The 10-second briefing

# Coal India
COAL IN

Target (INR): **420.00 → 420.00**
Upside: **13.7%**
31 Oct price (INR): **369.35**

# New volume target: 1bn tonnes by 2019

- New BJP-led government has set a steep output target of 1bn tonnes, a 17% CAGR, for CIL over the next 5 years
- Improvement in CIL's volumes a must for the government to meet its target to ensure 24/7 power supply across India
- In this report we look at milestones central to volume growth over the next 18 months; reaffirming Buy and target price

1 Buy (unchanged)
2 Outperform
3 Hold
4 Underperform
5 Sell

How do we justify our view?

**Saurabh Mehta**
(91) 22 6622 1009
saurabh.mehta@in.daiwacm.com

**Ajay Devnani**
(91) 22 6622 1015
ajay.devnani@in.daiwacm.com

## What's new
India's new BJP-led government has set a target for Coal India (CIL) to achieve production volumes of 1bn tpa by 2019 (a 17% CAGR), in order to meet the government's ambitious target to ensure a 24/7 power supply across India in the next 5 years.

## What's the impact
In this report we look in detail at the important milestones that will have to be met over the next 18 months if CIL is to meet this ambitious target.

**Government's planned steps include:** 1) streamlining the process for environmental and forest approvals, 2) requiring the Ministry of Coal to support CIL to coordinate with the ministries and state governments to expedite approvals, 3) expediting the 3 critical rail lines in Jharkhand, Odisha and Chhattisgarh, 4) finalising mine developer and operator (MDO) contracts, and 5) easing land laws to hasten land acquisitions.

**Key milestones to be met:** *3 months* – 1) transfer the environmental clearance (EC) process online, 2) finalise the MDO document; *6 months* – 1) CIL to invest INR50bn to purchase 250 rakes and then coordinate with Indian Railways and issue tenders, 2) resolve land acquisition issues for key mining and rail projects, which would be boosted if the Jharkhand state election were to favour the BJP (see full list of milestones, page 8).

While we are less optimistic than the company and the government that CIL can reach this volume target by 2019, we still build in a 6% volume CAGR for FY14-19 and, depending on the progress made, may revise this volume target. Nonetheless, we cut our FY15-17E EPS by 1-4% on the back of lower e-auction volumes.

## What we recommend
We reaffirm our Buy (1) rating and maintain our DCF-based 6-month target price of INR420, as CIL looks well placed to gain from the steps being taken by the government to step-up coal volumes significantly, which should aid a recovery in its earnings growth. The pending stake sale by the government remains a near-term risk to our call.

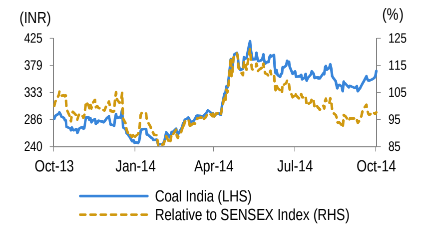
## How we differ
We are more positive vs. consensus on volumes, CIL's ability to manage costs, and its ability to raise prices.

### Forecast revisions (%)

| Year to 31 Mar | 15E | 16E | 17E |
|---|---|---|---|
| Revenue change | (1.2) | 0.1 | 1.1 |
| Net profit change | (3.8) | (1.1) | (0.5) |
| Core EPS (FD) change | (3.8) | (1.1) | (0.5) |

*Source: Daiwa forecasts*

### Share price performance




| | |
|---|---|
| 12-month range | 243.60-420.25 |
| Market cap (USDbn) | 38.00 |
| 3m avg daily turnover (USDm) | 18.71 |
| Shares outstanding (m) | 6,316 |
| Major shareholder | President of India (90.0%) |

### Financial summary (INR)

| Year to 31 Mar | 15E | 16E | 17E |
|---|---|---|---|
| Revenue (m) | 735,855 | 812,132 | 899,443 |
| Operating profit (m) | 168,187 | 205,028 | 214,119 |
| Net profit (m) | 168,376 | 195,118 | 210,708 |
| Core EPS (fully-diluted) | 26.657 | 30.891 | 33.359 |
| EPS change (%) | 11.5 | 15.9 | 8.0 |
| Daiwa vs Cons. EPS (%) | 1.1 | 3.6 | 3.1 |
| PER (x) | 13.9 | 12.0 | 11.1 |
| Dividend yield (%) | 3.6 | 4.2 | 4.5 |
| DPS | 13.329 | 15.445 | 16.680 |
| PBR (x) | 4.7 | 4.0 | 3.5 |
| EV/EBITDA (x) | 9.2 | 7.1 | 6.3 |
| ROE (%) | 36.6 | 36.3 | 33.8 |

*Source: FactSet, Daiwa forecasts*

## Contents

1 Buy (unchanged)
2 Outperform
3 Hold
4 Underperform
5 Sell

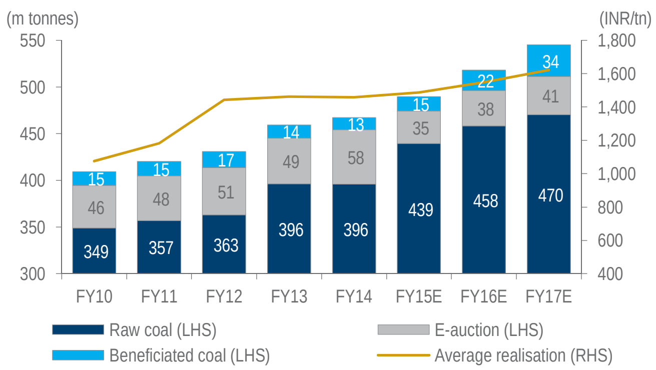
***How do we justify our view?***

- Growth outlook ✔ ✔ ✔ ✔ ✔
- Valuation ✔ ✔ ✔ ✔ ✔
- Earnings revisions ✔ ✔ ✔ ✔ ✔

## ■ Growth outlook ✔ ✔ ✔ ✔ ✔

On the back of our forecast for 5-6% CAGRs in production and dispatches over FY14-17E and a 3.5% blended ASP CAGR, we forecast CIL's revenue to rise at a CAGR of 9.3% over FY14-17, and its earnings to increase at an 11.7% CAGR over the same period.

**■ CIL: sales mix and blended ASPs**




*Source: Company, Daiwa forecasts*

## ■ Valuation ✔ ✔ ✔ ✔ ✔

Our 6-month target price for CIL remains INR420, reflecting increases in our long-term projections for production and sales volumes and pricing within our DCF valuation. We believe DCF is the most appropriate valuation methodology for CIL, as it captures the long-term earnings potential of the company's large coal reserves, which we believe are likely to be realised by a rise in production.

**■ CIL: DCF valuation**

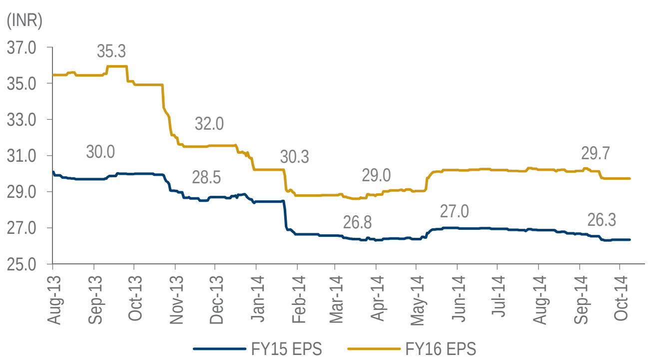
| | |
|---|---|
| **Sum of present value to FY30E (INRbn)** | **1,877** |
| Less: net debt (INRbn) | (768) |
| Equity value (INRbn) | 2,645 |
| No. of shares (bn) | 6.3 |
| Value (INR/share) | 420 |
| Target price (INR) | 420 |

*Source: Daiwa forecasts*

## ■ Earnings revisions ✔ ✔ ✔ ✔ ✔

The Bloomberg consensus FY15-16E EPS have been revised down by 12-16% over the past 12 months, we believe largely to build in the volume disappointments, cost pressure on the back of increases in diesel costs and costs relating to contractual workers, and the company's inability to completely pass these costs through as price increases. We are less negative than the consensus on all these fronts and as such, our EPS forecasts are 1-4% above the consensus numbers for FY15-16.

**■ CIL: consensus EPS forecasts for FY15 and FY16**




*Source: Bloomberg*

# Financial summary

## ■ Key assumptions

| Year to 31 Mar | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E |
|---|---|---|---|---|---|---|---|---|
| Coal Production (m tonnes) | 431.3 | 431.3 | 435.8 | 452.2 | 462.4 | 492.9 | 523.4 | 553.8 |
| Coal Dispatch (m tonnes) | 415.1 | 424.5 | 433.1 | 466.2 | 471.5 | 495.1 | 524.8 | 554.7 |
| Coal avg. blended price per tonnes (INR) | 1,074.7 | 1,183.3 | 1,443.8 | 1,462.7 | 1,459.2 | 1,486.4 | 1,547.6 | 1,621.6 |

## ■ Profit and loss (INRm)

| Year to 31 Mar | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E |
|---|---|---|---|---|---|---|---|---|
| Coal Revenues | 446,153 | 502,330 | 625,266 | 681,930 | 687,978 | 735,855 | 812,132 | 899,443 |
| Other Revenue | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Revenue | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total Revenue** | **446,153** | **502,330** | **625,266** | **681,930** | **687,978** | **735,855** | **812,132** | **899,443** |
| Other income | 27,362 | 12,150 | 3,810 | (4,939) | (927) | 0 | 0 | 0 |
| COGS | (298,739) | (312,360) | (394,507) | (423,407) | (448,864) | (472,299) | (504,272) | (575,206) |
| SG&A | (19,336) | (22,316) | (21,966) | (26,332) | (26,919) | (28,265) | (29,678) | (30,569) |
| Other op.expenses | (66,297) | (62,813) | (74,671) | (65,781) | (71,854) | (67,103) | (73,153) | (79,549) |
| **Operating profit** | **89,142** | **116,992** | **137,932** | **161,470** | **139,414** | **168,187** | **205,028** | **214,119** |
| Net-interest inc./(exp.) | 25,575 | 29,074 | 50,116 | 59,788 | 52,704 | 47,043 | 51,877 | 62,136 |
| Assoc/forex/extraord./others | 24,928 | 18,604 | 25,789 | 27,434 | 36,554 | 36,077 | 34,316 | 38,234 |
| **Pre-tax profit** | **139,646** | **164,670** | **213,838** | **248,693** | **228,672** | **251,307** | **291,221** | **314,489** |
| Tax | (43,425) | (55,959) | (64,845) | (76,227) | (77,679) | (82,931) | (96,103) | (103,781) |
| Min. int./pref. div./others | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Net profit (reported)** | **96,221** | **108,711** | **148,994** | **172,466** | **150,993** | **168,376** | **195,118** | **210,708** |
| **Net profit (adjusted)** | **96,221** | **108,711** | **148,994** | **172,466** | **150,993** | **168,376** | **195,118** | **210,708** |
| **EPS (reported)(INR)** | **15.234** | **17.211** | **23.589** | **27.305** | **23.905** | **26.657** | **30.891** | **33.359** |
| **EPS (adjusted)(INR)** | **15.234** | **17.211** | **23.589** | **27.305** | **23.905** | **26.657** | **30.891** | **33.359** |
| **EPS (adjusted fully-diluted)(INR)** | **15.234** | **17.211** | **23.589** | **27.305** | **23.905** | **26.657** | **30.891** | **33.359** |
| **DPS (INR)** | **3.499** | **3.900** | **10.000** | **14.000** | **29.000** | **13.329** | **15.445** | **16.680** |
| **EBIT** | **89,142** | **116,992** | **137,932** | **161,470** | **139,414** | **168,187** | **205,028** | **214,119** |
| **EBITDA** | **102,281** | **134,646** | **157,625** | **179,600** | **159,378** | **187,409** | **225,425** | **235,691** |

## ■ Cash flow (INRm)

| Year to 31 Mar | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E |
|---|---|---|---|---|---|---|---|---|
| Profit before tax | 139,646 | 164,670 | 213,838 | 248,693 | 228,672 | 251,307 | 291,221 | 314,489 |
| Depreciation and amortisation | 6,750 | 17,654 | 19,692 | 18,387 | 19,959 | 19,222 | 20,397 | 21,572 |
| Tax paid | (39,990) | (56,228) | (67,044) | (86,517) | (88,264) | (82,931) | (96,103) | (103,781) |
| Change in working capital | (1,310) | (43,284) | 35,647 | (68,390) | 2,442 | 36,878 | 57,370 | 44,611 |
| Other operational CF items | (24,719) | (24,803) | (52,260) | (81,965) | (70,390) | (46,935) | (51,769) | (62,028) |
| **Cash flow from operations** | **80,377** | **58,008** | **149,874** | **30,208** | **92,419** | **177,540** | **221,115** | **214,862** |
| Capex | (19,804) | (25,682) | (34,094) | (24,540) | (41,164) | (40,000) | (40,000) | (35,000) |
| Net (acquisitions)/disposals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other investing CF items | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Cash flow from investing** | **(19,804)** | **(25,682)** | **(34,094)** | **(24,540)** | **(41,164)** | **(40,000)** | **(40,000)** | **(35,000)** |
| Change in debt | (616) | (5,035) | (2,474) | (2,287) | (12,634) | 0 | 0 | 0 |
| Net share issues/(repurchases) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dividends paid | (22,100) | (25,832) | (74,291) | (79,070) | (242,430) | (96,816) | (112,193) | (121,157) |
| Other financing CF items | 28,031 | 30,346 | 53,435 | 62,938 | 54,715 | 47,043 | 51,877 | 62,136 |
| **Cash flow from financing** | **5,315** | **(522)** | **(23,330)** | **(18,418)** | **(200,349)** | **(49,773)** | **(60,316)** | **(59,021)** |
| Forex effect/others | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Change in cash** | **65,888** | **31,804** | **92,449** | **(12,750)** | **(149,093)** | **87,767** | **120,799** | **120,841** |
| Free cash flow | 60,573 | 32,326 | 115,780 | 5,669 | 51,256 | 137,540 | 181,115 | 179,862 |

