



ICAAP | ILAAP | IRRBB
[100+ hours]

EXCEL + PYTHON

1. Key ALM concepts

- **1.1** Preparing Structural Liquidity Statements (Excel)
- **1.2** LCR NSFR Computation (Excel)
- **1.3** IRRBB NII and EVE Computation (Excel)
- **1.4** ICAAP modelling (Excel)
- **1.5** ILAAP modelling (Excel)
- **1.6** Fund Transfer Pricing concepts (Excel)

2. Funding Risks

- **2.1** SLS preparation (Excel)
- **2.2** LCR computation (Excel)
- **2.3** NSFR computation (Excel)
- **2.4** Leverage ratio computation (Excel)

3. Loss Modelling

- **3.1** NII Computation using Traditional Gap analysis (Excel)
- **3.2** Duration concepts (Excel)
- **3.3** EVE computation using Duration gap analysis (Excel)
- **3.4** IRRBB deep dive – Repricing risk, Yield curve risk, Basis risk, Options risk (Excel)
- **3.5** Credit Spread Risk in the Banking Book (Excel)

4. Behavioural modelling

- **4.1** Statistics and Risk Primer – Regression, Time Series and VaR modelling (Excel)
- **4.2** Modelling Prepayments for amortising loans (Excel) – SMM, Logistic Regression, Cox Regression, Richard Roll Model
- **4.3** Modelling defaults for amortising and bullet facilities (Excel) – Linear Regression
- **4.4** Modelling Transactors, Revolvers and Bouncers for credit cards (Excel) – Average payments, NMD style core volatile split
- **4.5** Modelling utilisations on Credit cards (Excel)- Average utilisation, VaR based utilisation and timing

- **4.6** NMD modelling – Volume, Balance sensitivity, Pass through rate and Decay analysis (Excel) – Moving Average, HP Filter, Regression, VaR, Linear Regression, Threshold Models, Jarrow Ven Deventer Survival analysis, Run off modelling, Static Replicating portfolio, Mortality analysis
- **4.7** Fixed deposit Redemption modelling (Excel) – ERR, Logistic Regression, Cox Regression
- **4.8** Fixed deposit Renewal modelling (Excel) – Average renewals rate, Worst case renewal rate using VaR
- **4.9** Automatic Options Valuations – Bond and Swaption method (Excel) – Prepayment and Redemption
- **4.10** Impact of Behavioural analysis on SLS, IRRBB and FTP
- **4.11** Validation of Behavioural Models

5. ICAAP & ILAAP

- **5.1** RWA computation under Pillar 1
- **5.2** Deep dive into Pillar 2 Risks (Excel)
- **5.3** Scenario designs for ICAAP (Excel)
- **5.4** Scenario design for ILAAP (Excel)
- **5.5** Dynamic Balance sheet preparation
- **5.5** Management action planning for ICAAP & ILAAP (Excel)

6. Derivatives

- **6.1** Hedging Interest rate risk using Linear and Non-Linear Derivatives (Excel)
- **6.2** Hedging FX risk using Linear and Non-Linear Derivatives (Excel)

7. Risk & Performance management

- **7.1** RAROC concepts (Excel)
- **7.2** FTP methods – single pool, double pool, matched maturity method (Excel)
- **7.3** FTP for different products (Excel)

8. Live Workshops

- **8.1** CLEAR OPS – Integrating ICAAP | ILAAP | IRRBB in a single framework
- **8.2** Economic Capital Modelling
- **8.3** Asset Liability Management – Liability Driven Immunization
- **8.3** Pro banker – ALM simulation GAME