



भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS

भारत इलेक्ट्रॉनिक्स लिमिटेड

(भारत सरकार का उद्यम, रक्षा मंत्रालय)

पंजीकृत कार्यालय :

आउटर रिंग रोड, नागवारा, बेंगलूर - 560 045, भारत

Bharat Electronics Limited

(Govt. of India Enterprise, Ministry of Defence)

Registered Office : Outer Ring Road,
Nagavara, Bangalore - 560 045, INDIA.

CIN : L32309KA1954GOI000787

टेलीफैक्स/Telefax : +91 (80) 25039266

ई-मेल/E-mail : secretary@bel.co.in

वेब/Web : www.bel-india.com

To
National Stock Exchange of India Ltd.,
Exchange Plaza, Plot No. C/1,G Block,
Bandra-Kurla Complex, Bandra (E)
Mumbai – 400 051

No. 17565/6/SE/NSEC/SEC
20th September 2017

Dear Sir/Madam,

Sub: Presentations made at Analyst Meet held on 20 September 2017.

In continuation to our letter dated 31 August, 2017, please find enclosed herewith copy of the presentation made at Analyst Meet held on 20 September 2017. The same is also being put in Company's website as per the provisions of the SEBI (LODR) Regulations, 2015.

This is for your information and record.

Thanking you,

Yours faithfully,

For Bharat Electronics Ltd.


S. Sreenivas
Company Secretary

Encls: As above



**Presentation
On
Bharat Electronics Limited**

Navratna PSU

- Established in 1954 under MoD
- R&D / Technology driven Company operating in competitive Defence Electronics area
- Manpower: 9716 Employees

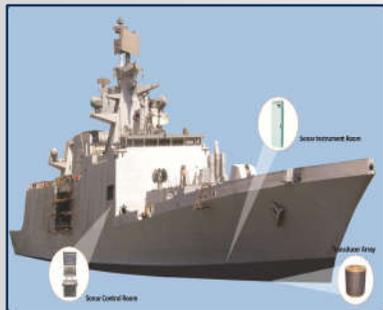
Subsidiary & JVs

- BEL Optronics Devices Ltd
 - Night Vision Image Intensifier tubes
- GE BE Pvt Ltd
 - Medical Electronics Parts, X-Ray Tubes
- BEL Thales Systems Ltd
 - Civil ATM and select Defence Radars

Manufacturing Network



Business Segments



- Radar
- Missile Systems
- Communication
- Electronic Warfare & Avionics
- Network Centric Systems
- Anti submarine Warfare
- Electro-Optics
- Tank Electronics
- Home Land Security
- Civilian Products

Multi product, Multi technology company – Diverse product range

Research & Development (R&D)

- 50% Engg. Manpower deployed in R&D
- 87% Sales Revenue from Indigenous R&D
- R&D investment: Rs. 777 Crs during 2016-17
- CMMi Level-5 Certification for Software development
- Largest Production Partner of DRDO
- Patents Application Filed – 83 Patents, Granted - 07

Central Research Labs
(2 Centers)

Blue Sky Research (Futuristic Technologies)
(Radio Frequency & Microwave; Embedded Computing System; Radar Signal Processing; Communication (Software Defined Radio & Wireless); Network Centric Software; Sensor Signal Processing; Very Large Scale Integration, Smart Computing System; Networking; Sensor Data Fusion;

Central Design Group and Product Development & Innovation Center
(2 Centers)

Core Technology Module development Groups
(Defence Software; Encryption; Radio Frequency; Microwave; Radar Signal Processing; Power Supply; Control Electronics, Embedded System; Computing Elements; Electro Optics, Communications)

Development & Engineering Groups
(20 Centers)

Products & Systems development

R&D Investment

Rs Crores



2014-15

2015-16

2016-17

Expansion & Modernization



- **600 Crores annual CAPEX**
- **World class Manufacturing & Test facilities**
 - **Super Components Facility**
 - **Test set up for Missile System**
 - **Antenna Test Range Facility**
 - **High Roof hangar for Radar & Antenna Integration**
 - **Modern Production setup for Airborne applications**
 - **Environmental Test facilities**

Expansion & Modernization



Rs Crores



Expansion & Modernization

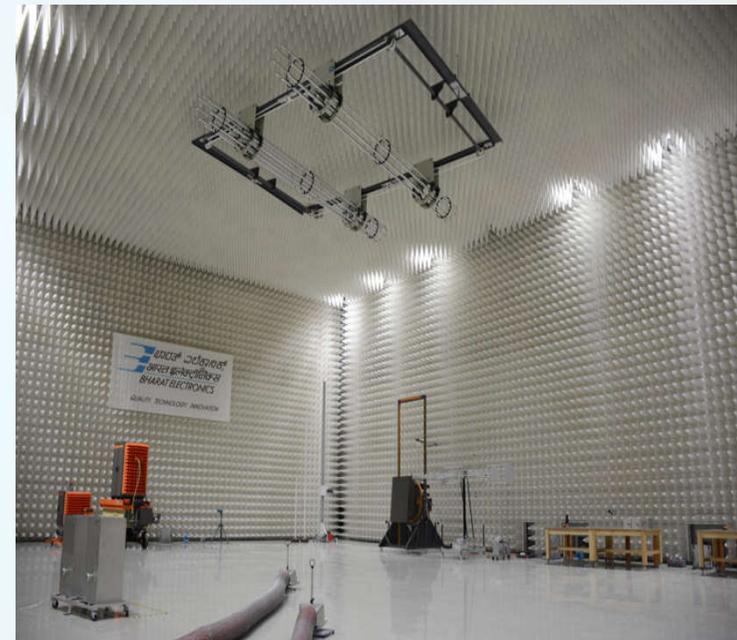
- New Radar Assembly Hangar at Ghaziabad unit for Assembly, Testing and Integration of Radar & Antenna Systems
- "Blowing Sand & Dust Test Facility" at Bangalore for testing of Abrasion resistance of sub-systems mounted externally on aircraft
- Pulse Current Injection Test Facility (PCI) for High Altitude Electro Magnetic Pulse (HEMP) / Nuclear Electro Magnetic Pulse (NEMP) test of various system level projects at Bangalore Unit



