

# BSE UPDATE – Jan 2015



# Corporate Presentation: Outline



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# Credentials

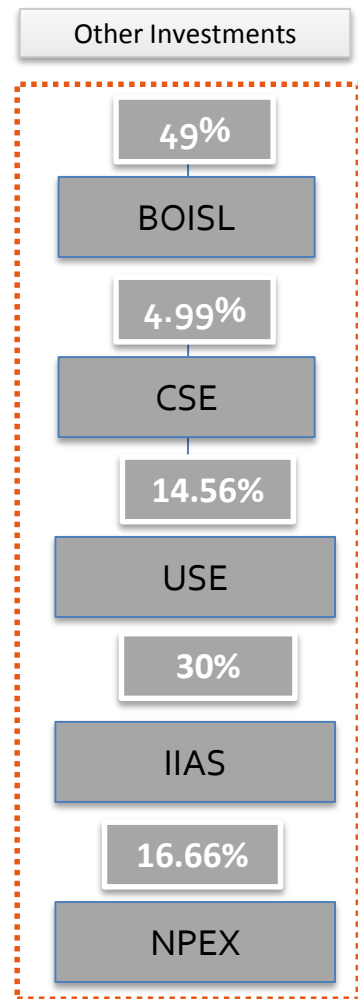
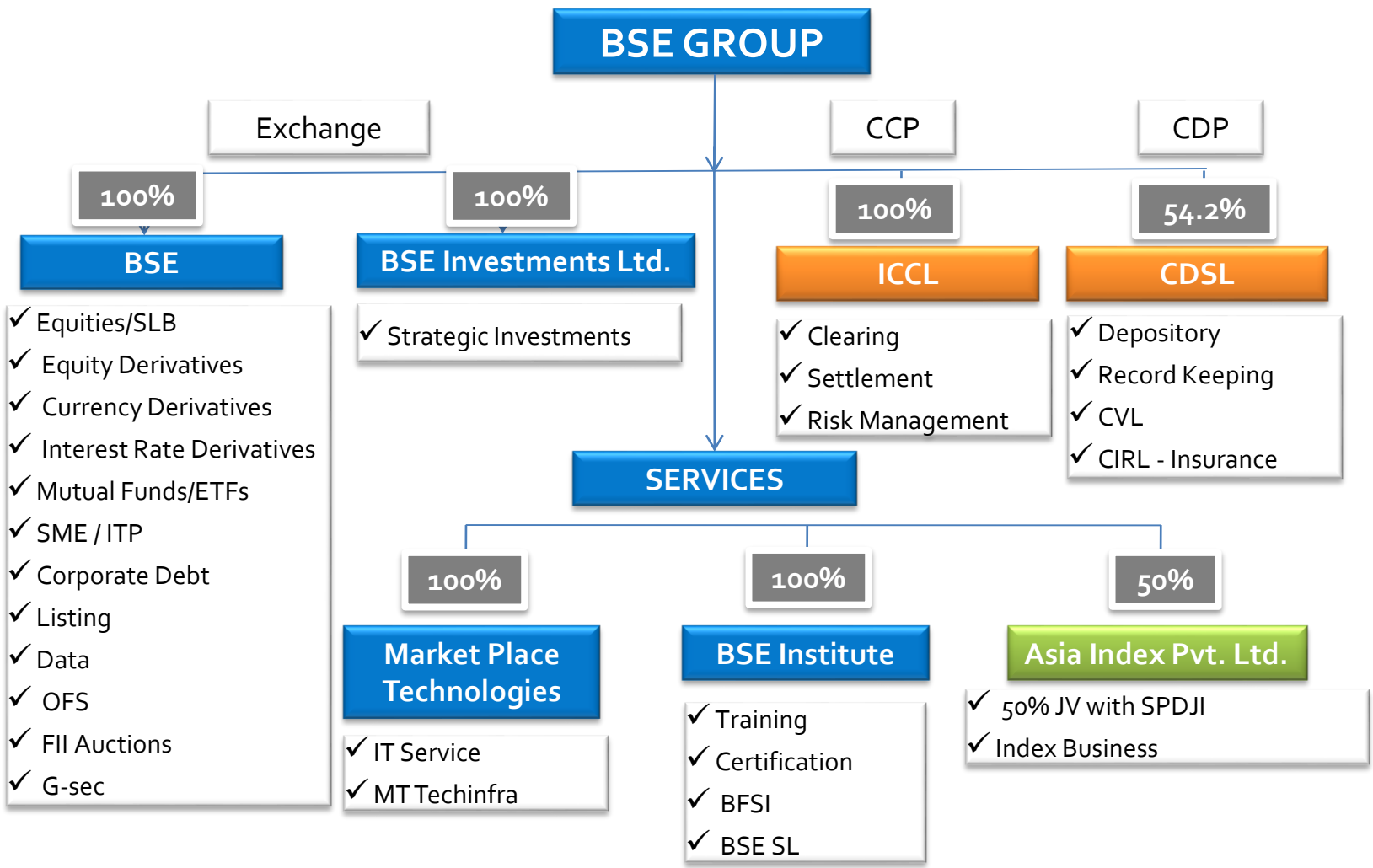
- Largest number of listed companies in the world – 5541 as of 31 Dec'14
- 11th Largest exchange Globally in terms of market capitalization - Over USD 1.61 Trillion \*
- 2nd most liquid exchange globally for Index Options \*
- 9th largest exchange in the world in terms of number of trades in Equity Shares \*
- 2nd largest in the World in terms of number of currency options contracts traded.\*
- 4th largest in the world in terms of number of currency futures contracts traded. \*
- Full bouquet of products including Equity, Equity Derivatives, Currency Derivatives, Interest Rate Derivatives, Debt Products, Security Lending & Borrowing Platform, IPO, SME Platform, Mutual Funds, ETFs and Offer for Sale (OFS).
- Partnership with S&P Dow Jones Indices on Index Products
- Exchange Technology from Deutsche Boerse Group (Eurex Platform)
- Cross listing of benchmark index S&P BSE SENSEX in BRICS countries



# BSE Group



A complete securities eco –system



As of 30<sup>th</sup> Sept 2014

# Continuous Evolution



First Wave (1995)

Migration from open out-cry to online screen-based order driven trading system

Second Wave

Corporatization & Demutualization from an Association of Persons (AOP)

Third Wave (2010)

Transformation to Integrated transaction processing company in the Financial Infrastructure Space

