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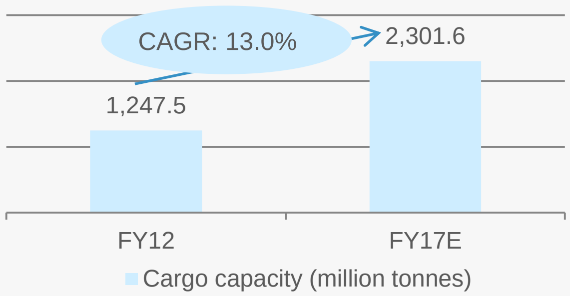
CONTENTS

MARCH 2014

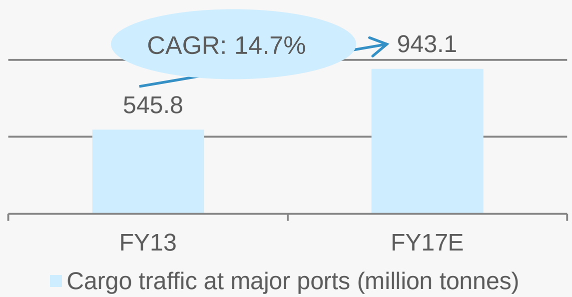
EXECUTIVE SUMMARY … (1/2)

Increasing trade activities and private participation in port infrastructure set to support port infrastructure activity



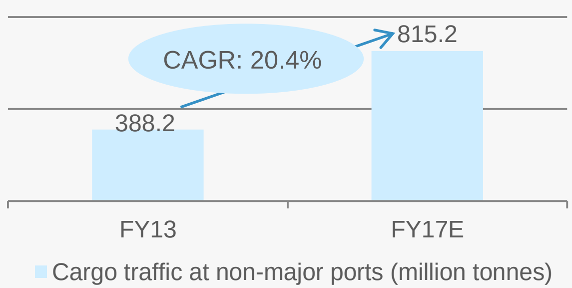
By FY17, cargo capacity in India is expected to increase to 2301.6 million tonnes from 1247.5 million tonnes in FY12

India has 13 major ports



By FY17, cargo traffic at major ports in India is expected to rise to 943.1 million tonnes from 545.8 million tonnes

India's 176 non-major ports are strategically located on the world's shipping routes

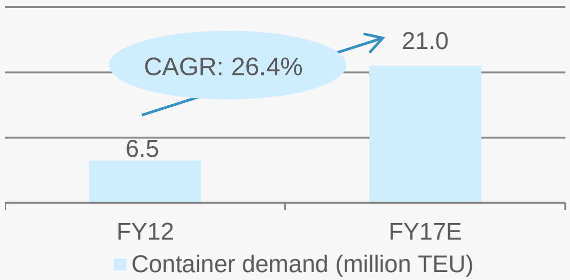


By FY17, cargo traffic at non-major ports in India is expected to grow to 815.2 million tonnes from 388.2 million tonnes

Source: Ministry of Shipping; Planning Commission; Aranca Research, Note: E - Estimates

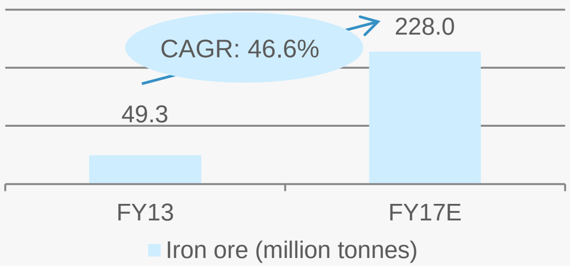
EXECUTIVE SUMMARY … (2/2)

Trade to boost demand for containers



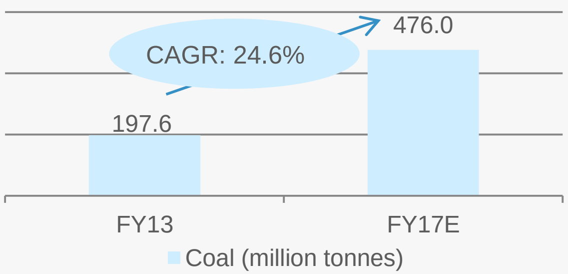
By FY17, container demand in India is expected to increase to 21 million TEU from 6.5 million TEU in FY12

Infrastructural development to increase demand for iron and steel



By FY17, iron ore import is expected to rise to 228 million tonnes from 49.3 million tonnes in FY13

Increase in power demand to boost coal imports



By FY17, coal import in India is expected to grow to 476 million tonnes from 197.6 million tonnes in FY13

Source: Ministry of Shipping, Planning Commission, Aranca Research; Notes: E - Estimates, TEU – Twenty Foot Equivalent Unit

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ADVANTAGE INDIA

FY12

Cargo traffic in MMT: 911.5

FY17E

Cargo traffic in MMT: 1,758

Robust demand

- Port traffic in India is set to rise at a CAGR of 15.9 per cent over FY12–14
- CAGR in traffic over FY12–14 for:
  - Non-major ports: 5.5 per cent
  - Major ports: 22.0 per cent

Attractive opportunities

- Non-major ports are set to benefit from strong growth in India's external trade
- Demand for port allied services such as operations and maintenance, and ship repair services will increase

Advantage India

Competitive advantages

- India has a coastline which is more than 7,517 km long, interspersed with more than 200 ports
- Most cargo ships that sail between East Asia and America, Europe and Africa pass through Indian territorial waters

Policy Support

- The government initiated NMDP, an initiative to develop the maritime sector; the planned outlay is USD11.8 billion
- FDI of 100 per cent under the automatic route and a ten year tax holiday for enterprises engaged in ports
- Launch of Maritime Agenda 2010–20 to develop infrastructure and investments in ports

Source: Report of the Task force on Financing Plan for Ports; Govt. of India; Aranca Research

Notes: FY – Indian Financial Year (April–March); NMDP – National Maritime Development Programme; FDI – Foreign Direct Investment; USD – US Dollar; E – Estimates; MMT – Million Metric Tonnes; CAGR – Compound Annual Growth Rate

THERE ARE TWO BASIC CATEGORIES OF PORTS IN INDIA

Ports in India

Major

- There are 13 major ports in the country; 6 on the Eastern coast and 7 on the Western coast
- Major ports are under the jurisdiction of the Government of India and are governed by the Major Port Trusts Act 1963, except Ennore port, which is administered under the Companies Act 1956

Non-Major (minor)

- India has about 200 non-major ports of which one-third are operational
- Non-major ports come under the jurisdiction of the respective state governments' maritime boards (GMB)