*Source: FactSet, Daiwa forecasts*

# *Financial summary continued ...*

## ■ Balance sheet (INRm)

| As at 31 Mar | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E |
|---|---|---|---|---|---|---|---|---|
| Cash & short-term investment | 390,782 | 458,064 | 582,028 | 622,360 | 523,895 | 611,586 | 732,277 | 853,010 |
| Inventory | 44,018 | 55,856 | 60,713 | 56,178 | 55,681 | 59,556 | 65,729 | 72,795 |
| Accounts receivable | 21,686 | 34,187 | 56,679 | 104,802 | 82,410 | 73,585 | 60,910 | 67,458 |
| Other current assets | 86,778 | 142,164 | 174,855 | 103,501 | 131,969 | 141,153 | 155,784 | 172,532 |
| **Total current assets** | **543,265** | **690,272** | **874,275** | **886,841** | **793,955** | **885,879** | **1,014,700** | **1,165,796** |
| Fixed assets | 142,461 | 149,005 | 163,437 | 169,617 | 191,002 | 211,780 | 231,384 | 244,812 |
| Goodwill & intangibles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other non-current assets | 22,425 | 19,369 | 31,755 | 46,500 | 57,466 | 57,466 | 57,466 | 57,466 |
| **Total assets** | **708,151** | **858,646** | **1,069,466** | **1,102,958** | **1,042,424** | **1,155,126** | **1,303,550** | **1,468,074** |
| Short-term debt | 16,199 | 15,210 | 15,274 | 13,053 | 1,778 | 1,778 | 1,778 | 1,778 |
| Accounts payable | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other current liabilities | 415,557 | 493,429 | 629,356 | 581,490 | 590,764 | 631,876 | 697,375 | 772,349 |
| **Total current liabilities** | **431,757** | **508,638** | **644,630** | **594,543** | **592,542** | **633,654** | **699,153** | **774,127** |
| Long-term debt | 3,432 | 326 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other non-current liabilities | 14,774 | 16,214 | 19,770 | 23,059 | 25,201 | 25,201 | 25,201 | 25,201 |
| **Total liabilities** | **449,963** | **525,178** | **664,400** | **617,602** | **617,743** | **658,855** | **724,354** | **799,327** |
| Share capital | 63,164 | 63,164 | 63,164 | 63,164 | 63,164 | 63,164 | 63,164 | 63,164 |
| Reserves/R.E./others | 194,789 | 269,978 | 341,367 | 421,556 | 360,881 | 432,472 | 515,397 | 604,948 |
| **Shareholders' equity** | **257,952** | **333,142** | **404,530** | **484,720** | **424,045** | **495,635** | **578,560** | **668,111** |
| Minority interests | 236 | 326 | 536 | 636 | 636 | 636 | 636 | 636 |
| **Total equity & liabilities** | **708,151** | **858,646** | **1,069,466** | **1,102,958** | **1,042,424** | **1,155,126** | **1,303,550** | **1,468,074** |
| EV | 1,962,035 | 1,890,747 | 1,766,731 | 1,724,278 | 1,811,468 | 1,723,778 | 1,603,086 | 1,482,353 |
| **Net debt/(cash)** | **(371,151)** | **(442,529)** | **(566,754)** | **(609,307)** | **(522,117)** | **(609,807)** | **(730,499)** | **(851,232)** |
| **BVPS (INR)** | **40.839** | **52.743** | **64.045** | **76.740** | **67.134** | **78.468** | **91.597** | **105.775** |

## ■ Key ratios (%)

| Year to 31 Mar | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E |
|---|---|---|---|---|---|---|---|---|
| Sales (YoY) | 15.0 | 12.6 | 24.5 | 9.1 | 0.9 | 7.0 | 10.4 | 10.8 |
| EBITDA (YoY) | 324.5 | 31.6 | 17.1 | 13.9 | (11.3) | 17.6 | 20.3 | 4.6 |
| Operating profit (YoY) | 1,094.0 | 31.2 | 17.9 | 17.1 | (13.7) | 20.6 | 21.9 | 4.4 |
| Net profit (YoY) | 363.2 | 13.0 | 37.1 | 15.8 | (12.5) | 11.5 | 15.9 | 8.0 |
| Core EPS (fully-diluted) (YoY) | 363.2 | 13.0 | 37.1 | 15.8 | (12.5) | 11.5 | 15.9 | 8.0 |
| Gross-profit margin | 33.0 | 37.8 | 36.9 | 37.9 | 34.8 | 35.8 | 37.9 | 36.0 |
| EBITDA margin | 22.9 | 26.8 | 25.2 | 26.3 | 23.2 | 25.5 | 27.8 | 26.2 |
| Operating-profit margin | 20.0 | 23.3 | 22.1 | 23.7 | 20.3 | 22.9 | 25.2 | 23.8 |
| Net profit margin | 21.6 | 21.6 | 23.8 | 25.3 | 21.9 | 22.9 | 24.0 | 23.4 |
| ROAE | 43.0 | 36.8 | 40.4 | 38.8 | 33.2 | 36.6 | 36.3 | 33.8 |
| ROAA | 14.5 | 13.9 | 15.5 | 15.9 | 14.1 | 15.3 | 15.9 | 15.2 |
| ROCE | 36.4 | 37.3 | 35.9 | 35.2 | 30.1 | 36.4 | 38.0 | 34.2 |
| ROIC | (61.9) | (69.6) | (71.0) | (78.4) | (83.2) | (106.8) | (103.7) | (86.0) |
| Net debt to equity | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Effective tax rate | 31.1 | 34.0 | 30.3 | 30.7 | 34.0 | 33.0 | 33.0 | 33.0 |
| Accounts receivable (days) | 16.4 | 20.3 | 26.5 | 43.2 | 49.7 | 38.7 | 30.2 | 26.0 |
| Current ratio (x) | 1.3 | 1.4 | 1.4 | 1.5 | 1.3 | 1.4 | 1.5 | 1.5 |
| Net interest cover (x) | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Net dividend payout | 23.0 | 22.7 | 42.4 | 51.3 | 121.3 | 50.0 | 50.0 | 50.0 |
| Free cash flow yield | 2.6 | 1.4 | 5.0 | 0.2 | 2.2 | 5.9 | 7.8 | 7.7 |

*Source: FactSet, Daiwa forecasts*

## ■ Company profile

Coal India is the largest coal-mining company in the world in terms of raw coal production (463m tonnes for FY14), extractable coal reserves (21.75bn tonnes), and resources base (64.7bn tonnes).

# New volume target: 1bn tonnes by 2019

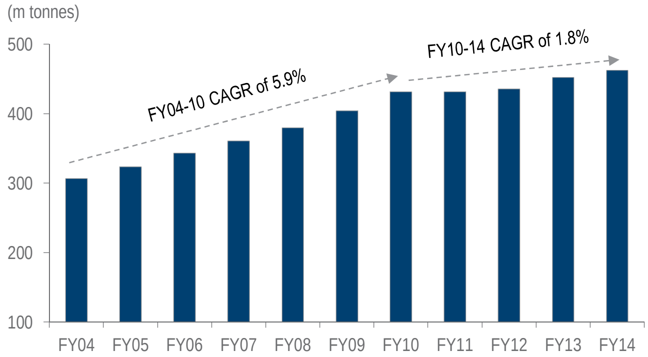
*The key focus of the new government is to revive the power sector, which calls for a ramp-up in coal production by CIL.*

## Structural changes under way

India's new BJP-led government's target of ensuring a 24/7 power supply availability across the country by 2019 would entail a significant increase in coal production – which in turn requires the government to facilitate faster coal production by CIL.

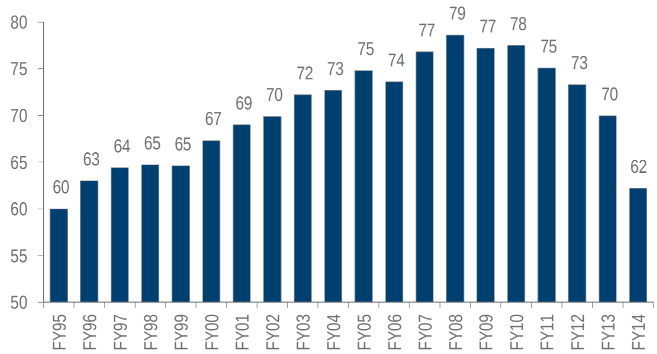
At present, CIL accounts for around 80% of India's coal output. Because CIL saw a subdued increase in production volumes (1.8% CAGR over FY10-14), the utilisation rate for India's coal-based power capacity fell to 62% for FY14 and coal-based power generation saw a CAGR of only 8.5%. This was despite a 70%-plus increase in its actual coal-based power-generation capacity (from 84GW to 145GW), which at the utilisation level of FY10 (78%) could have led to coal-based power generation a CAGR of 14.6%.

■ CIL: production volume




*Source: Company*

■ All India thermal PLF (%)




*Source: Central Electricity Authority (CEA)*

In line with the goal of power for all the government has put forward a steep target for CIL, requiring the company to meet a production level of 1bn tonnes by 2019, which would require its coal volumes to rise by a substantial 17% CAGR over the next 5 years, versus the company's own internal target of hitting close to 795m tonnes by 2019.

We published a report before the elections (which ran from 7 April to 12 May 2014) on the likely steps the new government may take (*What could change with the new government?, published on 14 May 2014)* and note that a number of the measures we highlighted have started to be implemented.

In addition to these measures, another solution to the coal problem that the government is contemplating is opening up the sector for commercial mining by private companies, and we detail the same in Appendix IV on page 21.

### New government's planned steps/ initiatives to increase coal volumes

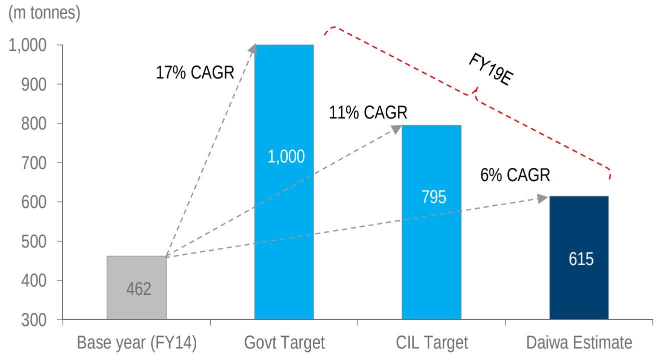
- Increase exploration capacity and target to complete detailed exploration of all available coal reserves.
- Simplify the procedure for forest clearance exploration and enable private-sector participation in exploration by evolving necessary contractual and incentive structures.
- Streamline the procedures for environmental, forestry and wildlife clearances; undertake a cluster approach in the clearance process.
- Increase the use of technology to make the approval process more efficient and easy to monitor, and incorporate best practices from various states.
- Resolve issues pertaining to inviolate areas (ie, forest areas allocated as conservation sites) and the Cumulative Environmental Pollution Index (CEPI), and the issue related to criminal prosecution of

officials of CIL and Singareni Collieries Company Limited (SCCL). The necessary clarification and guidelines regarding inviolate areas need to be issued expeditiously.

- Ministry of Coal to support CIL to coordinate with related ministries to expedite approvals.
- Hasten completion of the 3 critical rail lines in Jharkhand, Odisha and Chhattisgarh.
- Resolve the issues relating to the transportation of coal by ex-servicemen agencies with the Ministry of Defence.
- Improve efficiency, mechanisation and technology upgrades for exploration and mining operations.
- CIL to achieve 100% crushing of coal by December 2014 in order to improve its coal quality.
- Finalise bulk MDO contracts and model concession agreements for PPPs in mining to boost efficiency and expertise.
- Ensure a strict implementation of mine-closure policies and thorough monitoring by third-party agencies when carrying out scientific closure of exhausted mines. Such areas could be used for afforestation, public utility services and renewable energy, etc.
- Examine the issue of the transfer of coal-bearing areas under the Coal Bearing Act to build the framework for a comprehensive policy.

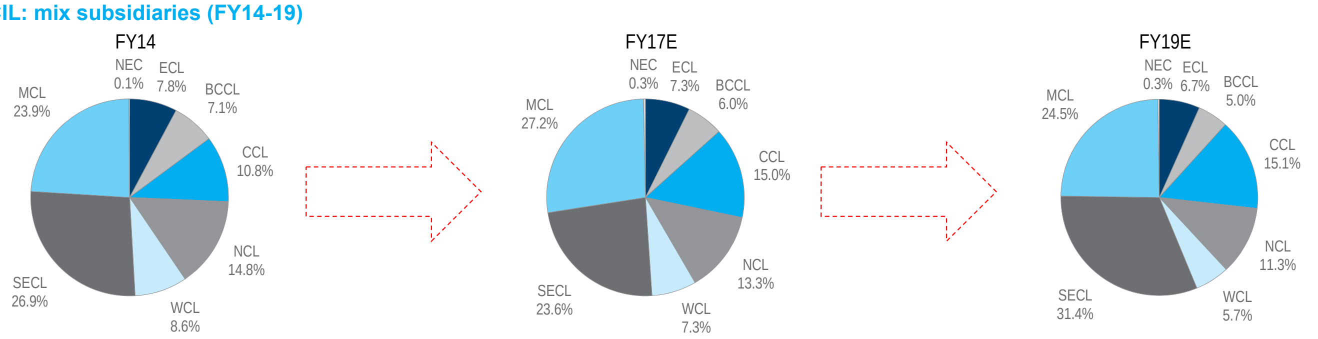
We have not yet incorporated the new government's or the company's optimistic volume targets into our volume forecasts for the company. But we have looked in detail at the key milestones CIL needs to meet over the next 3-18 months in order to accelerate its volume growth, and depending on the company's progress on many of these issues, we may revisit our volume targets for CIL.