Blowing Sand & Dust Test Facility

Expansion & Modernization

- Electro Magnetic Compatibility (EMC) Chamber for system level testing facility at Bangalore
- The Low Pressure Chemical Vapor Deposition equipment of the IC Wafer Fabrication Facility upgraded to handle wafers from 4 to 6 inch diameter at Bangalore
- Automated Transmit / Receive Module Assembly Line consisting of die-attach & wire bonding lines to increase the X-Band TR Modules production capacity



**Electro Magnetic Compatibility (EMC)
Chamber for system level testing**

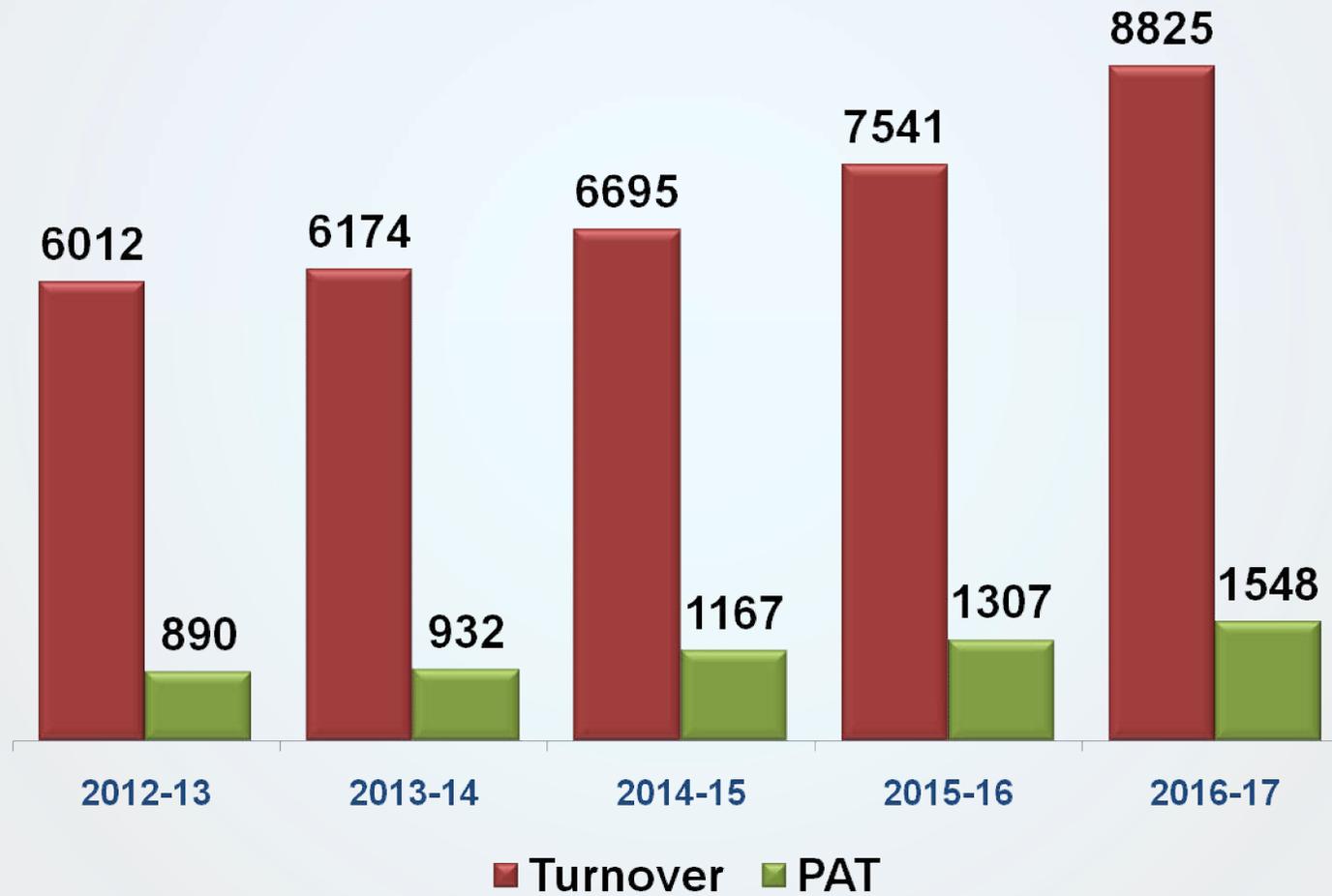


- **Dedicated Business Unit & Marketing Group for Exports**
- **Achieved USD 65 Million during 16-17**
- **Export Initiatives:**
 - Strategic alliances with global OEMs (Elbit, IAI, Thales, SAAB) for joint development / co-production
 - Focus on SE Asian Countries for Comn, Sonars and Coastal Security solutions

- **Major products exported:**
 - Coastal Surveillance System, VHF Radio (Bharati), Advanced Composite Communication System, Sanket, Electro Optic Fire Control System
- **Major countries:**
 - USA, UK, Russia, Italy, Myanmar, Brazil, Germany, France, Israel, Indonesia, Honduras, Malaysia, Maldives, Mauritius, Namibia, Seychelles, South Africa

Turnover & Profitability

Rs Crores



Major orders executed during 2016-17

Akash Weapon System



Fire Control System



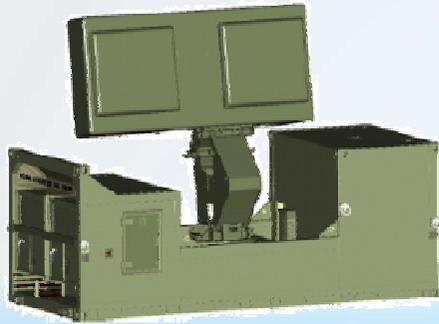
L70 Gun Upgrade



Integrated Air Command & Control System



Major orders executed during 2016-17



Low Level Transportable Radar



3D Tactical Control Radar



HHTI with LRF



Radio Relay Frequency (LB)