Source: Ministry of Shipping; Aranca Research

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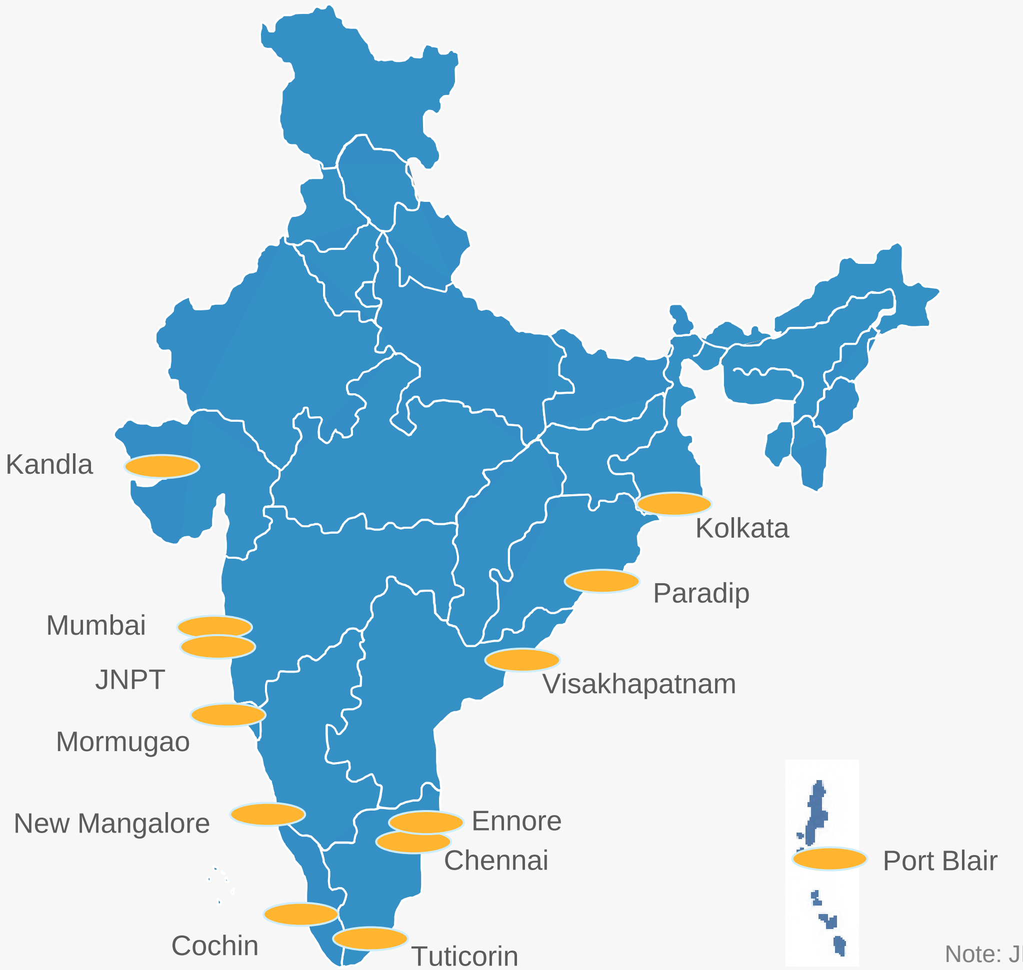
MAJOR PORTS IN INDIA



Note: JNPT – Jawaharlal Nehru Port Trust

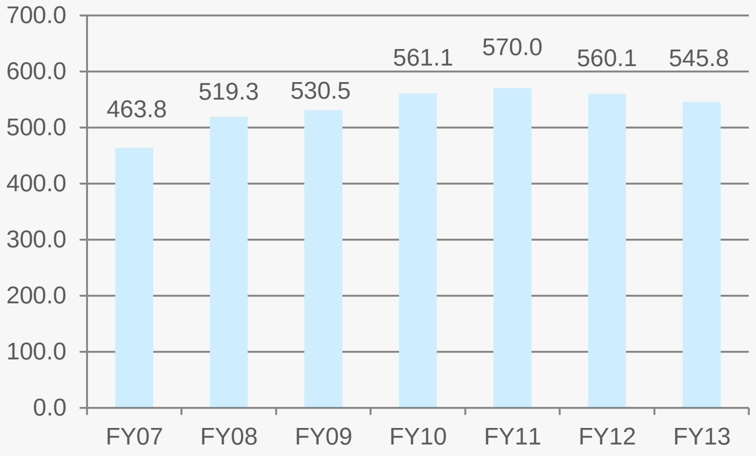
CARGO TRAFFIC IS ON THE RISE AT BOTH MAJOR AND NON-MAJOR PORTS … (1/2)

Cargo traffic at major ports in India –

- Stood at 545.8 MMT in FY13
- Increased at a CAGR of 2.8 per cent during FY07–13
- Cargo traffic in FY13 at major ports was 545.8 MMT compared with 560.1 MMT in the corresponding prior-year

Notes: CAGR – Compound Annual Growth Rate;
FY – Indian Financial Year (April–March)

Cargo traffic at major ports (MMT)



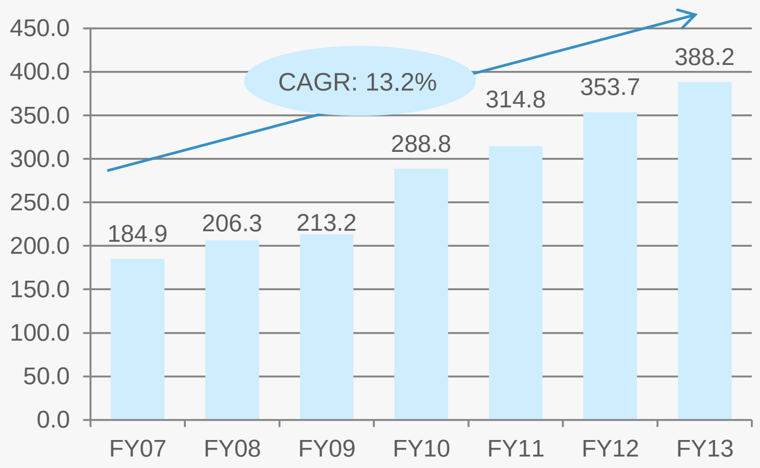
Source: Ministry of Shipping; Aranca Research
Note: MMT – Million Metric Tonnes

CARGO TRAFFIC IS ON THE RISE AT BOTH MAJOR AND NON-MAJOR PORTS … (2/2)

Cargo traffic at non-major ports –

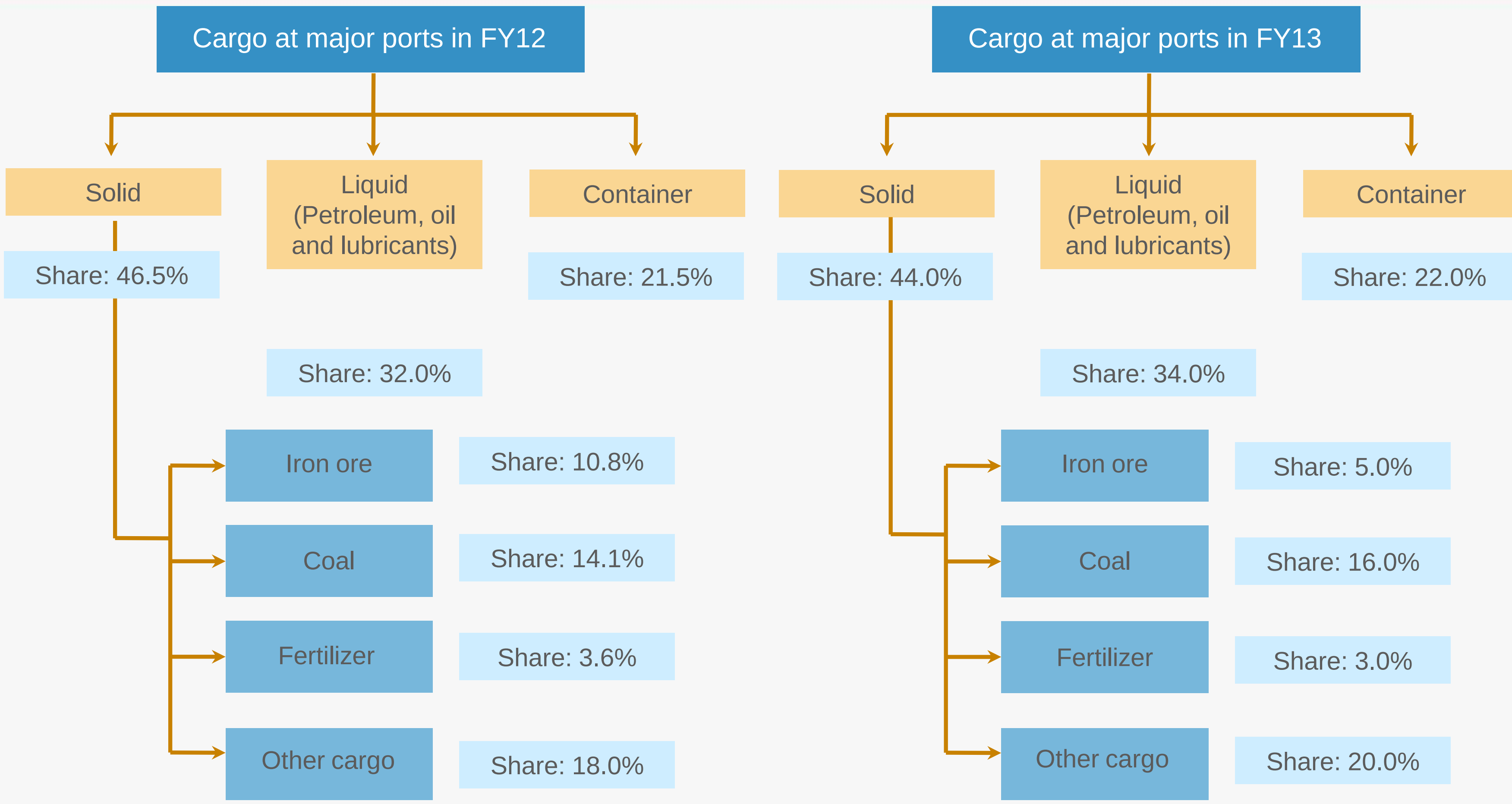
- Estimated to have touched 388.2 MMT in FY13
- Cargo traffic has expanded at a CAGR of 13.2 per cent during FY07–13
- Cargo traffic in 2013 at non-major ports was 388.2 MMT compared with 353.7 in the corresponding prior-year