**CIL: coal production volume targets**




*Source: Company, Daiwa forecasts*

**CIL: mix subsidiaries (FY14-19)**




*Source: Company*

*Note: Based on CIL target of 795m tonnes.ECL=Eastern Coalfields Ltd, CCL=Central Coalfields Ltd, BCCL=Bharat Coking Coal Ltd, NCL=Northern Coalfields Ltd, WCL=Western Coalfields Ltd, SECL=South Eastern Coalfields Ltd, NEC=North Eastern Coalfields Ltd*

## ■ CIL: key factors to monitor and milestones over next 18 months to assess volume ramp-up

| Factors to monitor | Milestones: 3 months | 6 months | 9 months | 12 months | 18 months |
|---|---|---|---|---|---|
| Railway rakes procurement | CIL to invest INR50bn in purchasing 250 rakes | Co-ordination with Indian Railways | Finalise requirements subsidiary-wise and issue tenders in phases | Start receiving deliveries of rakes to aid in smoothening demand | |
| Environmental/ forest approvals | EC process to be transferred online | Receive EC for 4.5mt under one-time 50% capacity addition policy | Streamline FC process and reduce stages from current 36 to much fewer | Backlog on mines and railway lines to be cleared | Smooth and timely EC and FC for coal-mining and railway projects |
| Key railway lines: Jharkhand (92km)-Line 1, Odisha (53km)-Line 2 and Chhattisgarh (180km)-Line 3 | Line 2: tree cutting is completed and construction work starts. Line 3: acquires land and seeks Stage I EC | Line 1: land disputes in Riyati to resolve, tree cutting to complete in remaining 17 km stretch, and receive Stage I FC | Line 2: expansion work to complete at Kanika railway siding, and receive Stage II FC | Line 1: acquires land for Shivpur-Kathautia line, break-up of forest / non-forest land clearance and receives final FC | Line 3: receive Stage I FC and final FC |
| MDO approach | Finalisation of MDO document | Select 10-15 OC mines with minimum 10mtpa of capacity | Approval process for the selected mines to be undertaken | Mines to be tendered out after approval process is completed | |
| Land acquisitions | | A Jharkhand state elections verdict in favour of BJP would help resolve land acquisition issues of key mining-railway projects, issues of land records, and local law and order issues, which affect regularly CIL's operations | Central govt to come up with change in land laws to aid land acquisitions. | | |
| Local issues – law and order situations | Initial discussions with state govt for more support | | Regular contact with state govt likely leading to solution to resolve local issues | | |
| Time line | 3 months | 6 months | 9 months | 12 months | 18 months |

Source: Daiwa

## ■ CIL: scenario for earnings and value – based on targets by the government, CIL and Daiwa

| | | FY19E | | |
|---|---|---|---|---|
| | FY14 (Base year) | Govt target | CIL target | Daiwa estimate |
| Production (m tonnes) | 462 | 1,000 | 795 | 615 |
| *CAGR (%)* | - | *17%* | *11%* | *6%* |
| Avg. incremental volume p.a.(m tonnes) | - | 100 | 70 | 30 |
| Revenue (INRbn) | 688 | 1,645 | 1,332 | 1,040 |
| *CAGR (%)* | - | *19%* | *14%* | *9%* |
| EPS (INR) | 24 | 90 | 65 | 40 |
| *CAGR (%)* | - | *30%* | *22%* | *11%* |
| Value/share (INR) | - | 850* | 630* | 420 |
| Upside (%) | 369** | *129%* | *70%* | *14%* |

*Source: Company, Daiwa forecasts*
*Note: *Value arrived at based on volume target as per government/company ** Based on share price as at 31 October 2014*

# Environment and forest approvals

## Current status

CIL currently has 148 ongoing projects (key projects with capex of over INR20m), whose progress the company is monitoring and which will be incremental contributors to its production volumes. The company's targets for these projects implies that they should account for 67% of its total production volumes by FY17. Regarding the MoEF's approvals for these projects, those that have so far received both environment clearance (EC) and forest clearance (FC) account for only 48% of the total capacity (as shown in the table below).

**CIL: update on 148 ongoing projects**

| | Number | Capacity (mt) | FY15E (mt) | FY17E (mt) |
|---|---|---|---|---|
| EC and FC received | 95 | 232.73 | 154.28 | 174.81 |
| EC pending and FC received | 4 | 6.28 | 2.36 | 4.06 |
| FC pending and EC received | 27 | 171.79 | 131.24 | 172.61 |
| EC and FC pending | 22 | 73.26 | 8.40 | 57.20 |
| **Total** | **148** | **484.06** | **296.28** | **408.68** |

*Source: Company, MoEF*

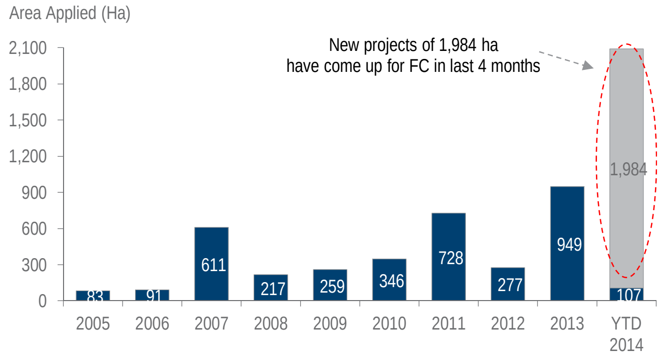
We have looked at the progress of the approvals for EC and FC, which are at various stages, and detail our findings below. While our conclusion is that the government is structurally trying to reengineer the process by introducing technology as well as working on simplifying the process, on the ground progress to date has been limited.

Also, there has been a marked decline in final approvals that have gone through over the past 3-4 months, while a large number of projects have come up for approval.

- New projects comprising 1,984ha have come up for FC, the largest amount of projects (in hectare terms) for which FC has been sought in the past 9 years.
- In EC, 13m tonnes of projects have had final EC granted.
- Every stage of EC has seen approvals over the past 3-4 months, ie, awaiting terms of reference (TOR), TOR granted, awaiting EC and final EC.

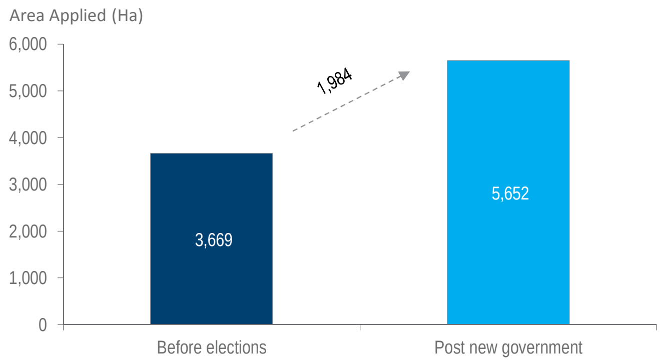
Of the 1,984ha of projects pending FC approval [check], 595ha is for the Pundi Opencast Project (OCP) in Jharkhand (CCL), 425ha belongs to the Nigahi project in Madhya Pradesh (NCL), and 325ha is for the Jamuna underground (UG) mine in Madhya Pradesh (SECL).

**CIL: projects awaiting stage-1 forestry clearance**




*Source: MoEF*
*Note: Data is for the land areas for which forestry clearance has been applied*

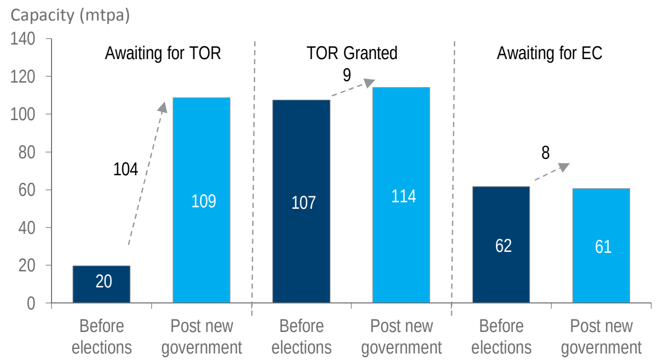
**CIL: projects awaiting stage I approval of the forestry clearance process**




*Source: MoEF*

The number of projects awaiting EC has increased from 189m tonnes to 284m tonnes over the past 3 to 4 months. This marked increase is due mainly to the new projects for which EC has been applied, ie, 104m tonnes. Of this 104m tonnes of new projects, 50m tonnes has been applied for the Siarmal opencast mine in Orissa (MCL) and 44m tonnes for the Kusmunda opencast expansion project in Chhattisgarh (SECL).

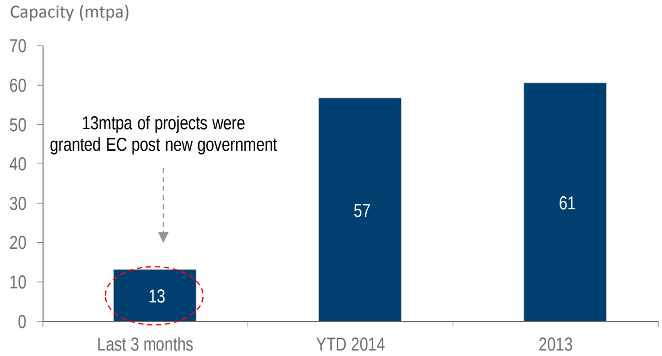
**CIL: projects awaiting approval at various stages of the EC process**




*Source: MoEF*
*Note: 104m tonnes of new projects have come for EC. 8.5m tonnes of projects granted TOR and 13.2m tonnes of project granted EC. Period – 2005 to date; TOR = Terms of reference; EC = environmental clearance*

Some 13m tonnes of projects have received final EC over the past 3 months. Of this 13m tonnes, the Lakhanpur OCP expansion was granted EC for 5m tonnes and Piparwar OCP for 3m tonnes.

**CIL: environmental clearance granted in past 18 months**




*Source: MoEF*

## Steps taken by the new government:

### 1. Online system for forest approvals

The Online Submission and Monitoring of Forest Clearance Proposal (OSMFCP) system was introduced with both offline and online modes in mid-July, and became completely online in mid-August. It is a single-window online system for submission and monitoring of FC proposals. The system automates the entire system of tracking of proposals, which includes online submission of a new proposal, editing and updating the details, and displaying the status of each proposal at various stages.

This online system is intended to bring in more transparency, efficiency and accountability in the granting of FCs.

- It features a user friendly portal, which is easy to access, and can view the status and recommendations of the projects.
- It aims to minimise the need for human interface between user agencies (project applicants) and MoEF officials both at the central and state levels.
- It enables the real-time monitoring of proposals.

We provide further details in Appendices I and II of this report.

### 2. One-time 50% capacity expansion without the need for a public hearing

In December 2012, MoEF issued guidelines to grant EC to existing coal mine projects seeking to expand their production capacity at one time by 25% within the same mining lease area without holding a public hearing. Later, at the request of the Coal Ministry, it was deemed that 25% capacity expansion was insufficient in absolute terms for the smaller coal mines.

Then, in January 2014, MoEF further relaxed the capacity expansion conditions for mines with capacities of up to 8mtpa. As per the new rules, coal mine projects with capacities of up to 8mtpa can opt for a one-time capacity expansion of 50% or 1mtpa, whichever is higher, within the same mining lease area. For mines with capacities of more than 8mtpa, the 25% one-time capacity expansion rule still applies.

In July 2014, MoEF relaxed the norms for mining projects with production capacities of more than 16mtpa. These projects are permitted to expand their capacity by up to 5mtpa within the same mining lease area without the need to hold a public hearing.

In September 2014, the rules were further relaxed for projects with production capacity of more than 20mtpa. For such projects, capacity expansion of up to 6mtpa within the same mining lease area is possible without the need to hold a public hearing.

In August 2014, 2 projects, ie, the Lajkura OCP (1.5m tonnes) and the Belpahar OCP (3m tonnes) in Odisha submitted proposals for EC for a one-time 50% capacity expansion at the existing coal mines.

We give more details in Appendix III of this report.

## Other likely steps in the next few months

- MoEF is working to simplify the procedure for FC exploration purposes.
- It is also working to streamline the procedures for environmental, forestry and wildlife clearances, to undertake a cluster approach in the clearance process.
- It is also working on resolving issues pertaining to inviolate areas and the CEPI, and the issue related to criminal prosecution of officials of CIL and SCCL. The necessary clarification and guidelines need to be issued expeditiously.
- It is streamlining the FC process to reduce the stages from the current 36 to many fewer stages.
- It plans to clear the backlog on mines and railway lines.
- It aims to implement a smooth and timely EC and FC for coal mining and railway projects.

### Issues relating to land acquisitions that needed to be addressed

- Delays in notifications by the state government.
- Delays in the authentication of land and obtaining land records from states known as Record of Rights (RoR) caused by problems in ascertaining the actual ownership of the land.
- Delays in resettlement and rehabilitation.
- Delays in obtaining physical possession of land due to the reluctance of project-affected people to shift.

## Evacuation infrastructure

### Enhancing the evacuation infrastructure is also key

As more than 50% of CIL's volumes are dependent on the Indian Railways, the government is taking steps to complete rapidly 3-4 railways lines, in order to provide evacuation infrastructure (ie, rail connections) to the major coal fields in Jharkhand (North Karanpura), Odisha (IB Valley and Talcher) and Chhattisgarh (Mand-Raigarh), which have a combined capacity of over 300mtpa coal production. These fields have not been able to be developed to their full potential due to a lack of evacuation infrastructure.

### Current status of the key lines

**Tori – Shivpur – Kathautia (Jharkhand – Line 1):** Of 447.4 acres of Raiyati land, 206.3 has been effectively handed over to Indian Railways, while the transfer of 142.7 acres at Jungle Jhari and 194 acres at gari Majurwa is pending. Tree cutting is pending along a 17km stretch. An application for land acquisition for the Shivpur-Kathautia line has been submitted by the Railways and is awaiting the breakdown of forest/non-forest land from the Jharkhand government. The Railways has yet to file an application to obtain stage-I FC for the Shivpur-Kathautia line.

**Jharsuguda – Gopalpur (Odisha – Line 2):** Tree felling is ongoing and 10% complete on forest land. Some 60% of the tree felling has been completed. Land acquisition issues have delayed stage II FC for the line.

**Bhupdeopur – Korichappar (Chhattisgarh – Line 3):** Land acquisition is in process and the line has not received any clearance, ie, EC/FC, yet.

**Talcher – Anugul:** a line of about 11km in length; work on 7km has been completed and the remaining 4km has been held up for land and related R&R issues. FC is also pending.