# A Distinguished Board Of Directors



**Mr. S. Ramadorai**

- Chairman
- Public Interest Director



**Mr. Ashishkumar Chauhan**

- Managing Director & CEO



**Mr. Sudhakar Rao**

- Public Interest Director
- Retd. IAS



**Dr. Sanjiv Misra**

- Public Interest Director
- Retd. IAS



**Mr. S. H. Kapadia**

- Mr. S. H. Kapadia
- Retd. Chief Justice of India








**Mr. Thomas Bendixen**

- Shareholder Director



**Mr. Dharendra Swarup**

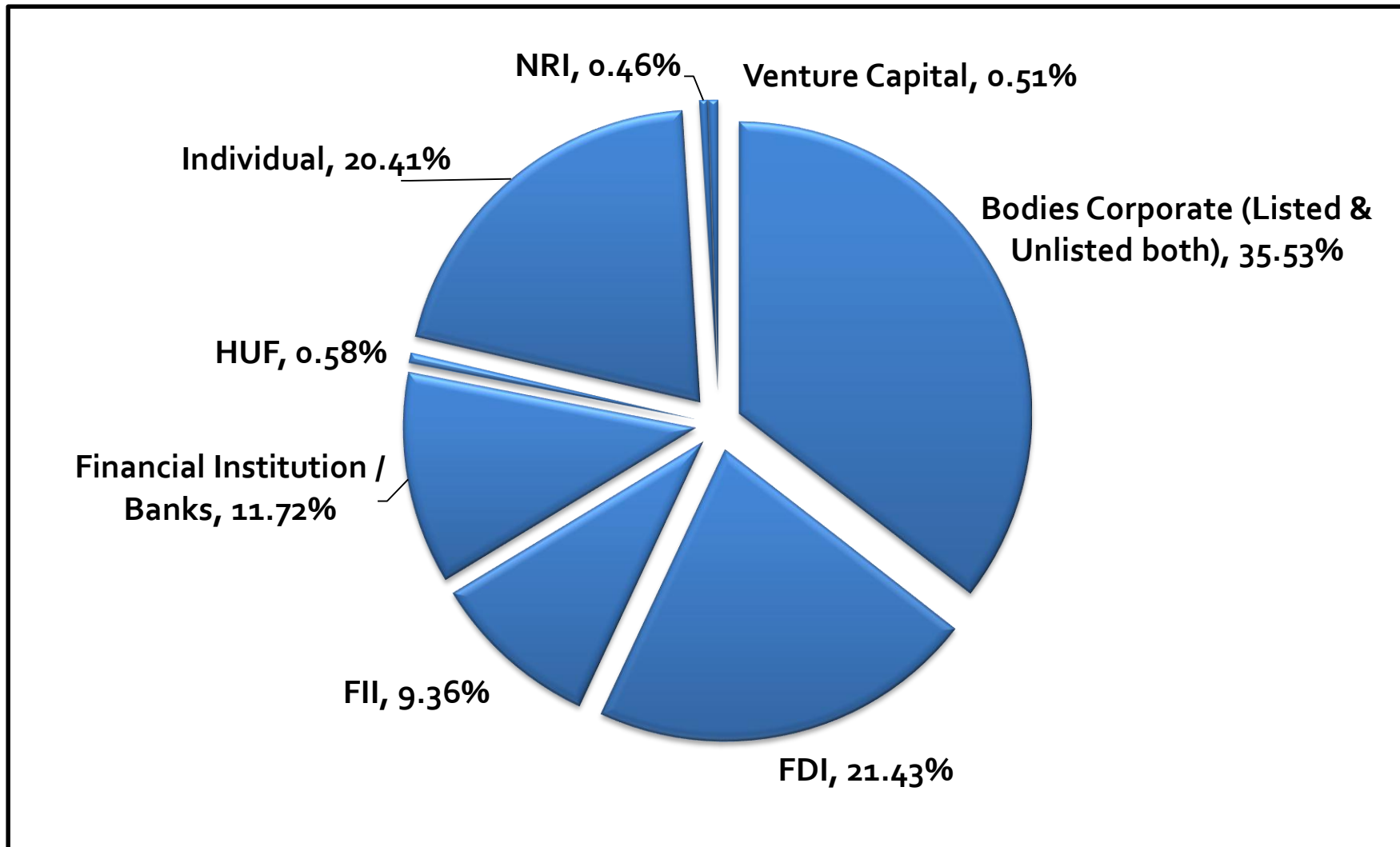
- Public Interest Director

	NAME / TITLE	DESCRIPTION
	<b>Ashishkumar Chauhan</b> Managing Director & Chief Executive Officer	<ul style="list-style-type: none"> <li>Ashishkumar Chauhan - Managing Director and CEO of the Exchange. He is present on the board of group companies including Central Depository Services Limited (CDSL), Indian Clearing Corporation Limited (ICCL), BSE Institute Limited, BSE Investments Limited, Marketplace Technologies Private Limited, and is a member of the Board of Governors of Indian Institute of Information and Technology (IIIT), Jabalpur. He was also ranked amongst the top 50 Chief Information Officer (CIO) by several magazines and institutions between 2005 and 2009 including CIO Magazine US, Information Week, US etc. Prior to joining BSE, Ashish was serving as the President and Group Chief Information Officer (CIO) of Reliance Industries Limited and CEO of India win Sports (owner of Mumbai Indians). He was also one of the key personnel involved in the setting up of National Stock Exchange of India (NSE) and was responsible for setting up the Equity and Derivatives Markets in addition to VSAT technologies for the 1st time in India.</li> <li>He has completed his Bachelor's in Engineering from Indian Institute of Technology, Bombay and Post Graduate studies in business from Indian Institute of Management Calcutta</li> </ul>
	<b>V Balasubramanian</b> Chief Business Officer	<ul style="list-style-type: none"> <li>V Bala - Chief Business Officer heading the business development and operations, comprising Markets, Listings and Market Data division. He is a board member for BSE Institute Ltd., Central Depository Services Limited (CDSL), BOI Shareholding Ltd., Asia Index Private Ltd., CDSL Ventures Ltd. &amp; Futures Industry Association - ASIA. He has close to two decades of experience in the capital markets industry and has previously worked with Reliance Group and as co-founder of Marketplace Technologies.</li> <li>He was part of the core team involved in setting up the National Stock Exchange in 1993 and was involved in roll out of the Capital Market Segment, Creation of NSCCL, Nifty, NCFM and Futures &amp; Options Segment.</li> <li>He has completed his Masters in Commerce from the University of Mumbai and is a Rank holder from the Institute of Cost Accountants of India.</li> </ul>
	<b>Nehal Vora</b> Chief Regulatory Officer	<ul style="list-style-type: none"> <li>Nehal currently heads all the regulatory functions of the exchange which include membership compliance, surveillance, inspection, investigation, regulatory communication, investor services, listing compliance and regulatory legal.</li> <li>He has more than 15 years of experience in the area of legal and compliance. He has previously worked at the Securities and Exchange Board of India (SEBI) for 10 years post which he was a Director, Law &amp; Compliance at DSP Merrill Lynch Ltd heading Broking and Investment banking Compliance</li> <li>He has completed his Bachelors in Commerce from Mumbai University and a Master of Management Studies from Narsee Monjee Institute of Management Studies, University of Mumbai.</li> </ul>
	<b>Nayan Mehta</b> Chief Financial Officer	<ul style="list-style-type: none"> <li>Nayan - CFO at BSE.</li> <li>He has previously worked at Credit Analysis &amp; Research Ltd. (CARE Ratings) as Joint General Manager (Accounts), CFO at Multi Commodity Exchange of India Limited and at the National Stock Exchange</li> <li>He has completed his Chartered Accountancy certification from Institute of Chartered Accountants of India and has a Bachelors in Commerce degree from University of Mumbai</li> </ul>
	<b>Kersi Tavadia</b> Chief Information Officer	<ul style="list-style-type: none"> <li>Kersi - CIO and is responsible for application systems &amp; IT infrastructure development and management.</li> <li>He has over 27 years of experience in the area of Applications / IT development and management and has previously worked with HSBC InvestDirect, Motilal Oswal, IL&amp;FS and most recently as CEO of Marketplace Technologies</li> <li>He is a physics graduate from University of Mumbai and has completed his diploma in Computer Science from Data Matrix. He has also completed Masters in Financial Management from Narsee Monjee Institute of Management Studies (NMIMS)</li> </ul>

AN EXPERIENCED MANAGEMENT TEAM

# Share Holding Pattern as on September,30 2014

Paid up Capital Rs. 10.38 crores | Face Value per share 1/- each





# BSE Products & Services Highlights



# Index Options - Global Liquidity Comparison



YTD 2014, BSE is the 2nd most Liquid exchange Globally for Index Options.

-World Federation of Exchanges (Period: Jan 2014 to Nov 2014)

INDEX OPTIONS		
RANK	EXCHANGE	NO OF CONTRACTS TRADED YTD'14
1	National Stock Exchange India	87,32,00,678
2	<b>BSE India</b>	<b>46,33,97,074</b>
3	Korea Exchange	42,27,07,859
4	EUREX	30,71,14,493
5	TAIFEX	13,45,37,460
6	CME Group	11,71,40,641
7	Tel Aviv SE	4,30,91,363
8	Osaka SE	4,04,57,926
9	Moscow Exchange	3,87,76,989
10	ICE Futures Europe	2,64,97,614

# Equity Trades – Global Exchanges



YTD 2014, BSE is the 9th largest exchange Globally by Number of Equity Trades

-World Federation of Exchanges (Period: Jan 2014 to Nov 2014)

EQUITY TRADES		
RANK	EXCHANGE	NO. OF EQUITY TRADES YTD'14 (USD - Thousands)
1	Mexican Exchange	27,75,196
2	NASDAQ OMX	15,73,837
3	National Stock Exchange India	15,53,909
4	Shenzhen SE	14,52,388
5	NYSE	13,95,183
6	Shanghai SE	12,01,919
7	Korea Exchange	10,33,402
8	Japan Exchange Group - Tokyo	5,77,483
9	<b>BSE India</b>	<b>3,54,117</b>
10	TMX Group	2,43,918

# Market Capitalization Comparison



For Nov 2014, BSE is the 11th largest Exchange Globally by Market Capitalization

World Federation of Exchanges

Market Capitalization		
Rank	Exchange	Market Capitalization Nov 2014 (USD Trillion)
1	NYSE	19.45
2	NASDAQ OMX	7.10
3	Japan Exchange Group - Tokyo	4.42
4	Euronext	3.46
5	Hong Kong Exchanges	3.29
6	Shanghai SE	3.28
7	TMX Group	2.13
8	Shenzhen SE	2.06
9	Deutsche Börse	1.80
10	SIX Swiss Exchange	1.63
11	<b>BSE India</b>	<b>1.61</b>

# Currency Options Comparison



YTD 2014, BSE is the 2nd largest Exchange Globally for Currency Options.

World Federation of Exchanges (Period: Jan 2014 to Nov 2014)

Currency Options		
RANK	EXCHANGE	NO. OF CONTRACTS TRADED YTD'14 (USD MILLIONS)
1	National Stock Exchange India	8,46,10,654
2	<b>BSE India</b>	<b>3,57,98,427</b>
3	Moscow Exchange	2,90,31,155
4	CME Group	1,52,44,919
5	Tel Aviv SE	1,14,61,684
6	Johannesburg SE	95,21,921
7	BM&FBOVESPA	80,38,749
8	MexDer	20,746
9	Borsa Istanbul	224

# Currency Futures Comparison



YTD 2014, BSE is the 4th largest Exchange Globally for Currency Futures.

