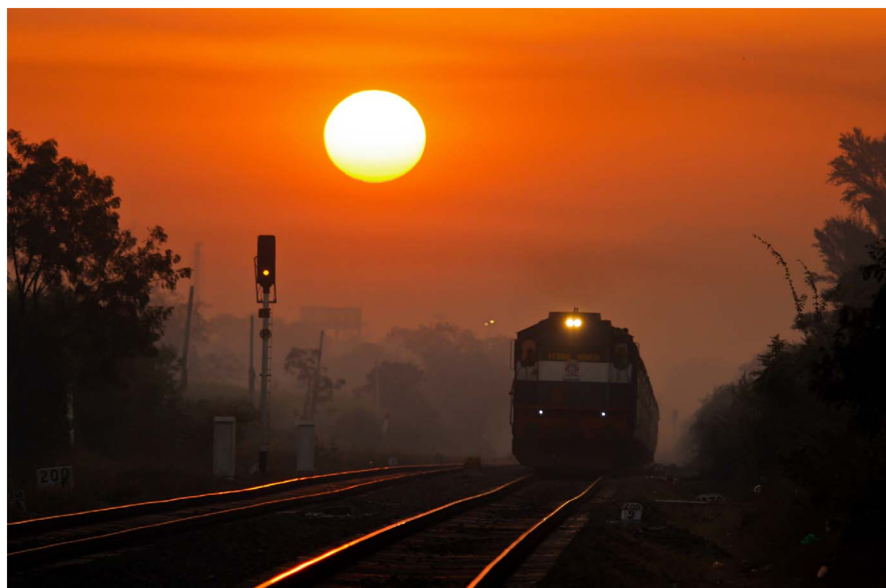
Deutsche Bank
Markets Research

Industry
Indian Railways

Date
26 April 2013

Asia
India

Transportation
Infrastructure



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F.I.T.T. for investors

All green & finally leaving the station: Get ready for the Indian railway boom

Keep buying L&T and UltraTech into the investment cycle

After many years of painful waiting, we expect Indian Railways to finally start placing a series of orders totaling USD40-50bn over the next 18-36 months. This order programme, which has the wider goal of developing 60,000sqkm (2% of the total country) with additional spends of USD100bn, could also serve to kick-start the broader investment cycle with ramifications across India Inc. Investors have been disappointed before but our extensive field checks suggest low risk of push-back ahead of the upcoming elections. We recommend buying L&T and Ultratech into this programme (we lift our L&T TP to top-of-Street) but also like later-cycle beneficiaries NTPC, Coal India, and Adani Ports.

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No longer unloved: Railways now politically/economically desirable

Over the last six decades, Indian Railways has suffered from a lack of political interest and consequent under-investment – for example, over this period annual track additions by Indian Railways have trended below 1% CAGR. This is all set to change, as Indian Railways is key to the development of the dedicated freight corridor (DFC) and Delhi Mumbai Industrial Corridor (DMIC). As such, it has prepared a coordinated programme to build: a) 3,300km of high speed trunk freight routes; b) 5,500km of feeder routes along with PSU/private players; and c) develop seven industrial clusters around 1,500sqkm of western rail corridor. This is the first time we have seen such preparedness at the beginning of a project. Furthermore, these projects have widespread support as they are seen as key to improving user costs and improve overall efficiency.

This time it's real: Preparations already relatively advanced

Any follower of the Indian railway sector is forgiven for immediate cynicism especially as potential impediments include: a) eight state and national elections over the next year; and b) delays in land acquisition or financial closure. But our confidence is underpinned by: (a) there is definite momentum as financial closures already achieved with three tier approvals involving the World Bank, Japanese Int'l Corp Agency, Central and State Governments, and (b) over the last 20 years few projects have been scrapped after such tie-ups; and b) DFC/DMIC have already acquired 98% of land required for projects slated for award over the next 12-18 months. For PPP routes, Indian Railways have 90% land in possession and are now offering returns that can match the best in infra space.

E&C and cement companies are early-cycle beneficiaries

We recommend investors position now ahead of the expected order announcements. We particularly like L&T and UtraTech Cement. For L&T, we now believe that FY14 new orders could be up 25% vs. consensus expectations of a 10-20% decline and lift our target price to INR2,045. For UltraTech, we have raised FY15E profit by 7% and reiterate Buy with INR2,100 target price. Valuations are detailed within this report (see pages 10-13), and key risks to our positive investment thesis include politically induced delays, high competition for orders and higher-than-expected programme costs.