■ **Critical rail links**

| Rail Link | Tori - Shivpur - Kathautia | Jharsuguda - Gopalpur | Bhupdeopur - Korichappar | Talcher |
|---|---|---|---|---|
| Coal field | North Karanpura | IB Valley | Mand-Raigarh | Talcher |
| Coal subsidiary | CCL | MCL | SECL | MCL |
| State | Jharkhand | Odisha | Chhattisgarh | Odisha |
| Length of rail link(km) | 92 | 53 | 180 | 327 |
| Type of link | Triple line | Double line | Double line | Single and Double line |
| Project cost (INRbn) | 35 | 10 | 25 | |
| Area granted for FC(Ha) | 377.9 | 75.8 | NA | 1.2(Talcher-Angul) |
| Volumes mine wise(mtpa) | Magadh(20), Amrapali(12), Pachra(15), Koedmanatu(10) | Basundhara(7), Garjanbahal(10), Siarmal(14), kulda(10-15), Chaturdhara(4) | Chhal, Barud, Rai West, Chimta pani, Pilma, Nagdharna, Kusum ghat, Jeem pali; over all 40-50mt will benefit for 13-5 Plan | Whole talcher field will benefit out of this line |
| Dependency on volumes(mtpa) | 80-100 | 50 | 40-50 | NA |
| **Milestones** | | | | |
| Proposal physically received on | Jul-08 | Jul-13 | NA | Oct-07 |
| Stage I FC | Apr-11 | Dec-13 | NA | Mar-10 |
| Stage II FC | Jun-13 | In-Principal | NA | Granted |
| Stage II EC | Granted | Dec-13 | NA | NA |
| Current status | Transfer of Gari Majurwa Khas and Gari Majurwa Jungle Jhari Pending. Tree cutting pending in 17 kms stretch. | Land acquisition issues, tree felling is ongoing, Stage II FC obtained for 0.89ha in Sundergarh | Coal and Railways ministers met and officials visited Chhattisgarh and resolved pending matters in 1st week of June | Work in 4km is held up for land and R&R related issues |
| Expected project completion date | Jul-17 | Sep-16 | Dec-16 | NA |

*Source: Company, MoEF, various media reports*

### Update on Eastern Dedicated Freight Corridor (EDFC)

The EDFC is a 1,839km long route stretching from Dankuni in West Bengal to Ludhiana in Punjab, which is spread across the northern region of U.P., Haryana, Punjab, Jharkhand and West Bengal. The EDFC will ease the bottlenecks in the transportation of coal and other commodities to the north of India. It will move coal from the coal fields in the eastern region to power plants in northern India. Timely completion of the EDFC is as important as the 3 key rail lines, and will ensure coal supply from the eastern region to power stations.

■ **Traffic projections on the EDFC**

| Commodity (m tonnes pa) | 2016-17E | 2021-22E |
|---|---|---|
| Coal | 55 | 62.9 |
| Total movement | 75.6 | 91.3 |
| % of coal in total traffic | 72.8% | 68.9% |

*Source: Dedicated Freight Corridor Corporation, Daiwa*

■ **Eastern dedicated freight corridor**

| Eastern Corridor | Section | Year | Status |
|---|---|---|---|
| Phase I-APL1 | Khurja - Kanpur (343kms) | 2011-2017 | Tata-Aldesa is building more than 300 km of rail lines and JSPL will supply around 88,000 tonnes of long rails to JV. |
| Phase II-APL2 | Kanpur - Mughalsarai (390kms) | 2013-2018 | World Bank has sanctioned a loan of $1.1bn in April, 2014. |
| Phase III-APL3 | Khurja-Ludhiana (397kms) | 2014-2019 | Asian Development Bank and Ministry of Railways will fund this section through loan. |
| Phase IV (Funding through PPP) | Dankuni - Sonnagar (550kms) | 2014-2019 | IR is waiting for a response to the RFQ and expecting to award it by the end of FY15. |
| Phase V ( Funding by Ministry of Railways) | Sonnagar - Mugal Sarai (125kms) | 2010-2016 | Work of formation and bridges under progress - 94% completed. Contracts for track work of 66 kms awarded. |

*Source: Dedicated Freight Corridor Corporation, Daiwa*
*Note: RFQ=Request for Quotation, PPP=Public Private Partnership, APL= Adoptable Program Loan, JSPL= Jindal Steel and Power Limited*

## E-auction volume forecasts cut

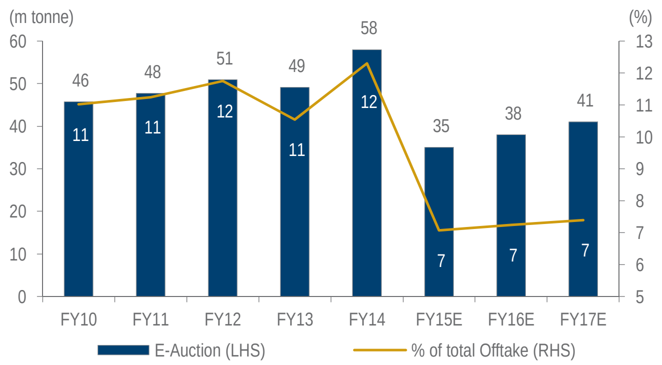
Coal India has cut its e-auction volumes post the direction from the government to increase the dispatches of the power sector by limiting volumes in e-auction to 25m tonnes.

As a result, volumes dropped significantly in 2Q FY15 to about 3.5m tonnes, from 12.9m tonnes in 2Q FY14, though ASPs increased.

Hence, for FY15 we are reducing our volume forecast for e-auction from 50m tonnes to 35m tonnes, as we believe limiting volumes to 25m tonnes will not be possible given the limited railway rakes available for transporting coal.

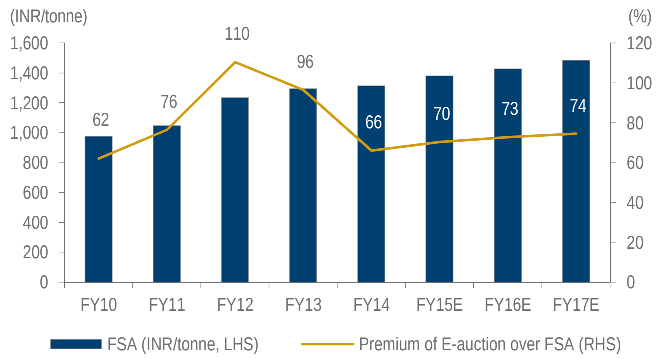
However, with a limited supply of e-auction coal, the company's ASPs are likely to gain strength and converge with seaborne coal ASPs, versus trading at more than a 30% discount previously. Such strength in e-auction coal ASPs would limit the loss from the cut in volumes.

■ **CIL: e-auction volumes as % of total dispatches**




*Source: Company, Daiwa forecasts*

■ **CIL: FSA price vs. e-auction price**




*Source: Company, Daiwa forecasts*

## Update on price hike

**A cut in e-auction volumes, cost pressure and 'grade slippage' support the case for a price hike.**

Coal companies came under cost pressure in FY14 on the back of: 1) rising costs for contract workers, 2) increases in diesel prices, after implementation of third-party sampling of coal supplied by CIL, which led to 1- to 2-grade slippages and pressure on ASPs (revenue loss in FY14), and 3) the recent direction the government has taken to reduce e-auction volumes. All 3 factors give cause for CIL to raise prices, in our view.

Given that CIL's customers' financials are highly sensitive to price rises, we forecast only a 4-5% increase in CIL's ASPs in FY15. Also, a clear policy from the new government that required CIL to evaluate cost increases for a given year, and implement a price rise if required, would allay investor concerns about pricing strategy or pricing power, in our opinion.

FSA coal ASPs could come under pressure, as from October onward third-party sampling to be done by external agencies chosen by customers could lead to coal grades slipping further. Exacerbating this situation is the coal minister's strict insistence that the grade and coal supplied must be consistent.

As such, we expect CIL to increase prices for low-grade coal but possibly cut prices for some high-grade coal, given the pressure on sea-borne coal prices.

■ Pithead run of mine price for non-coking coal (27 May 2013)

| Grades | GCV range (Kcal/Kg) | Domestic coal price (INR/tn) | Price change between grades ↑ (INR/tn) | Domestic coal price (INR/Kcal) | Imported coal price (INR/tn) | Imported coal price (INR/Kcal) | % Premium/(discount) to imported price |
|---|---|---|---|---|---|---|---|
| G1 | Above 7000 | * | | | | | |
| G2 | 6700-7000 | 4,870 | 980 | 0.71 | 3,858 | 0.56 | 0.26 |
| G3 | 6400-6700 | 3,890 | 400 | 0.59 | 3,685 | 0.56 | 0.06 |
| G4 | 6100-6400 | 3,490 | 690 | 0.56 | 3,512 | 0.56 | (0.01) |
| G5 | 5800-6100 | 2,800 | 1,200 | 0.47 | 3,340 | 0.56 | (0.16) |
| G6 | 5500-5800 | 1,600 | 200 | 0.28 | 3,167 | 0.56 | (0.49) |
| G7 | 5200-5500 | 1,400 | 150 | 0.26 | 2,994 | 0.56 | (0.53) |
| G8 | 4900-5200 | 1,250 | 280 | 0.25 | 2,821 | 0.56 | (0.56) |
| G9 | 4600-4900 | 970 | 110 | 0.20 | 2,649 | 0.56 | (0.63) |
| G10 | 4300-4600 | 860 | 160 | 0.19 | 2,476 | 0.56 | (0.65) |
| G11 | 4000-4300 | 700 | 40 | 0.17 | 2,303 | 0.55 | (0.70) |
| G12 | 3700-4000 | 660 | 50 | 0.17 | 2,130 | 0.55 | (0.69) |
| G13 | 3400-3700 | 610 | 60 | 0.17 | 1,958 | 0.55 | (0.69) |
| G14 | 3100-3400 | 550 | 40 | 0.17 | 1,785 | 0.55 | (0.69) |
| G15 | 2800-3100 | 510 | 60 | 0.17 | 1,612 | 0.55 | (0.68) |
| G16 | 2500-2800 | 450 | 50 | 0.17 | 1,439 | 0.54 | (0.69) |
| G17 | 2200-2500 | 400 | | 0.17 | 1,267 | 0.54 | (0.68) |

*Source: Company, Bloomberg*

*Note: * For GCV exceeding 7000 Kcal/Kg, the price shall be increased by Rs. 150 per tonne over and above the price applicable for GCV band exceedingly 6700 but not exceeding 7000 Kcal/Kg, for increase in GCV by every 100 Kcal/Kg or part thereof.*

# Summary of key assumptions

## ■ CIL: key assumptions

| | | FY15E | FY16E | FY17E |
|---|---|---|---|---|
| Production | m tonnes | 493 | 523 | 554 |
| *YoY change* | *%* | *6.6* | *6.2* | *5.8* |
| | | | | |
| Dispatch | m tonnes | 495 | 525 | 555 |
| *YoY change* | *%* | *5.0* | *6.0* | *5.7* |
| | | | | |
| Railway dispatches | m tonnes | 275 | 305 | 335 |
| Railway dispatches | as a % of total dispatches | 55.5 | 58.1 | 60.3 |
| Rail wagons required | Unit | 202 | 223 | 245 |
| | | | | |
| Raw coal | m tonnes | 439 | 458 | 470 |
| E-auction | m tonnes | 35 | 38 | 41 |
| *E-auction* | *As a % of total dispatches* | *7.1* | *7.2* | *7.4* |
| Washed coal | m tonnes | 15 | 22 | 34 |
| | | | | |
| Blended ASP | INR | 1,486 | 1,548 | 1,622 |
| *YoY change* | *%* | *1.9* | *4.1* | *4.8* |
| Raw coal ASP | INR | 1,380 | 1,428 | 1,485 |
| *YoY change* | *%* | *5.0* | *3.5* | *4.0* |
| E-auction coal ASP | INR | 2,350 | 2,468 | 2,591 |
| *YoY change* | *%* | *7.7* | *5.0* | *5.0* |

*Source: Daiwa forecasts*

# Valuation and recommendation

We reaffirm our Buy (1) rating and maintain our DCF-based 6-month target price of INR420, as CIL looks well positioned to gain from the steps being taken by the government to step-up coal volumes significantly, which should aid a recovery in its earnings growth.

We consider DCF as the most appropriate valuation methodology for CIL, as it captures the long-term earnings potential of the company's large coal reserves, which we believe are likely to be realised by a rise in production and an increase in the mix of market-linked sales.

## ■ CIL: DCF assumptions

| | |
|---|---|
| **Risk-free rate (%)** | **8.0** |
| Beta | 1.0 |
| Market-risk premium (%) | 4.0 |
| **Cost of equity (%)** | **12.0** |
| | |
| Gross cost of debt (%) | 7.5 |
| Tax rate (%) | 34.0 |
| **Net cost of debt (%)** | **5.0** |
| | |
| Target debt-to-capital ratio (%) | 10.0 |
| | |
| **WACC (%)** | **11.3** |
| | |
| Terminal growth rate (%) | 2.5 |

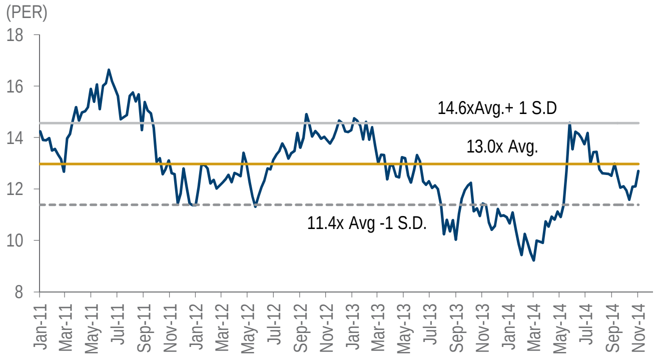
*Source: Daiwa forecasts*

## ■ CIL: DCF valuation

| | |
|---|---|
| **Sum of present value to FY30E (INRbn)** | **1,877** |
| Less: net debt (INRbn) | (768) |
| Equity value (INRbn) | 2,645 |
| No. of shares (bn) | 6.3 |
| Value (INR/share) | 420 |
| **Target price** | **420** |

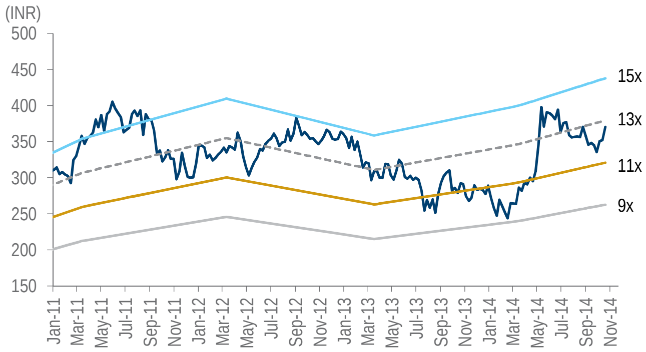
*Source: Daiwa forecasts*

## ■ CIL: PER bands



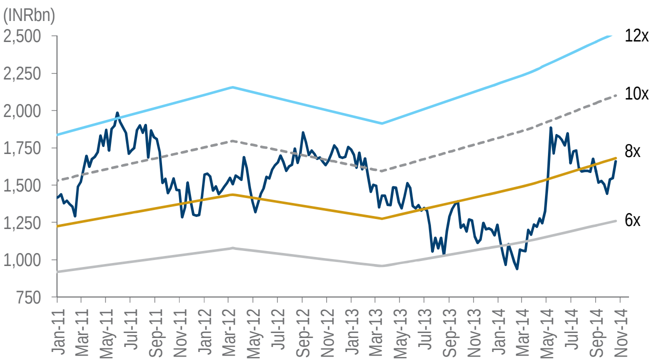

*Source: Bloomberg, Daiwa forecasts*

■ CIL: PER bands




*Source: Bloomberg, Daiwa forecasts*

■ CIL: EV/EBITDA multiple bands




*Source: Bloomberg, Daiwa forecasts*

## Risks

We have identified the following risks to our rating, target price and forecasts for CIL.

