PEAKS2TAILS

BOOTCAMP IN MARKET RISK

EXCEL & PYTHON

PEAKS2TAILS

OUR TRAINEES WORK IN

- Consulting
- Investment Banks
- Rating Agencies

PEAKS2TAILS

ABOUT US

Peak2tails LLP is a distinguished risk training and consulting firm founded in 2019, dedicated to providing comprehensive services to individuals and corporations. With a core focus on risk management, Peak2tails LLP was established by industry experts Satypriya Ojha and Karan Aggarwal, both of whom are **highly qualified FRM** (Financial Risk Manager) and **CQF** (Certificate in Quantitative Finance) **professionals**. The firm specializes in simplifying complex quantitative concepts through user-friendly spreadsheet models, offering a unique value proposition to its clients.

SERVICES

Risk Training:

Peak2tails LLP is renowned for its exceptional risk training programs, catering to professionals seeking to enhance their expertise in areas such as Market Risk, Credit Risk, Data Science, and other quantitative disciplines. Having successfully trained over 1000 professionals, our training courses provide practical knowledge and skills, enabling participants to navigate challenging risk environments effectively.

Risk Consulting:

On the corporate front, Peak2tails LLP specializes in risk consulting projects, particularly focused on Credit Risk & Market Risk for banks & non-banking financial companies (NBFCs). With extensive experience in handling diverse consulting engagements, we collaborate closely with our clients to develop tailored risk management strategies, optimize processes, & ensure regulatory compliance. Our unique approach of simplifying quantitative concepts using spreadsheet models helps clients grasp complex risk frameworks effortlessly.

Unique Selling Proposition (USP):

Simplifying Tough Quantitative Concepts:
At Peak2tails LLP, we excel in simplifying tough quantitative concepts through the use of intuitive spreadsheet models. We understand that complex financial and risk concepts can often be challenging to comprehend. Our expertise lies in translating intricate theories into practical models that are easy to understand, enabling our clients to make informed decisions and effectively manage risks.

PEAKS2TAILS

ABOUT THE COURSE

Market Risk and Counterparty Credit risk course is designed to empower you with tools and fundamentals to be able to value derivatives and model risk independently. The course covers FRTB market risk framework and Counterparty Credit Risk calculations in great detail with theory, analytical derivations, spreadsheet and python models for every single concept. Get hands-on modelling experience on some of the key areas such as FRTB-SA, FRTB-IMA, SA-CCR, IMM, xVA, SIMM etc. which are in huge demand today. Distinguish yourself from your peers by showcasing rock solid fundamentals and practical knowledge risk modeling. Although the core focus of this course is to train you on the latest regulatory capital framework, there is a constant emphasis on problem solving and independent thinking to tackle modelling problems throughout the course. Join this course to take advantage of over 140 hours of lecture and get access to a rich repository of Excel and Python models but more importantly be part of the transformative journey.

MODULE 1

PRIMER

Python Basic Libraries	• Data types, CRUD operations • If Else Statements & Loops • Numpy, Pandas, Matplotlib • Seaborn • Cufflinks
Python for Statistics	• Probability and statistics • Multiple Regression • Time Series Analysis • Monte Carlo for Pricing • Monte Carlo for Risk Management
Market Risk Foundations	• Overview of Regulatory Capital • Market Risk Terminology • Expectation & Variance Algebra – Theory & Worked Out Examples • Taylor Series & Sensitivities – Theory & Worked Out Examples

MODULE 2

MARKET RISK REGULATORY CAPITAL (FRTB)

FRTB – standardized approach	• Delta, Vega & Curvature Risk Charge for GIRR, CSR, EQ, FX, Commodity • Jump-to-Default Risk Charge (JTD) • Delta & Curvature Risk charge for an Equity Portfolio (Spot, Forwards, Options) • Vega Risk charge for an IR portfolio (Caps, Swaptions) • Vega Risk charge of Equity Option portfolio • Delta & Curvature Risk charge for an GIRR & CSR for an IR Portfolio (Bonds, Caps) • Delta Risk charge for FX Portfolio (Bonds & Equity Instruments) • JTD capital charge (Equity Forwards, Equity Options, Bonds, Callable Bonds, CDS)