World Federation of Exchanges (Period: Jan 2014 to Nov 2014)

Currency Futures		
RANK	EXCHANGE	NO. OF CONTRACTS TRADED YTD'14 (USD Millions)
1	Moscow Exchange	62,15,39,582
2	National Stock Exchange India	29,13,27,874
3	CME Group	16,58,53,430
4	<b>BSE India</b>	<b>14,63,30,679</b>
5	BM&FBOVESPA	8,09,16,781
6	Korea Exchange	4,49,52,147
7	Johannesburg SE	2,84,40,874
8	MexDer	1,81,35,028
9	Osaka SE	17,22,718
10	Borsa Istanbul	6,35,401

# Our Products

## Secondary Market

- Equity
- Equity Derivatives
- Currency Derivatives
- Interest Rate Derivatives
- ETFs
- Debt – Corporate Bond and Government Securities.
- Mutual Funds (Close Ended)
- SME / ITP
- Securities Lending and Borrowing

## Primary Market

- IPOs / FPOs and Rights Issues
- Institutional Placement Programme (IPP)
- Reverse Book Building (RBBS)
- Offer For Sale (OFS)
- Mutual Funds (Open Ended)
- Securitized Debt Instruments
- Structured Products
- FII Auctions
- G-sec

# Other Products

**Global indices :**  
Trade in rupee denominated futures

- Hang Seng
- FTSE/JSE Top 40
- MICEX
- Ibovespa

**ETFs**

- Over 36 Exchange Traded Funds
- ETFs accepted as collateral towards trading

**DEBT MARKET PRODUCTS**

- Government Securities
- Corporate Debt
- Structured Products
- Securitized Debt Instruments
- Non Convertible redeemable Preference Shares



# Innovation – Our Key Differentiator



## Easy Market Access

- New Trading Architecture - Eurex T7 Platform
- Co-location + HFT
- Direct Market Access (DMA)
- Smart Order Routing (SOR)
- Low Latency Feeds
- Point of Presence (PoP) (Coming Soon)
- New Membership Drive
- Internet-based exchange hosted trading platform (BOLT Plus on Web)
- Trading via mobile phone

## Product Innovation

- Strategic Partnership with S&P Dow Jones Indices
- Weekly Options on S&P BSE SENSEX & S&P BSE 100 .
- IPO system accessible via APIs
- Liquidity Enhancement Incentives for equity derivatives
- Maker-Taker pricing
- Stock Lending & Borrowing
- Call Auction in pre-open session
- S&P BSE Realized Volatility Index
- IDRs, Rupee-denominated global indices, ETFs
- Listed Mutual Funds – with historical NAV and Exchange SIP
- Direct Access to MF Distributors
- Third-party warrants (In-progress)

## Enhanced Reach

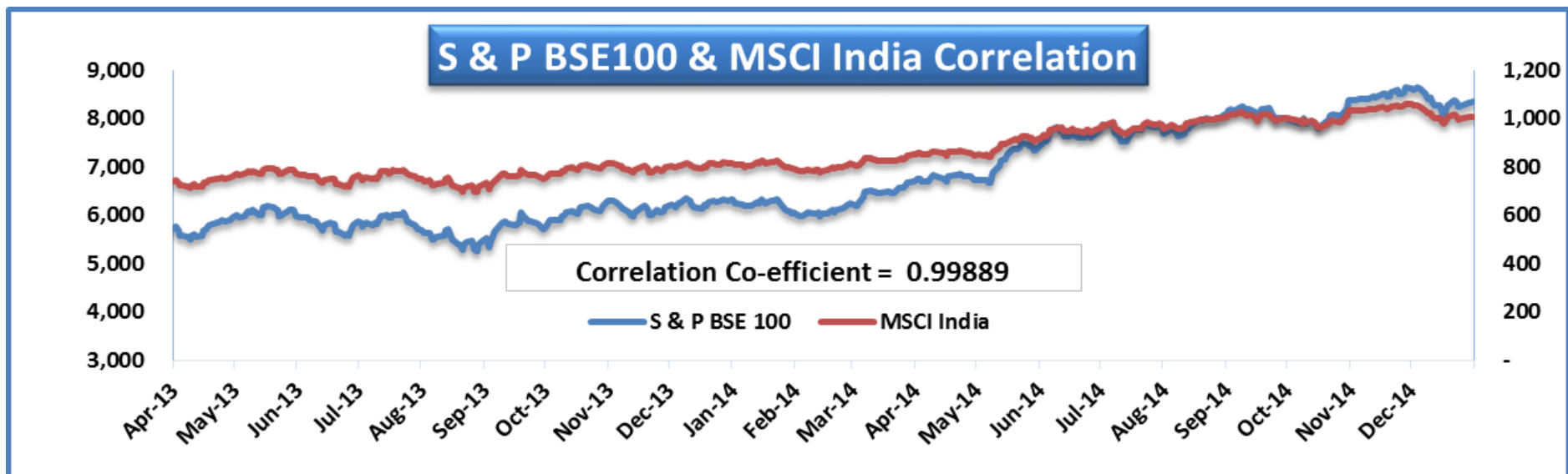
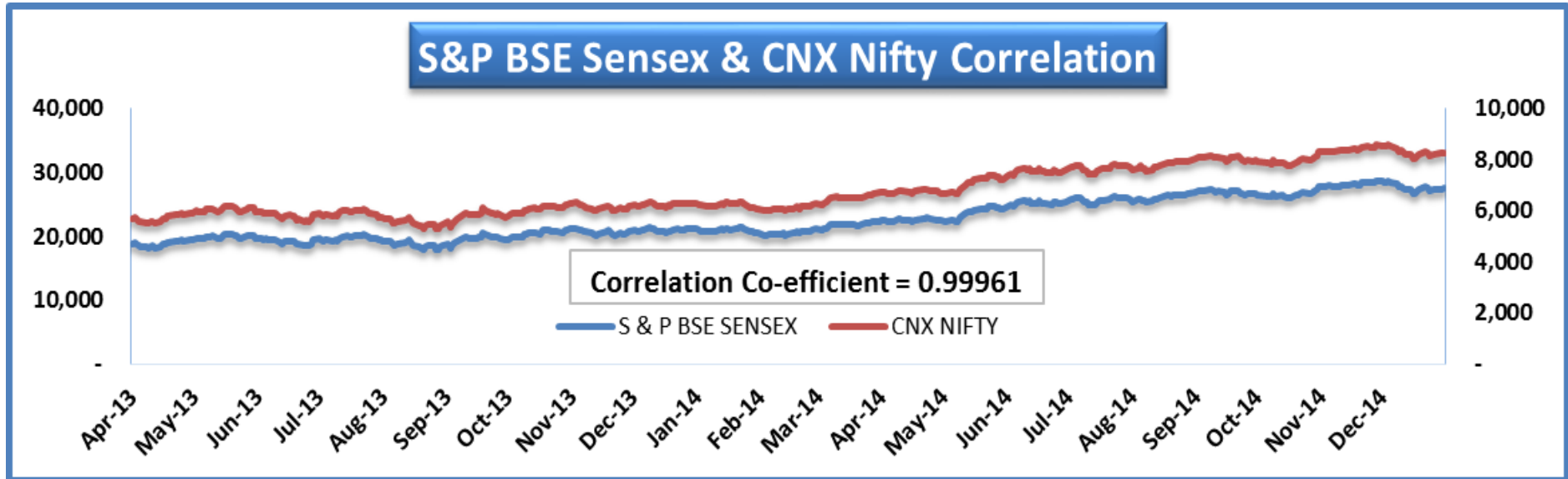
- Revamped website - member & investor friendly features
- First Securities Market Infrastructure member of SWIFT in India
- New indices – S&P BSE 500 SHARIAH, S&P BSE India 10 Year Sovereign Bond Index (Total Return), S&P BSE Infrastructure, S&P BSE SENSEX Futures Index, S&P BSE CPSE Index
- BRICS Alliance – Inter-exchange alliance to develop world's largest emerging markets
- High-quality research and world class analytical tools on MFs
- SME Exchange – Platform for the emerging business community

# Equities



- **Access Range** : Over **5541** listed companies - Largest in the world
- **Best Execution** – out of these **5541** listed equities, over 1500 are dual listed on the other Indian Exchange – **Use SOR to realize a lower impact cost for your clients! *Savings of 6-8bps have been achieved by clients using SOR!!!***
- **Dedicated Block Trade window** in the morning
- **Call-Auction for Illiquid Scrips** : All illiquid stocks are traded by way of hourly call-auctions
- **Pre-open Session**: The opening for the S&P BSE SENSEX basket of stocks. BSE exclusively listed stocks and initial offerings is conducted via a Call Auction.
- **Stock Lending and Borrowing** – With early pay-in and recall facilities
- **Lowest Cost**: BSE is the lowest cost Indian Exchange for cash equities :
  - A Flat transaction cost of 0.275 bps
  - This is approx. 15% lower than transaction costs at the other Exchange