1) The pending stake sale by the government remains a near-term risk to our call.

2) Delays in the implementation of reforms by the new government relating to environmental and forestry approvals, as well as delays to other steps to hasten the overall approval process, would likely lead to continued weak production-growth performance.

3) Any delays in raising prices to offset the increases in costs for materials consumed and contract workers would be risks to our earnings forecasts.

# Appendix I

## Online Submission and Monitoring of Forest Clearance Proposals (OSMFCP)

### Advantages of OSMFCP

**Reduces time and promotes standardisation**
Within the system, every proposal is assigned a unique number (which is used for future reference). Each time a change is made on the portal, the stakeholder is notified. Timely responses to important issues will reduce the turnaround time of the proposal. OSMFCP also standardises the process at the central and state levels.

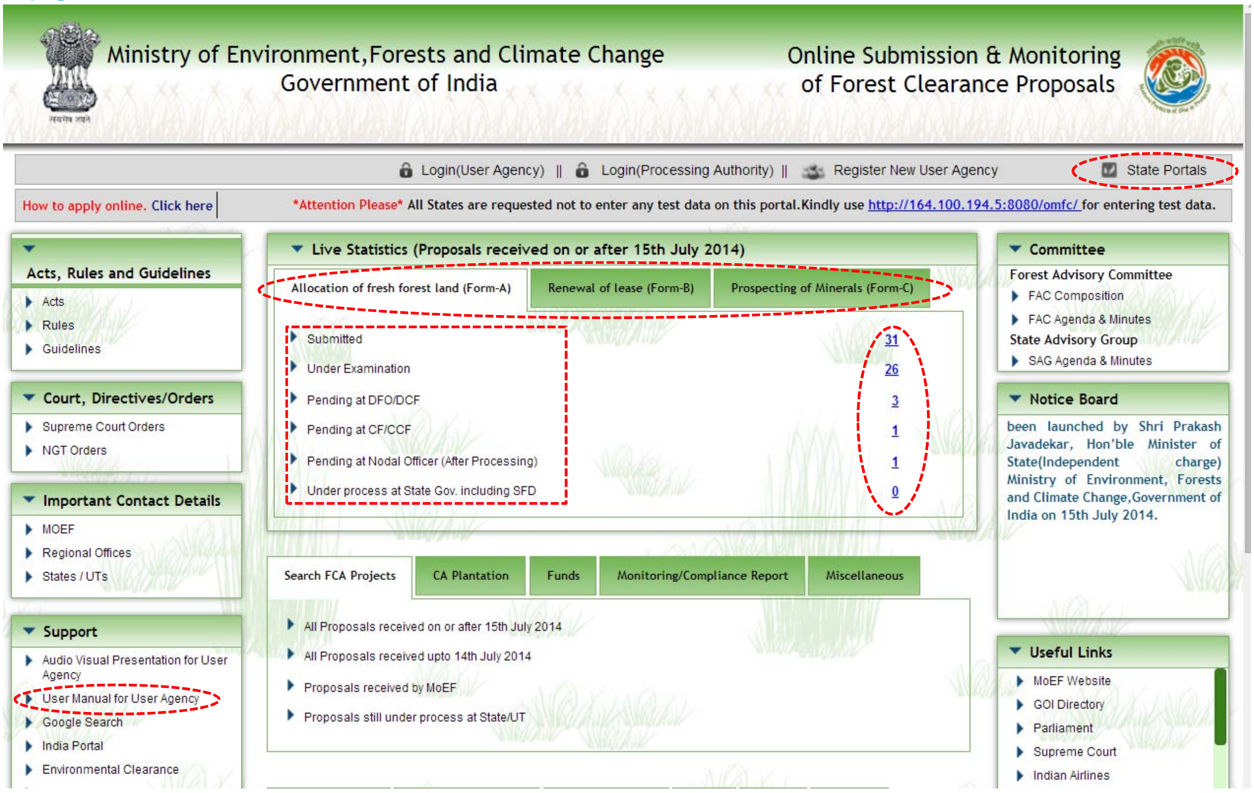
**Guard against incomplete application submission**
The online system will not accept a proposal until the complete application and all requisite documents are submitted. Once the proposal is complete, an acknowledgement will be given to the user agency.

**Real time monitoring**
At each stage, the status of the proposal is updated and made available on the MoEF's website in report format for the public at large. The system enables real-time monitoring of proposals in order to ensure that the stipulated time lines for processing the application are adhered to.

**User-friendly portal**

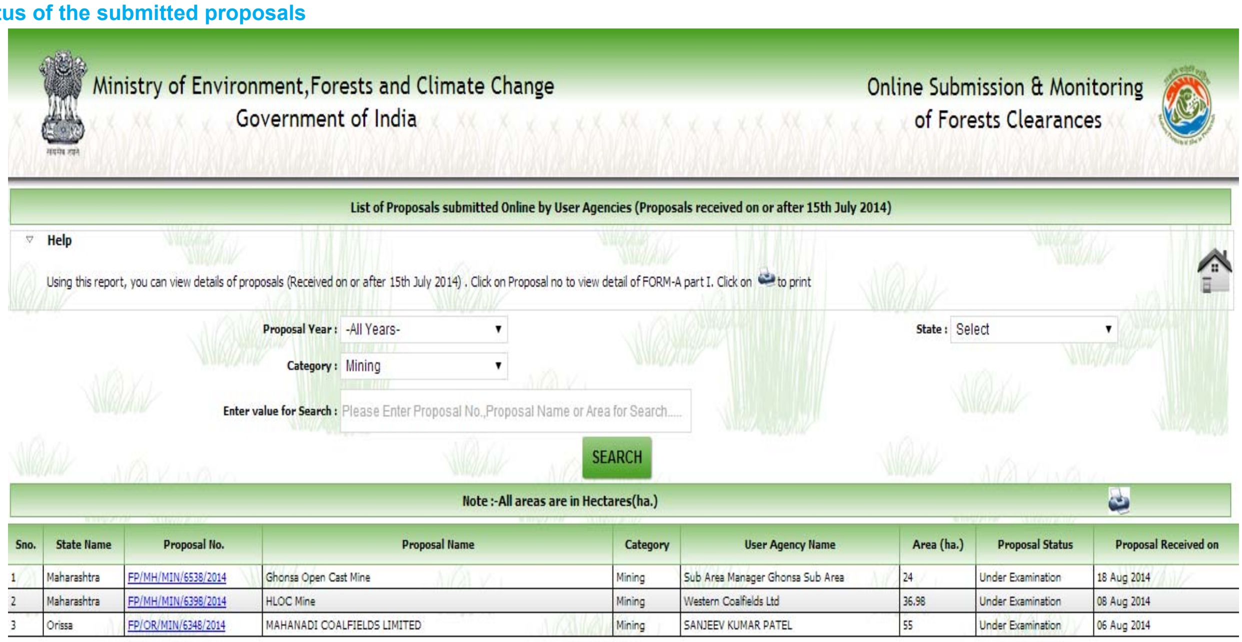
1. Accessible at any time and from any PC with Internet access.
2. Easy to add a new proposal by filling in the form.
3. Users can view the status, recommendations and number of submitted proposals at various stages.
4. A user manual is also available for applicants.
5. The MoEF portal in different states is accessible from the same website, ie, MoEF portals of central and other states are accessible on a single platform.

- **Home page of OSMFCP**




*Source: MoEF*

- **Status of the submitted proposals**




| Sno. | State Name | Proposal No. | Proposal Name | Category | User Agency Name | Area (ha.) | Proposal Status | Proposal Received on |
|---|---|---|---|---|---|---|---|---|
| 1 | Maharashtra | FP/MH/MIN/6538/2014 | Ghonsa Open Cast Mine | Mining | Sub Area Manager Ghonsa Sub Area | 24 | Under Examination | 18 Aug 2014 |
| 2 | Maharashtra | FP/MH/MIN/6398/2014 | HLOC Mine | Mining | Western Coalfields Ltd | 36.98 | Under Examination | 08 Aug 2014 |
| 3 | Orissa | FP/OR/MIN/6348/2014 | MAHANADI COALFIELDS LIMITED | Mining | SANJEEV KUMAR PATEL | 55 | Under Examination | 06 Aug 2014 |

*Source: MoEF*

# Appendix II

## Online submission system for TOR/EC proposals

OFFICE MEMORANDUM

**Subject: Online submission system for TOR/EC proposals – regarding**

As you are aware, National Informatics Centre (NIC) has developed and rolled out online system for submission of TOR/EC proposals with effect from 5th June 2014 onwards. There is a transition period from 5th June to 30th June 2014, wherein the proposals may be accepted in either of two modes, i.e., in hard copy or through web-portal. However, with effect from 1st July 2014, the TOR/EC proposals will be accepted only online by the Ministry of Environment and Forests (MoEF).

2. Needless to mention, I.A. division need to be in full preparedness to timely handle the online proposals. On successful submission of such a proposal, email containing acknowledgement slip will be sent automatically to the Project Proponent (PP) with a copy to the Member Secretary (Expert Appraisal Committee) concerned. The ToR and EC applications have to be examined within five and fifteen working days respectively by the Member Secretary concerned and additional information, if any, needs to be sought from the PP within this time frame itself. Thereafter, an acceptance letter will be sent to the PP informing that their proposal would be taken to the Expert Appraisal Committee (EAC) for appraisal. The system would ask PP to submit a hard copy of documents to MoEF within a week along with the acknowledgement slip. The PP would also be advised to visit MoEF's site about schedule of EAC meetings and in case their proposal is listed in the agenda of any EAC meeting, they should circulate hard copies of the concerned documents to Chairman & Members of the concerned EAC within a week of hosting of meeting notice on Ministry's website.

3. It is requested that all Member Secretaries may ensure taking timely action to ensure smooth functioning of this system. Also processing of ToR/EC proposals in accordance with the time frame stipulated under the provisions of the Environmental Impact Assessment (EIA) Notification 2006, may be ensured.

4. This issues with the approval of the Competent Authority.

*Source: MoEF*

# Appendix III

## Granting EC for one time production capacity expansion

**OFFICE MEMORANDUM**

**Subject: Guidelines for granting Environment Clearance for expansion of Coal Mining Projects involving one time Production Capacity Expansion in the existing operation – reg.**

This O.M. may be read in continuation of earlier O.M. of even number dated 19.12.2012, 07.1. 2014 and 30.5. 2014 which deal with the above subject.

2. The Ministry of Environment and Forests has, vide OM dated 19 December, 2012 issued guidelines for exemption from public hearing in respect of existing coal mining projects which apply for one time capacity expansion of up to 25% in the existing mining operation, within the existing mine lease area. The 25% expansion in production capacity is subject to a ceiling of 2 MTPA of additional production where the transportation of the additional production is proposed by road and a ceiling of 5 MTPA if such transportation is proposed by conveyor and/or rail transport.

3. The Ministry of Coal has been taking up the matter with this Ministry requesting for further dispensation arguing the need for quick ramping up of coal production considering the power generation requirements in the Country. They had argued that in the case of smaller coal mining projects the cap of capacity expansion up to 25% was inadequate as it resulted in relatively small increase in production in absolute terms for such mines. They had requested for increasing the limit of capacity expansion in respect of smaller projects. The matter was considered in the Ministry of Environment & Forests and it was decided that for expansion proposals of existing coal mining projects having production capacity up to 8 MTPA as per the EC letter, the limit of one time capacity expansion may be considered as 50% or incremental production upto 1 MTPA, whichever is more, in the existing mining operation, within the existing mine lease area, by the EAC for exempting Public Hearing under Clause 7(ii) of the EIA Notification, 2006. An OM of even number dated 7.01.2014 was accordingly issued.

4. The Ministry of Coal had again requested this Ministry that the dispensation given for one time capacity expansion for coal mining projects of production capacity up to 8 MTPA as per OM of 07th January, 2014 may also be extended to those coal mining projects which have already availed dispensation of one time production capacity expansion under earlier OM of 19th December, 2012. They had also pointed out an anomalous situation in respect of coal mining projects with capacity above 8 MTPA and up to 16 MTPA, where the transportation of additional production of coal was proposed by means of a conveyor and / or rail transport. While as per OM dated 07thJanuary, 2014, the additional production allowed for such projects up to 8 MTPA capacity would be 4 MTPA, for projects with capacity more than 8 MTPA and less than 16 MTPA, the additional production allowed as per the earlier OM of 19th December, 2012 would be

less than 4 MTPA. They had requested for removing this anomaly. The matter was again considered in the Ministry of Environment & Forests and it was decided that the dispensation given for one time capacity expansion for coal mining projects having production capacity up to 8 MTPA, as provided for in the OM dated 07th January, 2014, would also be applicable to the projects with capacity up to 8 MTPA, which had already availed the dispensation earlier under OM of 19th December, 2012. It was also decided that the coal mining projects with production capacity exceeding 8 MTPA and up to 16 MTPA may be given further dispensation under the O.M. dated 19.12.2012 to the effect that they could have one time capacity expansion, with additional production up to 4 MTPA if the transportation of additional production of coal was proposed by means of a conveyor and / or rail transport. The above dispensation was conveyed vide OM dated 30 May, 2014.

5. The Ministry of Coal has once again urged this Ministry for further dispensation in the matter so as to quickly ramp-up coal production for enhancing power production in public interest. The matter has been examined in this Ministry and considering the request of Ministry of Coal, it has been decided that in respect of one time capacity expansion proposals of existing coal mining projects with production capacity exceeding 16 MTPA, the EAC may after due diligence consider exempting public hearing subject to the ceiling of additional production up to 5 MTPA if the transportation of additional production of coal is proposed by means of a conveyor and / or rail transport. The above dispensation would be subject to satisfactory compliance with environmental clearance(s) issued in the past as judged by the EAC.. All other stipulations stated in earlier O.Ms. of even number dated 19.12.2012, 07.01.2014 and 30.5.2014 will continue to apply in such cases.

This issues with the approval of the Competent Authority.