MODULE 2

MARKET RISK REGULATORY CAPITAL (FRTB)

FRTB – simplified standardized app	• Maturity Ladder Framework (Vertical & Horizontal dis-allowance) • Treatment of Options (delta, gamma approach) • Maturity Ladder Method for an IR portfolio (Bond, IRS, Future) • Delta, Vega, Gamma Capital charge for a call option on Bond
FRTB – Advanced Approach (IMA)	• Properties of Risk Measure • Coherent vs Convex • VaR vs ES • ES aggregation framework for IMCC • Calibration to stress period • NMRF and stressed capital • Default Risk Capital • PLAT & Backtesting requirements with derivation • IMCC calculation of an Equity Portfolio • PLAT & Backtesting of Equity Option portfolio

MODULE 3

FRTB MODEL

Stochastic Process	• Brownian Motion • Ito Lemma • Dynamics of spot and forward price • Monte Carlo & Terminal Density
Equity Derivatives	• Forwards & Options & Black Scholes PDE • Option Greeks • Volatility Surface & Calibration • Local Volatility Models (Dupire) • Stochastic volatility models (SABR, Heston)
FX Derivatives	• Forwards, Cross Currency Swaps • FX Option

MODULE 3

FRTB MODEL

Interest Rate Derivatives

- Spot rate, Forward rate, swap rate
- Zero Coupon bond pricing
- FRA, IRS, Floaters pricing & duration
- Caps, Floors, Swaptions (Black-76)
- Equilibrium Term Structure Models (Vasicek, CIR)
- No Arbitrage Term Structure Models

Advanced Sensitivity Computation

- Pricing & Sensitivity by Finite Difference
- Sensitivity by Monte Carlo (Full valuation vs pathwise sensitivity)
- Adjoint automatic differentiation (AAD)
- Custom Library for Sensitivity Computation for Equity, IR, and FX portfolios

MODULE 4

CCR & XVA

Counterparty Credit Risk

- Exposure, Netting, Margin & Collateral
- Quantifying Exposure (EE, EPE, PFE, EEPE)
- Exposure profiles under Netting, Margin, Collateral & Wrong Way Risk
- SA-CCR Framework
- Internal Models Method Framework
- ISDA SIMM Framework
- Uncleared Margin Rules
- EAD modeling under SA-CCR for a sample portfolio
- Initial Margin Calculations (ISDA, SIMM methodology

XVA Toolbox

- CVA, DVA, BCVA
- FVA, MVA, colVA, KVA
- xVA calculation for forwards, swaps & options

CLASSES DETAILS

PEAKS2TAILS

01

Self Paced Sessions

Core conceptual classes available as recordings

02

Live Workshops

Integrated Market Risk case study in a workshop setting spanning across 2 days for 10 hours

03

Weekend Live classes

Regular live classes on topics not covered in self paced sessions.

04

Credit Abhyaas

Case study to understand how three lines of defence aka model development, model validation, model audit communicate with each other.

PEAKS2TAILS

KNOW YOUR TRAINER

SATYAPRIYA OJHA

Satyapriya Ojha is a highly skilled Capital Markets and Risk professional with **12+ years of experience in Regulatory Capital, Valuation and Analytics**.

He is an IIT & IIM graduate and holds FRM charter (top quartile in all subjects of part I & part II) and a distinction from CQF institute. He is an expert in quantitative models used in valuation and risk management . He has worked as a consultant in several regulatory projects for some of the top banks in the US in BASEL III and FRTB space. Currently, he serves as a product owner for a top wealth management firm engaged in quantitative portfolio management for institutional clients.