Top picks

Larsen & Toubro Ltd (LART.BO),INR1,541.80	Buy
UltraTech Cement (ULTC.BO),INR1,907.30	Buy
Adani Ports & SEZ Ltd (APSE.NS),INR144.50	Buy

Companies Featured

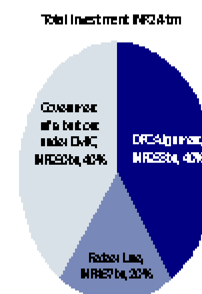
Larsen & Toubro Ltd (LART.BO),INR1,541.80 — Buy

	2012A	2013E	2014E
P/E (x)	19.2	19.7	17.0
EV/EBITDA (x)	16.1	13.6	12.0
Price/book (x)	2.7	2.2	1.9

UltraTech Cement (ULTC.BO),INR1,907.30 — Buy

	2012A	2013E	2014E
P/E (x)	12.8	19.7	16.6
EV/EBITDA (x)	7.9	11.6	9.9
Price/book (x)	3.2	3.4	2.9

Rail capex is not just about DFC



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Valuation matrix

Figure 1: Infrastructure coverage valuation radar

Companies	Year-end	Price	Rating	Market cap	P/E (x)		EV/EBITDA (x)		P/BV (x)		ROE (%)	
		(INR)		(INRm)	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E
Industrials												
ABB	Dec.	509	Sell	107,766	21.8	19.6	13.9	12.4	3.3	2.8	16.0	15.4
BHEL	Mar.	189	Buy	462,596	11.6	13.8	7.2	8.1	1.5	1.4	13.0	10.4
Cummins India	Mar.	515	Buy	142,827	19.3	18.1	13.4	12.3	5.6	5.0	30.6	29.3
Larsen & Toubro	Mar.	1,504	Buy	915,409	16.6	12.9	13.3	11.2	1.9	1.6	12.2	13.6
Siemens India	Sep.	529	Sell	178,442	25.3	20.8	13.3	10.7	3.8	3.3	15.7	17.0
Thermax	Mar.	577	Buy	68,699	18.2	16.0	11.1	9.3	3.3	2.9	19.0	19.0
Cement												
ACC	Dec.	1,215	Hold	226,456	17.8	14.1	10.7	7.9	2.9	2.6	16.6	19.2
Ambuja Cement	Dec.	186	Hold	252,750	18.0	14.3	7.9	6.2	2.9	2.5	17.1	19.1
Grasim Industries	Mar.	2,875	Buy	263,587	9.2	8.1	4.4	3.4	1.2	1.0	13.4	13.2
India Cements	Mar.	82	Buy	25,081	10.3	10.0	4.9	4.5	0.6	0.6	5.8	5.9
Shree Cement	Mar.	4,360	Buy	151,890	14.3	12.5	5.9	4.5	3.2	2.5	25.7	22.7
Ultratech Cement	Mar.	1,864	Buy	510,906	16.2	13.2	10.2	8.2	2.8	2.4	18.9	19.4
Jaiprakash Associates	Mar.	78	Hold	173,643	36.4	25.5	9.6	8.6	1.3	1.3	3.7	5.1
Infrastructure												
Essar Ports	Mar.	86	Buy	36,810	11.5	7.6	7.9	5.9	1.2	1.0	11.1	14.7
Adani Ports	Mar.	147	Buy	295,100	19.4	15.1	13.1	10.6	4.2	3.4	23.8	24.9
IRB Infrastructure Developers	Mar.	118	Buy	39,169	6.9	NA	6.5	NA	1.0	NA	16.1	NA
Utilities												
Adani Power	Mar.	48	Hold	115,834	23.4	12.5	9.9	8.3	2.0	1.8	9.8	15.1
Jaiprakash Power Ventures	Mar.	27	Buy	71,000	11.9	6.4	9.5	6.4	1.2	1.1	10.7	17.9
Jindal Steel & Power	Mar.	329	Buy	307,281	8.8	6.3	7.1	5.0	1.3	1.1	15.4	18.2
JSW Energy	Mar.	66	Buy	107,998	9.2	10.9	6.1	6.3	1.5	1.3	16.8	12.8
NTPC	Mar.	149	Buy	1,229,398	10.1	9.5	9.2	8.7	1.4	1.3	14.4	14.1
NHPC	Mar.	22	Hold	266,926	10.3	9.6	9.7	8.9	0.8	0.8	8.4	8.6
Power Grid	Mar.	110	Hold	461,710	11.7	10.1	8.7	7.7	1.7	1.5	15.9	15.7
Reliance Power	Mar.	75	Sell	209,403	21.5	11.3	16.6	10.4	1.1	1.0	2.3	2.6
Tata Power	Mar.	95	Hold	224,752	18.2	15.7	9.2	7.9	1.6	1.5	9.1	9.9
Coal India	Mar.	312	Hold	1,967,863	13.1	10.2	6.2	4.0	3.5	2.9	28.6	31.2