# Correlation – MSCI India Index



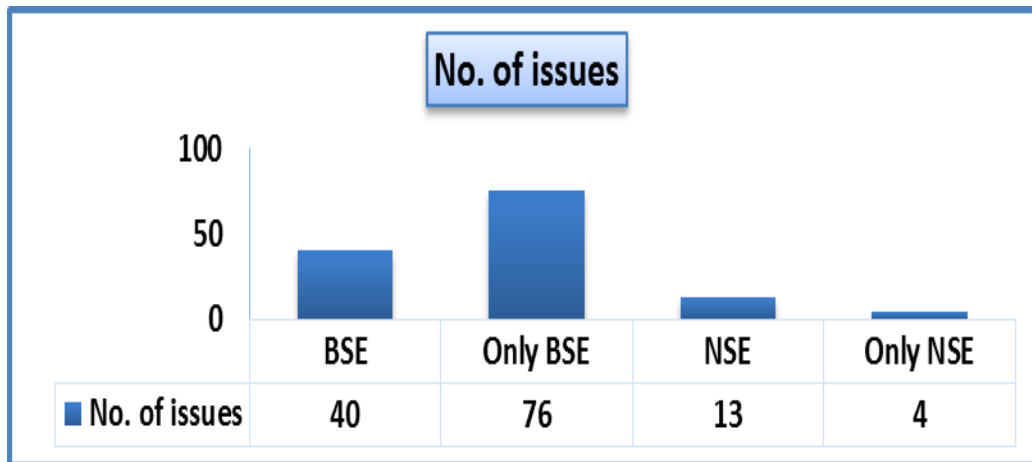
# Offer For Sale Platform



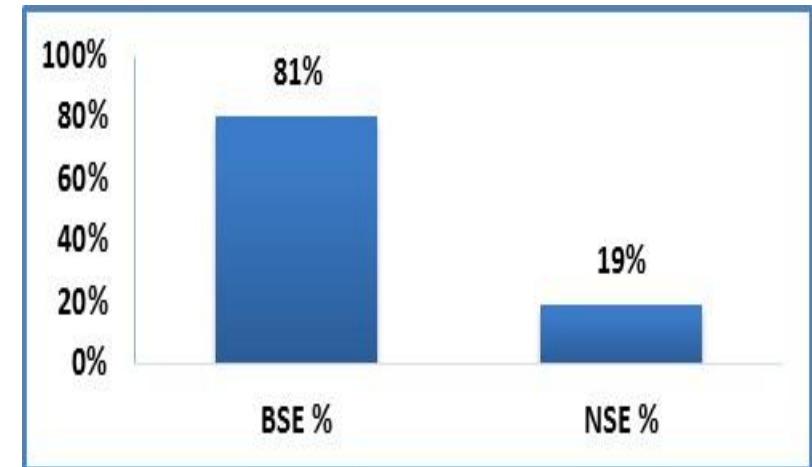
- An Offer For Sale is a new mechanism for increasing the public share holding as mandated under listing agreement.
- BSE launched the Offer For Sale (OFS) module on iBBS (Internet based book building System) platform on 24th February, 2012.
- As on Dec'14 , 134 companies have completed their OFS issues of which BSE was appointed the Designated Stock Exchange in 117 (~87.3%) OFS issues. Over 500 members have participated in OFS via BSE platform.
- The process has helped the Government to raise over Rs.37,520 Crs (USD 6.00 Billion) through divestment of holdings in PSUs.
- 76 OFS issues have been conducted exclusively only on BSE Platform.

# OFS Segment – BSE Leadership

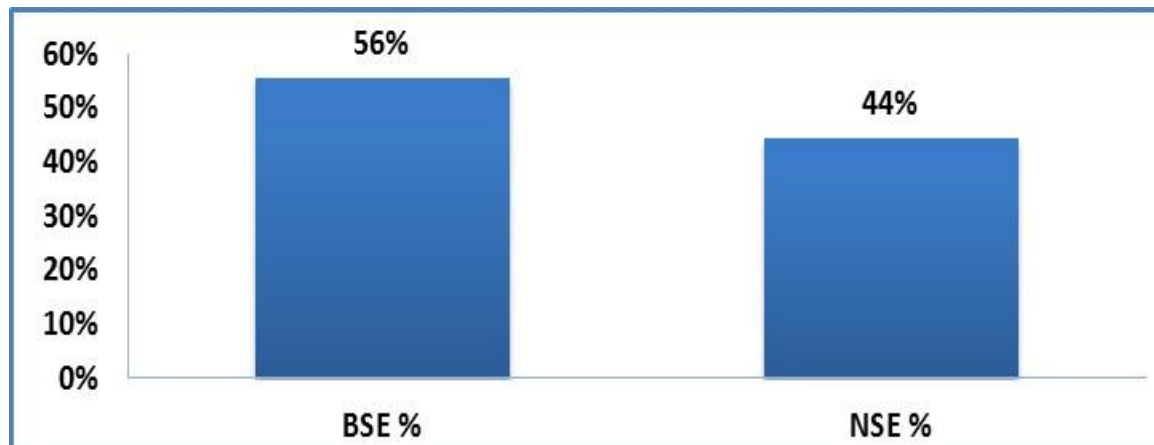
### Designated Stock Exchange (DSE) Statistics till date



### OFS Average Bid Share (%) – till date



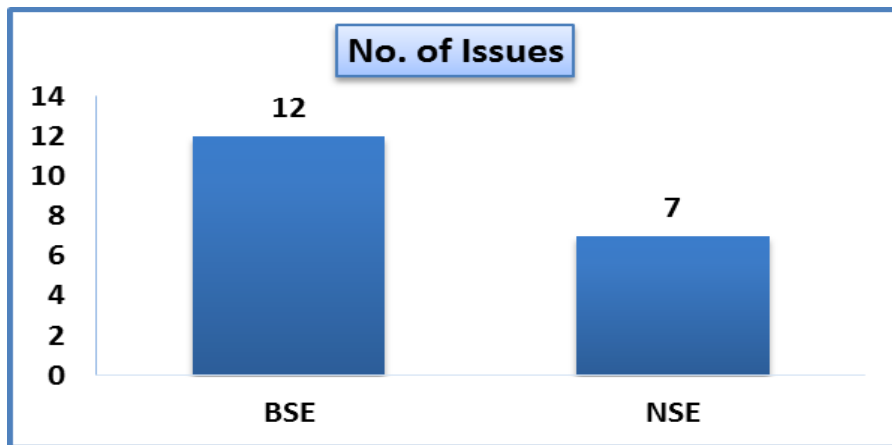
### OFS Amt Raised (%) from FY12-13 till date (Dec 31, 2014)



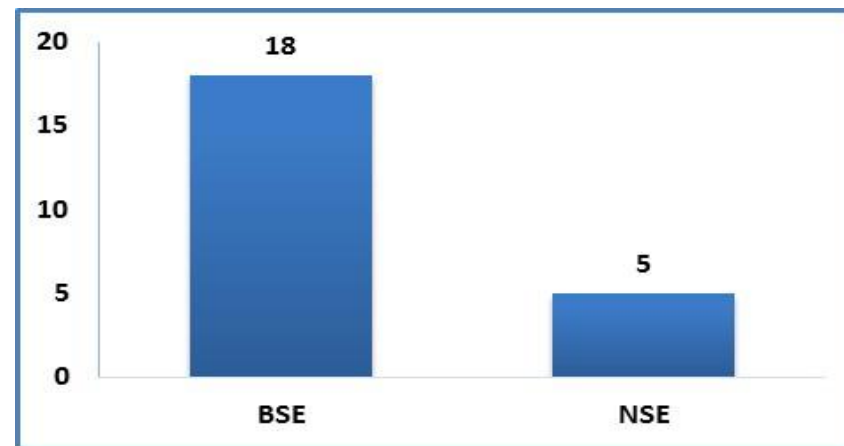
# Public Issues (Equity & Debt) – BSE Dominance



### IPO Segment DSE Statistics



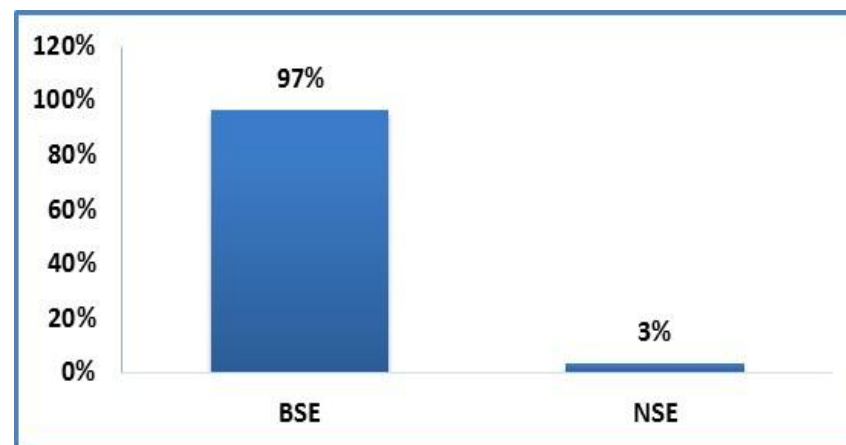
### Debt Segment DSE Statistics



### IPO Segment Bidding Statistics



### Debt Segment Bidding Statistics



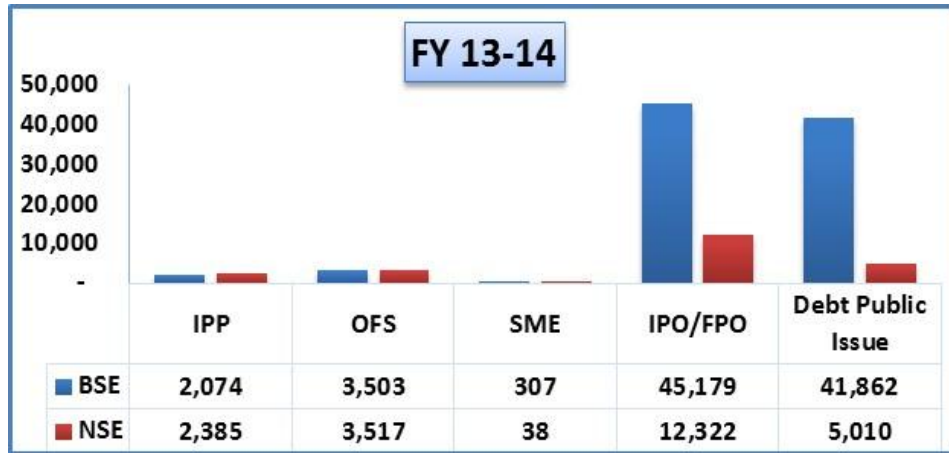
From FY12-13 till Dec 31, 2014

From April 2014 till Dec 31, 2014

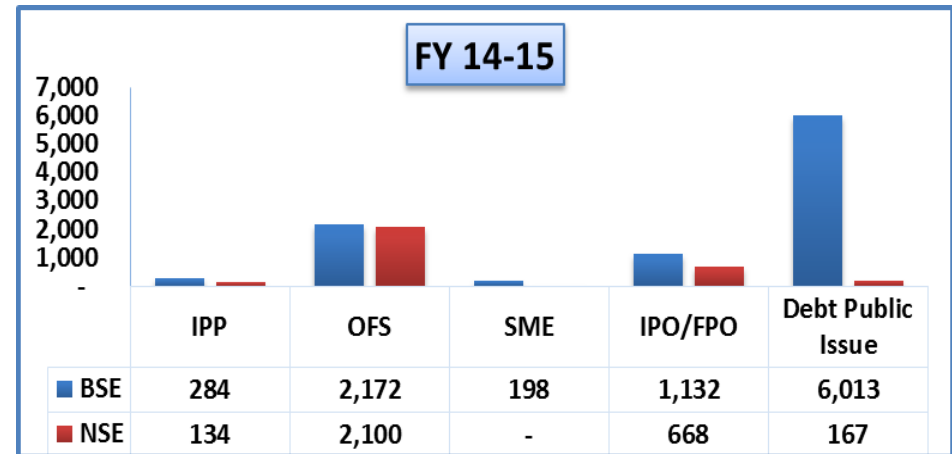
# Leadership In Fund Mobilization - Capital Formation