Cargo traffic at non-major ports (MMT)



Source: Ministry of Shipping, Aranca Research
Note: MMT – Million Metric Tonnes

CARGO PROFILE AT MAJOR PORTS IN INDIA … (1/2)



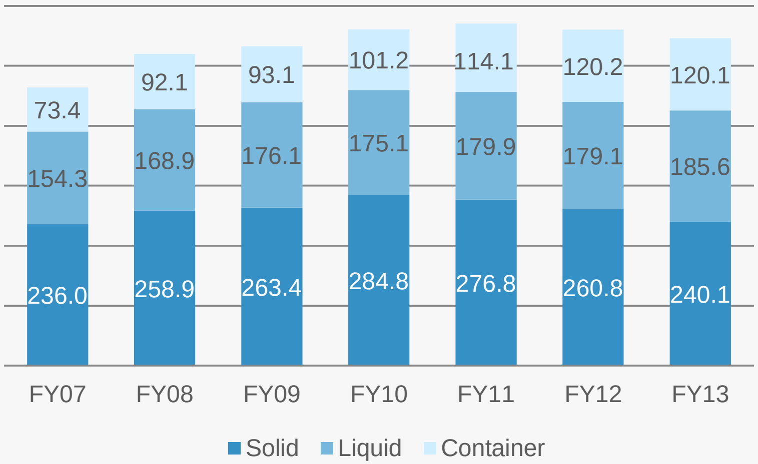
Source: Ministry of Shipping; Aranca Research

CARGO PROFILE AT MAJOR PORTS IN INDIA … (2/2)

Over FY07–13, CAGR in the volume of –

* Solid cargo was 0.3 per cent
* Liquid cargo was 3.1 per cent
* Container cargo was 8.5 per cent
* Cargo traffic during FY13 for solid, liquid, and container cargo was 240.1, 185.6, and 120.1 MMT, respectively

Cargo traffic at major ports (MMT)

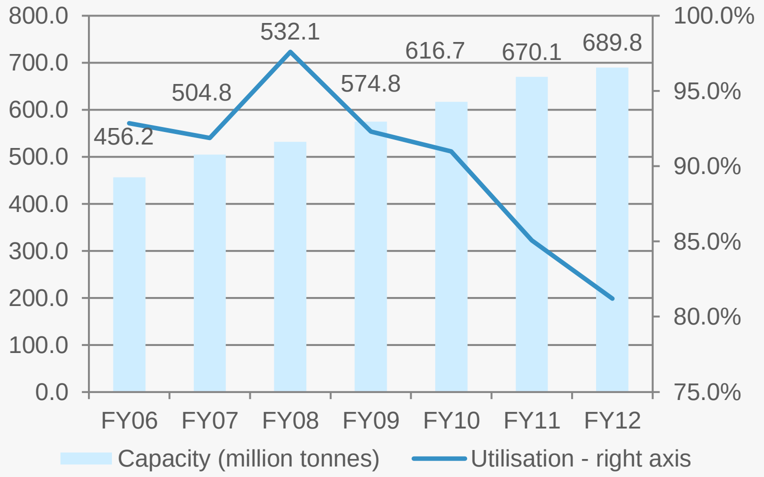


Source: Ministry of Shipping; Indian Ports Association (IPA); Aranca Research
Note: MMT - Million Metric Tonnes

INCREASE IN CAPACITY OVER THE YEARS

- Capacity at major ports grew to 689.8 MMT in FY12, implying a CAGR of 6.5 per cent since FY07
- With capacity increasing, utilisation rates have been gradually coming down
- Utilisation rates of major ports are much above world's average
- In FY13 the cargo handling capacity of major ports was 744.91 MMT

Capacity and utilisation at major ports (MMT)



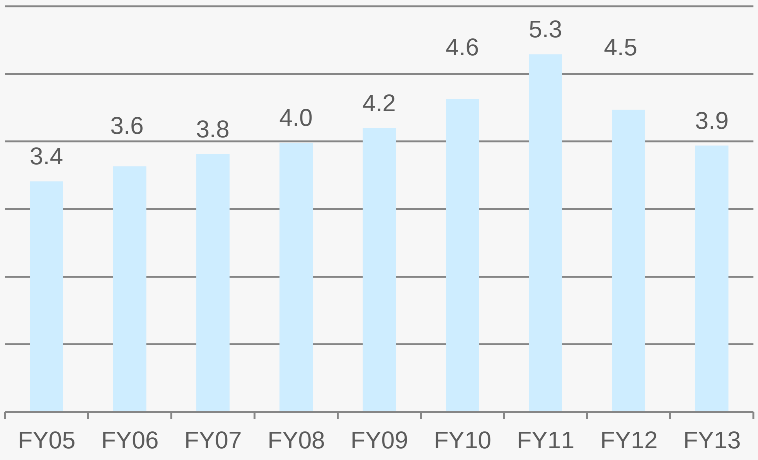
Source: Ministry of Shipping; Aranca Research,
Note: MMT – Million Metric Tonnes

DROP IN TURNAROUND TIME IN FY12

- Average turnaround time is influenced by factors such as type of cargo, parcel size and entrance channel
- The average turnaround time improved to 3.9 days in FY13 from 4.5 days in FY12

Note: Turnaround time – Total time spent by a ship from entry into port until departure

Average turnaround time for major ports (in days)



NOTABLE TRENDS IN THE PORTS SECTOR … (1/2)

Increasing private participation

- Strong growth potential, favourable investment climate, and sops provided by state governments have encouraged domestic and foreign private players to enter the Indian ports sector. In addition to the development of ports and terminals –
  - The private sector has extensively participated in port logistics services
  - During FY13, 29 projects are scheduled to be executed adding capacity of 208 MTPA at the cost of USD8.8 billion.
  - Its share in cargo mix has risen to 34 per cent in FY10 from 27 per cent in FY06

Setting up of port-based SEZs

- SEZs are being developed in close proximity to several ports, thereby providing strategic advantage to industries within these zones. Plants being set up include –
  - Coal-based power plants to take advantage of imported coal
  - Steel plants and edible oil refineries.
- Development of SEZs in Mundra, Krishnapatnam, Rewas and few others is underway

Focus on draft depth

- All the Greenfield ports are being developed at shores with natural deep drafts and the existing ports are investing on improving their draft depth.
- Higher draft depth is required to accommodate large sized vessels. Due to the cost and time advantage associated with the large sized vehicles, much of the traffic is shifting to large vessels from smaller ones, especially in coal transportation

Source: Ministry of Shipping; Aranca Research
Note: SEZ – Special Economic Zone

NOTABLE TRENDS IN THE PORTS SECTOR … (2/2)