Source: Bloomberg Finance LP, Deutsche Bank. Prices as on Apr 23, 2013

Executive summary

Our bottom-up analysis suggests USD40-50bn of rail orders over FY14-16E

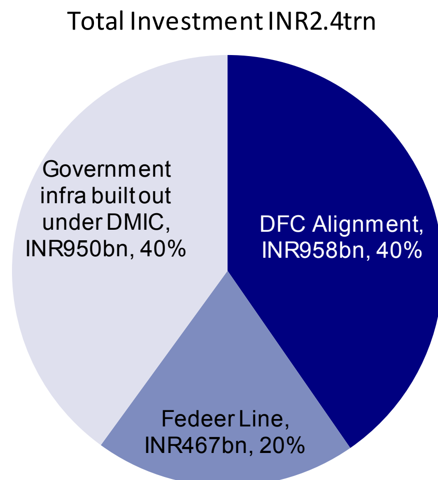
We have carried out detailed estimates of the capex roll-out of India's most ambitious and probably biggest greenfield project, i.e. the Dedicated Freight Corridors.

Our estimates, based on detailed bottom-up projections, suggest that the total spending will be USD40-50bn – just for constructing the core rail infrastructure for dedicated freight corridors, feeder routes (first and last mile connectivity) and conducting some basic work on the Delhi-Mumbai Industrial Corridor. It is important to note however that although there is significant focus on the railway roll-out of the DFC, the programme is not just about building an all-new trunk route to help alleviate serious rail line constraints, but a programme that has the potential to drive and kick-start a sustained investment cycle and give substantial cost benefits to end-users.

The entire programme can be divided into the following components:

- Firstly, the two high-speed trunk routes of 3,300km (one between New Delhi & Mumbai and the other between Ludhiana & Kolkata) at a cost of approx. USD20bn: This programme has already achieved key milestones, including land acquisition (>70% completed), environmental clearances, finalisation of engineering design specifications, financial closure etc. Most of this programme is taking place through the EPC tendering route and will be awarded in early FY14E.
- Secondly, Indian Railways has unveiled 4,500km of first and last mile connectivity projects for the use of beneficiaries to gain access to the DFC. Land for this project is owned by Indian Railways and ordering is set to commence in FY14E. These tracks, like the DFC, are being designed to handle a 25-tonne axle load (20% higher than current) and are also being electrified.
- Thirdly, the projects being undertaken through the public private partnership route are being kick-started by the cash-rich PSUs such as Coal India, NTPC and the top developers for installing new line networks (c1,500km) so as to improve their evacuation/supply of raw material/finished goods. The key point to note in this case is that Indian Railways is promising private/public developers (defined beneficiaries) a solid return (no risk of returns being capped in the future) – a promise last seen in Indian infrastructure when the first of the road, port and power concessions were awarded, thereby making it probably the best concession offered currently. Based on our feedback from field trips, we envisage a good level of interest across the user industries – and the programme is likely to kick-start in FY15E.
- Lastly (and most importantly), progress has been made for building core infrastructure in seven new cities and nine investment zones as a part of the USD100bn Delhi-Mumbai Industrial Corridor programme. The ordering in this programme is likely to begin in FY15, and the key point to note is that the latest annual budget has announced that this is the only new project to receive unequivocal support from the Finance Ministry. Moreover, preparatory work for developing a fresh 1000km of new industrial belt in UP along the eastern corridor is also being announced.

Figure 2: Massive investment to the tune of INR2.4tr is expected



Source: Ministry of Railways, DFCCIL, Deutsche Bank

As can be seen in Figure 3, we expect the entire DFC capex to be completed by FY17, with the bulk of it being undertaken during FY14E and FY15E (when approximately 1,500km of line is expected to be awarded in each of the periods). As far as the feeder routes are concerned, we expect the projects to kick-start in FY14E and be completed over a six-year period in FY19E.

