



# Corporate Presentation

January, 2017



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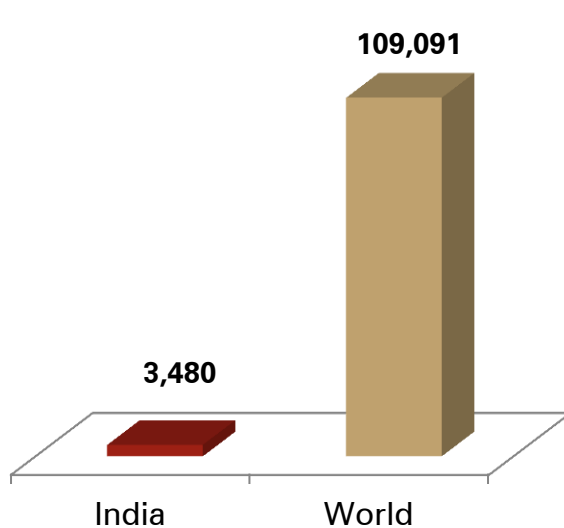
# **Aluminium Sector**



# Bauxite Reserves & Alumina-Aluminium Production (2015)

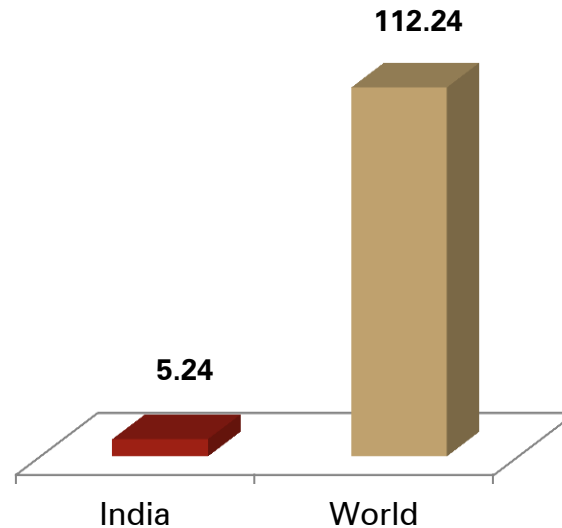
## Bauxite Reserves & Resources

(Million Tonnes)



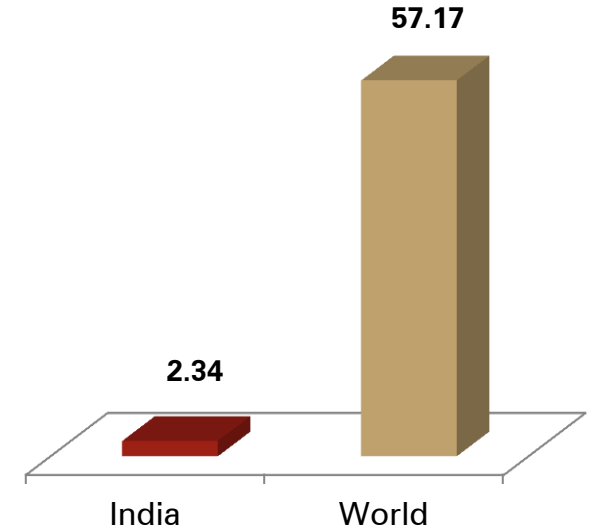
## Alumina Production

(Million Tonnes)



## Aluminium Production

(Million Tonnes)



## India

- Ⓐ Bauxite reserves : 3.19% of world reserve & resources
- Ⓐ Alumina Production : 4.7% of world production
- Ⓐ Aluminium Production : 4.1% of world production



# Global and Indian Aluminium Industry

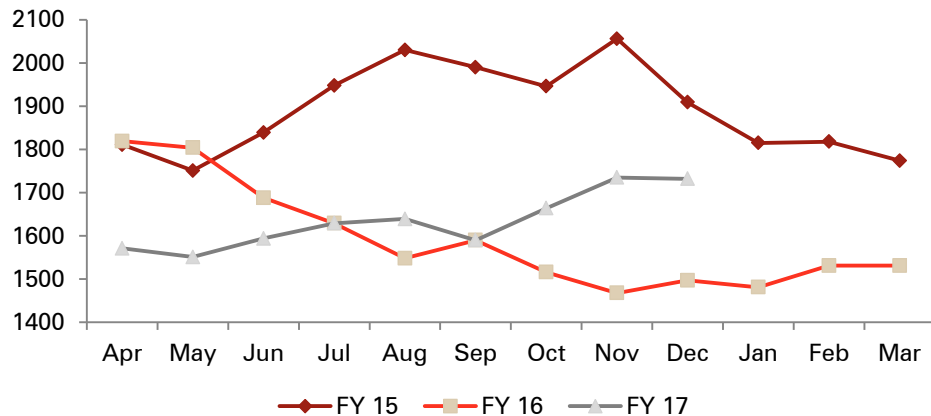
## China vs. Rest of the World

- Ⓐ The global economy grew by 3.1%<sup>1</sup> in 2015
  - Ⓐ Expected to grow by 3.1%<sup>1</sup> in 2016 and 3.4%<sup>1</sup> in 2017
- Ⓐ Global aluminium production increased by 7.3% in 2015<sup>2</sup>
  - Ⓐ Growth in production:
    - Ⓐ China: 11.8%
    - Ⓐ Rest of world: 2.4%
- Ⓐ China continues to be the world's largest producer and consumer of aluminium<sup>2</sup>

Source:  
 1. International Monetary Fund  
 2. Bloomberg

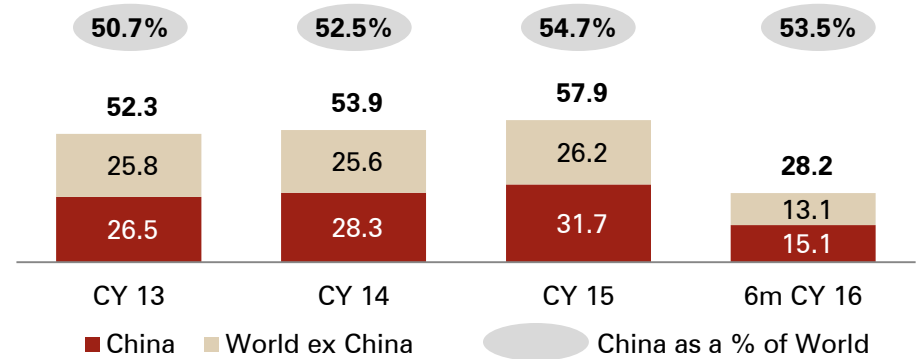
## London Metal Exchange (LME) Aluminium Price (\$/te)