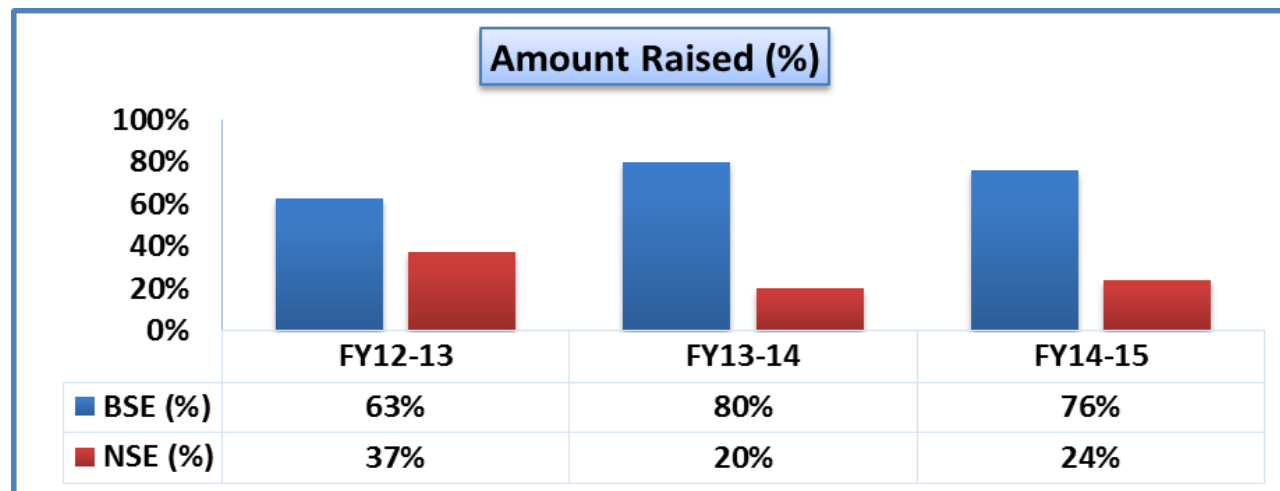
**FY13-14 Fund Mobilization (Cr.)**



**FY14 - 15 (Till Dec 31,2014) Fund Mobilization (Cr.)**



**All Segment Fund Mobilization Share (%) – FY14-15 (Till Dec 31,2014)**



# Debt Markets

## Business Statistics (Secondary Markets)



Retail trading in Corporate Bonds (F group)	FY 2013-14	FY 2014-15 (Till Dec-14)	Dec 2014
Turnover (Rs.Crores)	2,103	2,790	570
Number of members/participants	1,225	1343	1343

Wholesale Segment Reporting of Government Bonds	FY 2013-14	FY 2014-15 (Till Dec-14)	Dec2014
Turnover (Rs.Crores)	48,953	1,76,452	17,245
Number of members/participants	130	130	130

Wholesale Segment Reporting of Corporate Bonds (ICDM)	FY 2013-14	FY 2014-15 (Till Dec-14)	Dec2014
Turnover (Rs.Crores)	1,02,467	1,50,626	17,990
Number of members/participants	1,010	1113	1113

Settlement of Corporate Bonds and CP / CD (E-Settle)	FY 2013-14	FY 2014-15 (Till Dec-14)	Dec2014
Settlement of Corporate Bonds (Rs.Crores)	60,521	31,428	3,205
Settlement of CPs / CDs. (Rs.Crores)	2,08,477	1,39,692	15,893
Number of members/participants	1,010	1113	1113



# Growing Presence in Debt Segment



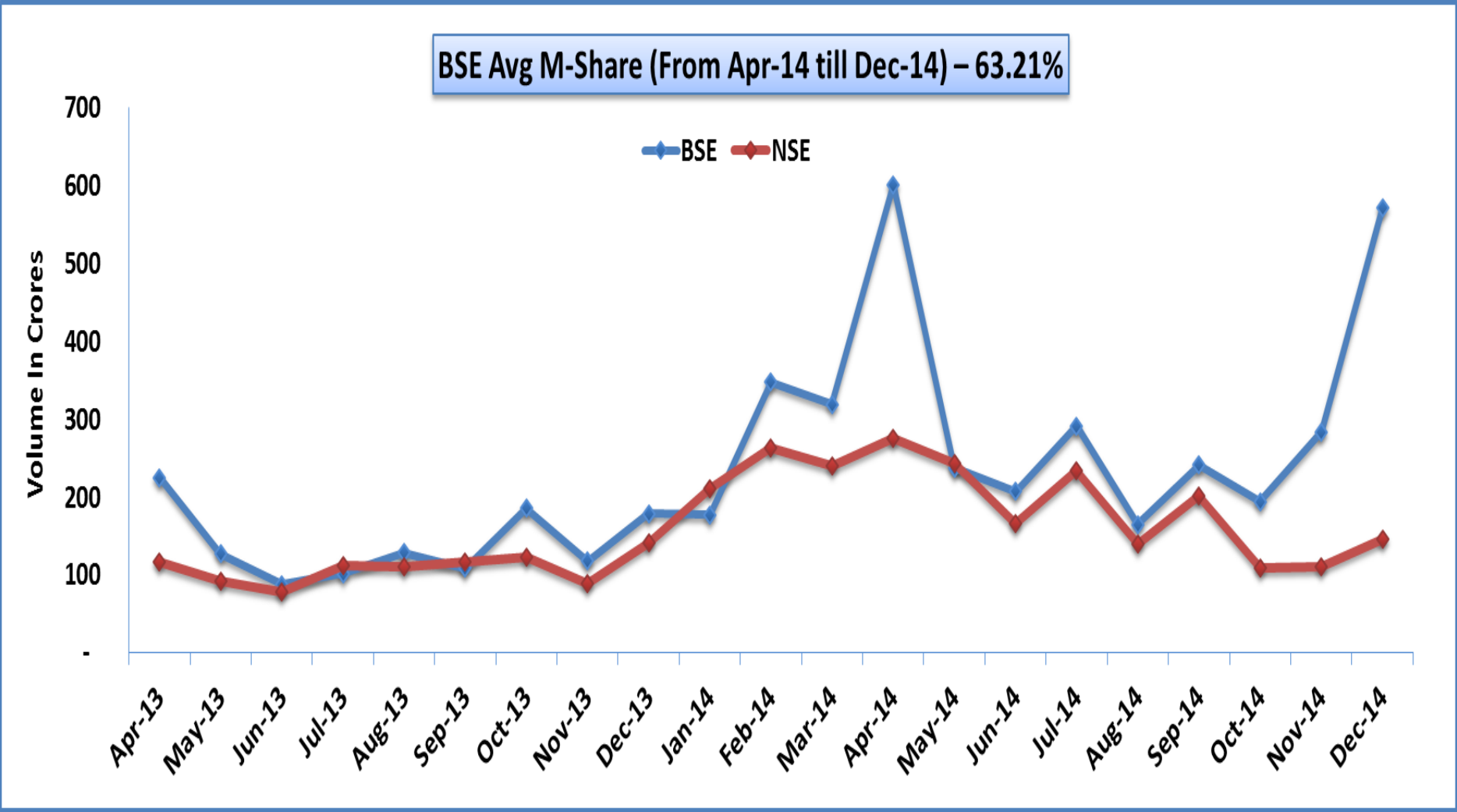
## Secondary Market updates

- BSE has retained market share of over 55% in the retail trading of Corporate Bonds in the financial year 2013-14. In the month of Dec 2014, BSE market-share was 80%.
- Market share in Reporting volumes in Wholesale Debt Market of Government Bonds for the month of Dec'14 is 24%. In 2013-14 volumes in this segment have exponentially increased to Rs. 48,952 crs vis a vis Rs.1,767 crs in the previous year 2012-13.
- The market share of BSE for corporate bond reporting is continually increasing from 17.57% in 2012-13 to 28% in the financial year 2013-14. In Dec 2014, BSE Market Share was around 19%.
- Settlement volumes of Corporate bonds have considerably increased from Rs. 42,976 crores in 2012 -13 to Rs. 60,521 crores in 2013-14.