Specialist terminal-based ports	• Terminalisation: Focus on terminals that deal with a particular type of cargo • This is useful for handling specific cargo such as LNG that requires specific equipment and hence high capital costs. Forming specialist terminals for such cargo result in optimal use of resources and increased efficiencies • Examples of specialist terminals: ICTT in Cochin, LNG terminal in Dahej Port
‘Landlord port’ model	• To promote private investments, the government has reformed the organisational model of seaports – • From: A ‘service port’ model where the port authority offers all the services • To: A ‘landlord port’ model where the port authority acts as a regulator and landlord while port operations are carried out by private companies • Major ports following ‘landlord port’ model: JNPT, Chennai, Visakhapatnam and Tuticorin
Rising traffic at non major ports	• With the increasing private participation in establishing minor ports. Cargo traffic handled by the minor ports are outpacing cargo traffic at major ports, traffic at non major ports has expanded at a CAGR of 13.2 per cent during FY07–13

Source: Aranca Research

Notes: ICTT – International Container Transshipment Terminal; LNG – Liquefied Natural Gas

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SECTOR BENEFITS FROM STRONG DEMAND, PRIVATE PARTICIPATION

Growing demand

- Increasing trade activities resulting in container traffic
- Rising demand for coal and other commodities
- Growing crude imports by the country

Inviting

Policy support

- National Maritime Development Programme and National Maritime Agenda
- FDI of upto 100 per cent under the automatic route
- Various sops and incentives for private players to build ports

Resulting in

Increasing investments

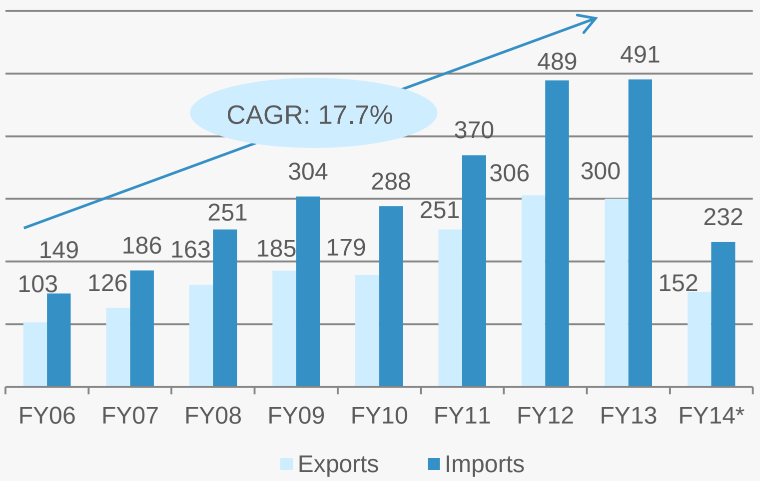
- Increasing investments in building ports and related activities
- Private equity supporting private port developers
- Increasing investments by foreign players

Source: Ministry of Shipping; Aranca Research

INDIA'S PORTS ARE BENEFITTING FROM STRONG GROWTH IN EXTERNAL TRADE … (1/2)

- India's total external trade is estimated to have grown to USD791 billion in FY13, implying a CAGR of 17.7 per cent since FY06
- Ports handle almost 95 per cent of trade volumes; thus rising trade has contributed significantly to cargo traffic

India's external trade flows (USD billion)

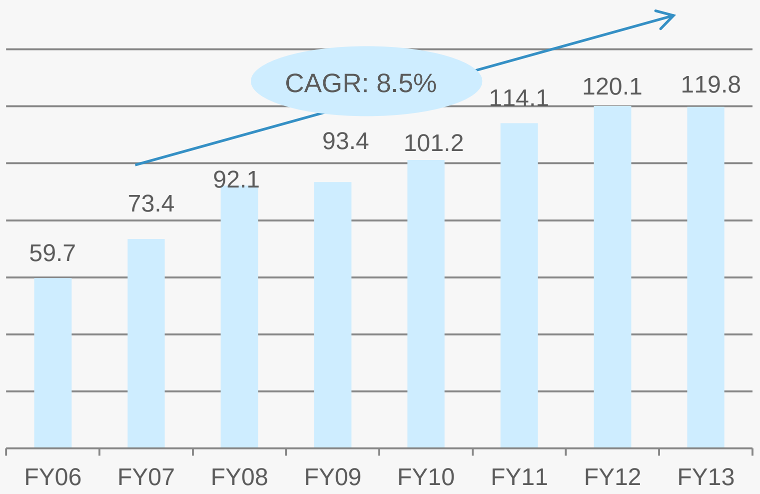


Source: Ministry of Commerce; Aranca Research
Note: FY14* - Till September 2013

INDIA'S PORTS ARE BENEFITTING FROM STRONG GROWTH IN EXTERNAL TRADE … (2/2)

- Increasing trade is translating into higher demand for containerisation due to their efficiency
- During FY07–13, container traffic rose to 119.8 MMT, implying a CAGR of 8.5 per cent

Container traffic at major ports (MMT)



Source: Indian Ports Association; Aranca Research
Note: MMT – Million Metric Tonnes

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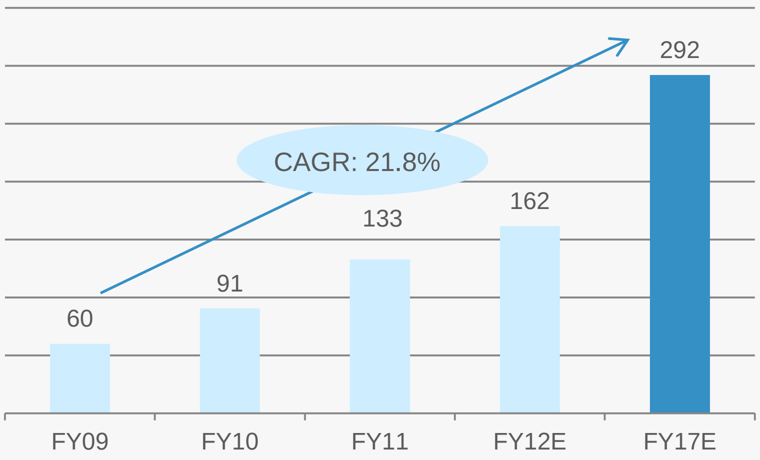
INCREASING COAL IMPORTS SET TO DRIVE RISING CARGO TRAFFIC … (1/2)

- India is the largest importer of thermal coal in the world; major chunk of this is transported by sea
- Coal imports (both thermal and cooking) are estimated to have risen to 161.5 MMT in FY12 due to new coal-fired power plants (30 GW of capacity addition), cement and steel plants
- With growing demand for power, coal imports are expected to reach 292 MMT in FY17

Notes: E – Estimates for FY12 and FY17; GW – Gigawatt; MMT – Million Metric Tonnes

Coal supply gap (import requirement) (MMT)

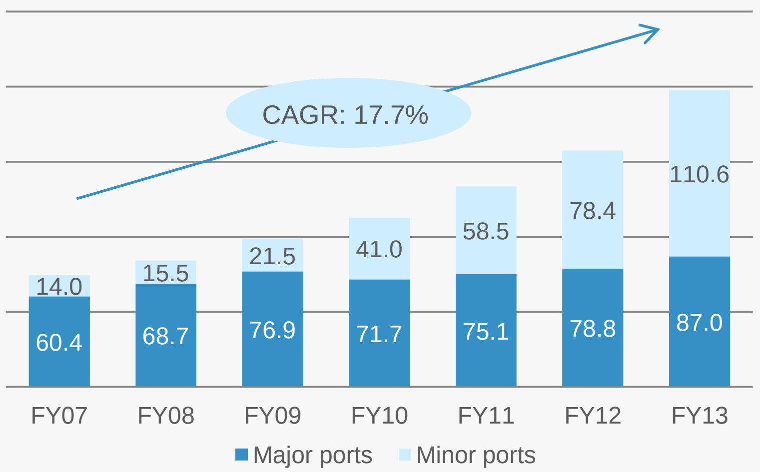


Source: Ministry of Coal; Aranca Research
Note: The figures from FY10–12 in the above graph are as per the data provided by Minister of State for Coal to the Upper House of Parliament; and the figure for FY17 is taken from the Planning Commission report