New products introduced during 2016-17

New Products Introduced in 2016-17



Weapon Locating Radar



Voter Verifiable Paper Audit Trail Mk 2



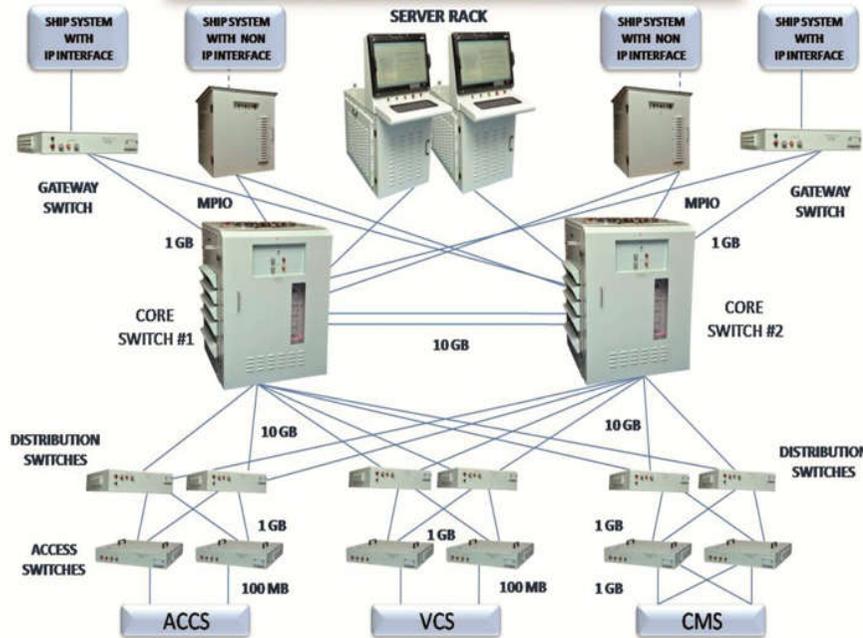
Beacon Mk III



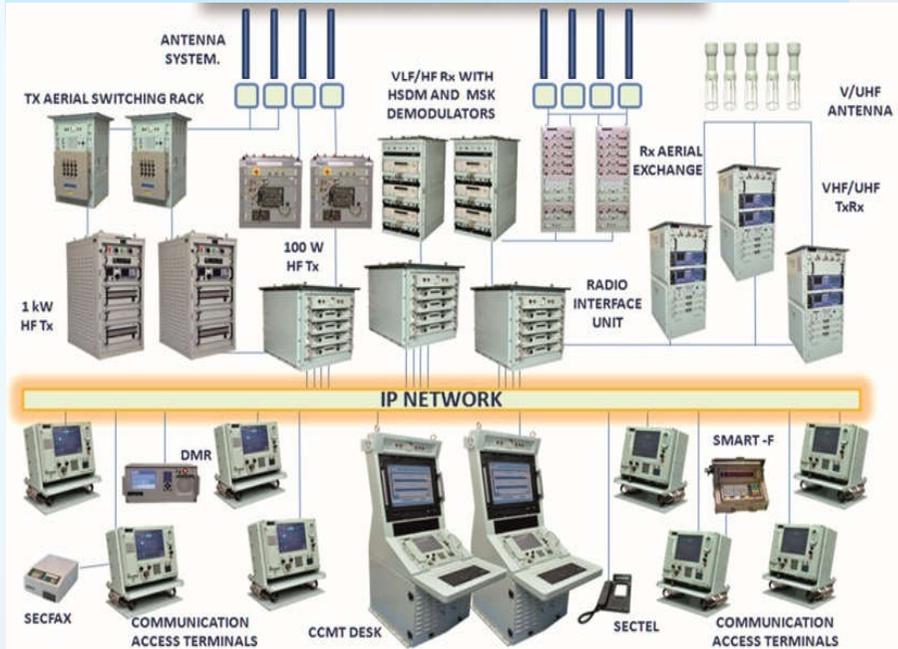
Missile Two Way Data Link

New Products Introduced in 2016-17

Gigabit Ethernet Based Ship Data Network

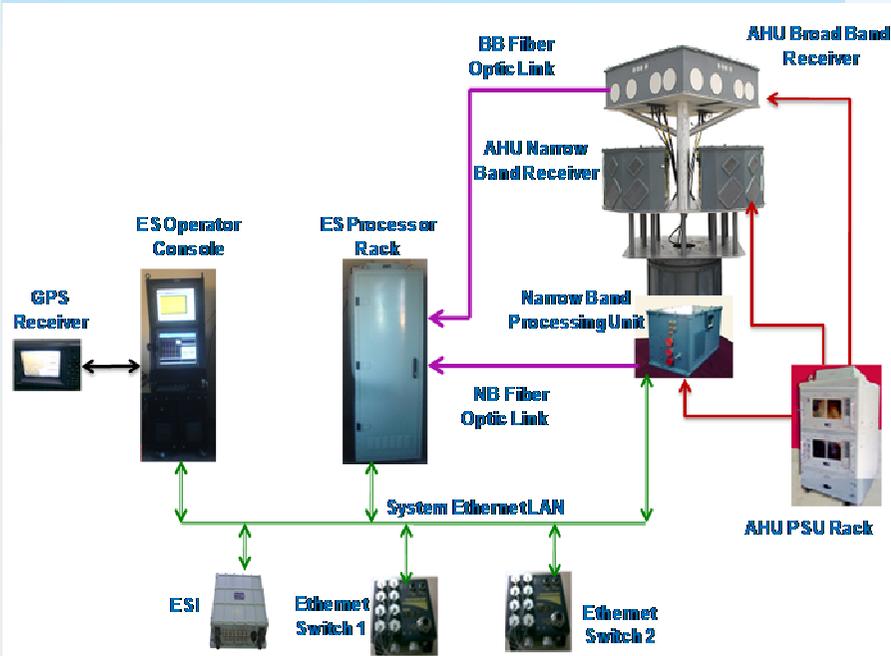


Advanced Composite Communication System



New Products Introduced in 2016-17

Ship Based EW System (Varuna)



