

FIMCIR/2018-19/024

06<sup>th</sup> Dec, 2018

To All FIMMDA Members/ Non Members

Madam / Sir,

**Awareness Programme - Basics of Bond Mathematics & Introduction to Indian Treasury Market on 10<sup>th</sup>-11<sup>th</sup> Jan, 2019**

FIMMDA in co-ordination with Dun & Bradstreet Information Services (India) Pvt Ltd (D&B) is conducting a two-day training programme on "Basics of Bond Mathematics & Introduction to Indian Treasury Markets" **10<sup>th</sup>-11<sup>th</sup> Jan, 2019**

The purpose of the programme is to give the participants a thorough understanding of the Basics of Bond Mathematics including the market practices performing in the various products, in the fixed income and the money markets. The course is also aimed at introducing the participant to the Indian Treasury Markets.

The programme is meant for people who are working in or are about to join the treasury front office, back office and mid office in banks, financial institutions and primary dealers & insurance companies understanding the opportunities and risks involved in the Bond portfolios.

The brief details of the program are as under:

**Program title** : Basics of Bond Mathematics & Introduction to Indian Treasury Market

**Course handled by** : Faculty from D&B

**Course Fee** : Members : Rs 15,000 + 18% (GST) Rs 2,700 =Rs.17,700  
: Non Members : Rs. 18000 + 18% (GST) Rs 3,240=Rs 21,240

**Period** : **10th-11th Jan, 2019 (Thursday & Friday)**

**Timing** : 10.00 am to 05.00 pm including lunch break



Nurturing Markets,  
Widening Horizons

Regd. Office: 2<sup>nd</sup> Flr, United India Bldg, Sir P.M. Marg,  
Next to RBI Amar bldg. - Monetary Museum,  
Fort, Mumbai - 400 001.  
Tel: 022-22690321 - 26  
Fax : 022-22626454

E-mail: [training@fimmda.org](mailto:training@fimmda.org)

**Venue** : FIMMDA  
2<sup>nd</sup> Floor, United India Building,  
Next to RBI Amar Building - Monetary Museum  
P.M. Road, Fort,  
Mumbai - 400 001

**Phone No** : 022-22690326

**Training coordinator:** Akash Surana

**E-mail Id** : [training@fimmda.org](mailto:training@fimmda.org)

Laptops will be provided by FIMMDA

A tentative time - table (Annexure I) of the course is enclosed for your perusal. This is a non - residential course.

Please send your registration forms by mail, mentioning names of candidates you are sponsoring, followed by your detailed letter along with payment. Please attend after receiving our confirmation.

**Due to logistic reasons, we can accept up to a maximum of 20 candidates on first come first serve basis**

Yours faithfully,

D.V.S.S.V Prasad  
Chief Executive Officer

Enclose: Registration Form

Annexure I (Program Schedule for Basics of Bond Mathematics Course)



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## REGISTRATION FORM

**Basics of Bond Mathematics & Introduction to Indian Treasury Market 10th-11th Jan, 2019**

**Organization:**

**Office Address:**

**Telephone Number:**

**Fax Number:**

Name of Participant/Designation	Department	Mobile No	E-mail ID

**AUTHORISED SIGNATORY:** \_\_\_\_\_

**Date:**

**UTR NO:**

**Date:**

Offline	Online	
Cheque /Demand Draft in Favor of "FIMMDA"	Account No	30782076282
	Name of Bank & Address	State Bank Of India Gresham House , Sir P.M. Road, Fort, Mumbai-400001
	IFSC CODE	SBIN0060113

**Payment to be made along with registration form.**

**(Annexure 1)**

**FIXED INCOME MONEY MARKET AND DERIVATIVES ASSOCIATION OF INDIA**

## Bond Mathematics

### Course Structure (Duration - 2 days)

#### **Objectives:**

- To make participants familiar with the concepts of bond mathematics and application of the same in trading and practice
- To explain the theory underlying the pricing and valuation of fixed income securities
- To understand interest rate risk management concepts

#### **Methodology:**

- Presentation and discussion
- Excel exercises wherever required
- Cases and examples

#### **Key Takeaways:**

- To inform participants about fixed income securities markets and trading of fixed income securities
- To discuss the government securities markets in detail
- To understand the concept of time value of money and its applications in bond valuation
- To familiarize how the bonds are valued
- To understand various concepts of yield: current yield, YTM, YTC, Zero Coupon yield
- To discuss interest rate risk management and measurement in bonds through duration and convexity

## **CONTENTS**

### **Day 1**

#### **Introduction to various Treasury Markets and Instruments**

##### **Types of treasury markets – Domestic and Forex treasury**

- Money Market
- Call Money Market, CBLO
- T Bills, CPs and CDs
- Maintenance of statutory reserves – CRR & SLR
- Liquidity Adjustment Facility
- Interbank Repos
  - Types of Repo
  - Transaction Process flow



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- Inflation Linked Bonds
- Strips

### **Government Securities Market**

- Size and Products – Various Types of G Secs. issued
- Auction Mechanism and Role of Primary Dealers
- SLR Securities
- Trading & Settlement systems
- Treasury Operations and Set up
  - Trading Process and Roles of Front, Middle and Back Office
- Rating Agencies
- Role of Rating Agencies
- Corporate Bonds and Spreads over G-sec according to Ratings

### **Fixed Income Mathematics**

- Time Value of Money
- Concept of Yield
  - Current Yield
  - Yield to Maturity
  - Yield to Call
  - Par Yield
- Yield to Maturity
  - Understanding and calculating YTM
  - Limitations of YTM
  - YTM Curve, Par Yield Curve and Zero Coupon Yield Curve
- Understanding Bond Theorems
- Day Count Conventions
- RBI Bond Valuation Guidelines
- Bond Valuation
  - Concept of Bond Valuation
  - Valuation of a plain vanilla bond
- Bond Valuation: Clean and Dirty Prices of bonds
- Important Excel functions used for Bond Valuation and Analytics

### **Bond Exercises**

- STRIPS
- Inflation Index Bonds



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## Day 2

### Macroeconomic Analysis for Treasury Markets

- Understanding macro-economic variables
  - Money Supply and Liquidity indicators
  - Inflation and Inflation expectations
  - Growth and expected growth rates
  - Factors affecting foreign exchange market
  - Purchasing power and Interest Rate parity theories
- Monetary and fiscal policies
  - Growth vs. inflation dilemma
  - Monetary and Fiscal expansionary and contractionary policies
- Yield Curve Types
  - YTM Curve
  - Par Yield Curve
  - Zero Coupon Yield Curve (ZCYC)
  - Forward Curve
- Interpreting the Yield Curve and ZCYC

### With Exercises

### Bond Trading Game (After Lunch)

#### Understanding risks of fixed income securities

- Risks in Bonds Trading
- Understanding Interest Rate Risk Management
  - Macaulay Duration
  - Modified Duration
  - Convexity
  - Applications of Duration and Convexity
  - Price Value of a Basis Point : PVBP
- Bond Portfolios Profile (Risks and Accounting issues)
  - Held To Maturity
  - Available For Sale
  - Held For trading

#### More Practical Examples towards End

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