INCREASING COAL IMPORTS SET TO DRIVE RISING CARGO TRAFFIC … (2/2)

* Increasing coal imports are set to drive coal cargo traffic upwards at both major and non-major ports
* With private ports boosting their coal handling capacities, non-major ports look set to handle majority of coal imports in the future
* Coal cargo traffic has grown at a CAGR 17.7 per cent over FY07–13 to reach 197.6 MMT
* Coal cargo traffic for FY13 at ports was 197.6 MMT compared with 157.2 MMT in the last year

Coal cargo traffic (MMT)

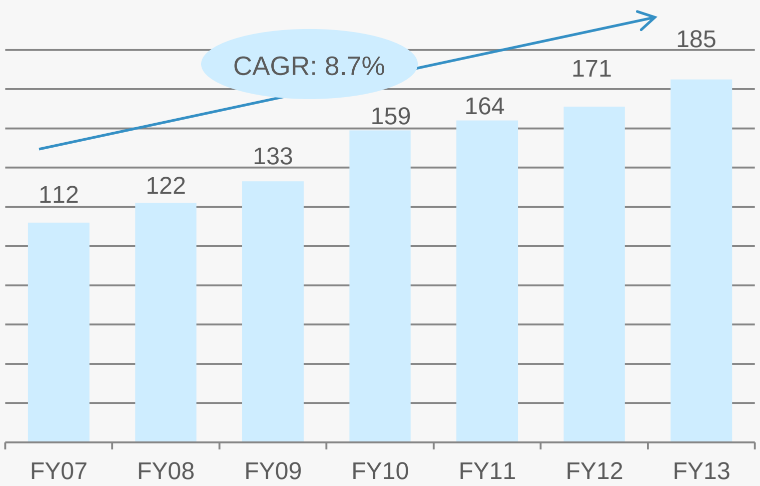


Source: Ministry of Shipping; Aranca Research
Note: MMT – Million Metric Tonnes

PORTS TO BENEFIT FROM GROWING CRUDE IMPORTS … (1/2)

- A consequence of strong GDP growth has been rising energy demand; the country currently meets about 75 per cent of total crude oil demand by imports
- India's crude imports touched 185 MMT in FY13, implying a CAGR of 8.7 per cent over FY07–13

Crude imports (MMT)

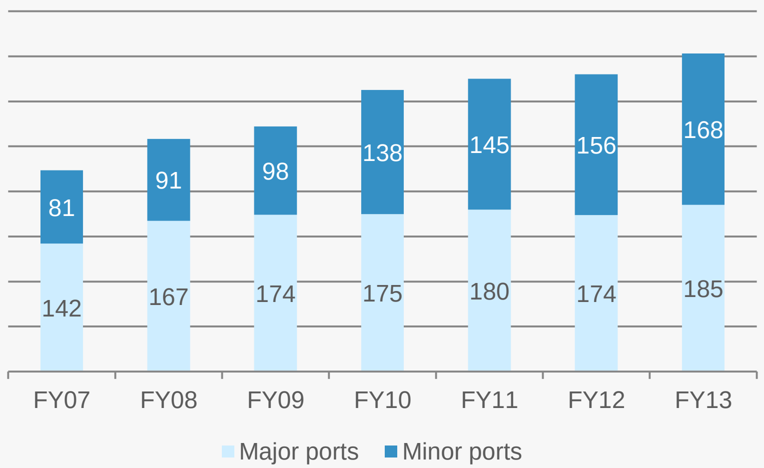


Source: Handbook of Indian Statistics (RBI); Aranca Research
Note: MMT – Million Metric Tonnes

PORTS TO BENEFIT FROM GROWING CRUDE IMPORTS … (2/2)

* Private ports have been especially good at attracting crude import traffic
* POL traffic at both major and non-major ports added up to 353.2 MMT in FY13

POL traffic (MMT)



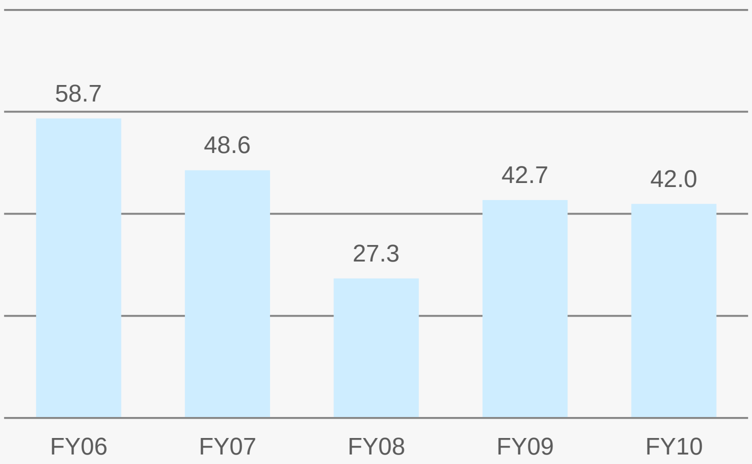
Source: Ministry of Shipping; Aranca Research
Notes: POL – Petroleum, Oil, and Lubricants; MMT – Million Metric Tonnes

NATIONAL MARITIME DEVELOPMENT PROGRAMME (NMDP) … (1/2)

NMDP, a Government of India initiative, is aimed at the all round development of the Indian maritime sector

- A total of 251 projects ranging from construction of new berths to rail/ road connectivity projects with an investment outlay of USD11.8 billion have been identified; capacity augmentation by 429 MMT
- Phase I of the project was completed in 2009; Phase II is scheduled for completion in 2012
- Funding plans: 64 per cent by the private sector; rest from ports' internal sources and budgetary support
- The capacity of Indian ports went up to 1,247.5 million tonnes in FY12, from about 1,100 million tonnes in FY11
- In 2013, government has set a target for creation of 250 million tonnes of capacity spread across 42 projects at an estimated cost of USD2.8 billion

Capacity addition (million tonnes)



Source: Ministry of Shipping; Aranca Research
Note: MMT – Million Metric Tonnes

NATIONAL MARITIME DEVELOPMENT PROGRAMME (NMDP) … (2/2)

As of March 31, 2010	Projects completed	Work in progress	Approved but work not awarded	In approval process	Preliminary/ planning stage
No of projects	50	74	16	29	82
Estimated outlay (USD billion)	1.2	3.4	0.6	2.4	4.1
Capacity addition (MMT)	56	94	61	110	108

NATIONAL MARITIME AGENDA 2010–20 … (1/2)

Focus on increasing capacity	• To create a port capacity of around 3,200 MT to handle the expected traffic of about 2,500 MT by 2020
Increasing investments	• Proposed investments in major ports by 2020 are expected to total USD54.5 billion, while those in non-major ports would be USD35 billion
World-class infrastructure	• To implement full mechanisation of cargo handling and movement at ports, thereby bringing Indian ports on par with the best international ports in terms of performance and capacity
Strategically building ports	• To develop two major ports (one each on East and West coast) to promote trade as well as two hub ports (one each on the West coast and the East coast) – Mumbai (JNPT), Kochi, Chennai, and Visakhapatnam
Bringing ports under regulator	• To establish a port regulator for all ports in order to set, monitor, and regulate service levels, technical and performance standards

Source: Ministry of Shipping; Aranca Research

NATIONAL MARITIME AGENDA 2010–20 … (2/2)

National Maritime Agenda 2010–20 is aimed at the all-round development of the Indian maritime sector

* 22 projects, which involve capacity addition of 97.34 MTPA and investment of USD1198.9 million, have been awarded as of January 2013
* Agenda involves investments in new projects at major ports of around USD22.8 billion, of which USD15.2 billion is expected to come from private sector players and the remaining from budgetary allocation
* By 2015, National Maritime Agenda aims to increase the share of Indian seafarers in the global shipping industry from 6–7 per cent to at least 9 per cent
* The government, through this policy, aims to increase the tonnage under the Indian flag and Indian control as well as the share of Indian ships in EXIM trade