*Source: MoEF*

# Appendix IV

## Opening up the coal sector for commercial mining – could also be a solution

### Timeline of the coal sector in India

### Coal Mines (Nationalisation) Act, 1973

- Prior to 1973, the coal mining industry in India comprised small and big mines scattered across the country which were largely owned by private companies.
- As the sector was in the hands of private coal mining companies, which did not have sufficient capital to invest in expanding capacity and upgrading their mines, the burgeoning energy needs of the country were not being met. Industrial unrest, unscientific mining practices, violations of mine safety laws, a reluctance to mechanise, and poor working conditions of labour in some private coal mines were some of the issues that concerned the government.
- In view of these conditions, the central government decided to nationalise the private coal mines. The nationalisation happened in 2 phases: first with the coking coal mines in 1972 and then with the non-coking coal mines in 1973. Coal mines that could not be nationalised remained in the hands of private lease holders.
- Under the Coking Coal Mines (Nationalization) Act, 1972, 226 coking coal mines (except Tata Iron & Steel Company Limited and Indian Iron & Steel Company Limited) were nationalized on 1 May 1972 and brought under Bharat Coking Coal Limited (BCCL), a new Central Government undertaking.
- All 711 non-coking coal mines were nationalized 0n 31 January 1973 and placed under a new government company, Coal Mines Authority Limited (CMAL). CMAL was organised as a unitary structure on divisional pattern with 4 divisions, namely, a Central Division, Eastern Division, Western Division and the Central Mine Planning & Design Institute Limited. The mines of the erstwhile National Coal Development Corporation (NCDC) were brought under the central division of CMAL.
- The Coal Mines (Taking Over of Management) Act, 1973, extended the right of the government to take over the management of the coking and non-coking coal mines in 7 states, including the coking coal mines taken over in 1971. This was followed by the nationalisation of all these mines on 5 May 1973 with the enactment of the Coal Mines (Nationalisation) Act, 1973.
- In November 1975, CIL was formed to manage both these companies, ie, BCCL and CMAL, and became a holding company with 5 subsidiaries, namely, BCCL, CCL, ECL, WCL and CMPDIL. It then proceeded to consolidate the businesses of both coking and non-coking coal under one entity in which government held a 100% stake.
- The coal industry, after the 1973 Act, was reorganised into 2 large public sector companies, CIL and SCCL. CIL owned and managed all previously government-owned mines of the NCDC and the nationalised private mines, and SCCL was owned and managed by the government of Andhra Pradesh.

### Coal Mines (Nationalisation) Amendment Act, 1976

- The 1973 Act was amended on 27 May 1976 when all the mining leases of private lease holders were terminated except those of: 1) private iron and steel producers which were allowed by the Act to carry on coal mining for captive use, and 2) sub-lease for coal mining to private parties in isolated small pockets not amenable to economic development and not requiring rail transport.

### Coal Mines (Nationalisation) Amendment Act, 1993

- Under the Coal Mines (Nationalisation) Act, 1973, coal mining was only reserved for public sector companies, ie, CIL and SCCL. These 2 companies took responsibility for supplying coal to all users.
- As time passed, these companies were not able to completely meet the burgeoning demand for coal, which led to an increase in imports. This increase in imports in turn led to a situation whereby it was necessary to allot captive coal blocks to specified end users solely to bridge the gap between the demand and the supply of coal.
- The Cabinet Committee on Economic Affairs approved the proposal for amendment of the Coal Mines (Nationalisation) Act on 5 May 1992 in regards to:

a) Allowing private-sector participation in coal mining operations (in addition to iron and steel producers).

b) Allowing privately owned companies to invest in, install and operate coal washeries for the purpose of washing coking and non-coking coal, etc.

- Finally, the bill was approved by the Lok Sabha on 19 April 1993 and received the assent of the president on 9 June 1993.
- In March 1996, the cement sector was notified as an end-use for the purposes of captive coal mining through the addition of an enabling provision in the Coal Mines (Nationalisation) Act.

## The Coal Mines (Nationalisation) Amendment Bill, 2000

- In February 1997, the central government decided that Indian companies, both in the public and private sectors, should be allowed to engage in the coal mining business without the restriction of captive mining. To this end it decided to amend the Coal Mines (Nationalisation) Act, 1973.
- The Coal Mines (Nationalisation) Amendment Bill, 2000 was introduced in the Rajya Sabha on 24 April 2000 with the goal of opening up the sector to commercial mining. It met with stiff resistance from the trade unions who expressed concerns over the possibility of unscientific mining and labour exploitation.

## Recent Supreme Court directive – to de-allocate captive coal blocks

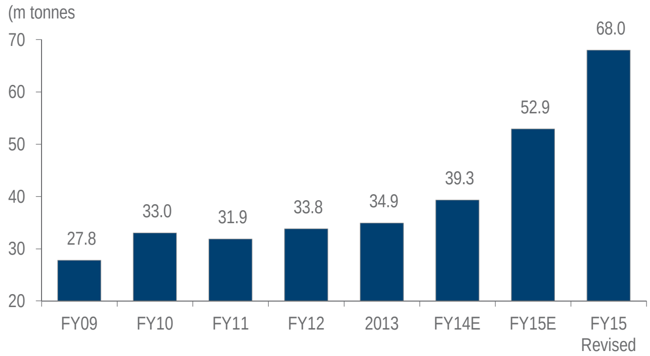
On 24 September 2014, the Supreme Court declared the allocation of 218 coal blocks (except 4 coal blocks) since 1993 as arbitrary and illegal, and directed that such allocations be withdrawn.

The 4 coal blocks which are exempt from the verdict are operated by the central government with no joint venture with the private company. Two of them belong to NTPC and SAIL, and the other 2 are allocated for ultra mega power projects (UMPP).

Cancellation of the coal blocks will be done after 6 months, ie, after 31 March 2015. The Supreme Court has asked the holders of 46 operational coal blocks to file their replies in 6 months.

All the companies will also be fined INR295/tonne for cumulative volumes produced.

■ Captive coal production volume




*Source: Ministry of Coal*

## The Coal Mines (Special Provisions) Ordinance, 2014

As a solution to the verdict of the de-allocation of coal blocks by the Supreme Court, the government came out with an ordinance to auction the de-allocated blocks for end usage in the next 3-4 months, in order to maintain the continuity in coal production by the captive coal blocks.

## Coal Mines (Nationalisation) Amendment Bill, 2014

In the winter session of Parliament, the central government may consider presenting a bill to allow commercial mining by the private sector in order to find a permanent solution to the coal shortage issue in India. However, they could find a strong resistance from the coal unions and other political parties.

■ Timeline of the coal sector in India

| Period | Events | Comments |
|---|---|---|
| May 1972 | Coking Coal Mines (Nationalization) Act, 1972 | Reasons being wasteful and selective mining, no planned development of coal resources, improvement in safety laws and quality of life of work force, to ensure adequate investments to meet growth needs |
| Jan 1973 | Coal Mines (Nationalization) Act, 1973 | Nationalization happened in 2 phases, first coking coal mines in 1972 and then non-coking coal mines in 1973 |
| Nov 1975 | Formation of Coal India | To consolidate all the coking and non-coking coal mines under BCCL and CMAL. |
| May 1976 | Coal Mines (Nationalization) Amendment Act, 1976 | To terminate all the mining leases of private lease holders except iron and steel producers |
| June 1993 | Coal Mines (Nationalization) Amendment Act, 1993 | Allowed Indian companies engaged in generation of power to carry coal mining for captive use as CIL and SCCL were not able to meet burgeoning need for coal |
| Mar 1996 | Inserted a provision to Act | Cement sector was notified as an end-use for the purposes of captive coal mining |
| Apr 2000 | Coal Mines (Nationalization) Amendment Bill, 2000 | To allow commercial mining, though it faced resistance from trade unions and political parties and bill was not taken up in the parliament |
| Sep 2014 | Coal blocks de-allocation | Supreme Court declared the allocation of 218 coal blocks since 1993 as arbitrary and illegal |
| Oct 2014 | Coal Mines (Special Provisions) Ordinance, 2014 | An ordinance to auction the de-allocated blocks for end-usage |
| Dec 2014 | Coal Mines (Nationalization) Amendment Bill, 2014 | Will likely present a bill to allow commercial mining by private sector in Winter session of Parliament |

*Source: Ministry of Coal, Company, PRS India, Daiwa*
*Note: BCCL= Bharat Coking Coal Limited and CMAL=Coal Mines Authority Limited*

■ **Producing captive coal blocks de-allocated**

| Company | Coal Block | Sl. No. of block | Govt (G)/ Private (P) | Sector | Projected production for 2014-15 (m tonnes) |
|---|---|---|---|---|---|
| WBSEB | Tara (East) | 1 | G | Power | 2.00 |
| WBPDCL | Tara (West) | 2 | G | Power | |
| JSPL | Gare Palma IV/I | 3 | P | Iron & Steel | 6.00 |
| CESC | Sarshatoli | 4 | P | Power | 2.80 |
| HIL | Talabira -I | 5 | P | Power | 2.50 |
| BLA | Gotitoria (E&W) (2 Blocks) | 6-7 | P | Pvt. commercial | 0.30 |
| MIL | Gare Palma IV/5 | 8 | P | Iron & Steel | 1.00 |
| PSEB | Panchwara Central | 9 | G | Power | 7.00 |
| JNL | Gare Palma IV/4 | 10 | P | Iron & Steel | 1.00 |
| PIL | Chotia | 11 | P | Iron & Steel | 1.00 |
| Jindal Power | Gare Palma IV/2&3 | 12-13 | P | Power | 6.25 |
| SIL | Belgaon | 14 | P | Iron & Steel | 0.24 |
| KPCL | Baranj I-IV, Kiloni and Manora Deep | 15-20 | G | Power | 2.50 |
| UML | Kathautia | 21 | P | Iron & Steel | 0.80 |
| ESCL | Parbatpur | 22 | P | Iron & Steel | 0.64 |
| Sarda Energy Ltd | Gare Palma IV/7 | 23 | P | Iron & Steel | 1.20 |
| WBPDCL | Barjora | 24 | G | Power | 0.50 |
| SAIL* | Tasra | 25 | G | Iron & Steel | 0.07 |
| DVC | Barjora North | 26 | G | Power | 2.20 |
| B.S. Ispat | Marki Mangli-I | 27 | P | Iron & Steel | 0.08 |
| Shree Virangana Iron & Steel | Marki Mangli-III | 28 | P | Iron & Steel | 0.36 |
| Shree Virangana Iron & Steel | Marki Mangli-II | 29 | P | Iron & Steel | |
| WBMTDCL | Trans Damodar | 30 | G | Commercial | 1.00 |
| Sasan Power | Molter & Molter Amlori Extension | 31-32 | P | UMPP | 2.00 |
| Soya Ispat & Jai Balaji Industries | Ardhagram | 33 | P | Iron & Steel | 0.30 |
| RRVUNL | Parsa (East) & Kanta Basan | 34-35 | G | Power | 5.50 |
| WBPDCL | Gangaramchak and Gangaramchak Bhadulia | 36-37 | G | Power | 0.02 |
| MPSMDC Ltd | Amelia North | 38 | G | Commercial mining | 1.50 |
| WBPDCL | Pachwara North | 39 | G | Power | 4.00 |
| MPSMDC Ltd | Bicharpur | 40 | G | Commercial mining | 0.03 |
| Jaiprakash Associates | Mandla North | 41 | P | Cement | 0.01 |
| Prism Cement Ltd | Sial Ghogri | 42 | P | Cement | 0.13 |
| | | | | **Total** | **52.93** |

*Source: Ministry of Coal, Daiwa*

*Note: * This is the block of Steel Authority of India, which is not de-allocated, WBSEB=West Bengal State Electricity Board, WBPDCL=West Bengal Power Development Corporation Limited, JSPL=Jindal Steel and Power Limited, CESC=Calcutta Electric Supply Corporation, HIL=Hindalco Industries Limited, BLA=BLA Power, E&W=East and West, MIL=Monnet Ispat Ltd, PSEB=Punjab State Electricity Board, JNL=Jayaswal Neco Limited, PIL=Prakash Industries Limited, SIL=Sponge Iron Limited, KPCL=Karnataka Power Corporation Limited, UML=Usha Martin Ltd, ESCL=Electrosteel Castings Limited, SAIL=Steel Authority of India Limited, DVC=Damodar Valley Corporation, WBMTDCL=West Bengal Mineral Development & Trading Corporation Ltd, RRVUNL=Rajasthan Rajya Vidyut Utpadan Nigam Limited, MPSMDC=Madhya Pradesh State Mining Development Corporation*

## Daiwa's Asia Pacific Research Directory

| HONG KONG | | |
|---|---|---|
| Hiroaki KATO | (852) 2532 4121 | hiroaki.kato@hk.daiwacm.com |
| *Regional Research Head* | | |
| Kosuke MIZUNO | (852) 2848 4949 / (852) 2773 8273 | kosuke.mizuno@hk.daiwacm.com |
| *Regional Research Co-head* | | |
| John HETHERINGTON | (852) 2773 8787 | john.hetherington@hk.daiwacm.com |
| *Regional Deputy Head of Asia Pacific Research* | | |
| Rohan DALZIELL | (852) 2848 4938 | rohan.dalziell@hk.daiwacm.com |
| *Regional Head of Product Management* | | |
| Kevin LAI | (852) 2848 4926 | kevin.lai@hk.daiwacm.com |
| *Chief Economist for Asia ex-Japan; Macro Economics (Regional)* | | |
| Christie CHIEN | (852) 2848 4482 | christie.chien@hk.daiwacm.com |
| *Macro Economics (Regional)* | | |
| Junjie TANG | (852) 2773 8736 | junjie.tang@hk.daiwacm.com |
| *Macro Economics (China)* | | |
| Jonas KAN | (852) 2848 4439 | jonas.kan@hk.daiwacm.com |
| *Head of Hong Kong and China Property* | | |
| Leon QI | (852) 2532 4381 | leon.qi@hk.daiwacm.com |
| *Banking (Hong Kong, China); Broker (China); Insurance (China)* | | |
| Anson CHAN | (852) 2532 4350 | anson.chan@hk.daiwacm.com |
| *Consumer (Hong Kong/China)* | | |
| Jamie SOO | (852) 2773 8529 | jamie.soo@hk.daiwacm.com |
| *Gaming and Leisure (Hong Kong/China)* | | |
| Lynn CHENG | (852) 2773 8822 | lynn.cheng@hk.daiwacm.com |
| *IT/Electronics (Semiconductor) (Greater China)* | | |
| Dennis IP | (852) 2848 4068 | dennis.ip@hk.daiwacm.com |
| *Power; Utilities; Renewables and Environment (Hong Kong/China)* | | |
| John CHOI | (852) 2773 8730 | john.choi@hk.daiwacm.com |
| *Head of Hong Kong and China Internet; Regional Head of Small/Mid Cap* | | |
| Joey CHEN | (852) 2848 4483 | joey.chen@hk.daiwacm.com |
| *Steel (China)* | | |
| Kelvin LAU | (852) 2848 4467 | kelvin.lau@hk.daiwacm.com |
| *Head of Transportation (Hong Kong/China); Transportation (Regional)* | | |
| Carrie YEUNG | (852) 2773 8243 | carrie.yeung@hk.daiwacm.com |
| *Transportation (Hong Kong/China)* | | |
| Jibo MA | (852) 2848 4489 | jibo.ma@hk.daiwacm.com |
| *Head of Custom Products Group* | | |
| Thomas HO | (852) 2773 8716 | thomas.ho@hk.daiwacm.com |
| *Custom Products Group* | | |