Prices have recovered in current year after decreasing in FY16



Source: Bloomberg

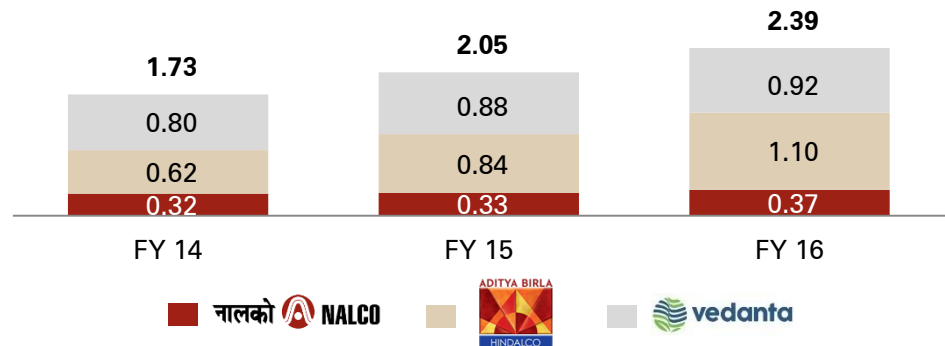
## World Aluminium Production (million tonnes)



Source: Bloomberg

## The Indian Primary Aluminium Industry Consists of Three Major Players

### Aluminium Production (million tonnes)

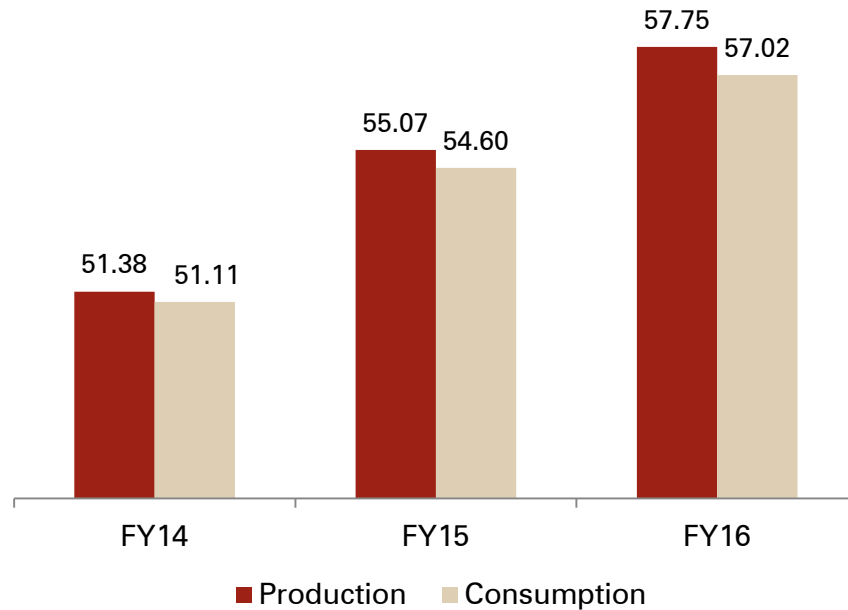


Source: Ministry of Mines, Annual Report 2015-16

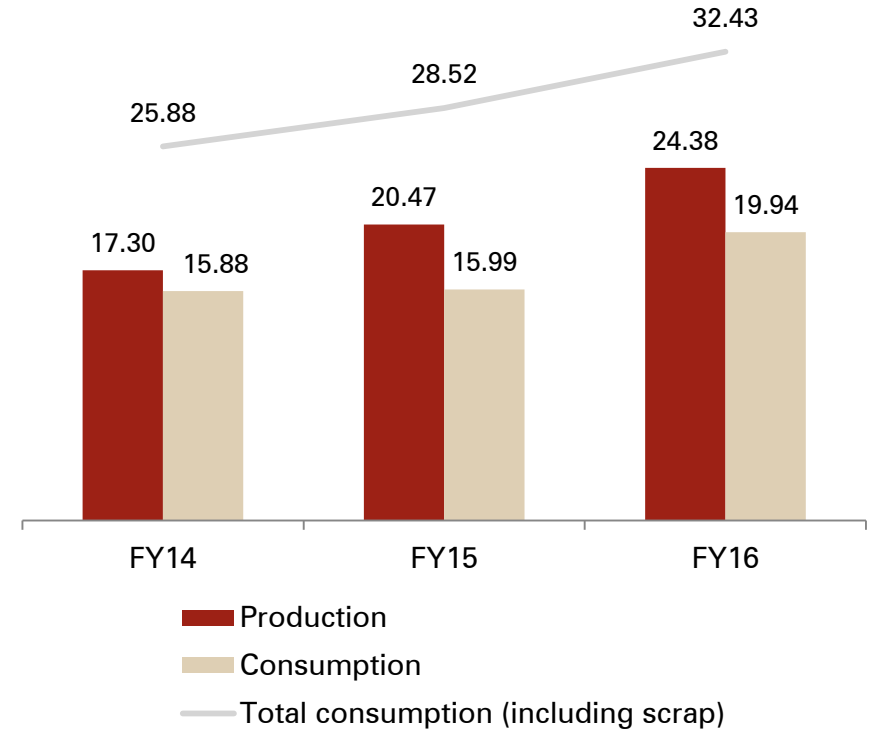
# Primary Aluminium : Production & Consumption (Last three years)



**Global (Million Tonnes)**



**India (Lakh Tonnes)**



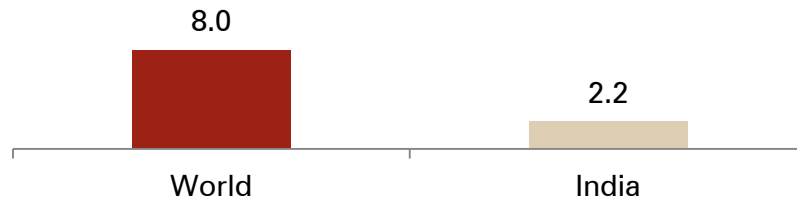
	March '2016	March'2015
Global Metal Stock	15.37	14.67

# Power, construction and automobile sectors to drive long-term demand



## India's Per Capita Aluminium Consumption Currently Low

(kg/person)

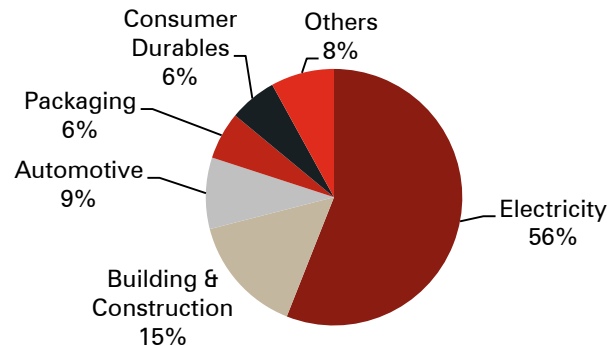


Demand for aluminium is expected to grow largely in line with the annual GDP growth rate

Source: Ministry of Mines, Annual Report 2015-16

## Power, Construction and Automobile Sectors Account for ~80% of Aluminium Consumption

### Primary Aluminium Consumption (FY 16)



Source: Aluminium Association of India

## Growth Drivers

### 1 Power Sector

- ⚡ Gol is planning significant investments to expand India's transmission and distribution network over the next five years
- ⚡ Improved electricity demand and initiatives such as UDAY are expected to further support sectoral growth

### 2 Construction Sector

- ⚡ Aluminium is widely used to make window frames, doors and industry roofings
- ⚡ Rising urbanization is expected to contribute to housing demand
- ⚡ 100 Smart Cities and 500 AMRUT Cities likely to invite investments of Rs. 2 tn bn in the next five years

