



NSE Bond Futures II

Interest Rate Futures

16th March 2016

Agenda

Fixed Income Securities

Comparison – Equity Share & Fixed Income Security

Interest Rate – Key Macroeconomic Indicator

Government of India Securities

Yield & Price relationship

PVBP of Bond

Product Offering

Trading in Bond Futures & Hedging

Factors to watch

Participation process

Contract Specifications

Fixed Income Securities

- A fixed income security is an investment that pays regular income in the form of a coupon payment, interest payment or preferred dividend
- The most common fixed-income securities include sovereign bonds, corporate bonds, fixed deposits, provident fund, commercial papers (CPs) and certificates of deposit (CDs)
- An example of a fixed-income security would be a 8% fixed-rate government bond where a Rs. 100 investment would result in an annual Rs.8.00 payment until maturity when the investor would receive the Rs.100 back

Types of Fixed Income Securities

Assets

Instrument	Rate of Interest	Tradable
Government of India Bonds	Fixed	Yes
Corporate Bonds	Fixed	Yes
Fixed Deposits	Fixed	No
Provident Fund	Fixed (Reset periodically)	No
Mutual Fund – (Debt / Liquid Funds)	Linked to government or corporate bonds	Yes

Liabilities

Instrument	Rate of Interest	Tradable
Home Loan	Fixed / Floating	No
Personal Loans	Fixed	No
Credit Cards	Fixed	No

Note: Interest from Fixed Income Securities can be fixed / floating

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	Equity Share	Fixed Income Security
Face Value / Notional Value	Rs. 100	Rs. 100
Dividend/Coupon p.a.	Varies	8% or Rs. 8.00
Maturity Value	No maturity of shares	Rs. 100
Ownership	Offers ownership of company	Debt security is a loan for an issuer

Note: Coupon rate will vary with different issuers and tenors

* Subject to credit risk of issuer

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Interest Rate – Key Macroeconomic Indicator

- **Country**
 - Inflation
 - Manufacturing activity
 - Cost of borrowing
 - Investments
 - Real Estate
 - Economic Growth
 - Financial Markets
- **Corporate**
 - Cost of borrowing
 - Investment and capacity expansion
 - Revenues / Sales
- **Individuals**
 - Inflation
 - Stock and commodities prices
 - Interest on loans
 - Bank deposit rates
 - Provident Fund interest rate
 - Real estate prices
 - Investment in mutual funds

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Government of India Securities

- Central and State government issues long term securities
- It is used to fund the government expenses and cash management
- It carries fixed or floating rate coupons/interest
- Tenor can be up to 40 years

A typical dated fixed coupon Government security contains the following features - coupon, name of the issuer, maturity and face value. For example, 7.59% GS 2026 would mean:

Name of Issuer	: Government of India
Date of Issue	: January 11, 2016
Maturity	: January 11, 2026
Coupon	: 7.59% paid on face value
Coupon Payment Dates	: Half-yearly (August 11 and January 11) every year

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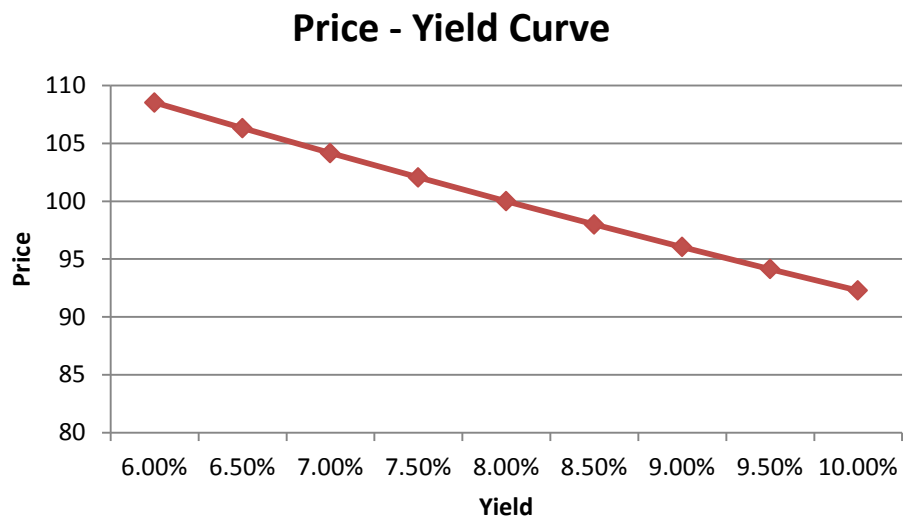
Yield of a bond

- Yield on a security is the implied interest offered by a security over its life, given its current market price.
- It generally indicates return on the investment.
- It consists of
 - Coupon
 - Interest from re-investment of coupons
 - Gain or loss from selling or redeeming the bond

Yield Price Relationship

- Price of the bond and the yield have inverse relationship
- The Yield (discount factor) and price relationship is shown in the following example:
 Par Value = Rs. 100, Coupon = 8.00% s.a., Maturity = 5 years