MODUS OPERANDI

Batch - Jan 2024 Cohort

Every Sunday Live Session-

5:30 pm – 8:00 pm IST

Zoom Meeting

Training Delivery -

Self paced videos

Duration 140 Hrs

DTH player

Examination-

Twice A Year

MODUS OPERANDI FOR CORPORATES

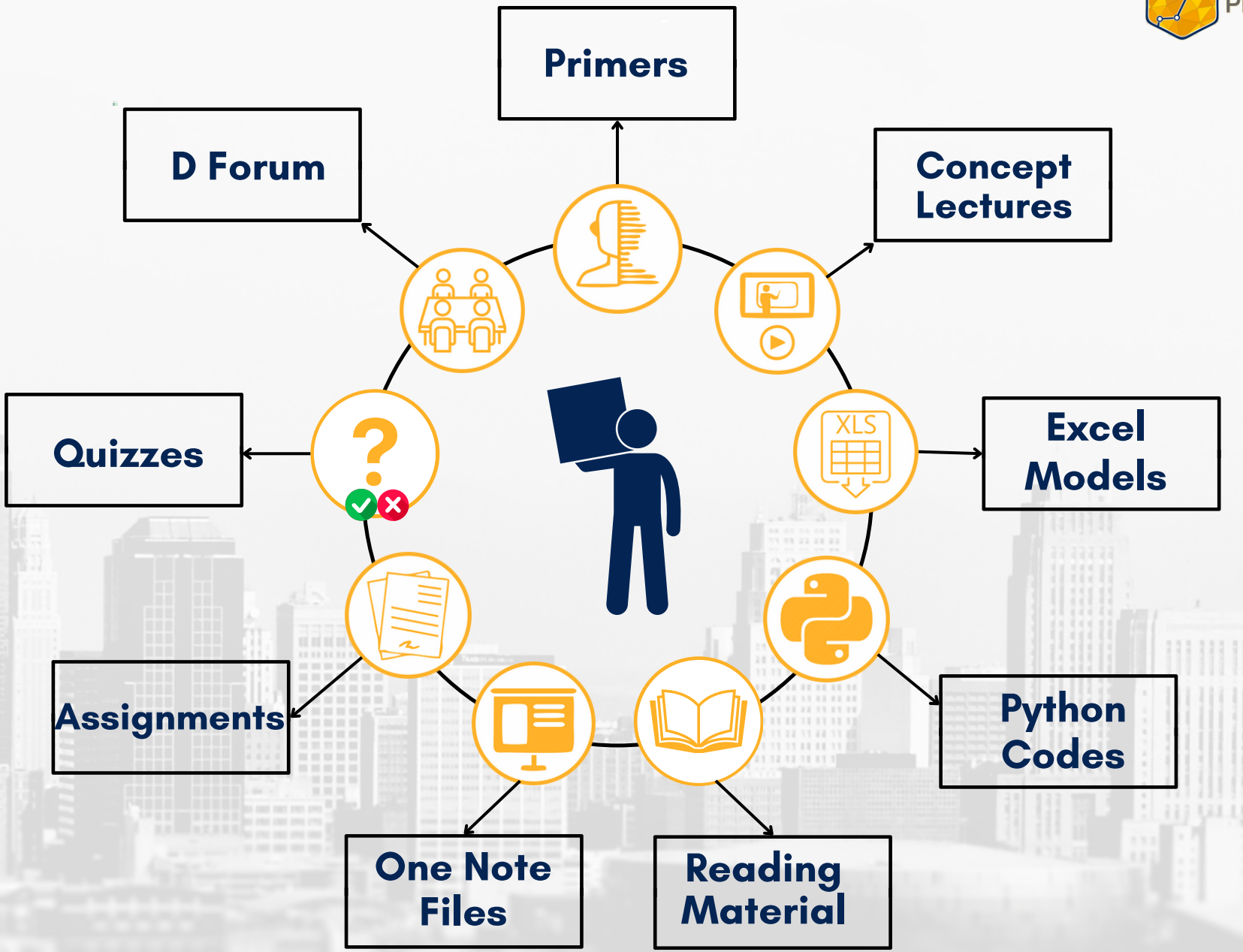
PEAKS2TAILS

Unlimited Doubt Solving Session

Quizzes For Practice

Multiple Licenses with Bulk Discounts

PEAKS2TAILS



PEAKS2TAILS

Training

Solutions

Consulting

Contact us:

86-97-86-97-86

www.peaks2tails.com

karan@peaks2tails.com

FREQUENTLY ASKED QUESTIONS

PREQUISITE

Basic knowledge of maths, stats and excel

CERTIFICATE

On successful completion of assignment and exam

FEES

40,000 For 1 Year Access
48,000 For Lifetime Access

DURATION

140 Hours

MODE

Online

FLEXIBLE TIMING

Flexible Timing