Figure 3: Phasing of capital expenditure

INR bn	Total	FY08	FY09	FY10	FY11	FY12	FY13	FY14e	FY15e	FY16e	FY17e	FY18e	FY19e	Remarks
Total DFC alignment cost	958	0	21	12	18	23	93	245	282	117	146			Assumes EPC ordering is completed by FY16
Feeder routes	565						0	56	81	71	105	117	135	A gradual pick up in ordering seen
Government infra built out under DMIC	950									95	190	285	380	Investments estimated to pick up from FY16 onwards
Total	**2473**	**0**	**21**	**12**	**18**	**23**	**93**	**301**	**363**	**283**	**441**	**402**	**515**	
% of Phasing		*0*	*1*	*0*	*1*	*1*	*4*	*12*	*15*	*11*	*18*	*16*	*21*	

Source: Deutsche Bank estimates

Our confidence on rollout stems from series of irreversible steps

Our field trips to meet government officials, project implementation teams as well as equipment suppliers suggest that consensus worries of fresh awards getting delayed either on account of political uncertainty or funding constraints appear misplaced. What is important to note is that unlike all other infrastructure roll-outs, the build-out by Indian Railways is a well thought-out plan. Key elements that give us confidence are:

1) A constitutional amendment has made land acquisition seamless for special projects such as the DFC.

    a) For projects on dedicated freight corridor that are being awarded in FY14E, 98% of land has been acquired vs. requirement of 80% as per tender notices.

b) The feeder routes/DMIC projects do not qualify as special projects, but for awards that are targeted to be ordered in FY14E, 100% of land parcels are already in possession.

2) Financial closure for the USD20bn DFC project as well as the tie-up of USD4.5bn funds for DMIC were completed in the latest budget.

3) Unlike the historical practice of awarding contracts based on an itemized bill of contracts, the DFC and DMIC projects are based on the FIDIC system of international tendering, making the process largely seamless in nature.

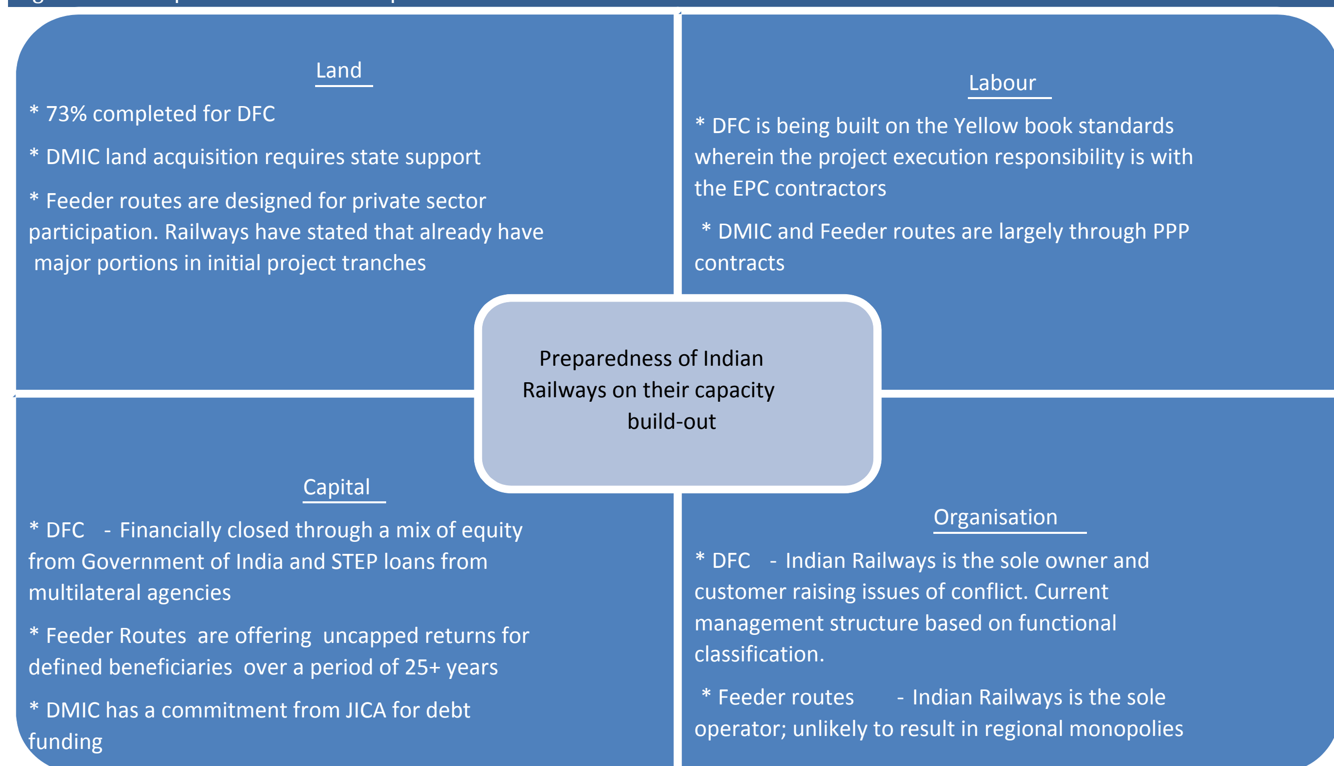
4) Targets for contract awards are well defined and FY14 seems to be an inflection year for new awards.