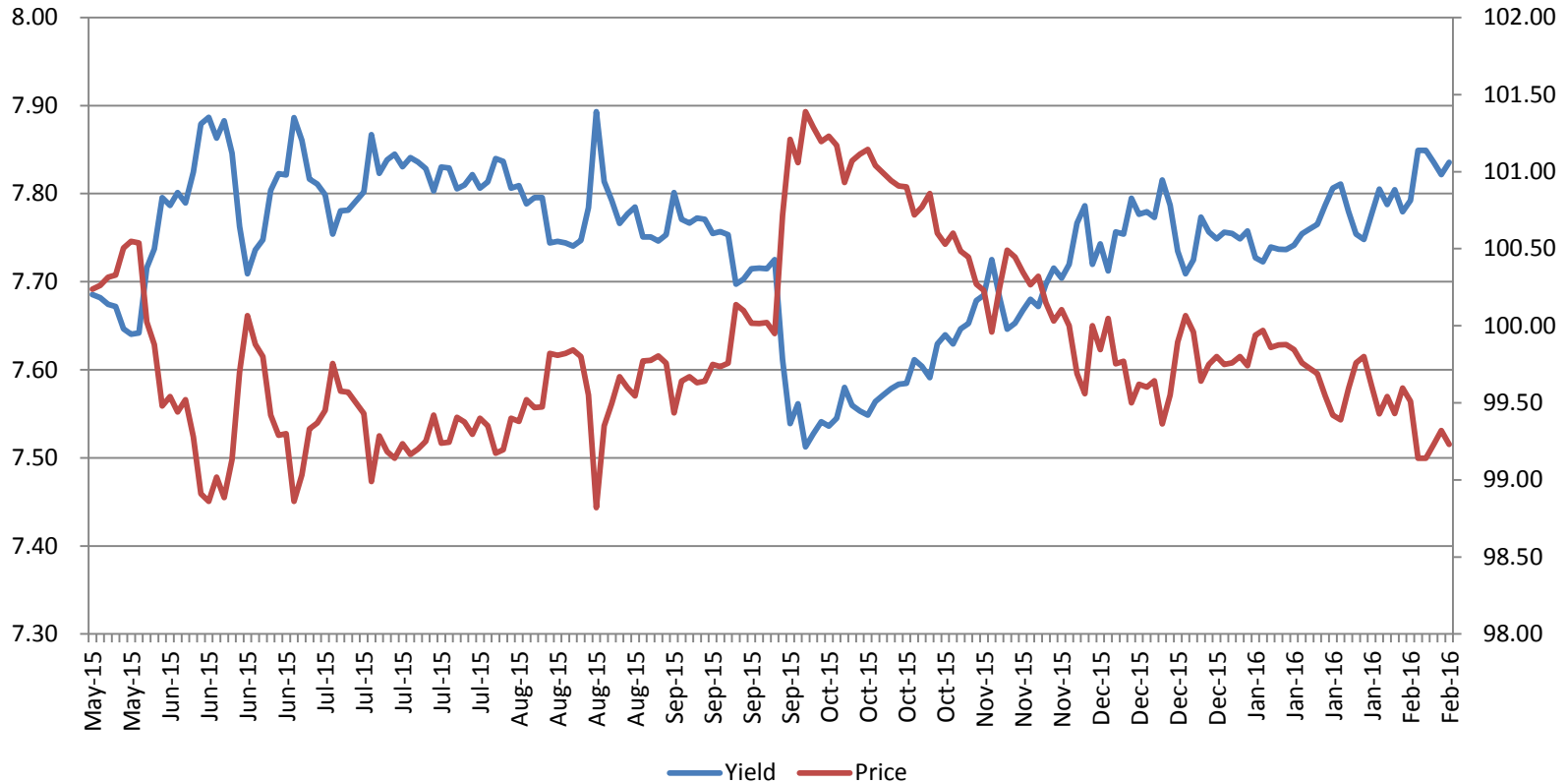
YTM	Bond Price
6.00%	108.53
6.50%	106.32
7.00%	104.16
7.50%	102.05
8.00%	100.00
8.50%	97.99
9.00%	96.04
9.50%	94.14
10.00%	92.28



- It is seen that higher the yield, lower the price and vice-versa
- Assumption, all factors remain constant and only yield changes

Yield Price Relationship

7.72% GS 2025



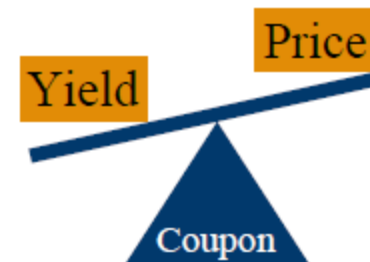
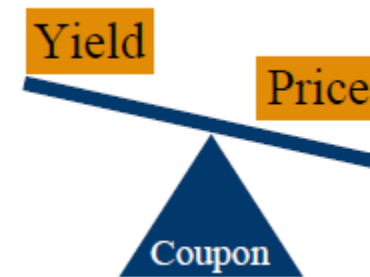
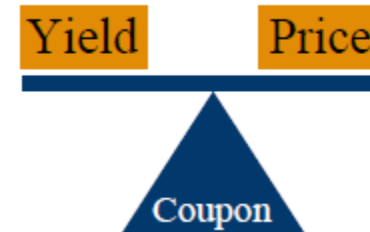
Source: Clearing Corporation of India Ltd. (CCIL)