### 3 Automotive Sector

- ⚡ Improving consumer sentiments and urbanization are expected to increase sale of cars and two wheelers
- ⚡ Revival in industrial and commercial activity is expected to improve commercial vehicle sales



# Recent Developments in Aluminium Sector

## Global

- ⓐ Global demand expected to grow by about 5% in 2016.
- ⓐ Stronger USA economy expected to improve demand in USA.
- ⓐ Chinese demand expected to grow by 7%.
- ⓐ Subdued Europe growth
- ⓐ Both alumina and energy prices started hardening.
- ⓐ Logistic and transport constraints , environmental issues and caustic soda shortages supporting Alumina prices.
- ⓐ Alumina prices aided by the metal production growth.
- ⓐ Higher metal prices leading to Chinese restarts

## India

- ⓐ Pick up in industrial activity and good monsoon expected to help robust domestic demand
- ⓐ Domestic demand, Improved LME (US\$/MT) price along with Rupee depreciation augurs well for domestic pricing in India.
- ⓐ Coal visibility improved with availability of e-auction coal.
- ⓐ Cheap imports impacts domestic players.
- ⓐ GST implementation will improve investors sentiment and domestic consumption



# **Company Overview**



# Leading Aluminium Producer in India<sup>1</sup>

## Long Standing Presence

- Ⓐ A 'Navratna' Company
- Ⓐ Over 35 years of experience in manufacturing and selling aluminium products
- Ⓐ Third largest aluminium producer in India
- Ⓐ Government of India (GoI) shareholding of 74.58 %

## Fully Integrated Operations

- Ⓐ Integrated aluminium producer encompassing mining ore to metal
- Ⓐ **Bauxite Mines:** 6.825 MTPA
- Ⓐ **Alumina Refinery:** 2.275 MTPA
- Ⓐ **Aluminium Smelter:** 0.46 MTPA
- Ⓐ **Thermal Power:** 1,200 MW
- Ⓐ **Wind Power:** 148 MW

## Extensive Product Portfolio

- Ⓐ **Aluminium:** Ingots, Wire rods, Billets and Rolled products
- Ⓐ **Alumina:** Alumina Hydrate, Calcined Alumina, Special Grade Alumina and Hydrate and Zeolite

## Roadmap for Expansion and Diversification

- Ⓐ Plans to increase alumina refining capacity by 1 MTPA
- Ⓐ Greenfield plans: alumina refinery and smelter
- Ⓐ Value addition plans: aluminium park
- Ⓐ Diversification plans: solar, wind and caustic soda

## Strong Financial Performance

- Ⓐ Market Capitalization – Rs. 12,854 Cr <sup>2</sup>
- Ⓐ FY16 Revenue – Rs. 7,353 Cr <sup>3</sup>, FY16 EBITDA – Rs. 1,475 Cr <sup>3</sup>, FY16 PAT – Rs. 731 Cr <sup>3</sup>
- Ⓐ Debt free Company

### Notes:

1. Ministry of Mines, Annual Report 2015-16
2. BSE as of January 02, 2017
3. Company annual report FY16



# Fully Integrated Operations (1/2)

## Bauxite Mining

- ⓐ 8<sup>th</sup> largest bauxite deposit globally <sup>1</sup>
- ⓐ Capacity: 6.825 MTPA
- ⓐ Operational since November 1985
- ⓐ Original resources of 310 million tonnes over 16 sq km
- ⓐ Ore quality – 45% alumina
- ⓐ Mechanized open-cast mines
- ⓐ Transport through 14.6 km conveyor belt
- ⓐ Available resource: 207 million tonnes

## Aluminium Refining

- ⓐ Capacity: 2.275 MTPA
- ⓐ 14km from bauxite mine
- ⓐ Atmospheric pressure digestion process
- ⓐ Pre-desilication and inter-stage cooling for higher productivity
- ⓐ Energy efficient fluidised bed calciners
- ⓐ Co-generation of 4x18.5 MW power by use of back pressure turbine in steam generation plant
- ⓐ Technology from Rio-Tinto-Alcan

## Aluminium Smelting

- ⓐ Capacity: 0.46 MTPA
- ⓐ Integrated facility for manufacturing carbon anodes, bus bars, anode stems etc.
- ⓐ Ingots, billets, wire rods, sows, strips & rolled products
- ⓐ Hyper Dense Phase System (HDPS) for alumina feeding.
- ⓐ Technology from Rio-Tinto-Alcan (RTA)

## Captive Thermal Power Plant

- ⓐ Capacity: 1,200 MW (10x120MW)
- ⓐ Meets entire requirement of smelter, feeds 35MW to refinery
- ⓐ 18.5 km captive railway system linked to Talcher coalfields
- ⓐ High PLF, zero effluent discharge
- ⓐ Advanced electro-static precipitator for pollution control



*Operations across the aluminium value chain with access to large bauxite reserves and power & port infrastructure*

Notes:

1. Geological Survey of India



# Fully Integrated Operations (2/2)

## Coal Blocks

- Utkal D & E coal blocks allotted by Centre
- 160 mn tonnes reserves
- Located near captive power plant in Angul
- Expected to assist in smooth operations and expansion plans

## Port Facilities

- Capacity to handle ships up to 40,000 DWT
- Exporting alumina and importing caustic soda
- Mechanized mobile ship loader
- Mechanized storage and handling facility
- Alumina storage capacity: 3 x 25,000MT RCC Silos.
- Caustic soda Lye storage capacity: 3 x 10,000LMT

## Rolled Product Units

- 50,000 MT per annum Rolled Products Unit
- Integrated with the Smelter Plant at Angul
- Production of aluminium cold rolled sheets and coils from continuous caster route
- Based on the advanced technology of FATA Hunter, Italy (part of Danieli group)

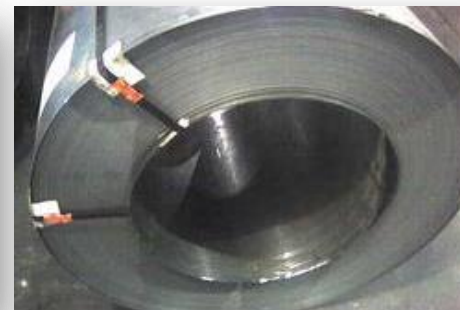
## Renewable Energy Projects

### Wind Projects

- 50.4 MW in Andhra Pradesh, 47.6 MW and another 50 MW in Rajasthan (Commissioned in September 2016)
- 50.4 MW under erection and commissioning in Maharashtra

### Solar Projects

- 260 kwp rooftop solar at corporate office and NALCO township, Bhubaneswar
- 50 kwp commissioning in progress at NALCO Research and Technology Centre



*Operations across the aluminium value chain with access to large bauxite reserves and power & port infrastructure*