Battle Field Surveillance System - XR



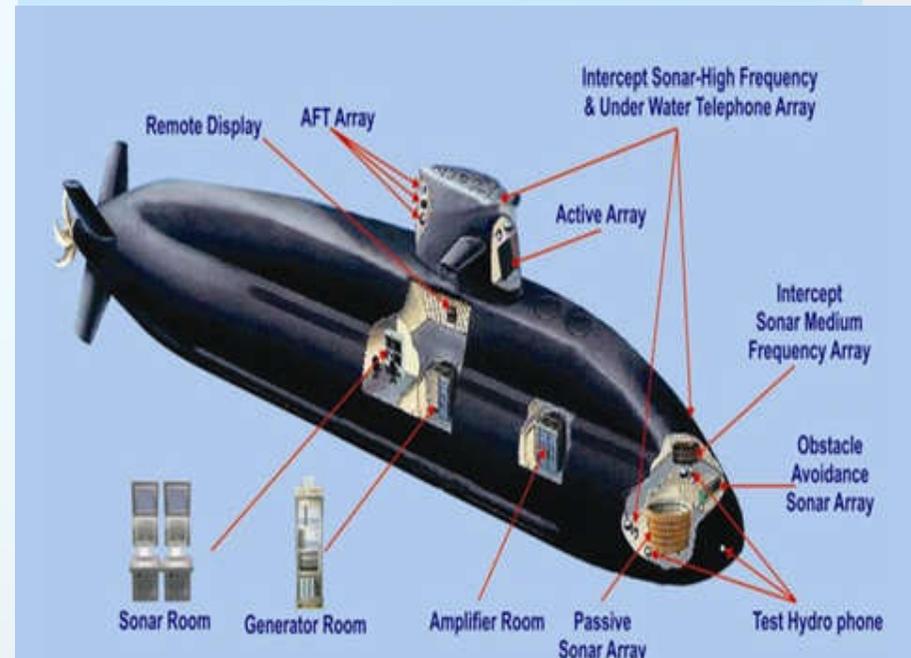
New Products Introduced in 2016-17

Hull Mounted Sonar (New Generation)

- Hull / Bow mounted single array medium range, low frequency SONAR system
- Cylindrical transducer array to panoramic search capability
- Dual frequency of operation
- Simultaneous active/passive search and track capability
- Advanced detection and classification features
- Automatic target tracking up to 8 targets in both active and passive modes with map overlay



Submarine Sonar Suite (USHUS 2)



Scenario 2017-18 & Make in India

Major Projects planned during 2017-18

- Integrated Air Command Control System
- Weapon Locating Radar
- Hand Held Thermal Imager with Laser Range Finder
- Fire Control System
- Akash Weapon System
- Low Level Transportable Radar
- L70 Gun Upgrade
- Ship Borne EW System - Varuna
- Ground Based Mobile ELINT
- Electronic Fuzes
- Schilka Tank Upgrade
- Electronic Voting Machines & VVPAT
- Homeland Security

Order Book : 2017-18

Major Orders Received during 2017 -18

- Voter Verifiable Paper Audit Trail (VVPAT)
- Commander TI Sights for T72
- Hull Mounted Sonar for P17
- Surveillance Radar Element (SRE)
- Satcom Network for NFS (Network File Server)
- Passive Night Vision Devices (PNVD)

Major Orders Likely to be Received during the year

- Long Range Surface to Air Missile (LRSAM)
- Akash for Airforce
- Commander TI sights for BMP
- Mobile Cellular Communication System
- Samyuktha Upgrade
- Fire Control System (Lynx U1 MOD)
- Low Intensity Conflict EW System
- Electronic Fuze
- Avionics Package for LCA (Light Combat Aircraft)

Current Order Book – 42,200 Crs

New infrastructure augmentation planned

- Defence Systems Integration Complex, Anantapur
- Micro Channel Plate Technology for NVDs
- Product Development and Innovation Centre, Bengaluru
- Cooled Thermal Imager – Technology
- Solar Power Plants at OFB locations
- Opto–Electronics Manufacturing facility, Machilipatnam
- Image Intensifier Tube – XR5 Technology
- Centre for High Power Laser, Pune
- EW Range Ibrahimpatnam, Hyderabad
- Space Grade Solar Cell facility, Bengaluru

Make in India & Private Industry Partnership

- 88% of Sales Revenue from Indigenous technology
- BEL is focusing more on core areas and R&D, all non-core areas are being outsourced to Indian Industries including MSMEs
- Outsourcing and Vendor Development Policy has been released
- IDDM Clause incorporated in Procurement Manual inline with DPP
- “Make in India” Display Cells established in all Units of BEL
- Nodal officers for Outsourcing & Vendor development nominated
- Procurement from MSEs has been increased to 20%
- BEL’s Test facilities are being provided to Private vendors



- BEL to continue indigenisation efforts in keeping with 'Make in India' initiative
- Radars, Missile Systems, Communication & Network Centric Systems, Tank Electronics, Gun Upgrades, Electro-Optic Systems and Electronic Warfare & Avionics Systems to drive BEL's growth
- Capacity enhancement and creation of new test facilities for Defence business
- Company pursuing business opportunities in Space Electronics, Solar Energy, Homeland Security, Smart Cards and Telecom
- Strategies and action plans in place to face competition, maintain technological edge and retain leadership position in strategic electronics

Thank You





ANALYSTS MEET
20.09.2017

Financial Highlights 2016-17

- Turnover registered a growth of 17.02% from ₹ 7,541.17 Crores in 2015-16 to ₹ 8,824.70 Crores in 2016-17.
- Value of Production has increased from ₹ 7,384.83 Crores in 2015-16 to ₹ 8,703.32 Crores in 2016-17. An increase of 17.85%.
- Profit after tax rose by 18.37% from ₹ 1,307.36 Crores in 2015-16 to ₹ 1,547.62 Crores in 2016-17.
- Increase of Profit after tax to Turnover Ratio from 17.34% in 2015-16 to 17.54% in 2016-17.
- Turnover per employee has increased from ₹ 0.77 Crores in 2015-16 to ₹ 0.91 Crores in 2016-17