Yield Price Relationship

- **Bonds at Par value**
 - Coupon equals yield
 - Current Price equals principal amount

- **Bonds at Discount**
 - Coupon less than yield
 - Current Price less than principal amount

- **Bonds at Premium**
 - Coupon greater than yield
 - Current Price greater than principal amount



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PVBP for Bonds

- Price Value of a Basis Point(PVBP) is a measure used to describe how a basis point change in yield affects the price of a bond.
- It shows the Rupee change in price, rather than percentage change

Maturity Bucket	Security Description	Change in Price (Paise) with one basis point move in yield
4-8 Year	8.27% GS 2020	3.67
4-8 Year	7.68% GS 2023	5.74
8-11 Year	8.40% GS 2024	6.16
8-11 Year (off the run)	7.72% GS 2025	6.80
8-11 Year (on the run)	7.59% GS 2026	6.80
11-15 Year	7.59% GS 2029	7.77
11-15 Year	7.88% GS 2030	8.26

- If other factors remain constant, then between two bonds:
 - With same coupon, Longer the maturity - Higher the PVBP
 - With same maturity, Higher the coupon - Higher the PVBP

Note: 1.00% = 100 Basis point

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Product Offering

NSE offers cash settled Interest Rate Futures / bond futures on Government of India Securities (G-Sec.)

Maturity Bucket	Underlying G-Sec.
4-8 Year	8.27% GS 2020
	7.68% GS 2023
8-11 Year	7.59% GS 2026
	7.72% GS 2025
	8.40% GS 2024
11-15 Year	7.59% GS 2029
	7.88% GS 2030

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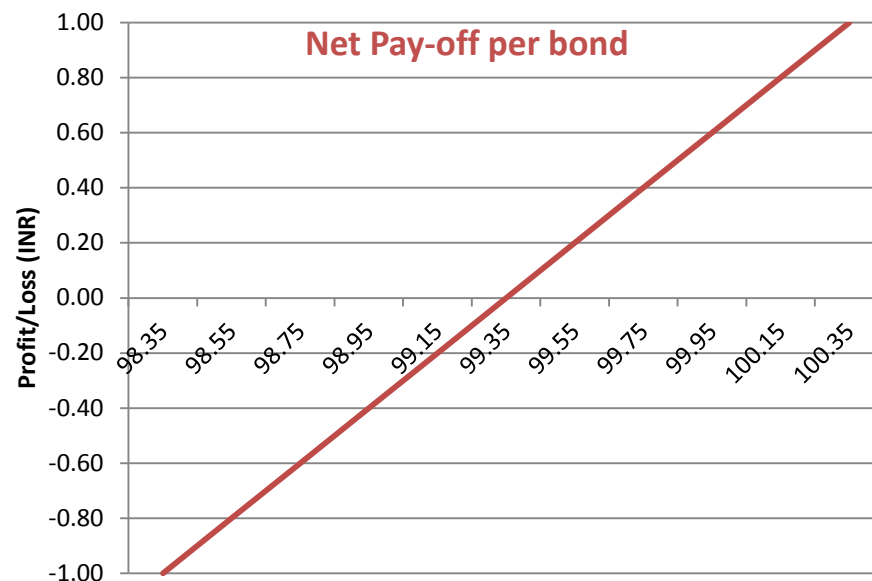
Contract Specifications

Trading in Bond Futures

View: Investor expects a decrease in yield (increase in price) of 7.72% GS 2025 bond

Strategy: Investor will buy bond futures

Underlying Bond	7.72% GS 2025
Futures Contract	
Expiry Date	31 st Dec 2015
Trade Date	14th Dec 2015
Future Price (INR)	99.35
Yield	7.80%
Position	Buy Futures
No. of Lot	1
Total Value (INR)	198,700 (2000*99.60*1)
Margin (2.5% approx.) (INR)	4,968
Trade Date	21st Dec 2015
Scenario 1	
Future Price (INR)	99.75
Yield	7.75%
Trade	Sell Futures
Profit (INR)	800 (99.75-99.35*2000)



Scenario 2	
Future Price (INR)	98.95
Yield	7.85%
Trade	Sell Futures
Loss (INR)	-800 (98.95-99.35*2000)

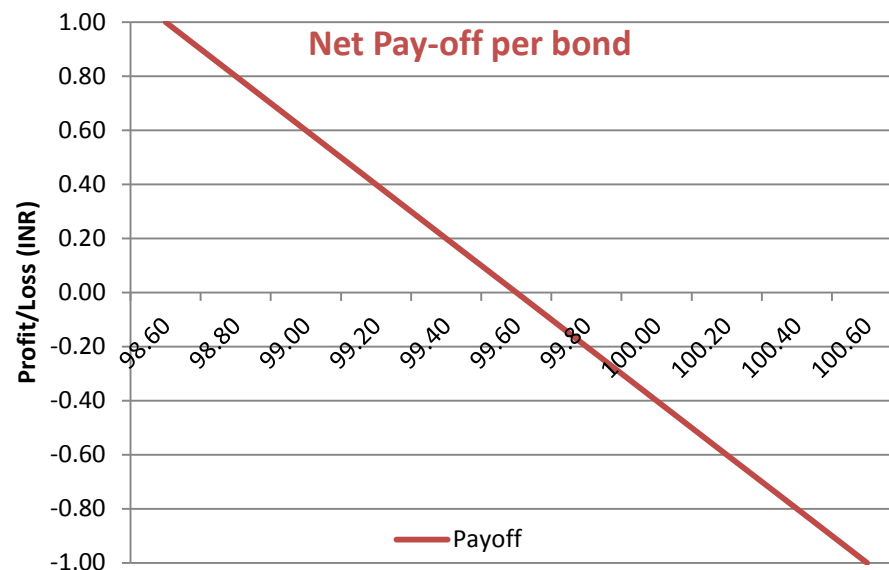
Note: Positions are subject to mark-to-market. Margins can incur cost of funding. It can be funded through FD, units of Mutual funds and other approved securities

