

# **Programme on Computing Skills in Debt Market Analytics**

***Focus : Sovereign Debt***

***Target Group***

Officers concerned with debt market instruments

***May 5 – 9, 2008***

## **Gist of Contents**

- ⇒ Statistical Tools . Mean, Standard Deviation, Skewness, Kurtosis, Probability, Normal Distribution
- ⇒ Term Structure Analysis
- ⇒ Risk-Return Analysis
- ⇒ Pricing Mechanism
- ⇒ Yield to Maturity (YTM) Analysis
- ⇒ Price vs. Maturity Analysis . pooled to par property and exception thereof
- ⇒ Horizon Return Analysis . Analysis of return when horizon or holding period is less than term to maturity. Inter-instrument performance assessment with respect to horizon return in different scenarios
- ⇒ Price Sensitivity
- ⇒ Hedging Instruments

Coordinator  
Dr Rituparna Das



**National Institute of Bank Management**

## Programme on

# Computing Skills in Debt Market Analytics

## Focus : Sovereign Debt

Knowledge on debt market analytics is necessary in the phase of deregulation of interest rates as part of financial sector reforms and the resultant volatility in interest rates. It is found that banks, insurance companies, primary dealers and provident funds carry almost 88 per cent of interest rate risk on account of exposure to sovereign debt. It should also be noted that interest rate risk is followed in its wake by liquidity risk as well as crisis in asset liability management. So hedging or taking the opportunity of interest rate volatility with the help of derivative products like interest rate futures with a view to making mark-to-mark gains becomes essential for debt market participants. What they need here is an understanding of the anatomy and evolution of term structure of interest rates as a measure of pure-time-value-of-money, i.e., credit-risk-free interest rate-risk, its influence on the debt instruments in terms of the latter's reaction and sensitivity to the movement in the former and the methods to measure such risk. In the above context NIBM is offering the captioned Programme.

## Objective

The programme aims to develop awareness of debt market risks, its possible impacts on individual instrument and portfolio and how to hedge.

## Contents

- ⇒ Statistical Tools . Mean, Standard Deviation, Skewness, Kurtosis, Probability, Normal Distribution
- ⇒ Term Structure Analysis
  - Genesis of term structure
  - Analysis of different shapes of term structure
- ⇒ Risk-Return Analysis
  - Analysis of volatility of return on individual instrument and portfolio
  - Refinance risk in ALM
  - Reinvestment risk and the debt market
- ⇒ Pricing Mechanism
  - Pricing of traded and non-traded debt instruments
  - Analysis of arbitrage process in the debt market
- ⇒ Yield to Maturity (YTM) Analysis
  - Analysis of YTM on an instrument under different conditions . par, discount and premium
  - Analysis of portfolio YTM
  - Problems with YTM in pricing
- ⇒ Price vs. Maturity Analysis . pooled to par property and exception thereof
- ⇒ Horizon Return Analysis
  - Analysis of return when horizon or holding period is less than term to maturity.
  - Inter-instrument performance assessment with respect to horizon return in different scenarios
- ⇒ Price Sensitivity
  - Duration, PVBP and modified duration
  - Convexity analysis
  - Problems with duration
  - Portfolio management strategies . bullet and barbell strategies
- ⇒ Hedging Instruments
  - Analysis of interest rate swap
  - Analysis of forward rate agreement
  - Analysis of interest rate future

## Methodology

Interactive and practical problem solving sessions.

## For Whom

The Programme is designed for the officers (not necessarily risk specialists) concerned with debt market instruments.

## Programme Coordinator

Dr Rituparna Das

**Rituparna Das** earned Ph.D on Forecasting from the Faculty of Management Studies, National Law University, Jodhpur and Master Degrees in Economics as well as Management from the University of Calcutta. His areas of specialization include Econometric Modeling and Market Risk Management. He is certified in computer operations as well as in teaching in PG and higher level programmes at University level. With versatile research experiences he taught in the reputed B-Schools and Colleges in Kolkata like Indian Institute of Social Welfare and Business Management (IISWBM), Goenka College of Commerce and Business Administration and Bidhannagar Government College in addition to W.B. National University of Juridical Sciences and Faculty of Management Studies, National Law University, Jodhpur. Recently he has conducted programmes like "Risk Management in Investment Portfolio" and "Mastering Computing Skills in Risk Management".

## Programme Dates

May 5 - 9, 2008

The programme will commence at 9.00 am on Monday, May 5 and conclude by the evening of Friday, May 9, 2008. Participants are expected to reach NIBM Campus positively by the evening of May 4 and plan their return journey after 6.00 pm on Friday, May 9, 2008.

## Venue

NIBM Campus, Kondhwe Khurd, Pune, India

## Fees per Participant\*

US \$ 1400 for Foreign Participant

Rs. 23,000 for member or Rs. 25,000 for non-member Indian institutions

The fees cover the cost of tuition, boarding and lodging facilities, programme material, etc. All demand drafts/pay-orders should be made out in favour of ~~National Institute of Bank Management~~ drawn on any bank and payable at Pune. (*\*Service Tax will be charged, if applicable*)

## TDS Exemption

Kindly note that NIBM is exempted under Section 194J of the Income Tax Act, 1961, and hence no tax is deductible at source from any payments made in its favour.

## Hostel Accommodation

The programme is fully residential. Participants will be provided well furnished single room AC accommodation in the Institute's recently renovated hostel complex on the Campus. Participants will not be permitted to bring their family members to stay on the campus.

## Nominations and Enquiries

Please address your enquiries and nominations alongwith the fees to :

Dr Rituparna Das

Programme Coordinator

National Institute of Bank Management

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## Last Date for Receiving Nominations

April 30, 2008