## Primary Market updates

- BSE is the preferred choice by issuers for listing Privately Placed Debt Instruments , having listed more number of instruments than the other Exchange in 2013-14. In Financial Year 2014-15, BSE has listed 1,195 Instruments vis-a-versa 957 on other Exchange.
- Out of **19 Debt Public Issues**, **18 times** BSE has been appointed as Designated Stock Exchange during the Financial year 2014-15.
- Over **96%** of the average bids amongst all public debt issues had been garnered through the BSE IBBS Platform till Dec 2014. In 2013-14, 89% of the average bids amongst all public debt issues was through the BSE IBBS Platform and amount mobilized was Rs.41,860 crores.

# Retail Corporate Debt Volumes BSE v/s NSE



## India's leading mutual fund distribution platform

- BSE StAR MF is a web-based transaction processing system that can be accessed “anytime” and “anywhere” , and enabled for Intra AMC switches , DPC , NRI transactions , Minor Transactions and unique X-SIP on StAR MF
- Most preferred Mutual Funds platform amongst MF Distributors with **77% M-share in Value Terms & 80% M-share in Order Terms for the month of Dec 2014**
- 39 AMCs with over 4000 schemes available on BSE StAR MF Platform. In FY14-15, we processed over 10,33,340 orders aggregating to Rs. 7652 Crs in terms of value. Over 1,50,000 SIPs / X-SIPs registered on BSE StAR MF Platform.
- Launched BSE StAR MF Platform for IFA's (MFD Model) on **March 6, 2014**.
- AMFI Registered ARN Holders can transact on BSE StAR MF Platform
- BSE Star MF in collaboration with Morning Star launched a dedicated website to empower investors with relevant information and tools on evaluating mutual fund investment opportunities.

### System Flexibility

- Feature-rich and highly flexible electronic order platform – easy and simple to use (API – Available)
- In-built risk management :Creation of multiple branches and multiple dealers (IDs)
- Simple UCC process : Every client has to be registered in system before entering orders - thus full transparency regarding source of funds, investor, etc.
- File upload facility for virtually all functions making it highly user friendly
- Detailed MIS reports available to brokers, issue of client confirmations built-in
- Innovative new products like Lo Schemes (Historic NAV) and Exchange SIP (XSIP)

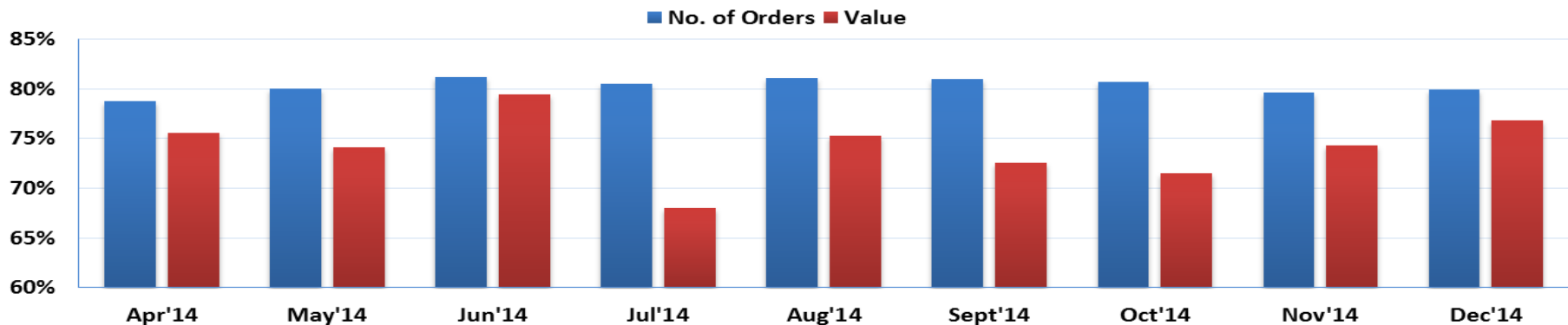
### Order Routing hours

- Existing NAV norms (cut-off at 3pm) to apply , apart from the liquid schemes offered for historical NAV (cut-off at 1.00 pm). Timings are extended for subscription only in case of NFOs at request of AMC.
- We also accept L-1 scheme types (other than liquid schemes) where transactions of minimum Rs 2 lakhs and above would be accepted, wherein broker will fulfil obligations on T day itself for availing same day NAV. Cut off time 1.00 PM
- For Registration Process, refer : <http://ir.bseindia.com/mfdforms/members/LoginMF.aspx?expandable=o>

# Benefits of using StAR MF Platform

- Investor gets to view all his /her investments in one single location (that too electronically) – can use same demat account as that for equity shares.
- Latest NAVs displayed in system for all available scheme options
- Investor gets full service from broker – no need to go to one broker for equity shares and another for Mutual Funds – broker is one stop shop. Also investor need not go to his distributor – just call !
- No cumbersome manual filling of MF application forms
- Under XSIP, Multiple SIPs can be registered under single Mandate for any AMC
- MFIs will have flexibility of charging brokerage to client on SIP at the time of registration
- Investor can also pledge MF units held by him as collateral (margin) with his broker as brokers are allowed to do so with exchange in turn
- Separate Know Your Client not needed if transacting in Demat mode
- System accessible via APIs
- Pay-in timings tweaked to synergies with timing for liquid fund investment – brokers can make invest surplus funds in liquid fund units giving maximum utilization of funds which would otherwise lie idle. These same liquid fund units can be deposited as collateral for trading segments, as cash equivalent.

**BSE Avg M-Share (From Apr-14 till Dec-14) – 75%**



# Equity Derivatives: Highlights



- Underlying Assets: Index Derivatives on :
  - Investable and Broad Indices – S&P BSE SENSEX and S&P BSE 100
  - Sector Indices – S&P BSE TECK , S&P BSE BANKEX , S&P BSE OIL AND GAS.
- Maturities available:
  - Index & Stock Futures: Near, Mid, Far Month
  - Index Options: Weekly, Monthly & Long Dated – Only Exchange in India offering weekly expiring Options
    - 5 Weekly, 3 Monthly and 12 Long Dated ( 4 quarterly and 8 semiannual)
  - Stock Options: Weekly and Monthly
    - 5 Weekly / 3 Monthly
- Ongoing Liquidity Enhancement Programme to create lasting liquidity in BSE derivatives. Market-Makers incentivized to maintain tight spreads and deep quotes
- Lower transaction costs for all participants:
  - As Liquidity provider, you pay Zero
  - As Liquidity taker, you pay 0.05 bps of Futures contract value and 0.05 bps of Options Premium value
  - For Options, this is almost 200 times lower transaction fees compared to the other exchange

# New Trading Architecture – EUREX T7



- We have partnered with the Eurex Group through a long-term technology alliance under which BSE has joined the Eurex technology roadmap and deployed the T7 system.
- New Technology to allow BSE achieve highest global standards for speed, reliability and order-handling capacity. BSE matching Engine to be one of the fastest platforms globally in terms of throughput, latency and turnaround time, BSE to get best in class order types and risk management features which is already in place at the Eurex platform.
- By aligning BSE, Eurex Exchange and ISE markets on a common trading infrastructure, IT costs for shared customers will reduce significantly. This will also reduce technology development and installation efforts for Eurex and ISE members who wish to connect to BSE and vice versa as well as strengthen the case for cross-listing

# New Trading Architecture – BOLT PLUS



- **Bolt Plus Live**
  - Products available for trading
    - Currency Derivatives - 29 Nov 2013
    - Interest Rates Futures - 28 Jan 2014
    - Equity Derivatives - 10 Feb 2014
    - Equity - 7 April 2014
  
- **Member Access**
  - API based access
    - Through existing IML API
    - Advanced High performance APIs (ETI, MDI/EMDI)
  
- **Peripheral Systems connecting to BOLT Plus**
  - Reference Data, Risk Management, Surveillance, Clearing & Settlement, Data Warehouse
  
- **Performance Testing & Benchmarking**
  - Latency : < 200  $\mu$ s (Gateway in to Gateway out)
  - Network Latency for Colo Users: 18  $\mu$ s
  - Throughput Capacity: 5 lacs order per second
  - Scalability: Horizontally scalable by adding partitions

# Equity Derivatives – Specifications



Products	Tick Size (INR)	Settlement Mechanism	Lot size	Contract Value as on 24th Dec 2014		Expiry
				INR	USD	
S&P BSE SENSEX Futures	0.25	Cash	15	4,08,129	6,431*	Last Thursday
S&P BSE-100 Futures	0.05	Cash	50	4,12,444	6,499*	Last Thursday
S&P BSE SENSEX Options	0.05	Cash	15	4,08,129	6,431*	Last Thursday - European
S&P BSE BSE-100 Options	0.05	Cash	50	4,12,444	6,499*	Last Thursday – European
Stock Futures	0.05	Cash	Based on underlying	NA	NA	Last Thursday
Stock Options	0.05	Cash	Based on underlying	NA	NA	Last Thursday - European

\* Notional Value for ATM strike (USD rate of 63.46)



# BPS saving on trading Options at BSE

Options	Trade at BSE	Trade at Competing Exchange A	Trade at Competing Exchange B
	bps	bps	bps
<b>Sell Options</b>			
Securities Transaction Tax	-1.70	-1.70	-1.70
SEBI Fees	-0.02	-0.02	-0.02
Exchange Fee	<b>-0.05 *</b>	<b>-5.00</b>	<b>-2.50</b>
<b>Buy Options to Square off</b>			
Securities Transaction Tax	0.00	0.00	0.00
SEBI Fees	-0.02	-0.02	-0.02
Exchange Fee	<b>0 *</b>	<b>-5.00</b>	<b>-2.50</b>
<b>Net outflow</b>	<b>-1.79</b>	-11.74	-6.74

Save 10 bps!