Trading in Bond Futures

View: Investor expects an increase in yield (decrease in price) of 7.72% GS 2025 bond

Strategy: Investor will sell bond futures

Underlying Bond	7.72% GS 2025
Futures Contract	
Expiry Date	25 th Feb 2016
Trade Date	19th Jan 2016
Future Price (INR)	99.60
Yield	7.77%
Position	Sell Futures
No. of Lot	1
Total Value (INR)	199,200 (2000*99.60*1)
Margin (2.5% approx.) (INR)	4,980
Trade Date	02nd Feb 2016
Scenario 1	
Future Price (INR)	99.00
Yield	7.85%
Trade	Buy Futures
Profit (INR)	1,200 (99.60-99.00*2000)



Scenario 2	
Future Price (INR)	100.20
Yield	7.69%
Trade	Buy Futures
Loss (INR)	-1,200 (99.60-100.20*2000)

Note: Positions are subject to mark-to-market. Margins can incur cost of funding. It can be funded through FD, units of Mutual funds and other approved securities

Hedging Strategy

View: Investor holds units of debt oriented Mutual Fund (MF). He expects yield will rise and NAV of units will decrease. However, he does not want to redeem the MF units.

Strategy: Investor will hedge with short position in IRF

On Trade Date (19th Jan 2016):

Investment Holding	Assume Debt Oriented MF – 10,000 units @NAV Rs. 13.30
Strategy	Sell Bond Futures 1 lot of 2,000 bonds
Future price of 7.72% 2025 Feb. contract	Rs. 99.60
Yield	7.77%

On 02nd Feb, 2016:

NAV of MF	Rs. 13.10
Future price of 7.72% 2025 Feb. contract	Rs. 99.00
Yield	7.85%
Loss on underlying MF	$10,000 * (13.30 - 13.10) = (\text{Rs. } 2000)$
Profit In NBF-II	$2,000 * (99.60 - 99.00) = \text{Rs. } 1200$
Net Profit / (Loss)	$(\text{Rs. } 800) (-2,000 + 1,200)$

Note: Amount of hedge will depend upon duration of bond and duration of MF units.

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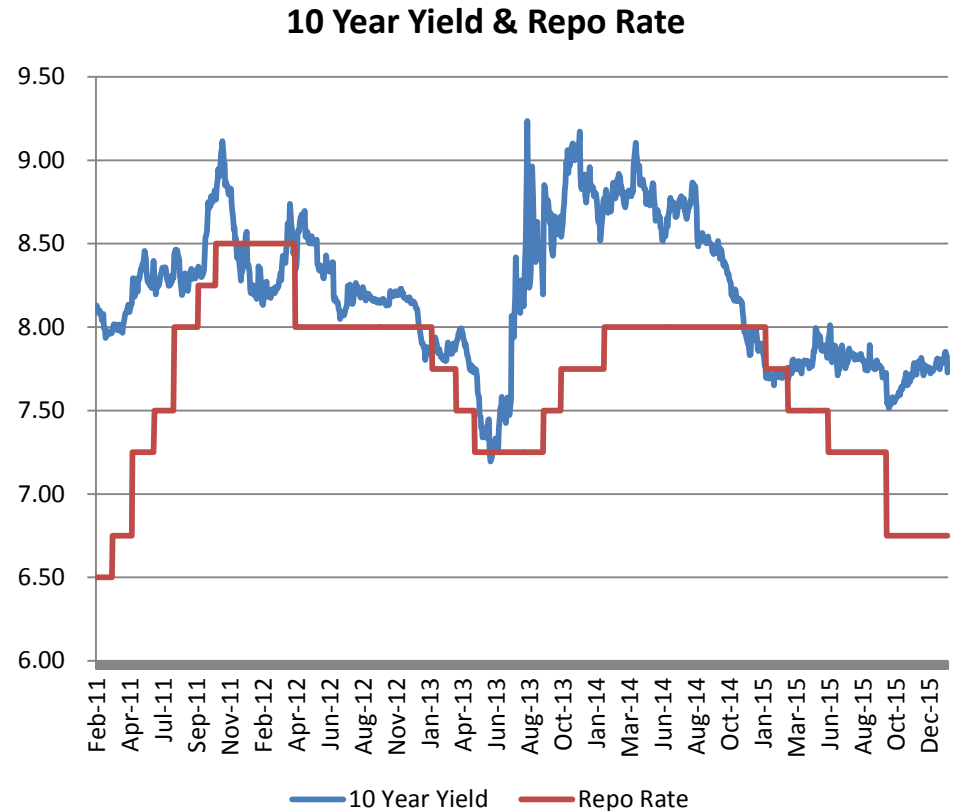
Contract Specifications

