop level

Intermediate and advance users only. In addition to comfort with basic mathematics, numbers and excel some familiarity with local structures and products is also required.

All participants are requested to arrange Laptops with a functional version of Microsoft Excel. A limited number of laptops are available for rental on a first come first serve basis.

4.0 About Alchemy Technologies

Alchemy is a leading regional Enterprise Risk advisory firm. As of the date of this workshop we have picked up three industry and peer awards and conducted more than 65 workshops in the areas of pricing, valuation, risk management and Basel II reporting. Our product portfolio include risk based technology solutions for treasury management, probability of default

modeling, Basel II reporting, Asset Liability Management, Stress Testing, and Financial Institution Limit Allocation.

Alchemy Risk Manager, our Basel II compliant enterprise risk solution has been implemented at five client sites in Pakistan. Our international partners include risk practices in Dubai, Thailand, Vietnam, Cambodia, Laos and Singapore

4.0 Outline

Day	Title	Topics
One	Risk – mindset and core concepts.	<p>Introduction. Course content. Participants, Instructor.</p> <p>Understanding the distribution and linking it to policy and reporting frameworks.</p> <p>Core concepts. Volatility, Correlation, Distributions: uniform, normal and log normal. Monte Carlo simulations, value at risk, duration, convexity and Asset Liability Management.</p> <p>The Black Scholes world and limit management. Basel II and Senior management reporting for Market Risk.</p>
Two	Market Risk and product applications	<p>The Nassim Taleb versus Philippe Jorion debate.</p> <p>Historical Simulation, Variance Covariance. Full Valuation versus Delta Normal models. Value at risk for Fixed Income instruments. The duration and convexity adjustments. Linkages to Greeks.</p> <p>Derivative products – vanilla and exotics. Money market, FX and Equities. Risk Measurement, Hedging of Positions. Delta and Gamma Hedges.</p> <p>VaR for options and derivatives. Value at risk interpretation. Value at risk and economic capital. The VaR to capital charge transformation. Capstone case.</p>
Three	Derivative Pricing – Part I	<p>Basic pricing tools. Closed form solutions. Binary Trees. Monte Carlo simulations. Variations for Foreign Exchange products</p> <p>Pricing exotics and more involved structures.</p>
Four	Derivative Pricing – Part II	<p>Interest Rate Swaps, Caps and Floors.</p> <p>Cross Currency Swaps and variations. Valuation Models, Sensitivity Testing. Broken Periods. Capstone case</p> <p>Review, wrap up and close.</p>

6.0 Facilitator profile



Jawwad Ahmed Farid is a Fellow Society of Actuaries (Chicago), a MBA from Columbia Business School (New York City) and a computer science graduate. During the last sixteen 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 and Washington Mutual Bank.

Jawwad's core areas of expertise include Asset/Risk Management, Investments, Product Development & the Financial Services Back Office. Jawwad blends a rare combination of risk management, information systems, international standards, business and product development skill set side by side with his actuarial expertise. His domestic client list includes State Bank of Pakistan, National Bank of Pakistan, Muslim Commercial Bank, Crescent Commercial (SAMBA), MyBank, Dawood Islamic Bank, KASB Bank, United Bank Limited, Pak-Kuwait Investment, Saudi Pak Commercial Bank, ABN AMRO, State Life Insurance, Dawood Family Takaful, Asia Health Care, Adamjee Insurance, Shell Pakistan, International General Insurance and others.

7.0 Workshop Fee, Restrictions and Cut off dates

12-14 participants only. Course fee is Rupees 80,000 per participant @ 20,000 per day per participant. Fees cover cost of materials, workshop facilities, lunch and three teas.

To avoid disappointments, please ensure that your nomination and payments have been received before 12:00 noon Wednesday, 14th October 2009. Please make all payments payable to Alchemy Technologies Pvt. Ltd.

For more information, please contact
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