5) Railway offerings in PPP seem to incorporate past experience from other infrastructure sectors' concessions.

a) In the latest Indian Railways policy, returns are not capped for PPP projects and it is also offering support to help augment land acquisition.

b) In the case of the DMIC project, the core infrastructure (water, power, sewage, roads, etc.) in the industrial zones will be tendered out by the government through EPC, while the development of usage will be tendered out through PPP mode.

Figure 4: Four pillars of factors of production and where we stand



Source: Dedicated freight corridor corporation of India, Delhi Mumbai Industrial Corridor, Ministry of Railways, Deutsche Bank

Where are the risks and how serious are they?

Looking at the build-out of GAIL's gas pipelines in South India (which are now stuck due to a debate between the Tamil Nadu state government and the company), we cannot rule out the possibility of further impediments. At this juncture, the critical red flags appear to be:

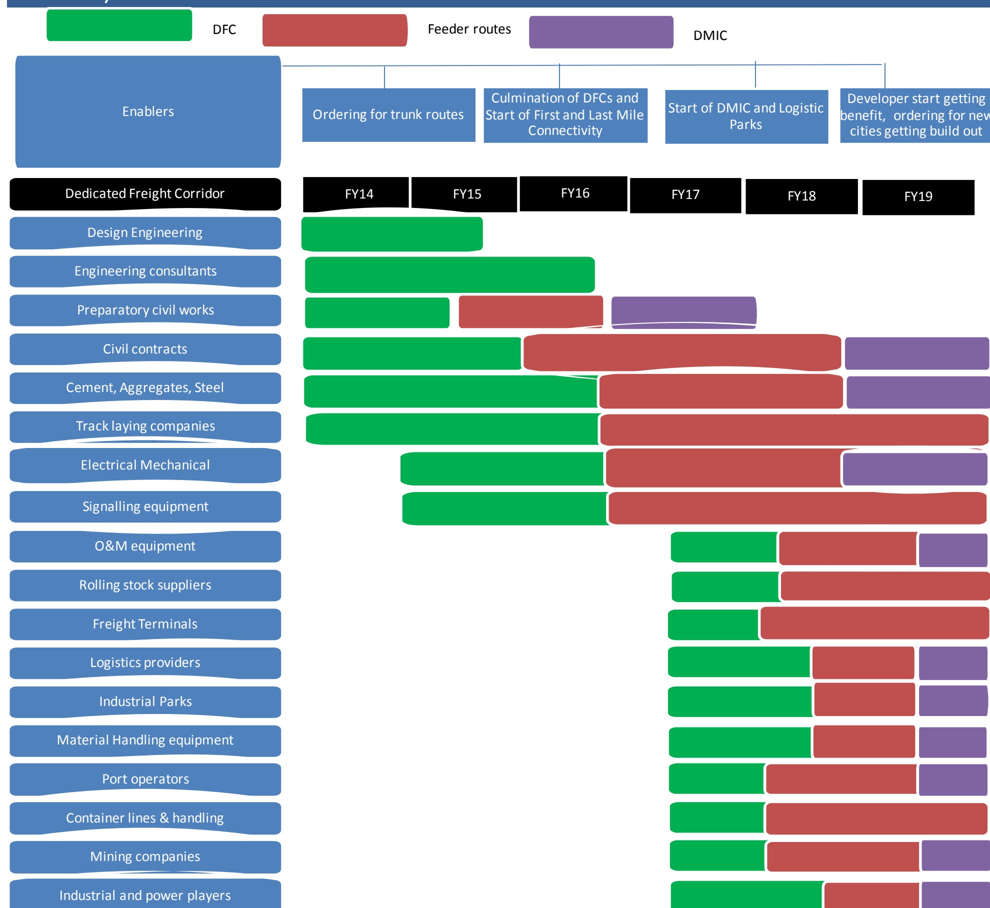
- Relationship between the DFC and Indian Railways. Currently, Indian Railways is the owner as well as the biggest user which raises the possibility of conflicts of interest.
- The corporate structure of the DFC is still a conventional one based on functional classification rather than a programme-based structure, and 85% of its workforce is currently on deputation.
- Any changes in law, such as the upcoming GST bill and its implications, as well as unforeseen things such as law and order, natural calamities, etc.
- Lastly, upcoming elections in eight states and the national elections.