Factors to watch

- Economic data
 - Inflation
 - Manufacturing activity
 - Growth rate
- RBI monetary policy Stance
- Government borrowings & auction of securities
- Crude oil price
- FII Activity (Inflows & Outflows)
- Equity markets
- Capital flows
- Global Events
- Interest rates in developed countries
- Commodity prices
- Political & geopolitical events

Interest Rate & Bond Yields

- The interest rates in an economy are directly linked to the Bond yields
- The interest rate in India is set by the Reserve Bank of India (RBI) through repo rate
- Repo rate is the rate at which RBI accepts the deposit from Bank
- Increase in interest rates by RBI could lead to increase in bond yields (decrease in bond price) and vice versa



Inflation & Bond Yields

- The interest rates in an economy are directly linked to the prevailing level of inflation
- RBI increases interest rate (repo rate) to cool down inflation
- High inflation = high interest rate = high bond yield = low bond prices

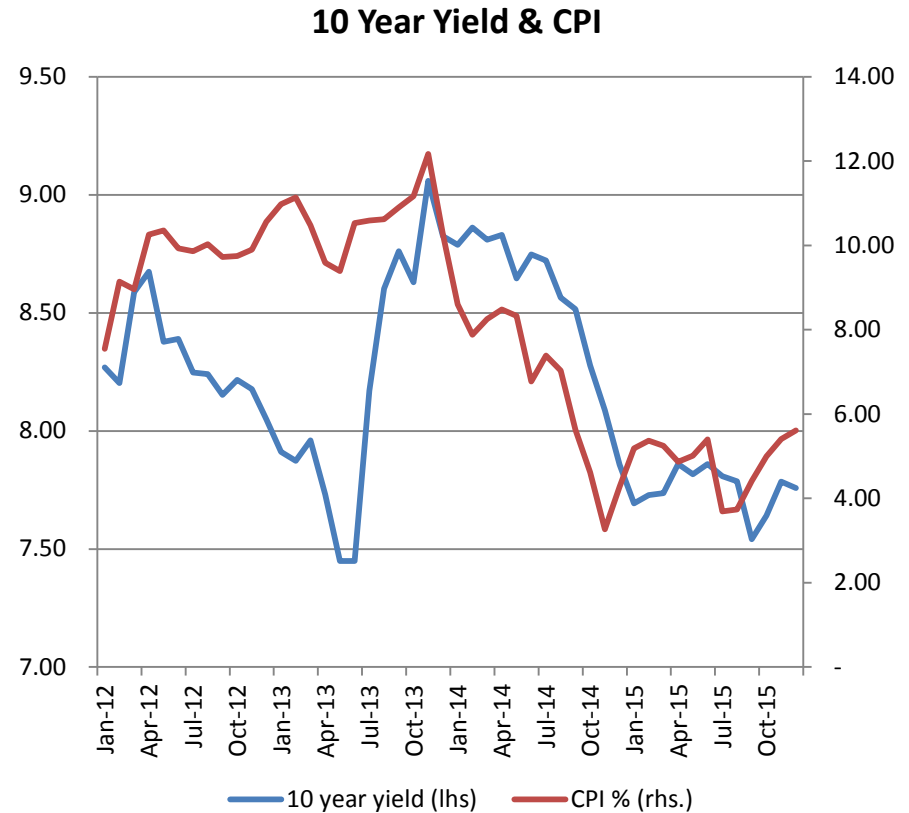


Chart data source: Reuters

Note: Month-end yields considered in the above chart

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Note: Bond Futures (IRF) is under the Currency Derivatives Segment (CDS) of the exchange