# Our Presence



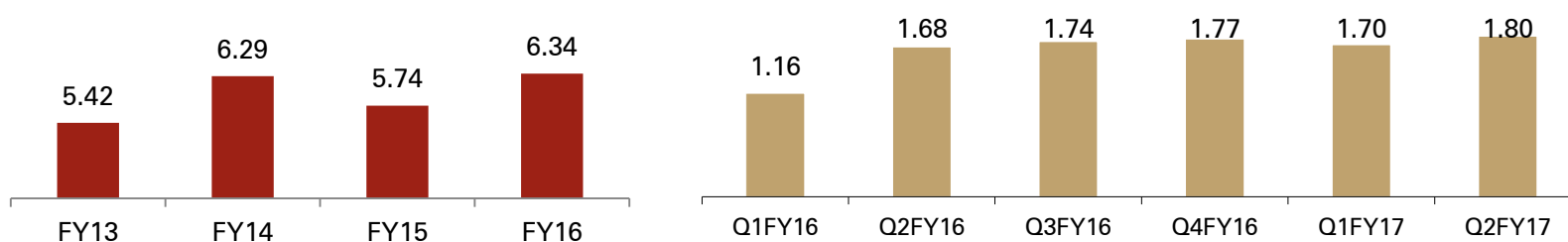
- Registered Office
- Regional Offices - 6
- 🏭 Production Centers - 2
- 🚢 Ports - 3
- ★ Bauxite Mines - 1
- ▲ Stockyards - 11
- ⚙️ Wind Power-3
- ⚙️ Wind Power under construction - 1