\* Assuming one active and one passive trade

# BPS saving on trading Futures at BSE

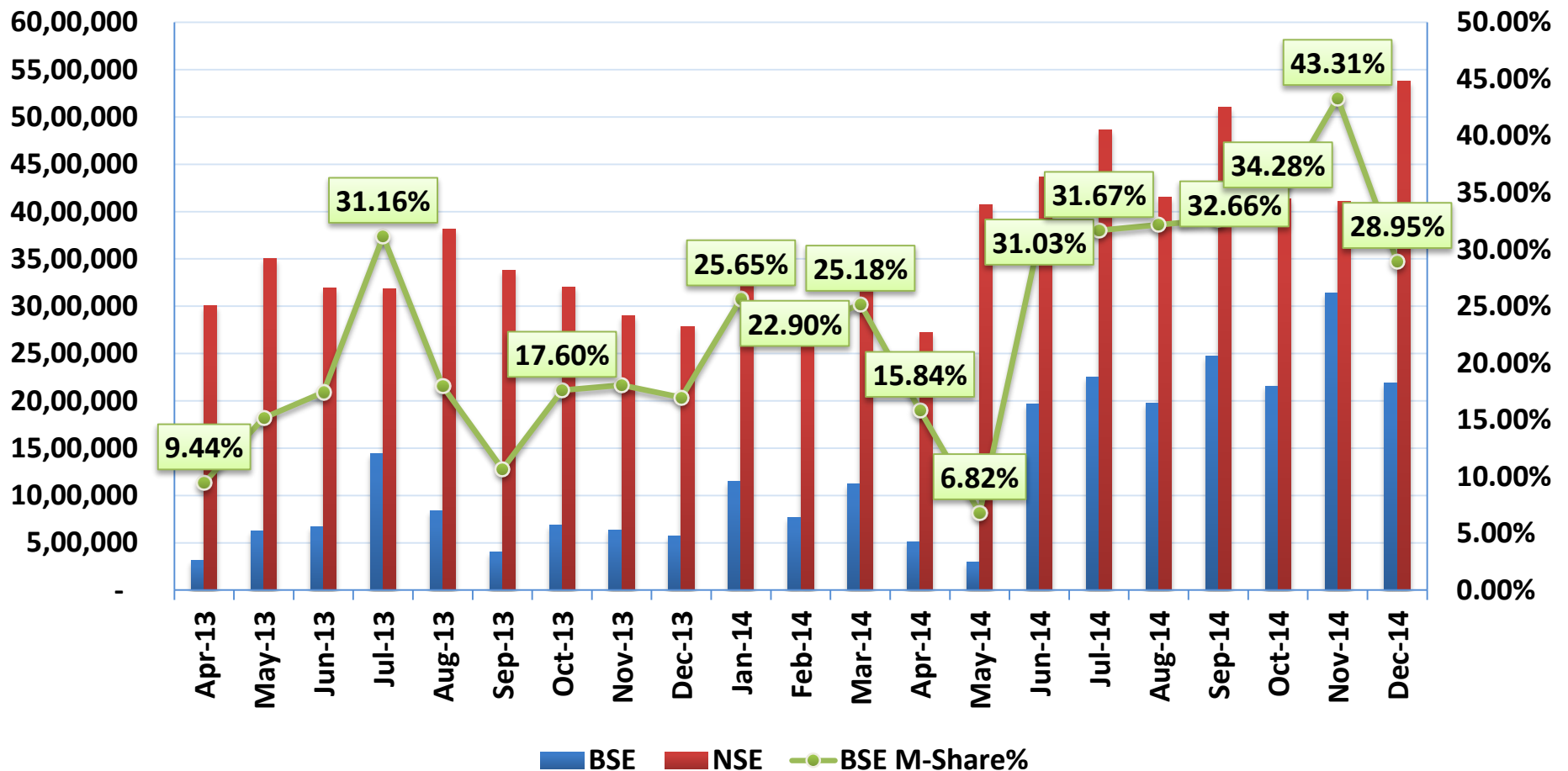
Futures	Trade at BSE	Trade at Competing Exchange A	Trade at Competing Exchange B
	bps	bps	bps
<b>Sell Futures</b>			
STT	-1.0	-1.0	-1.0
SEBI Fees	-0.02	-0.02	-0.02
Exchange Fee	-0.05 *	-0.19	-0.12
<b>Buy Futures to Square off</b>			
STT	0	0	0
SEBI Fees	-0.02	-0.02	-0.02
Exchange Fee	0 *	-0.19	-0.12
<b>Net outflow</b>	<b>-1.09</b>	-1.42	-1.28

Save 20% of your cost!

\* Assuming one active and one passive trade

# Market-share comparison (Equity Derivatives)%

**BSE Avg M-Share (From Apr-14 to Dec-14) - 30.36%**



# Snapshot

## Derivatives Segment Performance- 2014



Registered for LEIPS - broker-members (till date)

**543**

Members who have traded (till date)

**437**

Average Daily Turnover for YTD 2014

**Futures:** USD 44 Million

**Options:** USD 12,897 Million

Average num of contracts traded daily YTD 2014

**Futures:** 5,013

**Options:** 21,25,137

Average num of contracts Open Daily YTD 2014

**Futures:** 12,991

**Options:** 63,736

*Above Figures are from Jan-14 to Dec-14*

# Introduction to LEIPS



## BSE DERIVATIVES INCENTIVE PROGRAMME

- BSE LEIPS was initiated in September 2011, in order to create lasting liquidity in BSE's equity derivatives segment
- Current focus of the on-going phase is to bring liquidity in index products such as S&P BSE SENSEX and S&P BSE 100
- The programme invites participants to empanel either as a Market-Maker (MM) or a General Market Participant (GMP)
- MMs have obligations to quote and maintain spreads, whereas GMPs have no obligations
- MMs avail a higher incentive, on achieving obligations. GMPs receive trading incentives
- For all participants, the transaction charge has been made zero for passive orders and 0.05bps for active orders
- Incentives are paid on a daily basis. Annual budget of USD 8 million + for incentives
- Co-location racks, servers and algorithmic software provided free of cost (refer last slide details)
- Additional Incentive provided for Retail Client Trades

# Introduction to Maker- Taker Pricing



## EQUITY DERIVATIVES

- Effective from 10th Feb 2014, BSE introduced Maker Taker pricing for Non- LEIPS Products.
- Transaction charges on Index and Stock options which are part of Non- LEIPS contracts will be as follows:
  - **Passive order** (price maker) to receive Rs.2,400 per crore of premium value
  - **Active order** (price taker) to pay Rs.2,500 per crore of Premium Value (inclusive of IPF and TGF charges)
- **Passive Orders:** Passive orders are defined as the orders that already exist in the order book at the time of matching (trade taking place).
- **Active Orders:** Active orders are defined as those orders that match with passive orders that already exist in the order book at the time of matching (trade taking place).

# BPS saving on trading Currency Futures at BSE



<b>CURRENCY FUTURES</b>			
<b>For Turnover of 0 - 300 Cr. per day</b>	<b>Trade at BSE</b>	<b>Trade at Competing Exchange A</b>	<b>Trade at Competing Exchange B (0-250 Cr.)</b>
Transaction Fees ( Rs. / Cr)	2	110	105
<b>Save your cost @ BSE upto</b>	<b>98.18%</b>		
<b>For Turnover of 300 - 500 Cr. per day</b>	<b>Trade at BSE</b>	<b>Trade at Competing Exchange A (30% Discount)#\$</b>	<b>Trade at Competing Exchange B (250+ Cr.)*</b>
Transaction Fees ( Rs. / Cr)	2	77	52.5
<b>Save your cost @ BSE upto</b>	<b>97.40%</b>		
<b>For Turnover of 500+ Crs. per day</b>	<b>Trade at BSE</b>	<b>Trade at Competing Exchange A (50% Discount)#\$</b>	<b>Trade at Competing Exchange B (250+ Cr.)*</b>
Transaction Fees ( Rs. / Cr)	2	55	52.5
<b>Save your cost @ BSE upto</b>	<b>96.36%</b>		

*\*When a contract is squared off in USDINR pair by a member during the same day  
# Discount on daily turnover / \$ on incremental turnover above Rs 300 Crores)*