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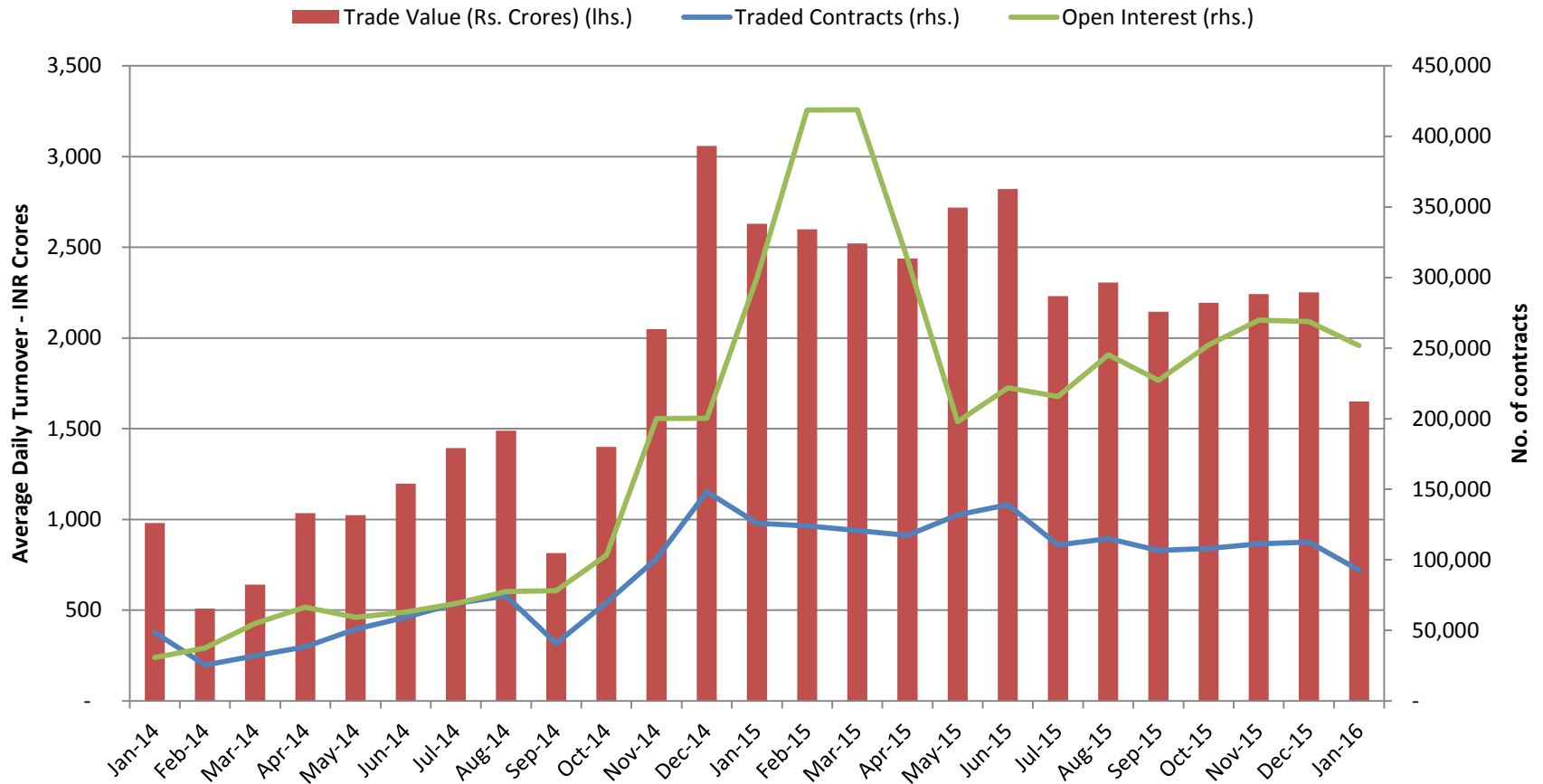
Contract Specifications

Attributes	6 Year	10 Year	13 Year
Underlying	GOI Securities with 4-8 years of residual maturity 8.27% GS 2020 7.68% GS 2023	GOI Securities with 8-11 years of residual maturity 7.59% GS 2026 7.72% GS 2025 8.40% GS 2024	GOI Securities with 11-15 years of residual maturity 7.59% GS 2029 7.88% GS 2030
Unit of Trading	1 Lot - (2000 bonds of FV Rs.200,000)		
Quotation	Price based (derived from underlying Clean Price)		
Contract Value	1 Contract shall be equal to Quoted price * 2000		
Tick Size	Rs.0.0025		
Trading Hours	Monday to Friday: 9:00 a.m. to 5:00 p.m. (<i>aligned with underlying market</i>)		
Trading Cycle	Three serial monthly contracts & three quarter end contracts (Mar, Jun, Sep & Dec)		
Expiry Day	Last Thursday of the month. (Previous day in case of holiday)		
Base Price	Theoretical price of the 1st day of the contract. On all other days, Daily Settlement Price of the contract		
Initial Margin	SPAN Based Margin (Min 1.5%)		
Extreme loss margin	0.5% of the value of the gross open positions		
Position Limit	Higher of 6% of Open Interest or Rs. 200 crores per maturity bucket		

Contract Specifications

Attributes	6 Year	10 Year	13 Year
Price operating range	+/- 3% of the base price. <i>(Whenever a trade in any contract is executed at the highest/lowest price of the band, Exchange may expand the price band for that contract by 0.5% in that direction after 30 minutes after taking into account market trend. Price band may be relaxed only 2 times during the day)</i>		
Daily Settlement	Daily MTM settlement on T+1 in cash based on daily settlement price		
Daily Settlement Price	Volume Weighted Average Futures Price of last half an hour or Theoretical Price		
Final Settlement	Final settlement on T+1 day in cash based on final settlement price		
Final Settlement Price	Last two hours volume weighted average price of the underlying bond. (If less than 5 trades then FIMMDA price shall be used for final settlement)		
Spread Trading	Facility for spread trading. Margin of Rs. 1500 for a one month spread, Rs. 1800 for two month spread, Rs. 2100 for three month spread and Rs. 3000 for greater than 3 month spread.		
Exchange Level Position Limit	Overall open interest in IRF contracts on each underlying shall not exceed 25% of the outstanding of underlying bond.		

NBFII – Average Daily Turnover



Source: NSE

Four decorative starburst graphics, each composed of small dots, are arranged around the text "Thank You". Two are on the left and two are on the right, with one slightly higher than the other on each side.