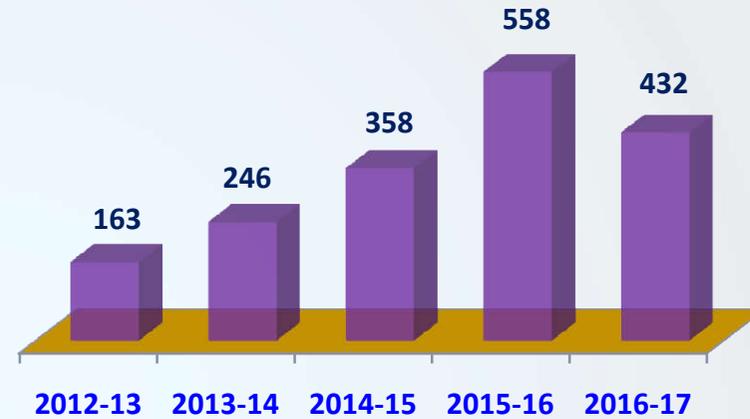
Financial Highlights 2016-17

- Earning Per Share has increased from ₹ 5.45 in 2015-16 to ₹ 6.64 in 2016-17.
- Book Value per Share has decreased from ₹ 37.43 in 2015-16 to ₹ 33.62 in 2016-17.
- Net Worth has decreased from ₹ 8,983.60 Crores in 2015-16 to ₹ 7,508.54 Crores in 2016-17.
- Buy Back of 1.66 Crores of equity shares of ₹ 10 each fully paid-up at price of ₹ 1305 per Share aggregating to ₹ 2171.16 Crores.
- Splitting of one equity share of ₹ 10 each fully paid-up into 10 equity shares of ₹ 1 each fully paid-up w.e.f. 16.03.17

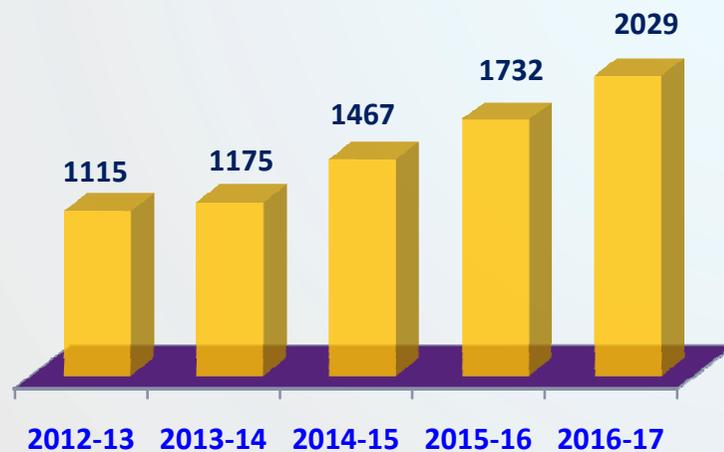
GROSS TURNOVER (₹ in Crores)



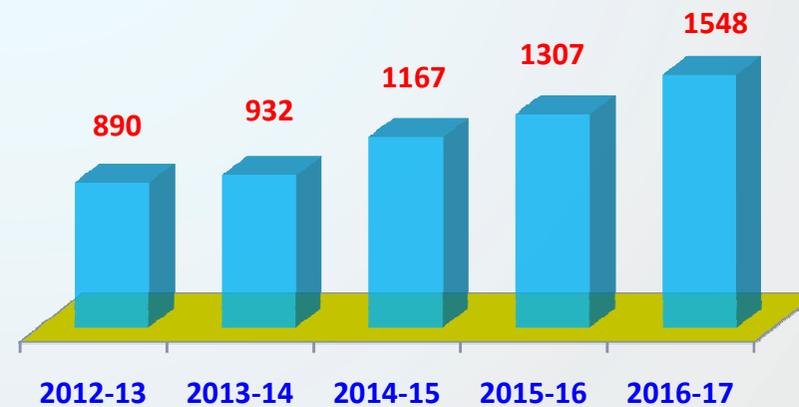
EXPORT TURNOVER (₹ in Crores)



PROFIT BEFORE TAX (PBT) (₹ in Crores)

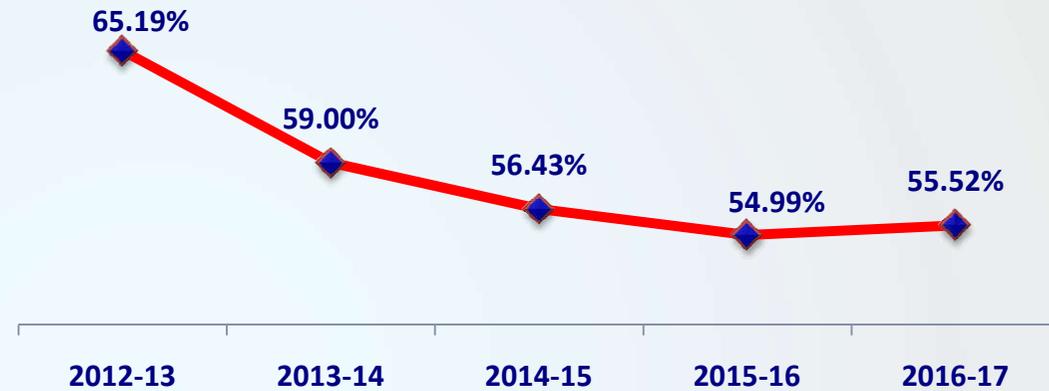


PROFIT AFTER TAX (PAT) (₹ in Crores)



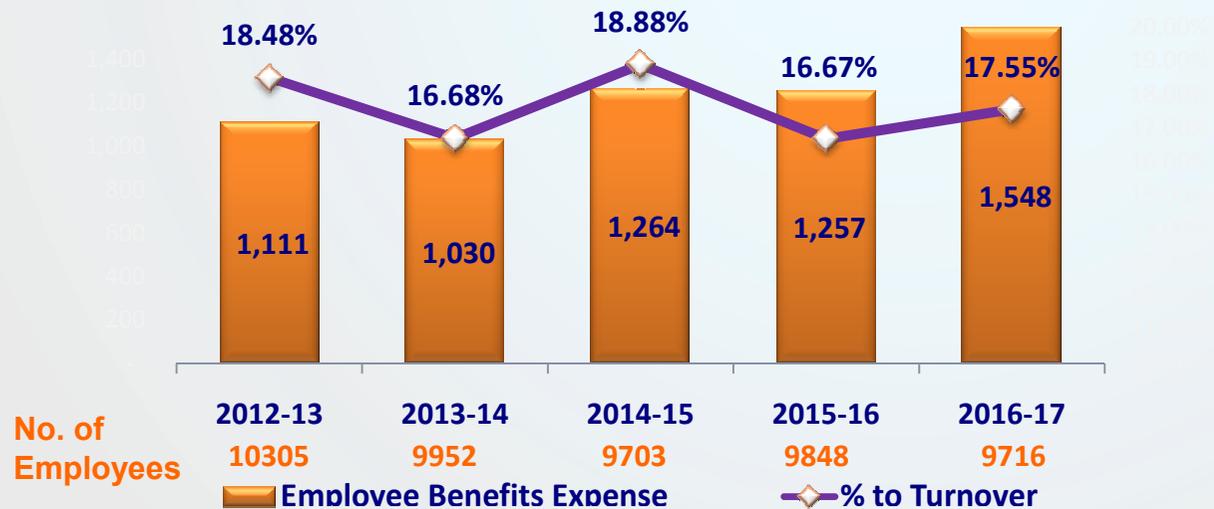
MATERIAL CONSUMPTION TO VOP

(In %)