Source: Ministry of Shipping; Aranca Research
Note: EXIM – Export-Import

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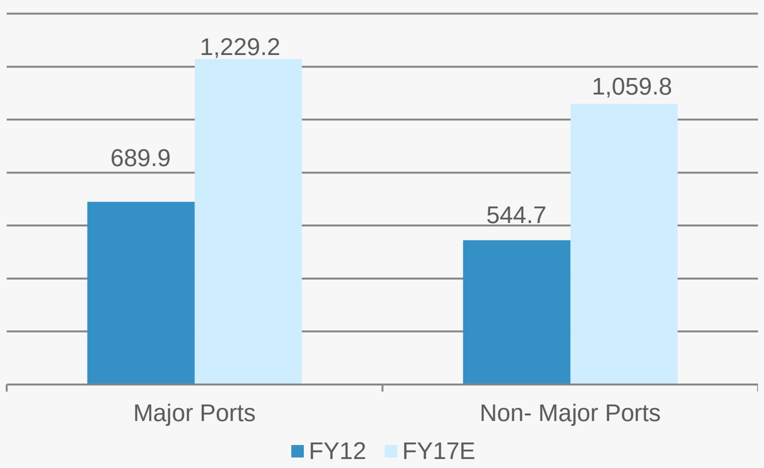
12TH FIVE-YEAR PLAN

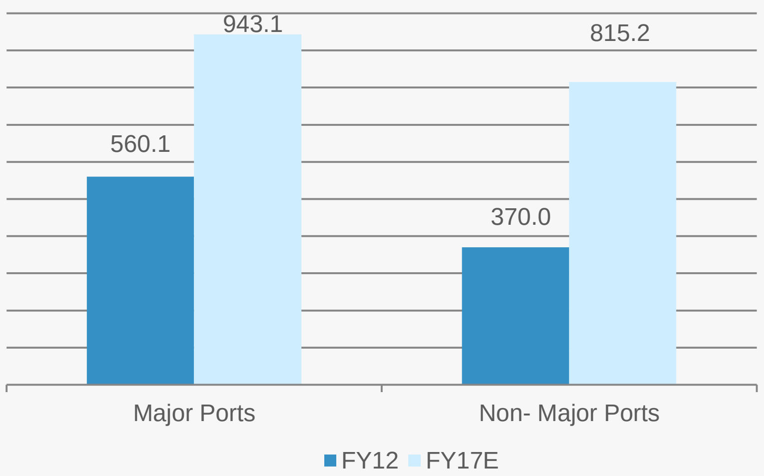
The 12th Five-Year Plan (2012–17) is focused on the development of major and non-major ports through public and private investments

* The proposed outlay for port sector in the plan, excluding private investment, is USD4.7 billion
* The government anticipates private sector investment of around USD10.6 billion during 12th Plan Period.

Planned capacity 12th Five-Year Plan (million tonnes)



Projected traffic12th Five-Year Plan (million tonnes)



Note: E - Estimates

FAVOURABLE POLICIES ASSISTING THE PRIVATE SECTOR

De-licensing and tax holidays

- The government has allowed FDI of up to 100 per cent under the automatic route for projects related to the construction and maintenance of ports and harbours
- A 10-year tax holiday to enterprises engaged in the business of developing, maintaining, and operating ports, inland waterways, and inland ports

Price flexibility

- Private ports enjoy price flexibility, as the government allows non-major ports to determine their own tariffs in consultation with the State Maritime Boards; at major ports, tariffs are regulated by the Tariff Authority for Major Ports (TAMP)

Model Concession Agreement (MCA)

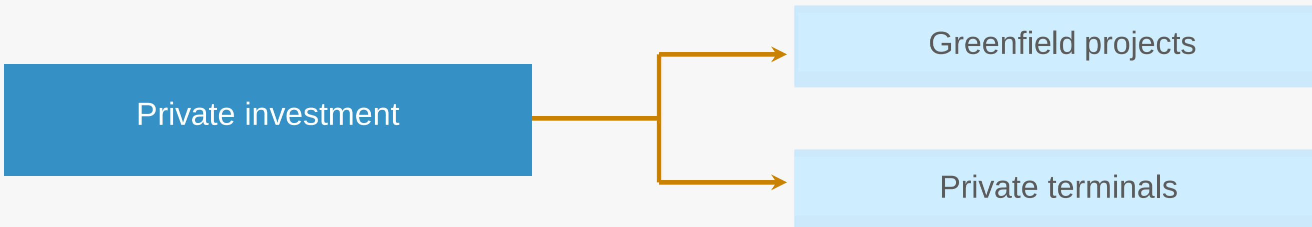
- An MCA has been finalised to bring transparency and uniformity to contractual agreements that major ports would enter into with selected bidders for projects under the Build, Operate and Transfer (BOT) model

Monopoly prevention

- The Ministry of Shipping has passed a regulation to prevent monopoly power –
  - An existing private operator (at a port) cannot bid for the next terminal to handle similar kind of cargo at the same port

Source: Ministry of Shipping; Aranca Research
Note: FDI – Foreign Direct Investment

STRONG PRIVATE SECTOR PARTICIPATION IN PORTS PROJECTS … (1/2)



- Currently, 29 private sector projects (captive ports) with a capacity of 203.0 MMT and developed with an investment of USD2.0 billion are already operational
- 24 projects, with a capacity of 142.0 MMT and involving an investment of USD2.7 billion, are currently under development
- 31 projects are currently in bidding/pipeline stage

Source: Ministry of Shipping; Aranca Research

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STRONG PRIVATE SECTOR PARTICIPATION IN PORTS PROJECTS … (2/2)

Terminals in major ports with private sector involvement	Port agency	Estimated cost (USD million)
Container terminal, Ennore	Ennore	293.1
LNG terminal, Cochin	Cochin Port Trust	729.1
Container terminal, NSICT	JNPT	156.3
Oil jetty related facilities (Vadinar)	Kandla Port Trust	156.3
Third container terminal (Mumbai)	JNPT	187.5
Crude oil handling facility (Cochin)	Cochin Port Trust	146.5
ICTT at Vallarpadam (Cochin)	Cochin Port Trust	262.9
Construction of SPM captive berth (Paradip)	Paradip Port Trust	104.2
Development of second container terminal (Chennai)	Chennai Port Trust	103.1

Key private sector companies	Ports they developed
Maersk	JNPT (Mumbai)
P&O Ports	JNPT (Mumbai and Chennai)
Dubai Ports International	(Cochin and Vishakhapatnam)
PSA Singapore	Tuticorin
Adani	Mundra
Maersk	Pipavav
Navyuga Engineering Company Ltd	Krishnapatnam
DVS Raju group	Gangavaram
JSW	Jaigarh
Marg	Karaikal

Source: Indian Ports Association; Aranca Research
Notes: NSICT – Nhava Sheva International Container Terminal, Mumbai; ICTT – International Container Transshipment Terminal; SPM – Single Point Mooring