We believe that these risks are standard across all the infrastructure projects and don't warrant any specific project-related risk at this point. The relationship between Indian Railways and the DFC should evolve into a win-win situation, as freight forms the bulk of revenues for Indian Railways and it is in their interest to enhance that in every manner.

Early-cycle beneficiaries are EPC companies/cement companies

As India embarks on the rail capex, the early-cycle beneficiaries are civil contractors such as L&T or raw material providers like cement. Unfortunately, track lines for the western corridor leg are being imported from Japan, and accordingly no listed entity in India will benefit. The mid-cycle beneficiaries include companies such as Siemens India, which can provide signalling, at least in the eastern corridor. The late-cycle beneficiaries include all developers, such as Adani Port, NTPC, Coal India, etc. Figure 5 depicts the beneficiaries of railway capex in the country.

Figure 5: Railway capex, particularly for the DFC, could have manifold impacts on the economy



Source: Deutsche Bank

Our top picks are L&T, APSE, NTPC and ULTC

The stocks to highlight with respect to this trend are summarized below.

L&T – Riding on back of rail theme (Buy with 12m target price of INR2,045/sh)

Analyst: Manish Saxena

Key points of the investment thesis:

- **An early-cycle beneficiary.** We expect 15x growth in new orders for the rail division of L&T in FY14E vs. FY13E to result in new order growth of 25% vs. consensus expectations of a decline in growth. Other swing sectors are expected to be power and roads. Our estimates factor in significant compression in the new order expectations of new buildings and factories (down 40% yoy) and process segments.
- Free cash flow to turnaround on (a) low probability of further worsening of NWC/sales, as L&T's new order pipeline has a far lower cycle time and less risk of cancellation/slowdown, and (b) standalone capex for new facilities has come to an end.
- Our 12-month target price (INR2,045/sh) is based on SOTP value, where we have estimated the long-cycle and short-cycle business at 20x one-year forward earnings. The IT business is valued at 10x FY14E, financials at 1.5x P/B FY14E and L&T IPDL at 1xP/B FY13E. Our top of Street 12m target price implies

exit P/E of 23x, which seems reasonable as estimates in the forecast period are based on the current low utilisations (below 70%) and operating margins at the lower end of the last five-year bands.

- Key downside risks stem from poor order inflows and margin pressure resulting in quarterly earnings disappointment. Based on our earnings model, If revenue from engineering projects is 10% above/below our expectations, standalone EPS could shift by 11% each in FY14E and FY15E.

UltraTech Cement: A repeat of 2004 in H2FY14? (Buy with 12m INR2,100/sh TP)

Analyst: Chockalingam Narayanan

Our Buy recommendation is predicated on:

- **An early-cycle beneficiary.** UltraTech with 43mnt of cement capacity (75% of total sales) catering to regions of the DFC and DMIC is the biggest cement demand beneficiary of the 1100sqkm of area being developed in these regions. Jaiprakash, with 25mnt of cement capacity (70% of its sales), comes a distant second. 5% higher utilisation in the forecast period raises our estimates by 7% in FY14-16E.
- UltraTech has also taken a big lead vs. other cement players in investing in logistics, both for handling as well as shipments. With 35% of the total value of cement being related to logistics, the differential in having a vertical integrated structure on sustainable margins is likely to be quite high. A INR200/t lower freight (vs. current freight cost of INR1,200/t) could raise the profitability gap between UltraTech and large cap peers by a further INR200-450/t (vs. current gap of INR0-350/t)
- We continue to use an average of 18x FY14E P/E and 10x EV/EBITDA to arrive at our 12-month target price given the current profitability levels. The multiples are at a premium to large cap peers ACC and Ambuja, largely on the back of the company emerging as the industry leader in terms of both capacity and profitability. This is in line with previous cycles, when industry leaders typically commanded a premium to peers. At our target price, the implied EV/t is USD170/t, a 10% premium to the replacement cost of the new units being added at USD155/t.
- The key downside risk to our call is widespread price disruptions following weak demand. A 1% rise in cement prices from our estimates could increase/decrease our earnings by 3.9% in FY14E and vice versa.

Adani Ports & SEZ – Ideally placed to capture incremental traffic (Buy with INR172 TP)

Analyst: - Chockalingam Narayanan

We remain positive on Adani Ports, given:

- **A late-cycle beneficiary through better utilisation of port capacity.** Firstly, three of APSEZ's port facilities, namely Mundra (200mnT capacity), Dahej and Hazira (total of 55mnT) are currently working at an average 43% utilisation and are ideally placed to capture the incremental traffic originating from the hinterland to exports and vice versa. Secondly, the promoter company Adani Enterprises (India's largest coal importer) would get access to a new rail network to ship in a greater amount of commodity imports, especially coal. Lastly, shipping liners would find the faster turnaround of railways to enable them to plan higher container imports; and Adani Port with its high unutilised capacity could well become the first and closest port of call for a large portion of the northern Indian hinterland markets.
- Adani Port would also benefit from minority investments in rail SPVs. It currently owns 20% in Kutch Railways and 12% in Bhaurch Dahej lines. These networks offer good returns under rail PPP and we would not rule out the

possibility of Adani Port investing in more such networks – as the current returns offered by Indian Railways are quite attractive.