## **Production and Sales**

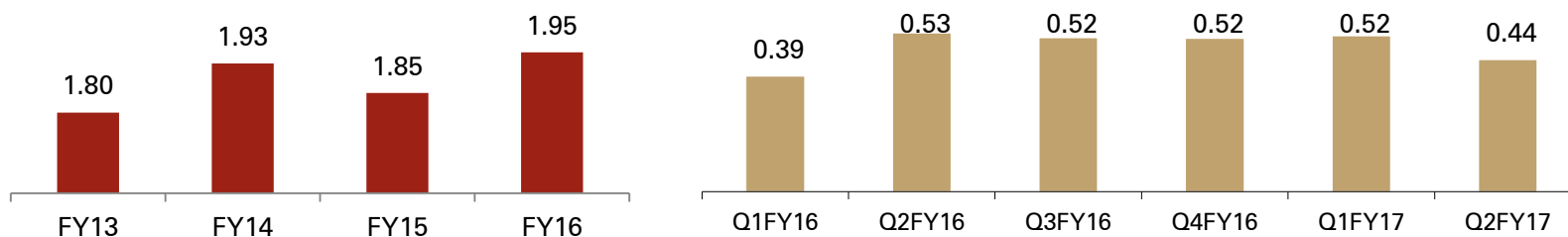
# Production Growth



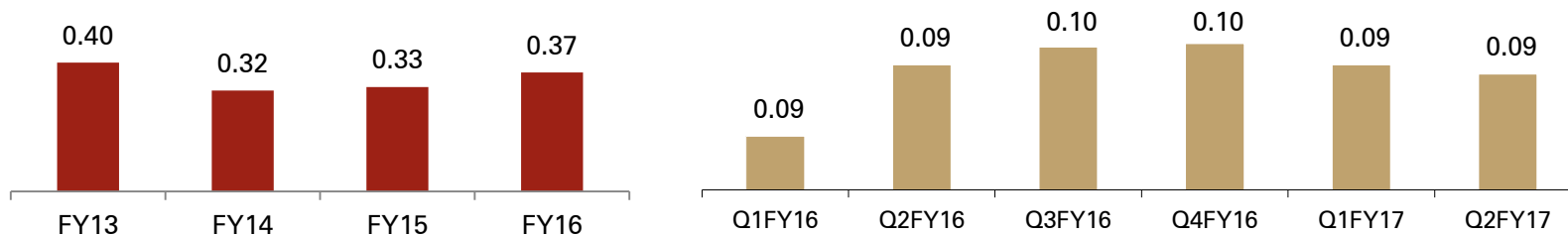
**Bauxite  
(Million Tonnes)**



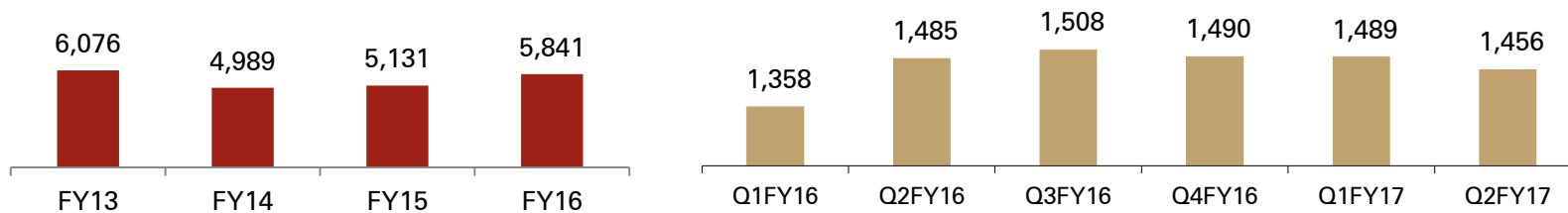
**Alumina  
(Million Tonnes)**



**Aluminium  
(Million Tonnes)**



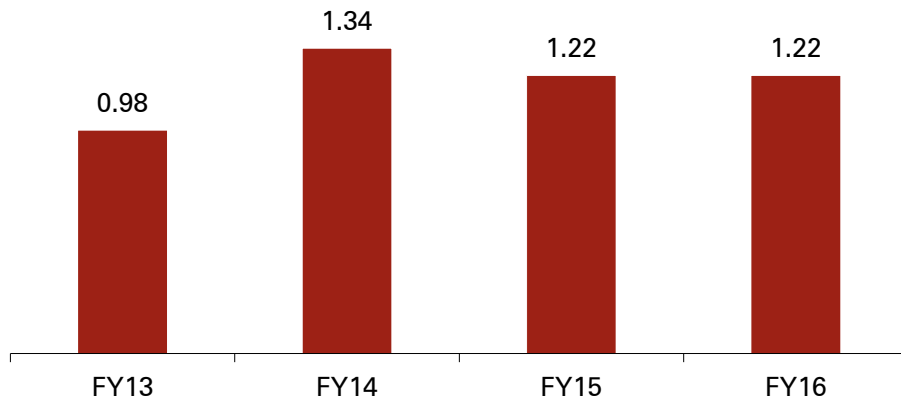
**Power  
(Million Units)**



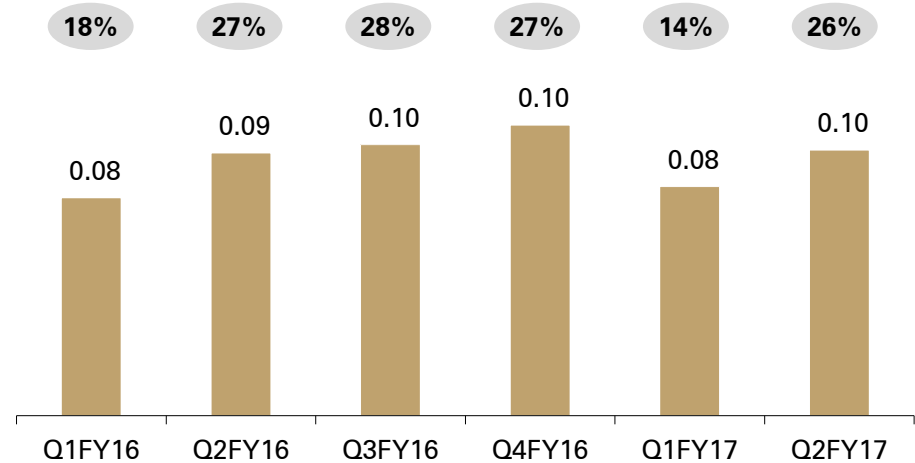
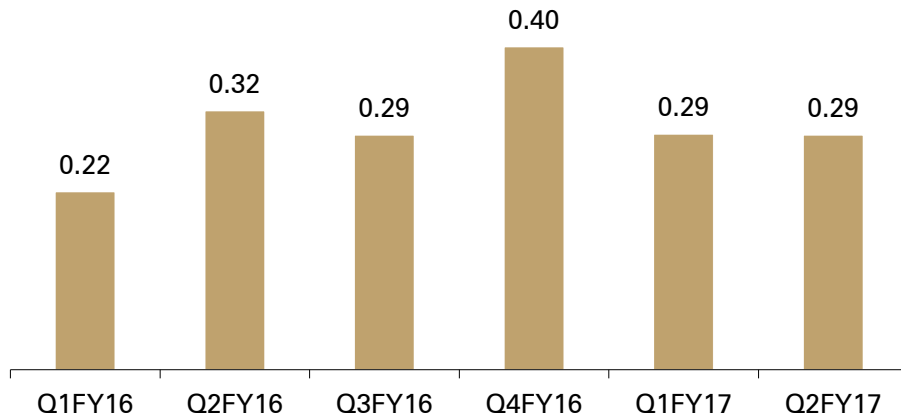
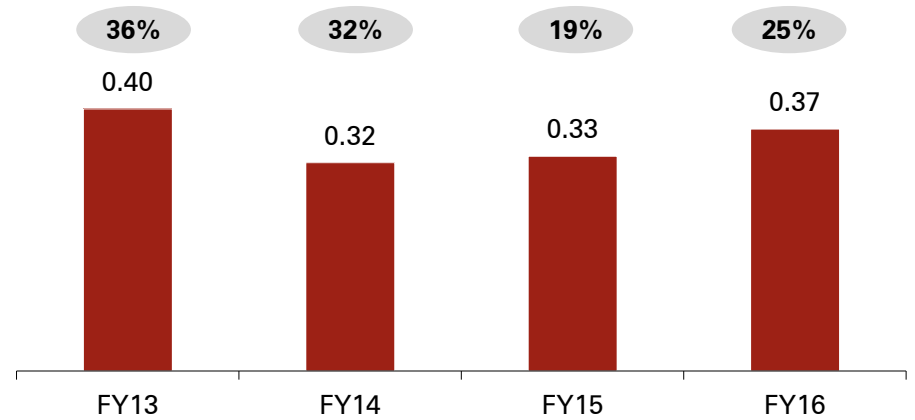
# Sales Volume



### Alumina (Million Tonnes)



### Aluminium (Million Tonnes)



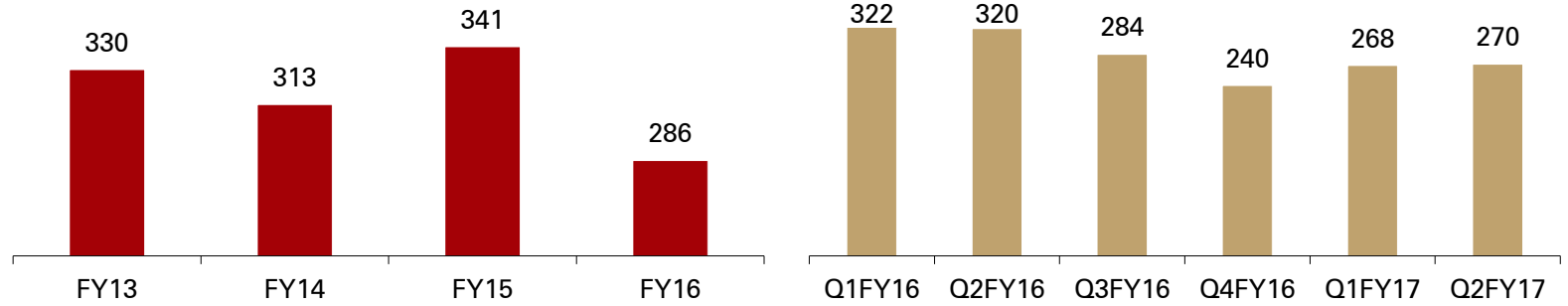
Aluminium export %



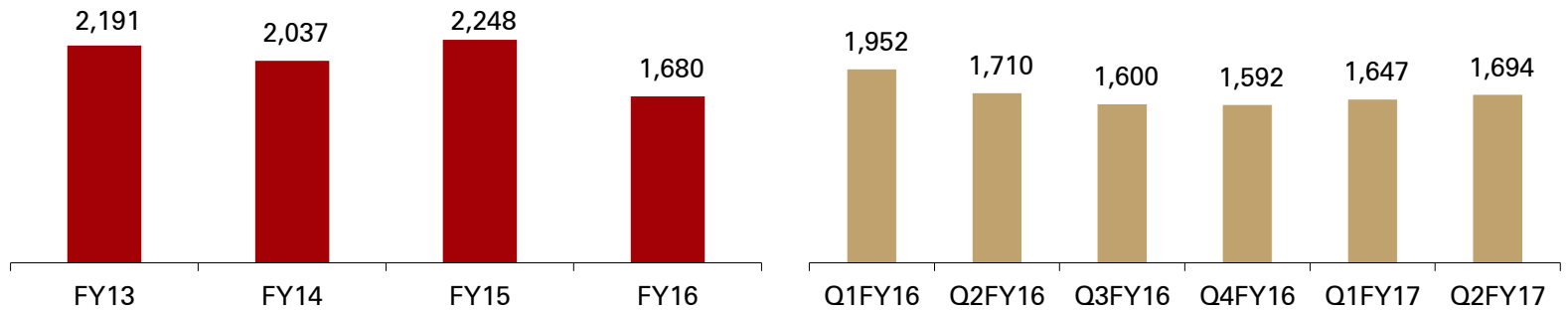


# Average Realization

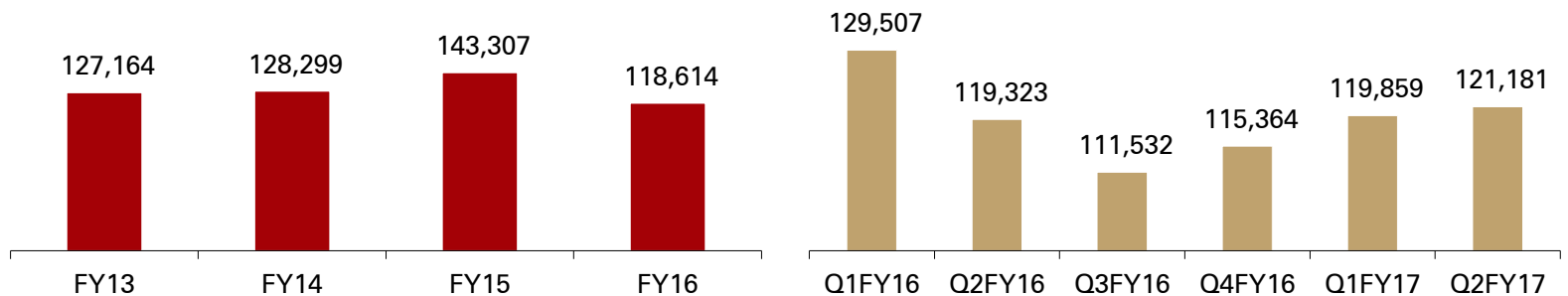
Alumina  
Export  
(\$/t)