Thank You

Disclaimer – Information provided in this presentation is for general information purpose only. The final product specification , settlement process and membership related information would be notified through NSE circulars after SEBI approval



Interactive Brokers

The Professional's Gateway to the World's Markets



A Brief Introduction to Interactive Brokers

- Interactive Brokers Group (IBG LLC) equity capital exceeds \$5 billion. IBG LLC is listed on the NASDAQ with stock code IBKR
- Interactive Brokers Group was founded by its Chairman and CEO Thomas Peterffy.
- Our real-time margining system marks all customer positions to market continuously. All orders are credit vetted before being executed and positions in accounts with inadequate margin deposits are liquidated automatically.
- We have reported solidly positive earnings for the past 20 consecutive years.
- Interactive Brokers LLC is rated 'BBB+'; Outlook Stable by Standard & Poor's
- Interactive Brokers (India) Pvt Ltd is a subsidiary of IBG LLC with INR 425 crore in paid up capital and is a member of NSE, BSE and NSDL.
- Interactive Brokers Group is headquartered in Greenwich, Connecticut and has approximately 1000 employees in its offices in the USA, Switzerland, Canada, Hong Kong, UK, Australia, Hungary, Russia, Japan, India, China and Estonia. IB is regulated by the SEC, FINRA, NYSE, FCA and other regulatory agencies around the world.
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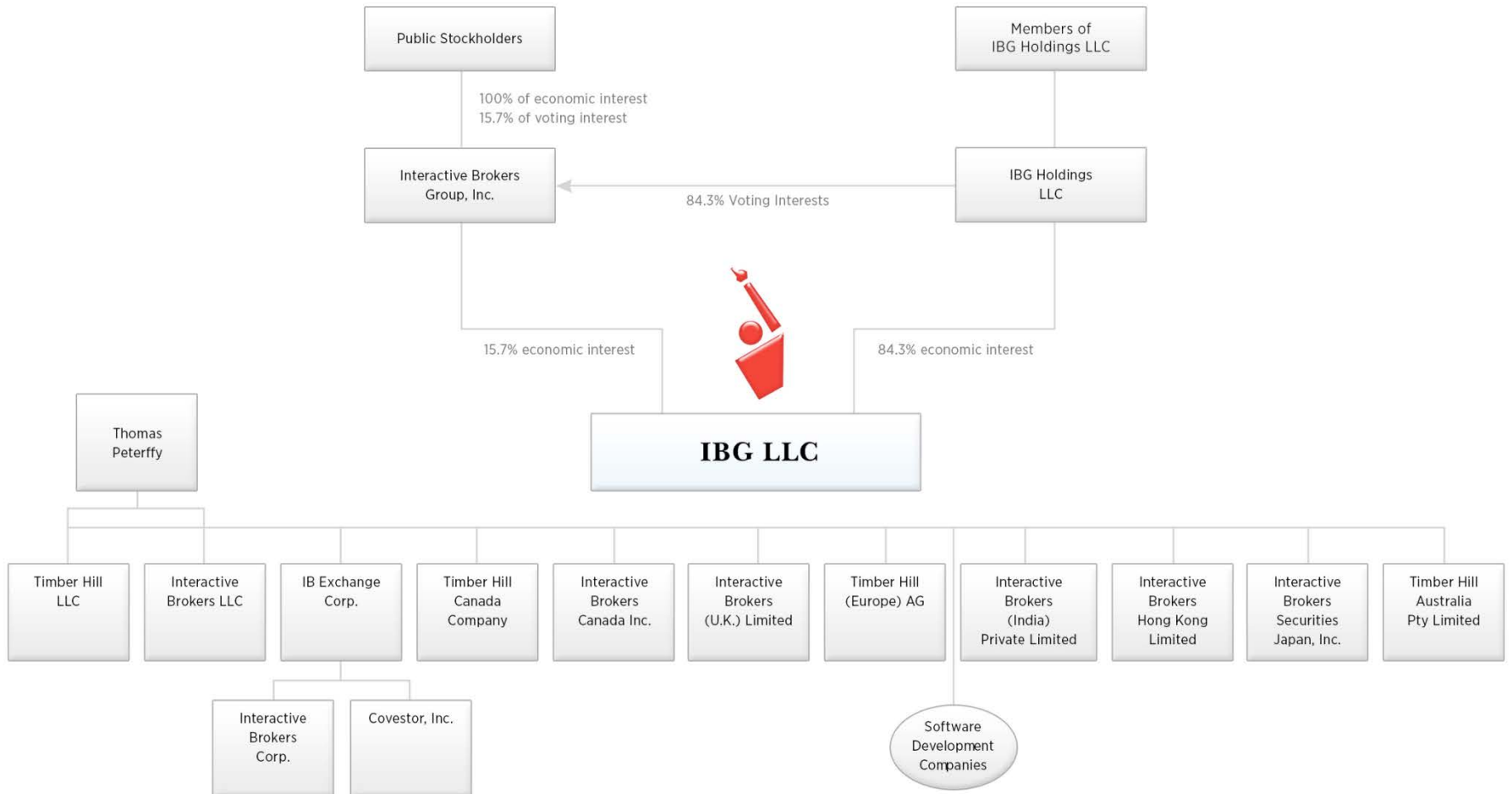


Convert currencies at market determined rates as low as **1/10 of a basis point**, or create a position collateralized by a non-native currency.