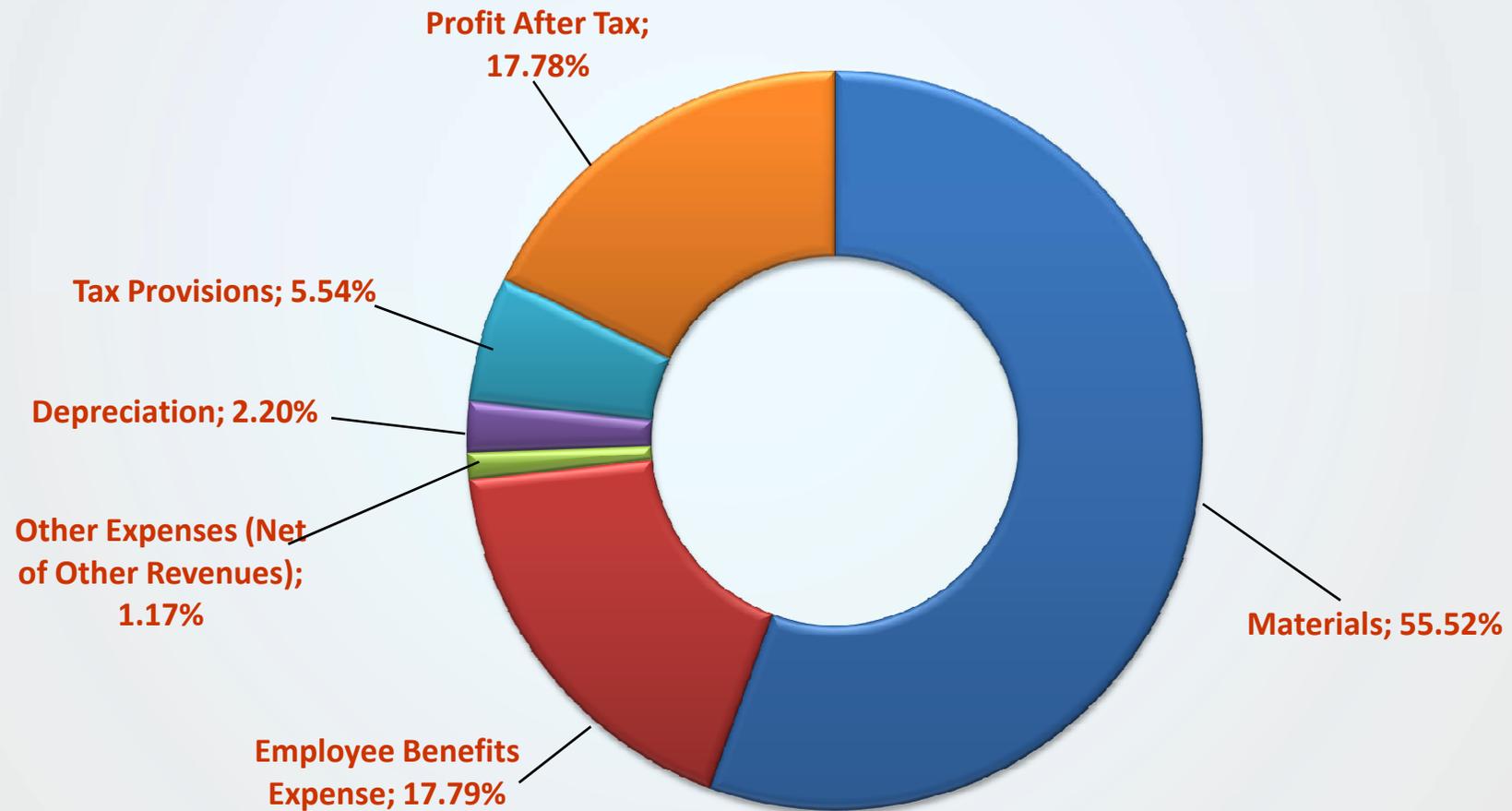


EMPLOYEE BENEFITS EXPENSE TO TURNOVER

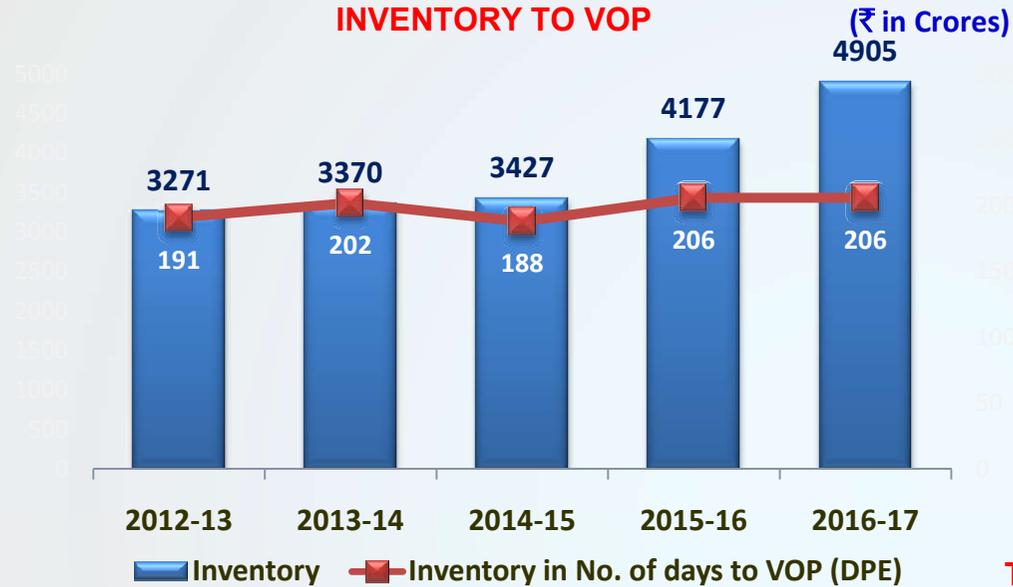
(₹ in Crores)