Aluminium  
Export  
(\$/t)

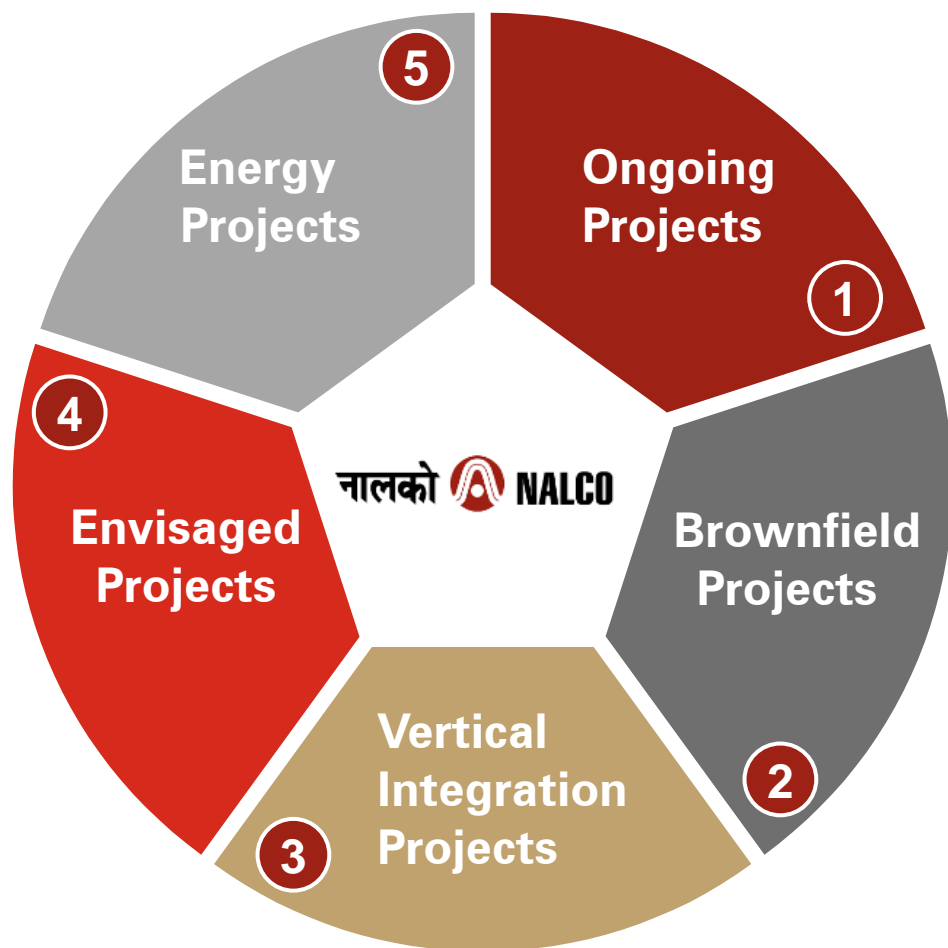


Aluminium  
Domestic  
(Rs/t)



## **Expansion and Diversification Plans**

# Expansion and Diversification Strategy



1

- Utkal D & E Coal Blocks
- 100 MW Wind Power Plants

2

- 5<sup>th</sup> Stream Alumina Refinery Expansion
- Brownfield Expansion of Smelter and Captive Power Plant

3

- Caustic Soda plant in collaboration with Gujarat Alkalies Chemicals Limited
- Angul Aluminium Park – JV with Odisha Industrial Infrastructure Development Corporation

4

- Smelter in Odisha
- Mines and Refinery in Andhra Pradesh
- Overseas Tolling/Smelter

5

- NTPC-NALCO Power Company
- 20 MW Solar Power plant in Madhya Pradesh
- 50 MW Wind Power Plant
- 50 MW Solar Power Plant



# On-going & Brownfield Projects

## On-going Projects

Location	Capacity	Estimated Investment (Rs. Cr)	Status	Likely Completion
<b>Utkal D &amp; E Coal Blocks</b>				
Talcher, Odisha	2 MTPA	534	<ul style="list-style-type: none"> <li>• Utkal-E along with Utkal-D re-allocated vide notification dated September 11, 2015</li> <li>• Allotment order issued by Ministry of Coal in May 2016</li> <li>• Central Mine Planning and Design Institute engaged for preparation of mining plan</li> </ul>	January, 2020
<b>100 MW Wind Power Projects</b>				
Sangli Maharashtra & Jaisalmer, Rajasthan	100 MW	700	<ul style="list-style-type: none"> <li>• 50 MW commissioned in Rajasthan in September 2016</li> <li>• 90% progress achieved for 50.4 MW WPP in Maharashtra. Commissioning expected by January, 2017 subject to project registration approval from Maharashtra Energy Development Agency (MEDA).</li> </ul>	January, 2017

## Brownfield Projects

Location	Capacity	Estimated Investment (Rs. Cr)	Status	Likely Completion
<b>5th Stream Alumina Refinery Expansion</b>				
Damanjodi, Odisha	1 MTPA	5,540	<ul style="list-style-type: none"> <li>• Investment approval accorded by Board.</li> <li>• Statutory Clearances underway</li> <li>• Public Hearing for Environment Clearance held on September 28, 2016</li> </ul>	2021
<b>Brownfield Expansion of Existing Smelter Plant</b>				
Angul, Odisha	0.5 MTPA	10,000	<ul style="list-style-type: none"> <li>• Preliminary Discussions held with RTAIL in Nov'16. Power at viable rate to be availed from NTPC</li> </ul>	-

# Vertical Integration Projects



Location	Capacity	Estimated Investment (Rs. Cr)	Status	Likely Completion
<b>Caustic Soda plant in collaboration with Gujarat Alkalies Chemicals Limited (GACL)</b>				
Dahej, Gujarat	Caustic Soda: 0.27 MTPA CPP: 130 MW	1999 (NALCO's equity in the project: Rs. 240 crore)	<ul style="list-style-type: none"> <li>JV Company GACL-NALCO Alkalies &amp; Chemicals Private Limited formed in December 2015</li> <li>NALCO holds 40% equity interest in JV</li> <li>NALCO to source minimum 50,000 tonne of caustic soda from the JV Company</li> <li>Project clearances, detailed project report updation etc. are underway</li> <li>Location of the project has changed due to regulatory issues</li> </ul>	2019-20
<b>Angul Aluminium Park – JV with Odisha Industrial Infrastructure Development Corporation (IDCO)</b>				
Angul, Odisha	Aluminium downstream industries	99.60 (NALCO's equity in the project: Rs. 37 crore)	<ul style="list-style-type: none"> <li>NALCO to supply 50,000 MT of molten aluminium per year for a period of 20 years</li> <li>Project approved by DIPP, GoI under Modified Industrial Infrastructure Upgradation Scheme (MIUS) for Central grant</li> <li>224 acre Land acquisition for the project done</li> <li>Equity interest of NALCO revised to 49%</li> <li>Pricing mechanism of hot metal under finalisation</li> </ul>	2019-20