Fund your account in multiple currencies. Trade assets denominated in multiple currencies from a single account.

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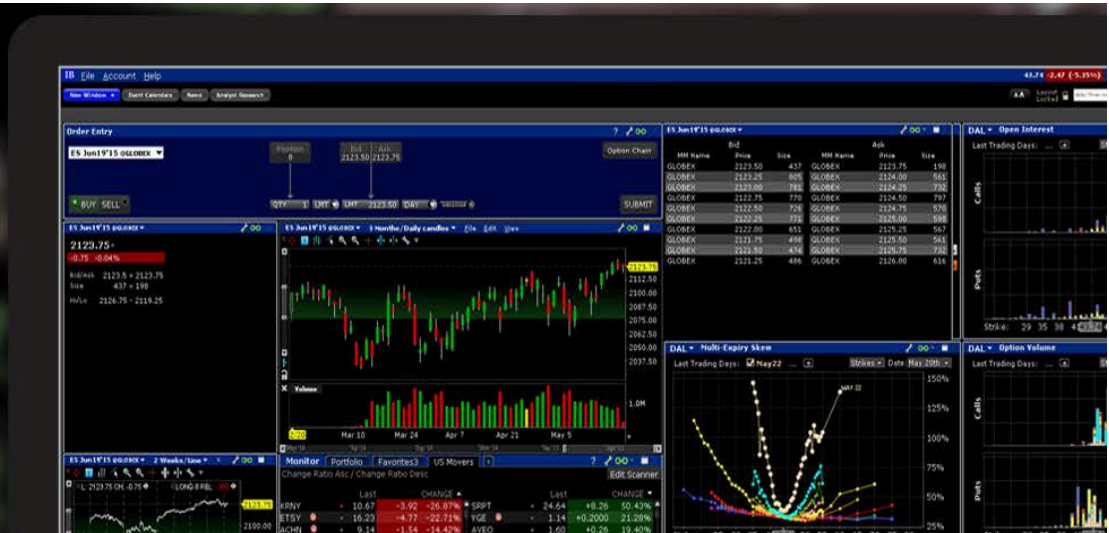
- Our trading platforms have been designed with the professional trader in mind:
- Optimize your trading speed and efficiency with our market maker-designed Trader Workstation (TWS). Easily toggle back and forth between our two interfaces:
 - Mosaic provides out-of-the-box usability in a single, comprehensive and intuitive workspace with quick and easy access to trading, order management and portfolio tools from a single screen.
 - Classic TWS gives you single-click trading in a spreadsheet-like interface, with access to our advanced trading tools in multiple windows.
- Use our HTML-based WebTrader, a clean and simple interface that works from behind a firewall. Easily view market data and research, manage and submit orders, and monitor your order and account activity.
- Use mobileTWS to trade your IB account on-the-go from just about any mobile device, including the iPhone™ and iPad™, Android phone or tablet.
- Alternative access via IB API for automating your trading
- Have a look at our comprehensive set of trading tools : (Chart Trader, Scale Trader, Accumulate Distribute Algorithm, and much more!)

Optimize your trading speed and efficiency with our Trading Platforms



Order types and algos may help limit risk, speed execution, provide price improvement, allow privacy, time the market and simplify the trading process through advanced trading functions.

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IB's Account Management system lets you configure and manage your IB account from a single window and gives you convenient access to these account features:



Reporting



Funding



Account Configuration



Trading



Security



User Access Rights



Customer Service



Account Services



Product	Commissions	Minimum Per Order
NSE Equities	0.05%	INR 30
NSE Futures	0.01%	N/A
NSE Index Options	INR 15 per contract	N/A
NSE Stock Options	INR 25 per contract	N/A

Notes:

1. Intraday closing leg free for NSE stocks/futures. NSE Stocks has a minimum of INR 30 per order.
2. Additional charges of STT, Exchange Charges, Service Tax, and Stamp Duty apply

Product	Commissions	Minimum Per Order
US Equities	USD 0.005 per share	USD 1
Australia Equities	0.08%	AUD 6
Hong Kong Equities	0.08%	HKD 18
Japan Equities	0.08%	JPY 80



REQUIRED MINIMUMS

NSE Account with
Interactive Brokers
(India) Private
Limited

- Minimum initial deposit of USD 2000 in INR
- Minimum monthly commissions of USD 5 in INR
- Minimum liquid net worth requirement of USD 6000 in INR for NSE Stocks and USD 30,000 in INR for NSE Derivatives (Proof documents are required)

Global Trading
Account with
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LLC

- Minimum initial deposit of USD 5000 (For Indian Residents)
- Minimum monthly commissions of USD 10
- Minimum liquid net worth requirements apply based on your age. To know more, visit www.interactivebrokers.com



Process flow of how it works:

Go to IB's website and click on open an account, fill online application

Submit Documents online for global account. For the NSE, our application services group will print and courier the forms for physical signatures

Upon receiving the documents, IB Compliance will review the client application

Once your account is approved, you can fund your account and start trading



Thank You!

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