2016-17 HOW A RUPEE EARNED IS DISTRIBUTED



INVENTORY TO VOP



VoP = Net turnover – Changes in Inventories of FG, WIP & Scrap

TRADE RECEIVABLES TO SALES (₹ in Crores)



RETURN ON CAPITAL EMPLOYED (in %)



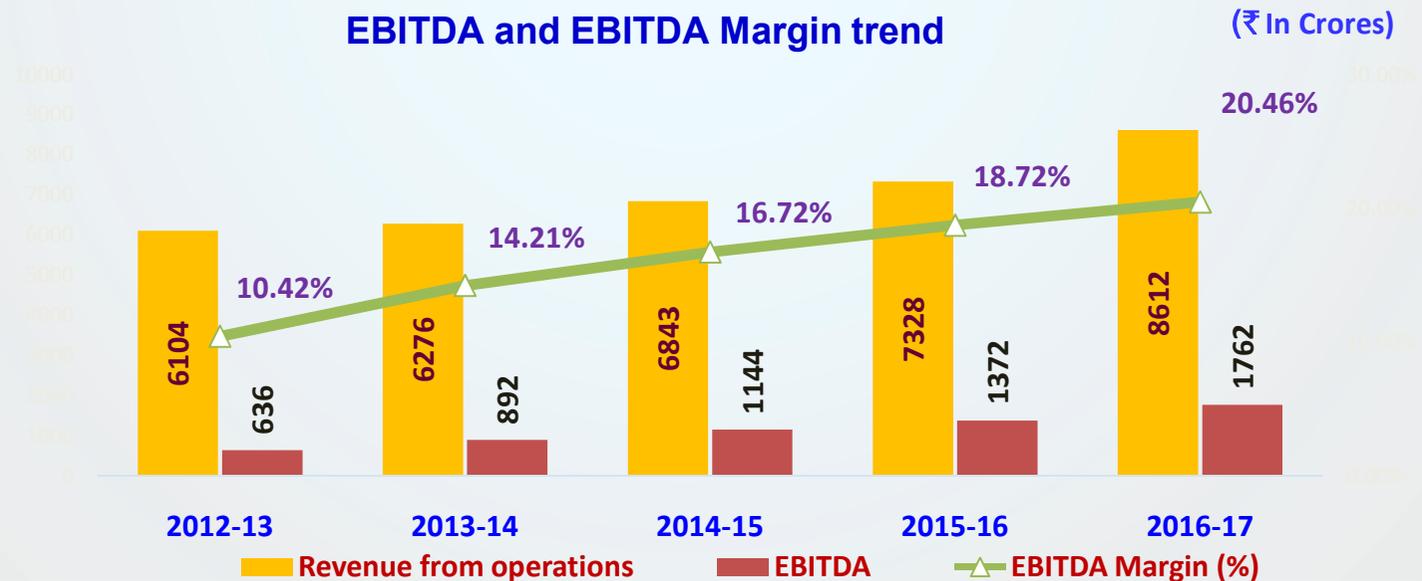
2012-13 2013-14 2014-15 2015-16 2016-17
Return on Capital Employed = PAT / Capital Employed

RETURN ON EQUITY (ROE) (In %)



2012-13 2013-14 2014-15 2015-16 2016-17
Return on Equity = Profit After Tax / Net Worth

EBITDA and EBITDA Margin trend



EARNING PER SHARE (EPS) (in ₹)



EPS normalised for the previous periods due to split in Face Value of Shares

CASH EARNING PER SHARE (in ₹)



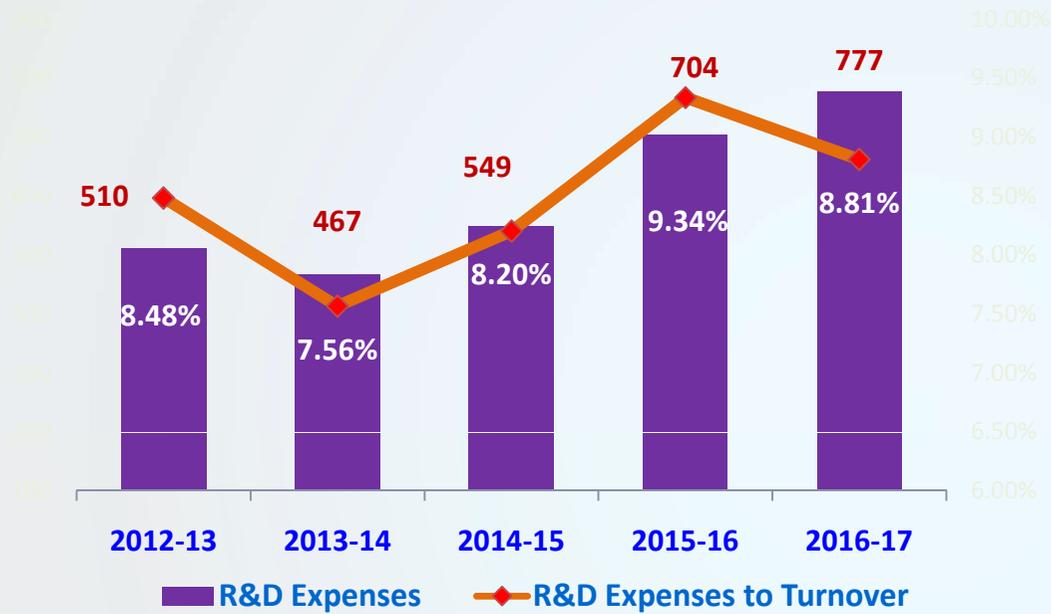
Cash Earning Per Share = (PAT + Depreciation) / No. of Shares

DIVIDEND DISTRIBUTION (₹ in Crores)