- We estimate our 12-month target price through the SOTP of all port concessions, wherein the concession value of each port is estimated using NPV with zero terminal value. At our target price, the stock would trade at 4.9x FY14E P/B for an RoE of 24-25% in FY14E and FY15E. This seems reasonable to us considering the improving RoE profile being achieved when the port utilisation levels are at 43-49% over the forecast period and the historical range at which the stock has traded. A 5% higher utilisation over FY17E onward raises our target price by 12%.
- Key downside risks are (1) delay/pushback in the Abbot Point assets being transferred to the Adani promoter family, resulting in debt remaining elevated in the forecast period and multiples drifting down, (2) consensus downgrades due to low economic activity, and (3) acquisitions at a significant premium to replacement.

NTPC: Back to an era of fuel sufficiency? (Buy with a 12M target price of INR180/sh)

Analyst: - Abhishek Puri

Our summary view on NTPC is:

- **A late-cycle beneficiary through better fuel availability.** NTPC stock has underperformed the Sensex by ~20% over the past 12 months, primarily due to 15-16 quarters of earnings disappointment, nil generation growth and a decline in the availability of plant (PAF) – leading to a decline in ROEs and limited EPS growth. While in the near to medium term, improving coal availability from higher coal production would offer respite, building up the freight corridor and PPP lines of Coal India and NTPC could alter the availability paradigm back to 92% levels vs. our long-term forecast of 85%. Our DCF value for this change consequently rises by 7%.
- Over the last few years, management's focus has shifted from new capacity to fuel sourcing. The rise in fuel availability through better rail corridors would allow NTPC to refocus its growth into the core power business. Our estimates factor in book growth of 7%. 2% higher book growth from FY17E raises our DCF value by 3%.
- Our 12-month target price is INR180/sh. We have used the average of a three-stage DCF methodology and a target exit P/BV multiple to value the regulated earnings business model of NTPC. Valuations are attractive at 1.4x P/B and 10x PE for a utility model – at a 30% discount to historical averages and ~15-20% discount to comparable regional peers like CLP and Kepco.
- Key downside risks include delays in commissioning, cost overruns in new projects, risk to ROEs on lower coal availability and regulatory tightening, if any.

Coal India: Coping with the absence of a robust rail network (Hold with INR345 TP)

Analyst: Manish Saxena

Our neutral view on Coal India is driven by the following factors:

- **A late-cycle beneficiary on higher sustainable despatch growth:** Dedicated Freight Corridors would give a lot of despatch capacity to Coal India, especially in North India, which forms 40% of current despatches at leads greater than 1,000km.
- Secondly, Coal India's investments in three feeder routes would raise the annual mining capacity by 290mnt (60% of current capacity) over the next five years. According to our life-of-mine DCF, the Coal India value rises by 5%, even if we assume 50mnt of additional production from FY18E onwards.

- Our INR345/sh 12m target price is based on a combination of life-of-mine DCF and P/E multiple (14x 1-year forward P/E for regulated business and 7x 1-year forward P/E for spot sales). Our reverse DCF suggests that the current price factors in -1% price growth for 3% volume growth, which looks reasonable. Having said that, the upcoming offer for sale could result in price volatility. Accordingly, we maintain Hold.
- Upside risk is contingent on the company getting the governing board to revise the regulated prices in line with the cost push. A 1% increase in the regulated sales price enhances earnings by 2%. The key downside risk is the potential de-rating of the multiple with the passing of the proposed Coal Regulator Bill, if investors perceive that the pricing autonomy of Coal India will be taken over by the new regulator. Our sensitivity analysis shows that if the sales volume for FY13E is 2% lower than expected, then FY13E EPS could fall by 4%. Diversion of e-auction coal to the power sector with a regulated price increase of less than cINR150/t could have a negative impact on earnings.