# Envisaged Projects



Location	Capacity	Likely Investment (Rs. Cr)	Status
<b>Smelter Plant, Odisha</b>			
Greenfield Smelter, at Kamakhyanagar and Sundergarh, Odisha	Dhenkenal: 0.6 MTPA Sundergarh: 0.5 MTPA	22,000	Power at viable rate on sustainable basis from NTPC/NLC.
<b>Mines and Alumina Refinery in Andhra Pradesh</b>			
Andhra Pradesh	Bauxite: 6.0 MTPA Alumina: 2.0 MTPA	11,000	<ul style="list-style-type: none"> <li>• Gudem &amp; KR Konda Mine reserved for NALCO by Govt. Viability will improve on allocation of Jerrela Bauxite Mines.</li> <li>• Soft CSR activities going on.</li> </ul>
<b>Overseas Smelter &amp; Power Plant</b>			
Iran, Oman & Indonesia have been identified suitable destinations	Smelter: 0.5 MTPA Power: 1050 MW	19,000	<ul style="list-style-type: none"> <li>• MOU signed with Iranian Mines &amp; Mining Industries Development &amp; Renovation Organization (IMIDRO), Iran in May 2016 to explore business opportunity including toll smelting with alumina supplied from NALCO's refinery in India.</li> <li>• A Joint Task Force (JTF) comprising members from NALCO and IMIDRO has been formed to recommend further course of action.</li> </ul>

# Energy Projects



Location	Capacity	Estimated Investment (Rs. Cr)	Status	Likely Completion
<b>NTPC-NALCO Power Company</b>				
Gajamara Power Project	2,400 MW	14,000	<ul style="list-style-type: none"> <li>NALCO &amp; NTPC, the Maharatna Power Producer, have entered into a MoU for developing power projects and other business collaborations in India</li> <li>The companies to float a JV, NTPC-NALCO Power Company, to set up power plants</li> <li>First power plant of 2,400 MW is planned in Odisha to supply uninterrupted power to NALCO's smelter in Angul and proposed Greenfield Smelter at Kamakhyanagar .</li> </ul>	-
<b>Solar Power Plant, Madhya Pradesh</b>				
Madhya Pradesh	20 MW	140	<ul style="list-style-type: none"> <li>20 MW solar project being set up to meet Renewable Purchase Obligation</li> <li>New &amp; Renewable Energy Department (MPNRED) has accorded in-principle approval</li> <li>Selection of solar power developer for the project under process</li> </ul>	September, 2017
<b>50 MW Wind Power Plant</b>				
Wind potential location in the Country	50 MW	350	<ul style="list-style-type: none"> <li>Selection of Wind Power Developer is underway</li> </ul>	January, 2018
<b>50 MW Solar Power Plant</b>				
Solar potential location in the Country	50 MW	310	<ul style="list-style-type: none"> <li>Tender for selection of solar power developer to be issued shortly</li> </ul>	January, 2018

## **Key Financials**

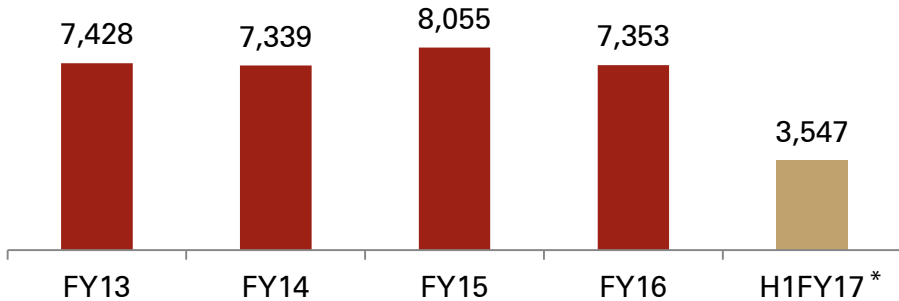




# Key Financials (1/2)

## Revenue

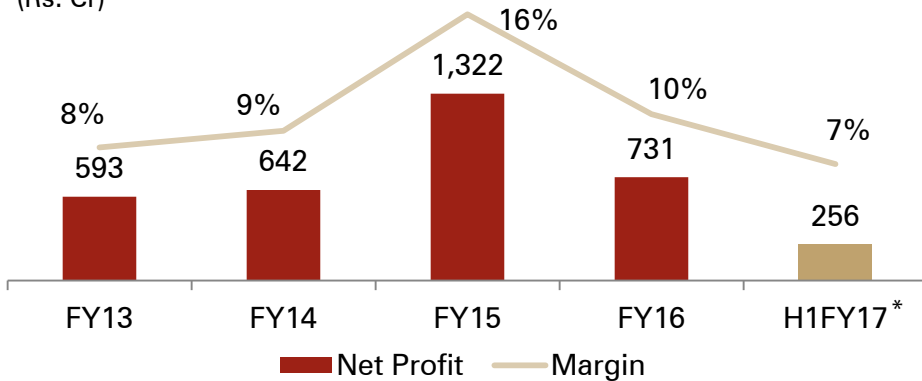
(Rs. Cr)



Note:  
1 Revenue includes other income

## Net Profit

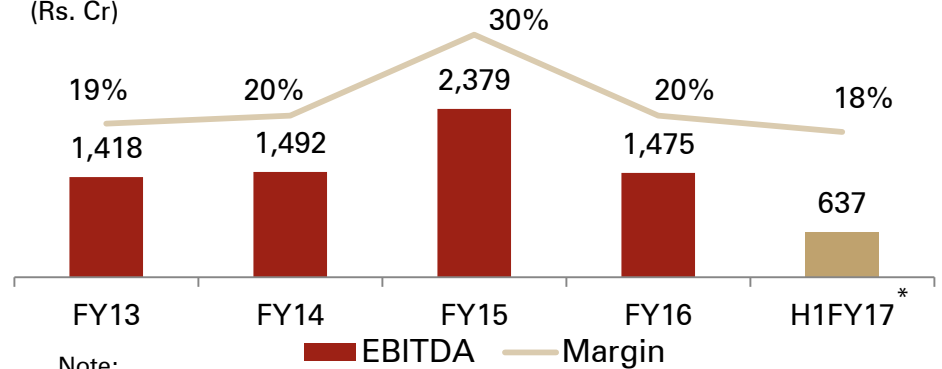
(Rs. Cr)



Note:  
1 Net Profit margin = Net Profit/ Revenues (including other income)