# BPS saving on trading Currency Options at BSE



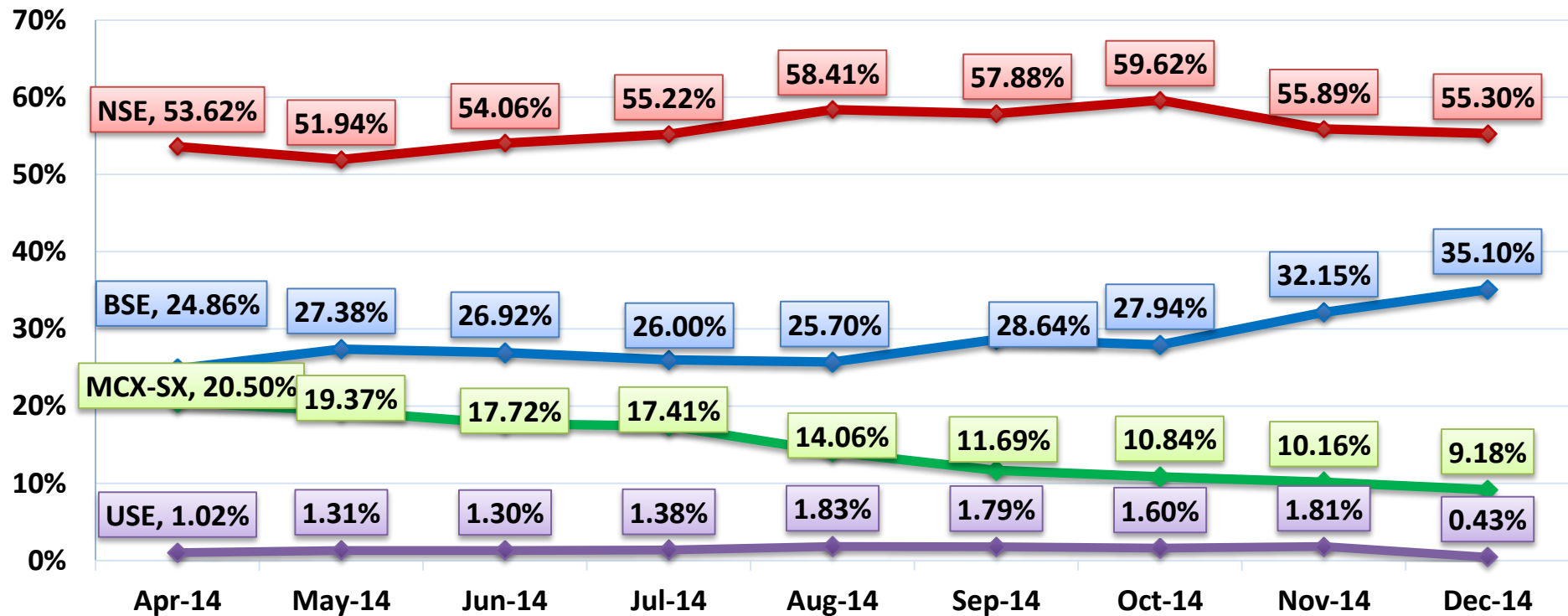
<b>CURRENCY OPTIONS PREMIUM</b>			
<b>Avg Daily Premium Value 0- 12.5 Cr.</b>	<b>Trade at BSE</b>	<b>Trade at Competing Exchange A</b>	<b>Trade at Competing Exchange B (0-250 Cr.)</b>
Transaction Fees ( Rs. / Cr)	2	4000	3500
<b>Save your cost @ BSE upto</b>	<b>99.95%</b>		
<b>Avg Daily Premium Value 12.5-25 Cr.</b>	<b>Trade at BSE</b>	<b>Trade at Competing Exchange A (30% Discount)#\$</b>	<b>Trade at Competing Exchange B (250+ Cr.)*</b>
Transaction Fees ( Rs. / Cr)	2	3500	3000
<b>Save your cost @ BSE upto</b>	<b>99.94%</b>		
<b>Avg Daily Premium Value 25+ Cr.</b>	<b>Trade at BSE</b>	<b>Trade at Competing Exchange A (50% Discount)#\$</b>	<b>Trade at Competing Exchange B (250+ Cr.)*</b>
Transaction Fees ( Rs. / Cr)	2	3000	3000
<b>Save your cost @ BSE upto</b>	<b>99.93%</b>		

**\* on incremental ADPV above Rs. 20 crores**



# Market-share comparison (Currency Derivatives)

Currency Derivatives Avg M-Share % (From Apr'14 to Dec'14) – 28.55%



# Snapshot



## Currency Derivatives Segment Performance- 2014

Members who have traded (till date)

210

Average Daily Turnover for YTD 2014

**Futures: 4,648 Crores**

**Options: 1,717 Crores**

Average num of contracts traded daily YTD 2014

**Futures: 7,58,160**

**Options: 2,76,903**

Average num of contracts Open Daily YTD 2014

**Futures: 3,21,317**

**Options: 18,620**

*Above Figures are from Jan-14 to Dec-14*

# Snapshot

## Interest Rate Derivatives Segment Performance- 2014



Total Turnover (Since Launch)

22,927 crore \*

Average num of contracts Open Daily YTD 2014

20,885

- Launched Interest Rate Futures (IRF) on 10 Year GOI Bonds on Jan 28,2014
- Underlying Assets: Interest Rate Derivatives offers trading in following two products:
  - 91-Day T-Bill Futures
  - 10-year G-sec Futures

### Business Benefits to Members

- Membership at no cost and no deposit, At present 120 + registered members
- Low transaction charges : No Transaction charges for one year (w.e.f. January 28,2014)
- Clearing & Settlement by ICCL and Uniform Risk Management & Margin framework

\* Total Turnover since launch from 28 Jan 2014 till Nov-14

# Technology Programme

## Co-location facilities



### Fastest Co-location

- Fastest Co-location service by a Stock Exchange in India with roundtrip network latency of only 20 microseconds.
- BSE trading system with low latency (200 microseconds) coupled with high end ALGO servers provide full efficiency to the ALGO trader.
- Order execution round trip latency is only 220 microseconds.
- Market access across Equity, Equity Derivatives and Currency Derivatives segments.
- State-of-the-art Data Centre services from NTT – Netmagic.

### BSE Co-location : NTT Netmagic Data Centre

**BSE Co-location is entirely managed by a third party service provider - NTT Netmagic. Key technical highlights are:**

- 10 Gbps Fibre optic cable connection with BSE trading system with full redundancy
- 24 X 7 operations support
- 24 X 7 High security zone
- Uninterrupted Power Supply with DG back up
- ITIL and ISO 27001 compliant
- FM200 Fire suppression facility
- Global Exchanges' feed from Thomson Reuters Electron network
- 99.999% uptime

### Recent Upgrades at Co-location

- Low latency switches deployed at Colocation.
- Dedicated Colocation gateways with minimum hops to route the algo orders to BSE Trading system for low round trip latency.
- Connectivity between members' Colo Racks and Colocation switches upgraded from 1 Gbps Copper to 10 Gbps Fibre network.
- Members' trading servers directly connected to Colocation low latency switches via 10 Gbps Fibre network for low latency trading.
- Low latency 10 Gbps Solarflare NIC cards (Model No. : SFN7322F) will be provided to members by BSE.

# Technology Programme

## Software and Hardware



### For services opted by member, BSE bears the cost on behalf of the member for;

- The software license cost for ALGO trading and market access
- The infrastructure cost on Co-location rack space
- The ALGO trading servers at Co-location
- The internet connectivity between BSE Co-location and member's office

### ALGO Trading

Algo Trading software is available from following vendors for quoting and market making in Eq. Derivatives including auto hedging capabilities across Exchanges and Segments:

- Greeksoft Technologies Pvt. Ltd
- uTrade Solutions Pvt. Ltd
- Omnesys Technologies Pvt. Ltd

### Cost Comparison

Service	BSE			Other Exchange
Colocation Network Bandwidth	10 Gbps fiber optic network			10 Gbps fiber optic network
10G Go-live Month	Sept 2014			Oct 2014
Order Processing Roundtrip Latency (including colo network latency and processing time of Exchange Trading System)	220 µsec			1000 µsec #
Post migration drop in Roundtrip Latency (in µsec): Order Processing	1G	10G*	% drop	NIL #
	350	220	40%	
Post migration drop in Roundtrip Latency (in µsec): Colo Network	1G	10G*	% drop	
	150	20	90%	
10G Switch at Member Rack	Not Mandatory			Mandatory
10G NIC Card from Exchange per member	2 Solarflare Cards (SFN7322F)			NIL
Additional cost to member for 10G migration	NIL			INR 10 – 20 Lakhs
Full Racks	Free			One Time Cost : Rs. 1 Lakh plus AMC : Rs.12 Lakhs
Half Racks	Free			One Time Cost : Rs. 50,000 plus AMC : Rs.6 Lakhs
Quarter Racks	Free			Not Available
Servers	Free			Not Available
Algo software	Free			Not Available
Interactive and Market data connectivity cost	Unlimited order throughput and market data feed at no cost			<b>Interactive Connectivity : Annual Cost per connection</b> Rs.10 Lakhs for 400 messages/sec
				<b>TBT Market Data Feed : Annual Cost per feed</b> Full Rack : Rs.1.00 Lakh / Half Rack: Rs.0.50 Lakh

For more details kindly contact **Mr. Vivek Garg, Email: [tech.prog@bseindia.com](mailto:tech.prog@bseindia.com), Mobile no: 75063 69722**

**\*10G network with Solarflare card SFN7322F # Based on market feedback**

# Tickers & Symbols



Bloomberg Ticker	Category	Type
SENSEX Index CT	S&P BSE SENSEX Index futures	Futures contract
BSE100 Index CT	S&P BSE 100 index futures	Futures contract
SENSEX Index OMON	S&P BSE SENSEX Index options	Options contract
BSE100 Index OMON	S&P BSE 100 Index Options	Options contract

Thompson Reuters Symbols	Category	Type
0#BIF	S&P BSE SENSEX Equity Index	Futures contract
0#BHI	S&P BSE 100 Index futures	Futures contract
0#BIF*.BO	S&P BSE SENSEX Equity Index	Options contract
0#BHI*.BO	S&P BSE 100 Index Options	Options contract
0#BIR	S&P BSE Currency USD/INR	Futures contract
0#BEU	S&P BSE Currency EUR/INR	Futures contract
0#BGB	S&P BSE Currency GBP/INR	Futures contract
0#BJP	S&P BSE Currency JPY/INR	Futures contract
0#BSE91	S&P BSE Treasury Bill	Futures contract
0#B883	S&P BSE 10 Yr G-Sec	Futures contract
0#B716	S&P BSE 10 Yr G-Sec	Futures contract

# Thank You



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