| PHILIPPINES | | |
|---|---|---|
| Bianca SOLEMA | (63) 2 737 3023 | bianca.solema@dbpdaiwacm.com.ph |
| *Utilities and Energy* | | |

| SOUTH KOREA | | |
|---|---|---|
| Sung Yop CHUNG | (82) 2 787 9157 | sychung@kr.daiwacm.com |
| *Pan-Asia Co-head/Regional Head of Automobiles and Components; Automobiles; Shipbuilding; Steel* | | |
| Mike OH | (82) 2 787 9179 | mike.oh@kr.daiwacm.com |
| *Capital Goods (Construction and Machinery)* | | |
| Jun Yong BANG | (82) 2 787 9168 | junyong.bang@kr.daiwacm.com |
| *Oil; Chemicals; Tyres* | | |
| Thomas Y KWON | (82) 2 787 9181 | yskwon@kr.daiwacm.com |
| *Pan-Asia Head of Internet & Telecommunications; Software – Internet/On-line Game* | | |

| TAIWAN | | |
|---|---|---|
| Rick HSU | (886) 2 8758 6261 | rick.hsu@daiwacm-cathay.com.tw |
| *Head of Regional IT/Electronics; Semiconductor/IC Design (Regional)* | | |
| Steven TSENG | (886) 2 8758 6252 | steven.tseng@daiwacm-cathay.com.tw |
| *IT/Technology Hardware (PC Hardware)* | | |
| Christine WANG | (886) 2 8758 6249 | christine.wang@daiwacm-cathay.com.tw |
| *IT/Technology Hardware (Automation); Pharmaceuticals and Healthcare; Consumer* | | |
| Kylie HUANG | (886) 2 8758 6248 | kylie.huang@daiwacm-cathay.com.tw |
| *IT/Technology Hardware (Handsets and Components)* | | |

| INDIA | | |
|---|---|---|
| Punit SRIVASTAVA | (91) 22 6622 1013 | punit.srivastava@in.daiwacm.com |
| *Head of India Research; Strategy; Banking/Finance* | | |
| Saurabh MEHTA | (91) 22 6622 1009 | saurabh.mehta@in.daiwacm.com |
| *Capital Goods; Utilities* | | |

| SINGAPORE | | |
|---|---|---|
| Ramakrishna MARUVADA | (65) 6499 6543 | ramakrishna.maruvada@sg.daiwacm.com |
| *Telecommunications (China/ASEAN/India)* | | |
| Royston TAN | (65) 6321 3086 | royston.tan@sg.daiwacm.com |
| *Oil and Gas (ASEAN/China); Capital Goods (Singapore)* | | |
| David LUM | (65) 6329 2102 | david.lum@sg.daiwacm.com |
| *Property and REITs* | | |
| Evon TAN | (65) 6499 6546 | evon.tan@sg.daiwacm.com |
| *Property and REITs* | | |
| Jame OSMAN | (65) 6321 3092 | jame.osman@sg.daiwacm.com |
| *Telecommunications (ASEAN/India); Pharmaceuticals and Healthcare; Consumer (Singapore)* | | |

## Daiwa's Offices

| Office / Branch / Affiliate | Address | Tel | Fax |
|---|---|---|---|
| **DAIWA SECURITIES GROUP INC** | | | |
| **HEAD OFFICE** | Gran Tokyo North Tower, 1-9-1, Marunouchi, Chiyoda-ku, Tokyo, 100-6753 | (81) 3 5555 3111 | (81) 3 5555 0661 |
| Daiwa Securities Trust Company | One Evertrust Plaza, Jersey City, NJ 07302, U.S.A. | (1) 201 333 7300 | (1) 201 333 7726 |
| Daiwa Securities Trust and Banking (Europe) PLC (Head Office) | 5 King William Street, London EC4N 7JB, United Kingdom | (44) 207 320 8000 | (44) 207 410 0129 |
| Daiwa Europe Trustees (Ireland) Ltd | Level 3, Block 5, Harcourt Centre, Harcourt Road, Dublin 2, Ireland | (353) 1 603 9900 | (353) 1 478 3469 |
| | | | |
| Daiwa Capital Markets America Inc | Financial Square, 32 Old Slip, New York, NY10005, U.S.A. | (1) 212 612 7000 | (1) 212 612 7100 |
| Daiwa Capital Markets America Inc. San Francisco Branch | 555 California Street, Suite 3360, San Francisco, CA 94104, U.S.A. | (1) 415 955 8100 | (1) 415 956 1935 |
| Daiwa Capital Markets Europe Limited | 5 King William Street, London EC4N 7AX, United Kingdom | (44) 20 7597 8000 | (44) 20 7597 8600 |
| Daiwa Capital Markets Europe Limited, Frankfurt Branch | Trianon Building, Mainzer Landstrasse 16, 60325 Frankfurt am Main, Federal Republic of Germany | (49) 69 717 080 | (49) 69 723 340 |
| Daiwa Capital Markets Europe Limited, Paris Representative Office | 36, rue de Naples, 75008 Paris, France | (33) 1 56 262 200 | (33) 1 47 550 808 |
| Daiwa Capital Markets Europe Limited, Geneva Branch | 50 rue du Rhône, P.O.Box 3198, 1211 Geneva 3, Switzerland | (41) 22 818 7400 | (41) 22 818 7441 |
| Daiwa Capital Markets Europe Limited, Moscow Representative Office | Midland Plaza 7th Floor, 10 Arbat Street, Moscow 119002, Russian Federation | (7) 495 641 3416 | (7) 495 775 6238 |
| Daiwa Capital Markets Europe Limited, Bahrain Branch | 7th Floor, The Tower, Bahrain Commercial Complex, P.O. Box 30069, Manama, Bahrain | (973) 17 534 452 | (973) 17 535 113 |
| Daiwa Capital Markets Hong Kong Limited | Level 28, One Pacific Place, 88 Queensway, Hong Kong | (852) 2525 0121 | (852) 2845 1621 |
| Daiwa Capital Markets Singapore Limited | 6 Shenton Way #26-08, DBS Building Tower Two, Singapore 068809, Republic of Singapore | (65) 6220 3666 | (65) 6223 6198 |
| Daiwa Capital Markets Australia Limited | Level 34, Rialto North Tower, 525 Collins Street, Melbourne, Victoria 3000, Australia | (61) 3 9916 1300 | (61) 3 9916 1330 |
| DBP-Daiwa Capital Markets Philippines, Inc | 18th Floor, Citibank Tower, 8741 Paseo de Roxas, Salcedo Village, Makati City, Republic of the Philippines | (632) 813 7344 | (632) 848 0105 |
| Daiwa-Cathay Capital Markets Co Ltd | 14/F, 200, Keelung Road, Sec 1, Taipei, Taiwan, R.O.C. | (886) 2 2723 9698 | (886) 2 2345 3638 |
| Daiwa Securities Capital Markets Korea Co., Ltd. | One IFC, 10 Gukjegeumyung-Ro, Yeouido-dong, Yeongdeungpo-gu, Seoul, 150-876, Korea | (82) 2 787 9100 | (82) 2 787 9191 |
| Daiwa Securities Capital Markets Co Ltd, Beijing Representative Office | Room 301/302，Kerry Center，1 Guanghua Road，Chaoyang District，Beijing 100020, People's Republic of China | (86) 10 6500 6688 | (86) 10 6500 3594 |
| Daiwa SSC Securities Co Ltd | 45/F, Hang Seng Tower, 1000 Lujiazui Ring Road, Pudong, Shanghai 200120, People's Republic of China | (86) 21 3858 2000 | (86) 21 3858 2111 |
| Daiwa Securities Capital Markets Co. Ltd, Bangkok Representative Office | 18th Floor, M Thai Tower, All Seasons Place, 87 Wireless Road, Lumpini, Pathumwan, Bangkok 10330, Thailand | (66) 2 252 5650 | (66) 2 252 5665 |
| Daiwa Capital Markets India Private Ltd | 10th Floor, 3 North Avenue, Maker Maxity, Bandra Kurla Complex, Bandra East, Mumbai – 400051, India | (91) 22 6622 1000 | (91) 22 6622 1019 |
| Daiwa Securities Capital Markets Co. Ltd, Hanoi Representative Office | Suite 405, Pacific Palace Building, 83B, Ly Thuong Kiet Street, Hoan Kiem Dist. Hanoi, Vietnam | (84) 4 3946 0460 | (84) 4 3946 0461 |
| | | | |
| **DAIWA INSTITUTE OF RESEARCH LTD** | | | |
| **HEAD OFFICE** | 15-6, Fuyuki, Koto-ku, Tokyo, 135-8460, Japan | (81) 3 5620 5100 | (81) 3 5620 5603 |
| **MARUNOUCHI OFFICE** | Gran Tokyo North Tower, 1-9-1, Marunouchi, Chiyoda-ku, Tokyo, 100-6756 | (81) 3 5555 7011 | (81) 3 5202 2021 |
| | | | |
| New York Research Center | 11th Floor, Financial Square, 32 Old Slip, NY, NY 10005-3504, U.S.A. | (1) 212 612 6100 | (1) 212 612 8417 |
| London Research Centre | 3/F, 5 King William Street, London, EC4N 7AX, United Kingdom | (44) 207 597 8000 | (44) 207 597 8550 |

## Disclaimer

This publication is produced by Daiwa Securities Group Inc. and/or its non-U.S. affiliates, and distributed by Daiwa Securities Group Inc. and/or its non-U.S. affiliates, except to the extent expressly provided herein. This publication and the contents hereof are intended for information purposes only, and may be subject to change without further notice. Any use, disclosure, distribution, dissemination, copying, printing or reliance on this publication for any other purpose without our prior consent or approval is strictly prohibited. Neither Daiwa Securities Group Inc. nor any of its respective parent, holding, subsidiaries or affiliates, nor any of its respective directors, officers, servants and employees, represent nor warrant the accuracy or completeness of the information contained herein or as to the existence of other facts which might be significant, and will not accept any responsibility or liability whatsoever for any use of or reliance upon this publication or any of the contents hereof. Neither this publication, nor any content hereof, constitute, or are to be construed as, an offer or solicitation of an offer to buy or sell any of the securities or investments mentioned herein in any country or jurisdiction nor, unless expressly provided, any recommendation or investment opinion or advice. Any view, recommendation, opinion or advice expressed in this publication may not necessarily reflect those of Daiwa Securities Capital Markets Co. Ltd., and/or its affiliates nor any of its respective directors, officers, servants and employees except where the publication states otherwise. This research report is not to be relied upon by any person in making any investment decision or otherwise advising with respect to, or dealing in, the securities mentioned, as it does not take into account the specific investment objectives, financial situation and particular needs of any person.

Daiwa Securities Group Inc., its subsidiaries or affiliates, or its or their respective directors, officers and employees from time to time have trades as principals, or have positions in, or have other interests in the securities of the company under research including derivatives in respect of such securities or may have also performed investment banking and other services for the issuer of such securities. The following are additional disclosures.

**Japan**
Daiwa Securities Co. Ltd. and Daiwa Securities Group Inc.
Daiwa Securities Co. Ltd. is a subsidiary of Daiwa Securities Group Inc.
Investment Banking Relationship

Within the preceding 12 months, The subsidiaries and/or affiliates of Daiwa Securities Group Inc. * has lead-managed public offerings and/or secondary offerings (excluding straight bonds) of the securities of the following companies: Modern Land (China) Co. Ltd (1107 HK); China Everbright Bank Company Limited (6818 HK); econtext Asia Ltd (1390 HK); Lotte Shopping Co (023530 KS); Rexlot Holdings Ltd (555 HK); Neo Solar Power Corp (3576_TT); Accordia Golf Trust (AGT SP).

*Subsidiaries of Daiwa Securities Group Inc. for the purposes of this section shall mean any one or more of: Daiwa Capital Markets Hong Kong Limited (大和資本市場香港有限公司), Daiwa Capital Markets Singapore Limited, Daiwa Capital Markets Australia Limited, Daiwa Capital Markets India Private Limited, Daiwa-Cathay Capital Markets Co., Ltd., Daiwa Securities Capital Markets Korea Co., Ltd.

**Hong Kong**
This research is distributed in Hong Kong by Daiwa Capital Markets Hong Kong Limited (大和資本市場香港有限公司) ("DHK") which is regulated by the Hong Kong Securities and Futures Commission. Recipients of this research in Hong Kong may contact DHK in respect of any matter arising from or in connection with this research.
Ownership of Securities
For "Ownership of Securities" information, please visit BlueMatrix disclosure Link at https://daiwa3.bluematrix.com/sellside/Disclosures.action.
Investment Banking Relationship
For "Investment Banking Relationship", please visit BlueMatrix disclosure Link at https://daiwa3.bluematrix.com/sellside/Disclosures.action.
Relevant Relationship (DHK)
DHK may from time to time have an individual employed by or associated with it serves as an officer of any of the companies under its research coverage.
DHK market making
DHK may from time to time make a market in securities covered by this research.

**Singapore**
This research is distributed in Singapore by Daiwa Capital Markets Singapore Limited and it may only be distributed in Singapore to accredited investors, expert investors and institutional investors as defined in the Financial Advisers Regulations and the Securities and Futures Act (Chapter 289), as amended from time to time. By virtue of distribution to these category of investors, Daiwa Capital Markets Singapore Limited and its representatives are not required to comply with Section 36 of the Financial Advisers Act (Chapter 110) (Section 36 relates to disclosure of Daiwa Capital Markets Singapore Limited's interest and/or its representative's interest in securities). Recipients of this research in Singapore may contact Daiwa Capital Markets Singapore Limited in respect of any matter arising from or in connection with the research.