## EBITDA

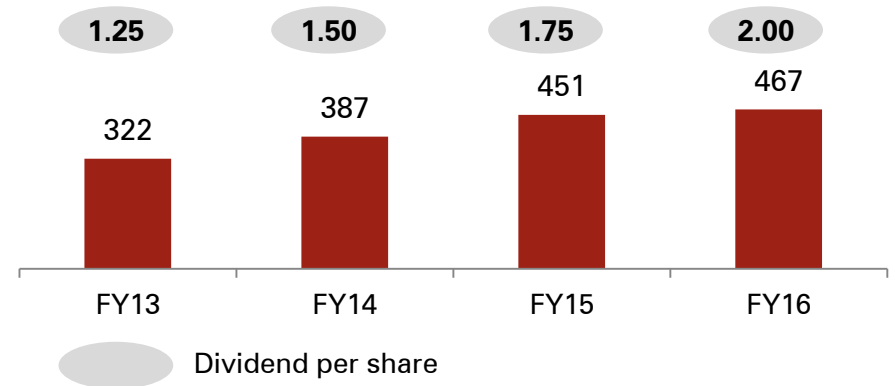
(Rs. Cr)



Note:  
1 EBITDA includes other income excluding exceptional items  
2 EBITDA margin = EBITDA (including other income) / Revenues (including other income)

## Dividend

(Rs. Cr)



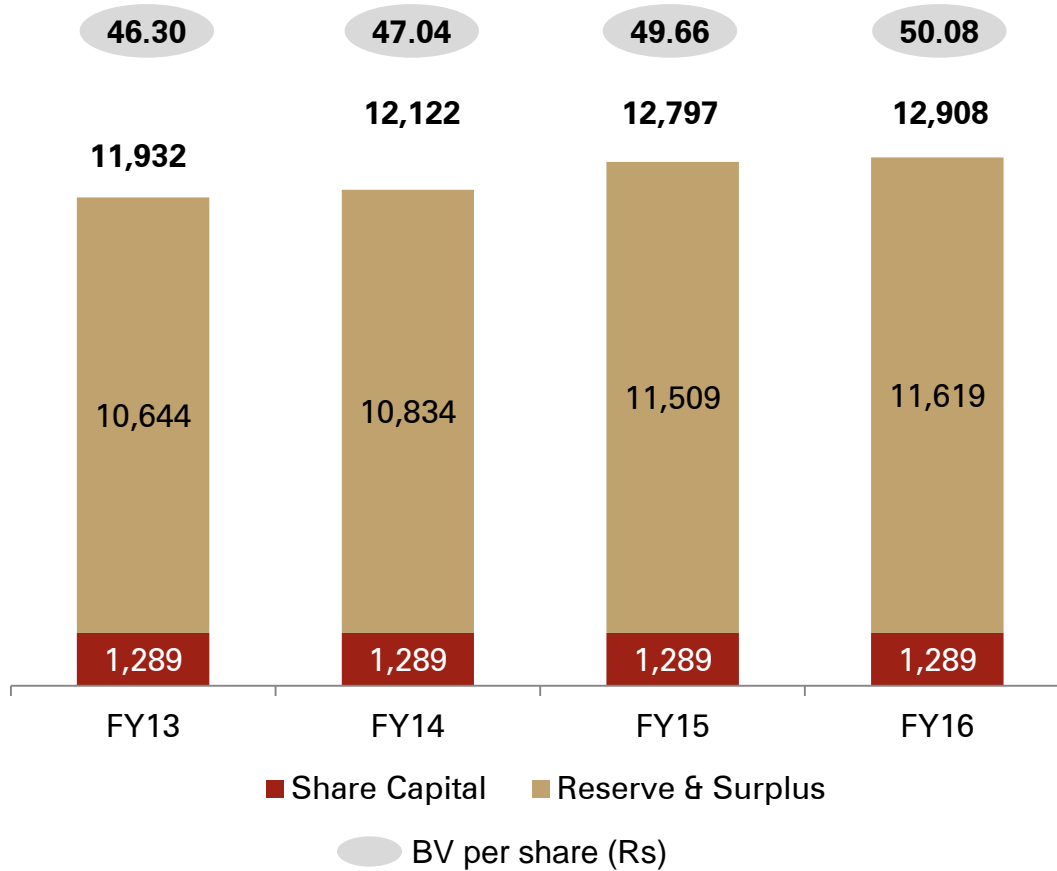
Note:  
1 Dividend for FY 16 (Rs. 467 Cr.) includes interim dividend of Rs. 322 Cr. and final dividend of Rs. 145 Cr., post buy-back of shares



# Key Financials (2/2)

## Net Worth

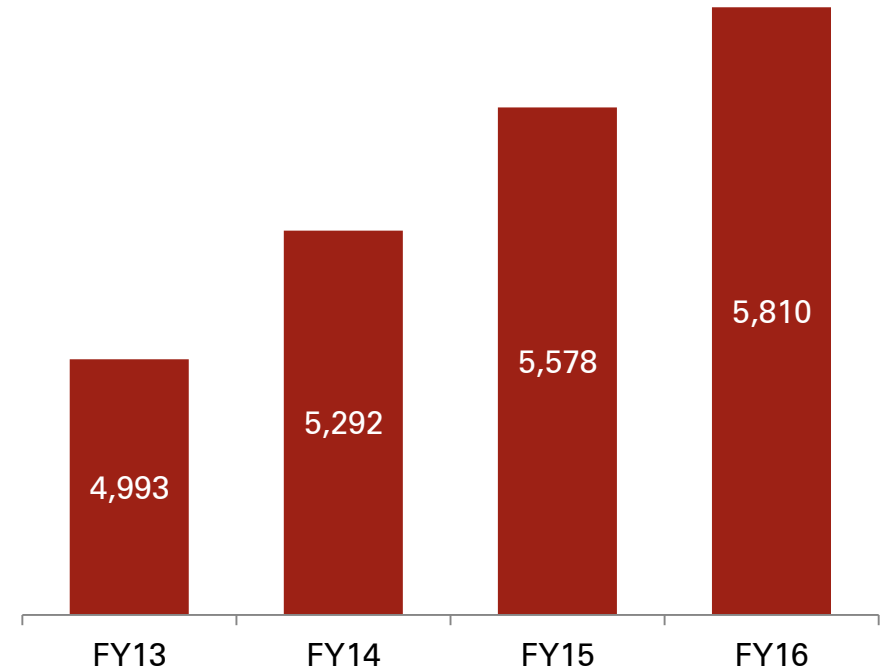
(Rs. Cr)



Figures above the bar indicate Net Worth

## Cash and Bank Balance

(Rs. Cr)



Note:  
1 Cash and Bank Balance includes investment in Mutual Funds



# Appendix



# Buy Back of Shares

- Buy Back process of 25% of paid up capital (64.43 crore shares) completed in Sep'16
- Total cash outflow: Rs. 2,835 crore @ Rs. 44 per share (face value: Rs. 5 each)

	Total No. of Equity Share (mn)	No. of Shares held by Gol (mn)	No. of Shares held by Other Shareholders (mn)	Gol Holding	Share Capital (Rs. Cr)
Before Buy Back	2,577.2	2,085.8	491.5	80.93%	1,288.62
After Buy Back	1,932.9	1,441.5	491.4	74.58%	966.46