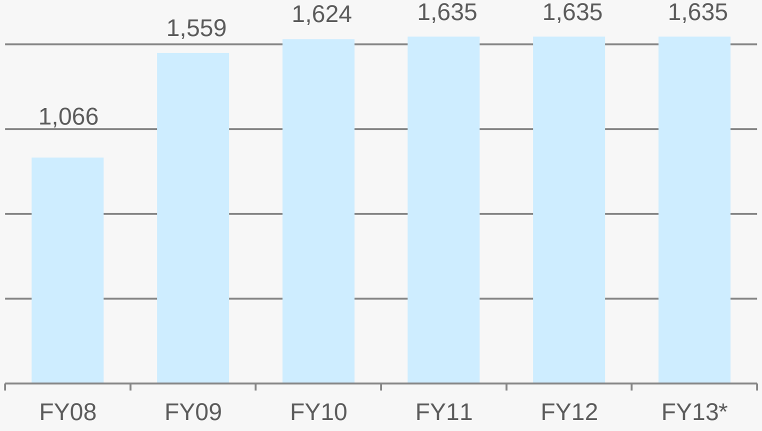
PRIVATE EQUITY INTEREST IN INDIAN PORTS/SHIPPING REMAINS HEALTHY

PE deals since 2008

Target	Acquirer	Value (USD million	Year
Krishnapatnam Port Co Ltd	3I Group	161.0	2008
JSW Infrastructure	Eton Park Capital	125.0	2010
Fourcee Infrastructure	General Atlantic LLC	104.0	2012
Mundra Port	3I Group, GIC Real Estate	100.0	NA
Karaikal Port Pvt Ltd (Second round)	Ascent Capital	41.7	NA
Ocean Sparkle Ltd	Standard Chartered PE	41.6	2012
Gangavaram Port	Warburg Pincus	34.0	2008
Karaikal Port Pvt Ltd (First Round)	IDFC Project Equity	32.6	NA
Gujarat Pipavav Port Ltd	IDFC	28.5	NA
Karaikal Port Pvt Ltd	Standard Chartered PE (Mauritius) II Ltd	27.1	2012
20Cube Logistics	Zephyr Peacock India	17.0	2013
Continental Warehousing Nhava Sheva	Aureos India Fund, Eplanet Venture	16.4	NA

Source: E&Y; Grant Thornton; Aranca Research

Cumulative FDI inflows in ports since April 2000 (USD million)



Source: Department of Industrial Policy & Promotion (DIPP); Aranca Research
Note: * - till August 2013

Foreign investors have been encouraged by growth potential in the ports sector as well as favourable policies

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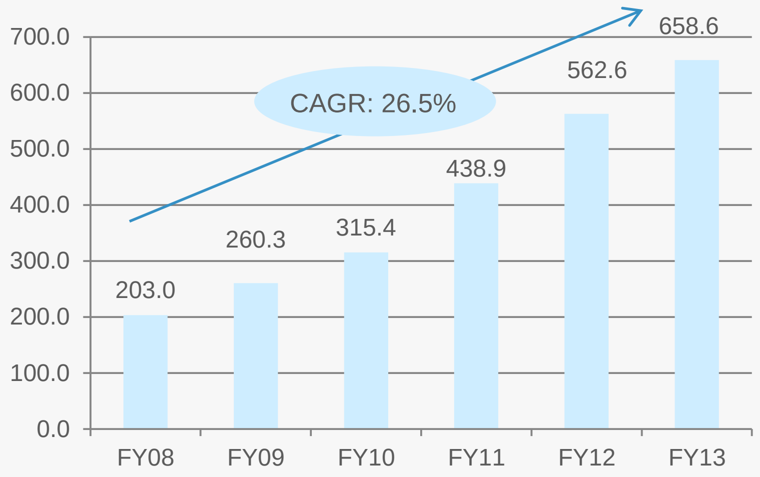
MUNDRA: THE LARGEST PRIVATE PORT IN INDIA … (1/2)

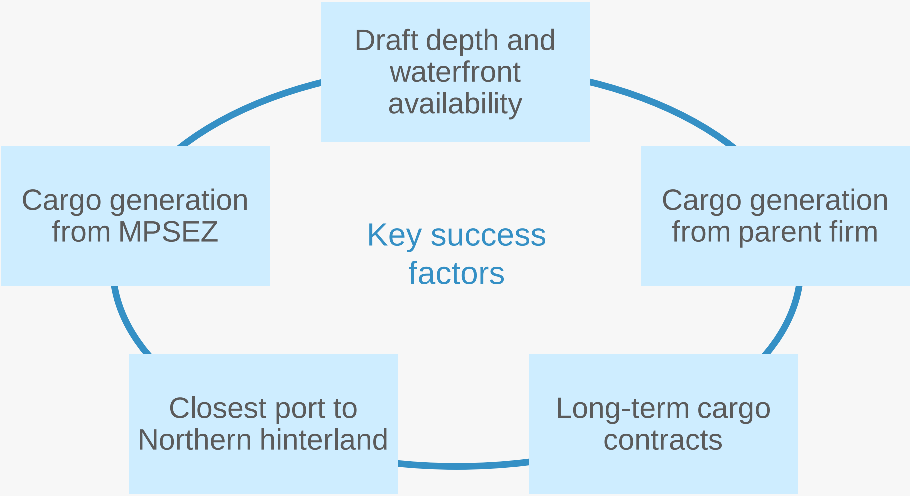
- Mundra Port and Special Economic Zone Ltd was renamed as Adani Ports & Special Economic Zone Ltd
- It is the largest private port in India in terms of volume
  - Revenue (FY13): USD658.6 million
  - Operating profit: USD308.7 million
- Cargo traffic at Mundra port: 72.3 MMT in FY13
  - Container traffic contributed the most, followed by coal and edible oil, chemicals and POL
- Has the world's largest fully mechanised coal terminal with a capacity of 60 MTPA
- Handles the third highest container traffic in India
- During FY08–13, total revenue rose to USD658.6 million, implying a CAGR of 26.5 per cent

Trends in net sales (USD million)

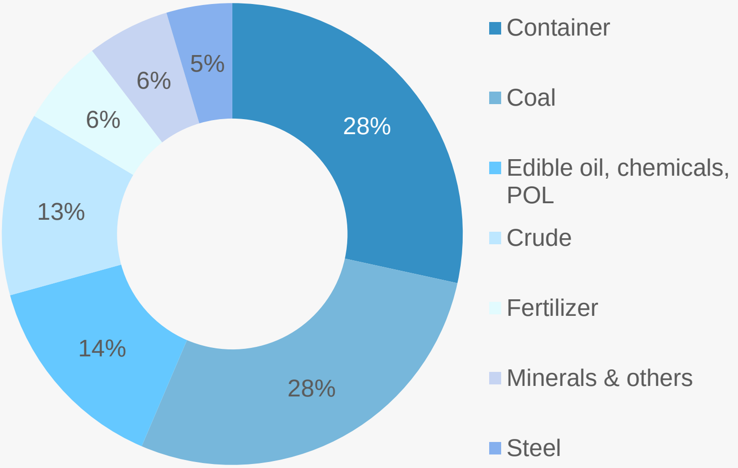


Source: Company Sources, including Annual Reports and News Items; Assorted News Articles; Aranca Research
Notes: POL – Petroleum, Oil and Lubricants, MTPA – Million Tonnes Per Annum; MMT – Million Metric Tonnes

MUNDRA: THE LARGEST PRIVATE PORT IN INDIA … (2/2)



Cargo profile of Mundra Port (FY11)



Source: Company Annual Report; Aranca Research
Notes: POL – Petroleum, Oil, and Lubricants;
MPSEZ – Mundra Port Special Economic Zone

JNPT: MAJOR PORT WITH THE LARGEST CONTAINER CAPACITY … (1/2)

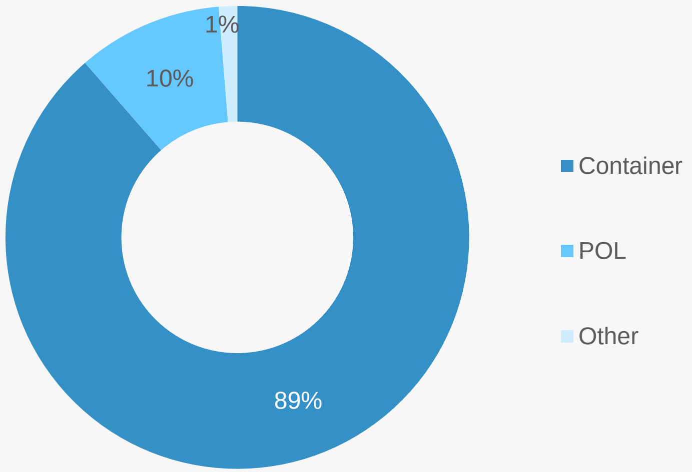
- Jawaharlal Nehru Port Trust (JNPT) has the third highest cargo traffic and the highest container traffic in the country
- It is a container-focussed port with container traffic of 57.9 MMT in FY13
- Traffic handled at JNPT for FY13 was 64.5 MMT
- Distribution of JNPT's container traffic for FY12 across its various terminals was as follows –
  - Jawaharlal Nehru Port Container Terminal (JNPCT): 1.21 million TEUs
  - Nhava Sheva International Container Terminal (NSICT): 1.40 MMT
  - APM Terminals: 1.9 MMT

