

## **Two-day course on Pricing and Management of Credit risk**

### **USP of the Course:**

- Highly practical, Excel-based course that would teach participants how to price and manage credit risk using Excel
- Focuses on pricing of single obligor risk as well as portfolio credit risk
- Will involve Excel-based simulation exercises for credit risk
- Risk of business cycles on portfolio credit correlation
- Will explain and illustrate economic capital computation – a must for absorbing shocks of unexpected losses
- Also deals with Basel II credit risk capital at length

### **For Whom:**

- **Credit and risk professionals in banks and financial institutions**
- **Controllers of banks and financial institutions**
- **Non-banking finance companies**
- **Financial consultants**
- **Rating agency professionals**
- **Central bankers and regulators who are concerned with risk-based supervision**

### **Course Outline:**

#### **Day – 1 Single obligor credit risk**

1. Understanding of credit risk; components of credit risk – risk of default, exposure at the time of default, and recovery rate. Understanding the bankruptcy process and distribution of assets upon bankruptcy. Collateralised and uncollateralized credit. Rules about enforcement of collateral interests. Senior and subordinated credit. Essentials of pricing of credit risk
2. Financial statement analysis. Significant financial ratios and their understanding. Reading through financial statements.
3. Discriminant analysis – use of regression in discriminant analysis. Altman's Zeta score model. Logit and probit models for understanding credit risk. Derivation of probability of default from logit and probit models.
4. Merton's structural analysis of credit risk. Factors that lead to credit risk – leverage and volatility of assets. Working of Merton's model on Excel. How to get volatility of assets? Construction of Merton's model in case of unlisted companies. Construction of Merton model in cases of asset backed funding. Merton model as a generic tool for understanding and quantification of credit risk.
5. Intensity approach to pricing of credit risk – deriving credit spreads from the market. Derivation of a spread curve and understanding of curve fitting devices. Where to get relevant information about credit spreads.

## Day – 2 Portfolio credit risk

6. Portfolio approach to credit risk – understanding probability of default of obligors and the impact of correlation. What is correlation and what correlation is relevant for credit risk. Deriving correlation information from equity prices, credit spreads, etc. Merton's model and correlation.
7. Impact of correlation in a portfolio – lower tranches of the risk and senior tranches of the risk. Probability distribution of losses in case of portfolio of credit risks. Drawing up probability distribution using Excel. Use of simulations on Excel to draw up probability distribution. **Business cycles and correlation – factoring business cycle risk in portfolio credit risk.**
8. Use of probability distribution of portfolios for computing economic capital. Concept of expected and unexpected losses. Allocation of economic capital and pricing of RARoC.
9. Regulatory capital and credit risk. Basel II requirements of capital relating to credit risk.
10. Introduction to credit derivatives. Single name and portfolio derivatives. Introduction to index trades.