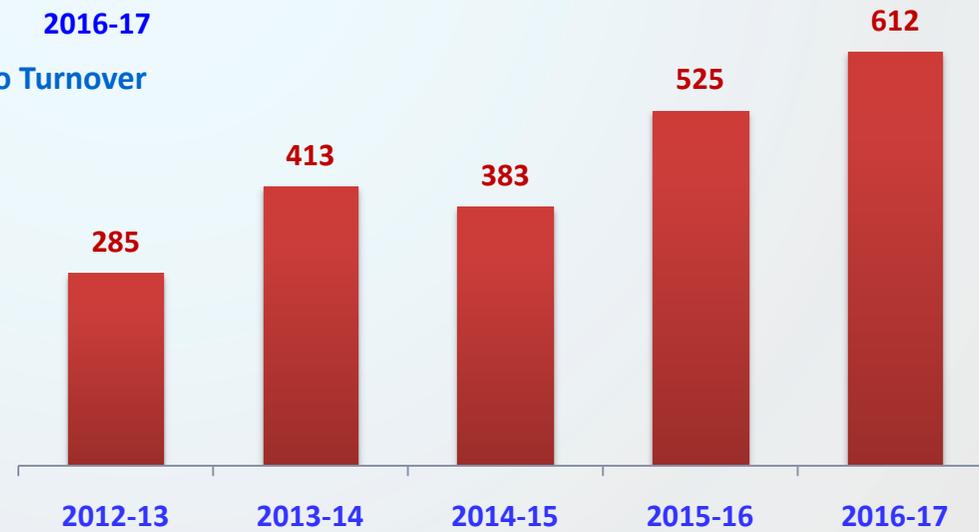


Note: Excludes Dividend Tax

R&D EXPENSES TO TURNOVER (₹ in Crores)



CAPEX (₹ In Crores)



PRICE EARNING RATIO (in %)



BOOK VALUE PER SHARE (₹ in Crores)



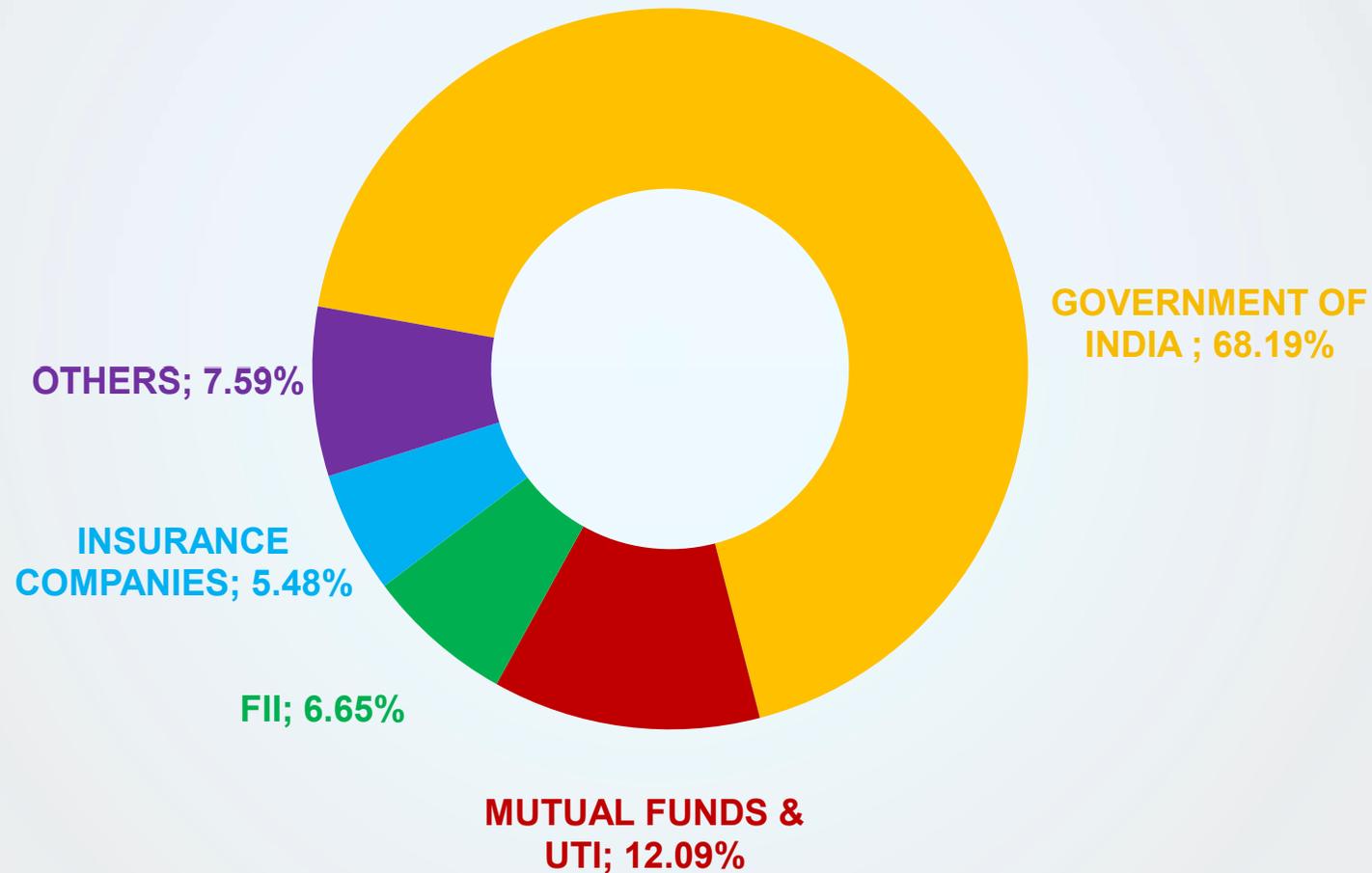
Book Value normalised for the previous periods due to split in Face Value of Shares

MARKET CAPITALISATION (₹ In Crores)



Based on the closing rate on 01.09.17 for 2017-18 and average market closing price for previous years of NSE

SHARE HOLDING PATTERN AS ON 31.03.2017



Others includes: Corporate Bodies (3.56%), NRI's (.19%) ,Banks & Financial Institutions (.15%)

QUARTERLY PERFORMANCE

Financial Highlights for 1st Quarter 2017-18

(₹ in Crores)

Particulars	2017-18	2016-17
Total Income from Operation (Net)	1724.83	879.00
Net Profit for the period before tax	179.27	48.59
Net Profit for the period after tax	125.32	36.09
Earning Per Share (EPS in ₹) (Previous year normalised for Issue of Bonus Shares)	5.60	1.50

Thank You