Notes: TEU – Twenty-Foot Equivalent Unit; MMT – Million Metric Tonnes

JNPT: MAJOR PORT WITH THE LARGEST CONTAINER CAPACITY … (2/2)

- JNPT was developed to relieve the pressure of Mumbai port and was commissioned in 1989
- It serves most of North India and has good hinterland connectivity through road and rail networks
- JNPT, with a capacity of 4.2 million TEU, handles over 55 per cent of India's container traffic and is ranked 24th among global container ports
- JNPT is a pioneer in involving private sector participation in major ports and operates under a landlord model; NSCIT is the first private terminal in the country
- The port is poised to handle 10 million TEUs of containers by 2015–16
- Proposed capacity additions by FY17 –
    - Marine chemical: 30 MTPA
    - Container terminal: 58 MTPA

Cargo profile of JNPT (FY12)

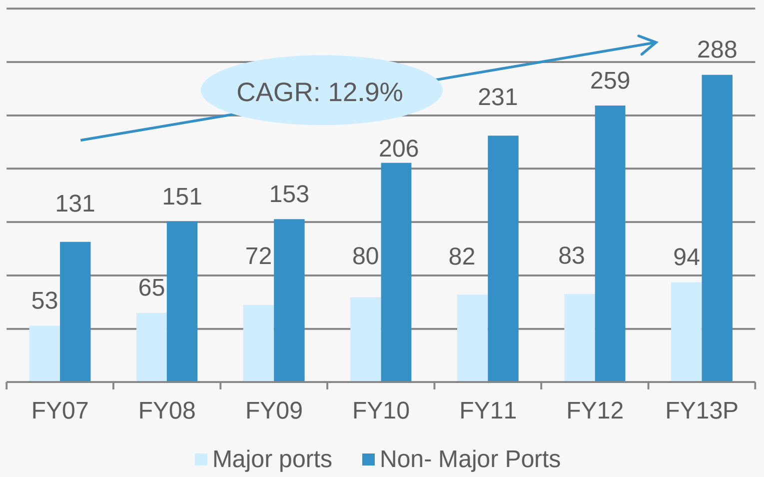


Source: JNPT's website; Indian Ports Association; Aranca Research
Notes: POL – Petroleum, Oil, and Lubricants;
TEU – Twenty-Foot Equivalent Unit; MTPA – Million Tonnes Per Annum

GUJARAT: PORT HUB OF INDIA … (1/2)

- Gujarat is endowed with 1215 kilo meters of coastline i.e. 1/6th of total Indian coastline
- The state has 42 ports of which 41 are non major, while Kandla is the sole major port
- During FY07–13, cargo traffic in Gujarat increased at a CAGR of 12.9 per cent to reach 381.4 million tonnes
- Favourable policies of Gujarat government helped the state in gaining private investors interest in port related activities

Cargo handled at major and non-major port of Gujarat



Source: Shipping Ministry, Planning Commission, Aranca Research
Note: P – Provisional

GUJARAT: PORT HUB OF INDIA ... (2/2)

- During FY13, Gujarat added 43 million tonnes of capacity at non-major ports, augmenting the capacity of non-major ports to 366 million tonnes
- During the 12th Five-Year Plan, the government estimates investment of about USD9.4 billion in the port sector by private players in Gujarat
- With seven ports under construction and five proposed ports, Gujarat has the highest number of privately operated greenfield ports in India

Greenfield ports	Developer
Port of Pipavav	GMB and Gujarat Pipavav Port Ltd
Mundra Port	Gujarat Adani Port Ltd
Dahej Port	Petronet LNG Ltd and GMB
Hazira Port	Shell Gas B.V.

Source: Shipping Ministry, Planning Commission, Aranca Research

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OPPORTUNITIES

Increasing scope for private ports

- With rising demand for port infrastructure due to growing imports (crude, coal) and containerisation, public ports (major ports) will fall short of meeting demand
- This provides private ports with an opportunity to serve the spill-off demand from major ports and increase their capacities in line with forecasted new demand

Ship repair facilities at ports

- Dry docks are necessary to provide ship repair facilities. Out of all major ports, Kolkata has five dry docks, Mumbai and Visakhapatnam have two; the rest have one or no dock at all
- Given the positive outlook for cargo traffic, and the resulting increase in number of vessels visiting ports, demand for ship repair services will go up. This will provide opportunities to build new dry docks and setup ancillary repair facilities

Port support services

- Increasing investments and cargo traffic point to a healthy outlook for port support services
- These include operation and maintenance (O&M) services like pilotage, harbouring and provision of marine assets like barges and dredgers
- Currently, limited players provide port O&M services, ensuring an opportunity for domestic and overseas players

Source: Ministry of Shipping; Aranca Research
Note: O&M – Operations & Maintenance

INDUSTRY ASSOCIATIONS

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Fax. No: 022-22621405
Email: secretary@ippta.org.in

NOTES

* Major and non-major ports do not have a strict association with traffic volumes. The classification has more of an administrative significance
* Cargo traffic includes both loading (export) and unloading (imports) of goods
* Containerisation is the increased use of container for transporting non-bulk goods. It leads to increased efficiency (both time and money)
* Turnaround time is the total time spent by a ship from entry into port till departure
* Twenty Equivalent Units (TEU) is a standard measure of containers which are 20 feet in length and 8 feet in width; the height can vary
* Draft is the vertical distance between waterline and the bottom of the ship. It determines the depth of water a ship or boat can safely navigate. Higher capacity ships will need higher draft, hence ports with higher natural draft will attract bigger ships
* Waterfront availability is the length of the water line on the coast where ships can rest and the goods are unloaded. Longer waterfront lengths reduce waiting time and help raise capacity
* Terminals are certain sections of the ports where different types of cargo are unloaded
* Single Point Mooring (SPM) is a loading buoy anchored offshore that serves as a mooring point and interconnect for tankers loading or offloading gas or fluid product
* A dry dock is a narrow basin that can be flooded to allow a ship to be floated in, then drained to allow that ship to come to rest on a dry platform. Dry docks are used for construction, maintenance and repair of ships

GLOSSARY … (1/2)

- **FY**: Indian Financial Year (April to March) – So FY11 implies April 2010 to March 2011
- **USD**: US Dollar
- **FDI**: Foreign Direct Investment
- **IPA**: Indian Ports Association
- **NMDP**: National Maritime Development Programme
- **POL**: Petroleum, Oil & Lubricants
- **SEZ**: Special Economic Zone
- **CAGR**: Compounded Annual Growth Rate
- **ICTT**: International Container Transshipment Terminal
- **TEU**: Twenty-Foot Equivalent Unit
- **MMTPA**: Million Metric Tonnes Per Annum
- **MMT**: Million Metric Tonnes

GLOSSARY … (2/2)

- **GOI**: Government of India
- **NSICT**: Nhava Sheva International Container Terminal, Mumbai
- **O&M**: Operation and Maintenance services
- **LNG**: Liquefied Natural Gas
- Wherever applicable, numbers have been rounded off to the nearest whole number

EXCHANGE RATES

Exchange rates (Fiscal year)

Year	INR equivalent of one USD
2004-05	44.95
2005-06	44.28
2006-07	45.28
2007-08	40.24
2008-09	45.91
2009-10	47.41
2010-11	45.57
2011-12	47.94
2012-13	54.31

Exchange rates (Calendar year)

Year	INR equivalent of one USD
2005	45.55
2006	44.34
2007	39.45
2008	49.21
2009	46.76
2010	45.32
2011	45.64
2012	54.69
2013*	57.72

Average for the year
2013* - from January to October 2013

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