**Australia**
This research is distributed in Australia by Daiwa Capital Markets Stockbroking Limited and it may only be distributed in Australia to wholesale investors within the meaning of the Corporations Act. Recipients of this research in Australia may contact Daiwa Capital Markets Stockbroking Limited in respect of any matter arising from or in connection with the research.
Ownership of Securities
For "Ownership of Securities" information, please visit BlueMatrix disclosure Link at https://daiwa3.bluematrix.com/sellside/Disclosures.action.

**India**
This research is distributed by Daiwa Capital Markets India Private Limited (DAIWA) which is an intermediary registered with Securities & Exchange Board of India. This report is not to be considered as an offer or solicitation for any dealings in securities. While the information in this report has been compiled by DAIWA in good faith from sources believed to be reliable, no representation or warranty, express of implied, is made or given as to its accuracy, completeness or correctness. DAIWA its officers, employees, representatives and agents accept no liability whatsoever for any loss or damage whether direct, indirect, consequential or otherwise howsoever arising (whether in negligence or otherwise) out of or in connection with or from any use of or reliance on the contents of and/or omissions from this document. Consequently DAIWA expressly disclaims any and all liability for, or based on or relating to any such information contained in or errors in or omissions in this report. Accordingly, you are recommended to seek your own legal, tax or other advice and should rely solely on your own judgment, review and analysis, in evaluating the information in this document. The data contained in this document is subject to change without any prior notice DAIWA reserves its right to modify this report as maybe required from time to time. DAIWA is committed to providing independent recommendations to its Clients and would be happy to provide any information in response to any query from its Clients. This report is strictly confidential and is being furnished to you solely for your information. The information contained in this document should not be reproduced (in whole or in part) or redistributed in any form to any other person. We and our group companies, affiliates, officers, directors and employees may from time to time, have long or short positions, in and buy sell the securities thereof, of company(ies) mentioned herein or be engaged in any other transactions involving such securities and earn brokerage or other compensation or act as advisor or have the potential conflict of interest with respect to any recommendation and related information or opinion. DAIWA prohibits its analyst and their family members from maintaining a financial interest in the securities or derivatives of any companies that the analyst cover. This report is not intended or directed for distribution to, or use by any person, citizen or entity which is resident or located in any state or country or jurisdiction where such publication, distribution or use would be contrary to any statutory legislation, or regulation which would require DAIWA and its affiliates/ group companies to any registration or licensing requirements. The views expressed in the report accurately reflect the analyst's personal views about the securities and issuers that are subject of the Report, and that no part of the analyst's compensation was, is or will be directly or indirectly, related to the recommendations or views expressed in the Report. This report does not recommend to US recipients the use of Daiwa Capital Markets India Private Limited or any of its non – US affiliates to effect trades in any securities and is not supplied with any understanding that US recipients will direct commission business to Daiwa Capital Markets India Private Limited.

**Taiwan**
This research is distributed in Taiwan by Daiwa-Cathay Capital Markets Co., Ltd and it may only be distributed in Taiwan to institutional investors or specific investors who have signed recommendation contracts with Daiwa-Cathay Capital Markets Co., Ltd in accordance with the Operational Regulations Governing Securities Firms Recommending Trades in Securities to Customers. Recipients of this research in Taiwan may contact Daiwa-Cathay Capital Markets Co., Ltd in respect of any matter arising from or in connection with the research.

**Philippines**
This research is distributed in the Philippines by DBP-Daiwa Capital Markets Philippines, Inc. which is regulated by the Philippines Securities and Exchange Commission and the Philippines Stock Exchange, Inc. Recipients of this research in the Philippines may contact DBP-Daiwa Capital Markets Philippines, Inc. in respect of any matter arising from or in connection with the research. DBP-Daiwa Capital Markets Philippines, Inc. recommends that investors independently assess, with a professional advisor, the specific financial risks as well as the legal, regulatory, tax, accounting, and other consequences of a proposed transaction. DBP-Daiwa Capital Markets Philippines, Inc. may have positions or may be materially interested in the securities in any of the markets mentioned in the publication or may have performed other services for the issuers of such securities.
For relevant securities and trading rules please visit SEC and PSE Link at http://www.sec.gov.ph/irr/AmendedIRRfinalversion.pdf and http://www.pse.com.ph/ respectively.

**Thailand**

This research is distributed to only institutional investors in Thailand primarily by Thanachart Securities Public Company Limited ("TNS").

This report is prepared by analysts who are employed by Daiwa Securities Group Inc. and/or its non-U.S. affiliates. While the information is from sources believed to be reliable, neither the information nor the forecasts shall be taken as a representation or warranty for which Thanachart Securities Public Company Limited, Daiwa Securities Group Inc. nor any of their respective parent, holding, subsidiaries or affiliates, nor any of their respective directors, officers, servants and employees incur any responsibility. This report is provided to you for informational purposes only and it is not, and is not to be construed as, an offer or an invitation to make an offer to sell or buy any securities. Neither Thanachart Securities Public Company Limited, Daiwa Securities Group Inc. nor any of their respective parent, holding, subsidiaries or affiliates, nor any of their respective directors, officers, servants and employees accept any liability whatsoever for any direct or consequential loss arising from any use of this research or its contents.

The information and opinions contained herein have been compiled or arrived at from sources believed reliable. However, Thanachart Securities Public Company Limited, Daiwa Securities Group Inc. nor any of their respective parent, holding, subsidiaries or affiliates, nor any of their respective directors, officers, servants and employees make no representation or warranty, express or implied, as to their accuracy or completeness. Expressions of opinion herein are subject to change without notice. The use of any information, forecasts and opinions contained in this report shall be at the sole discretion and risk of the user.

Daiwa Securities Group Inc. and/or its non-U.S. affiliates perform and seek to perform business with companies covered in this research. Thanachart Securities Public Company Limited, Daiwa Securities Group Inc., their respective parent, holding, subsidiaries or affiliates, their respective directors, officers, servants and employees may have positions and financial interest in securities mentioned in this research. Thanachart Securities Public Company Limited, Daiwa Securities Group Inc., their respective parent, holding, subsidiaries or affiliates may from time to time perform investment banking or other services for, or solicit investment banking or other business from, any entity mentioned in this research. Therefore, investors should be aware of conflict of interest that may affect the objectivity of this research.

**United Kingdom**

This research report is produced by Daiwa Capital Markets Europe Limited and/or its affiliates and is distributed in the European Union, Iceland, Liechtenstein, Norway and Switzerland. Daiwa Capital Markets Europe Limited is authorised and regulated by The Financial Conduct Authority ("FCA") and is a member of the London Stock Exchange, Eurex and NYSE Liffe. Daiwa Capital Markets Europe Limited and/or its affiliates may, from time to time, to the extent permitted by law, participate or invest in other financing transactions with the issuers of the securities referred to herein (the "Securities"), perform services for or solicit business from such issuers, and/or have a position or effect transactions in the Securities or options thereof and/or may have acted as an underwriter during the past twelve months for the issuer of such securities. In addition, employees of Daiwa Capital Markets Europe Limited and/or its affiliates may have positions and effect transactions in such securities or options and may serve as Directors of such issuers. Daiwa Capital Markets Europe Limited may, to the extent permitted by applicable UK law and other applicable law or regulation, effect transactions in the Securities before this material is published to recipients.

This publication is intended for investors who are not Retail Clients in the United Kingdom within the meaning of the Rules of the FCA and should not therefore be distributed to such Retail Clients in the United Kingdom. Should you enter into investment business with Daiwa Capital Markets Europe's affiliates outside the United Kingdom, we are obliged to advise that the protection afforded by the United Kingdom regulatory system may not apply; in particular, the benefits of the Financial Services Compensation Scheme may not be available.

Daiwa Capital Markets Europe Limited has in place organisational arrangements for the prevention and avoidance of conflicts of interest. Our conflict management policy is available at http://www.uk.daiwacm.com/about-us/corporate-governance-regulatory . Regulatory disclosures of investment banking relationships are available at https://daiwa3.bluematrix.com/sellside/Disclosures.action.

**Germany**

This document is distributed in Germany by Daiwa Capital Markets Europe Limited, Niederlassung Frankfurt which is regulated by BaFin (Bundesanstalt fuer Finanzdienstleistungsaufsicht) for the conduct of business in Germany.

**Bahrain**

This research material is distributed by Daiwa Capital Markets Europe Limited, Bahrain Branch, regulated by The Central Bank of Bahrain and holds Investment Business Firm – Category 2 license and having its official place of business at the Bahrain World Trade Centre, South Tower, 7th floor, P.O. Box 30069, Manama, Kingdom of Bahrain. Tel No. +973 17534452 Fax No. +973 535113

This material is provided as a reference for making investment decisions and is not intended to be a solicitation for investment. Investment decisions should be made at your own discretion and risk. Accordingly, no representation or warranty, express or implied, is made as to and no reliance should be placed on the fairness, accuracy, completeness or correctness of the information and opinions contained in this document, Content herein is based on information available at the time the research material was prepared and may be amended or otherwise changed in the future without notice. All information is intended for the private use of the person to whom it is provided without any liability whatsoever on the part of Daiwa Capital Markets Europe Limited, Bahrain Branch, any associated company or the employees thereof. If you are in doubt about the suitability of the product or the research material itself, please consult your own financial adviser. Daiwa Capital Markets Europe Limited, Bahrain Branch retains all rights related to the content of this material, which may not be redistributed or otherwise transmitted without prior consent.

**United States**

This report is distributed in the U.S. by Daiwa Capital Markets America Inc. (DCMA). It may not be accurate or complete and should not be relied upon as such. It reflects the preparer's views at the time of its preparation, but may not reflect events occurring after its preparation; nor does it reflect DCMA's views at any time. Neither DCMA nor the preparer has any obligation to update this report or to continue to prepare research on this subject. This report is not an offer to sell or the solicitation of any offer to buy securities. Unless this report says otherwise, any recommendation it makes is risky and appropriate only for sophisticated speculative investors able to incur significant losses. Readers should consult their financial advisors to determine whether any such recommendation is consistent with their own investment objectives, financial situation and needs. This report does not recommend to U.S. recipients the use of any of DCMA's non-U.S. affiliates to effect trades in any security and is not supplied with any understanding that U.S. recipients of this report will direct commission business to such non-U.S. entities. Unless applicable law permits otherwise, non-U.S. customers wishing to effect a transaction in any securities referenced in this material should contact a Daiwa entity in their local jurisdiction. Most countries throughout the world have their own laws regulating the types of securities and other investment products which may be offered to their residents, as well as a process for doing so. As a result, the securities discussed in this report may not be eligible for sales in some jurisdictions. Customers wishing to obtain further information about this report should contact DCMA: Daiwa Capital Markets America Inc., Financial Square, 32 Old Slip, New York, New York 10005 (telephone 212-612-7000).

Ownership of Securities

For "Ownership of Securities" information please visit BlueMatrix disclosure Link at https://daiwa3.bluematrix.com/sellside/Disclosures.action.

Investment Banking Relationships

For "Investment Banking Relationships" please visit BlueMatrix disclosure link at https://daiwa3.bluematrix.com/sellside/Disclosures.action.

DCMA Market Making

For "DCMA Market Making" please visit BlueMatrix disclosure link at https://daiwa3.bluematrix.com/sellside/Disclosures.action.

Research Analyst Conflicts

For updates on "Research Analyst Conflicts" please visit BlueMatrix disclosure link at https://daiwa3.bluematrix.com/sellside/Disclosures.action. The principal research analysts who prepared this report have no financial interest in securities of the issuers covered in the report, are not (nor are any members of their household) an officer, director or advisory board member of the issuer(s) covered in the report, and are not aware of any material relevant conflict of interest involving the analyst or DCMA, and did not receive any compensation from the issuer during the past 12 months except as noted: no exceptions.

Research Analyst Certification

For updates on "Research Analyst Certification" and "Rating System" please visit BlueMatrix disclosure link at https://daiwa3.bluematrix.com/sellside/Disclosures.action. The views about any and all of the subject securities and issuers expressed in this Research Report accurately reflect the personal views of the research analyst(s) primarily responsible for this report (or the views of the firm producing the report if no individual analysts[s] is named on the report); and no part of the compensation of such analyst(s) (or no part of the compensation of the firm if no individual analyst[s)] is named on the report) was, is, or will be directly or indirectly related to the specific recommendations or views contained in this Research Report.

The following explains the rating system in the report as compared to relevant local indices, based on the beliefs of the author of the report.
"1": the security could outperform the local index by more than 15% over the next six months.
"2": the security is expected to outperform the local index by 5-15% over the next six months.
"3": the security is expected to perform within 5% of the local index (better or worse) over the next six months.
"4": the security is expected to underperform the local index by 5-15% over the next six months.
"5": the security could underperform the local index by more than 15% over the next six months.

**Additional information may be available upon request.**

**Japan - additional notification items pursuant to Article 37 of the Financial Instruments and Exchange Law**
(This Notification is only applicable where report is distributed by Daiwa Securities Co. Ltd.)

If you decide to enter into a business arrangement with us based on the information described in materials presented along with this document, we ask you to pay close attention to the following items.

- In addition to the purchase price of a financial instrument, we will collect a trading commission* for each transaction as agreed beforehand with you. Since commissions may be included in the purchase price or may not be charged for certain transactions, we recommend that you confirm the commission for each transaction.
- In some cases, we may also charge a maximum of ¥ 2 million (including tax) per year as a standing proxy fee for our deposit of your securities, if you are a non-resident of Japan.

- For derivative and margin transactions etc., we may require collateral or margin requirements in accordance with an agreement made beforehand with you. Ordinarily in such cases, the amount of the transaction will be in excess of the required collateral or margin requirements.
- There is a risk that you will incur losses on your transactions due to changes in the market price of financial instruments based on fluctuations in interest rates, exchange rates, stock prices, real estate prices, commodity prices, and others. In addition, depending on the content of the transaction, the loss could exceed the amount of the collateral or margin requirements.
- There may be a difference between bid price etc. and ask price etc. of OTC derivatives handled by us.
- Before engaging in any trading, please thoroughly confirm accounting and tax treatments regarding your trading in financial instruments with such experts as certified public accountants. *The amount of the trading commission cannot be stated here in advance because it will be determined between our company and you based on current market conditions and the content of each transaction etc.

When making an actual transaction, please be sure to carefully read the materials presented to you prior to the execution of agreement, and to take responsibility for your own decisions regarding the signing of the agreement with us.

Corporate Name: Daiwa Securities Co. Ltd.
Financial instruments firm: chief of Kanto Local Finance Bureau (Kin-sho) No.108
Memberships: Japan Securities Dealers Association, The Financial Futures Association of Japan
Japan Securities Investment Advisers Association
Type II Financial Instruments Firms Association