Shree Cement : In the right place at the right time - again (Buy with INR5,100 TP)

We like Shree on the following factors

Analyst: Chockalingam Narayanan

- Shree Cement (SHCM), among the mid-cap cement companies, is the biggest beneficiary of the upcoming railway capex for the following three reasons: (a) its upcoming 5mnt expansion in Northern India along the upcoming rail network is timely; (b) its entire operations and key raw material suppliers are also along the upcoming rail network, which will help reduce its logistics and input costs, and (c) its under-utilised merchant power capacity could start to derive operating leverage benefits.
- With FCF yields of over 8%, despite sustainable capex, valuations are attractive at an EV/t of USD108 (c.30% below replacement). We value Shree at an exit EV/EBITDA multiple of 7.15x (25% discount to large cap peers) to get our 12-month target price of INR5,100/sh.
- An adverse ruling in the competition case and lower-than-expected price rises are the key risks

Changes in ratings and target prices

Key changes are summarized below.

Figure 6: Changes in ratings and target prices

	Rating		Target Price (INR/sh)		
Stock	Old	Revised	Old	Revised	% Change
L&T	Buy	Buy	1,925	2,045	6

Source: Deutsche Bank

Figure 7: Revised estimates and changes

	Sales (INR m)			EBITDA (INR m)			Net Income (INR m)		
	FY13E	FY14E	FY15E	FY13E	FY14E	FY15E	FY13E	FY14E	FY15E
L&T	786,161	896,352	1,059,275	96,806	111,005	136,105	47,744	55,202	70,972
% Change	*0*	*-3*	*3*	*-1*	*-9*	*0*	*-1*	*-7*	*1*
Ultratech	200,179	224,282	263,574	46,755	54,788	66,572	26,554	31,560	38,613
% Change	*0*	*0*	*4*	*0*	*0*	*5*	*0*	*0*	*7*
Coal India	684,097	711,159	810,605	181,095	178,142	227,713	154,081	150,679	192,759
% Change	*0*	*0*	*1*	*0*	*0*	*2*	*0*	*0*	*1*

Source: Deutsche Bank estimates

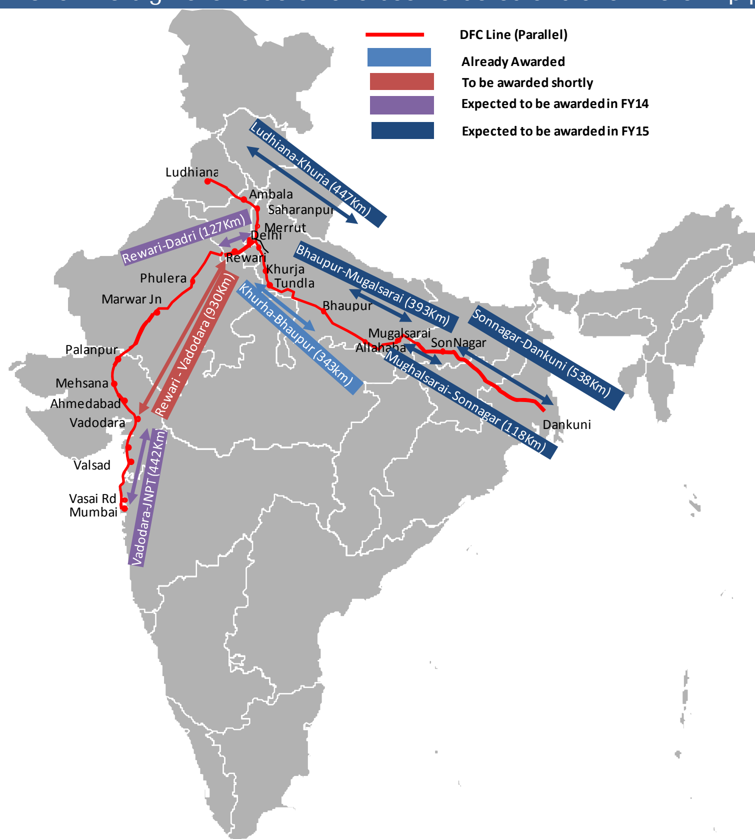
The start of India's rail capex boom

Firstly, EPC award for main DFC lines is at advanced stages

The Government of India has set quarterly targets for the awarding of the trunk routes. While the first of the parcels of the civil contracts between Khurja and Kanpur has been awarded for build-out, the next series of contracts, totalling 1,442km of civil contracts on the western corridor as well as electrification contracts for c1,000km, are slated to be awarded this year. For most of the civil contracts, the tenders have already been invited and the process should kick off in this financial year.

As per Schedule, 930km Rewari-Vadodara civil contract is slated to be awarded by June 2013, followed by electrification order for ~ 1,000km by September 2013

Figure 8: First of the big ticket orders have been ordered and a lot more in pipeline



Source: DFCCIL, Deutsche Bank

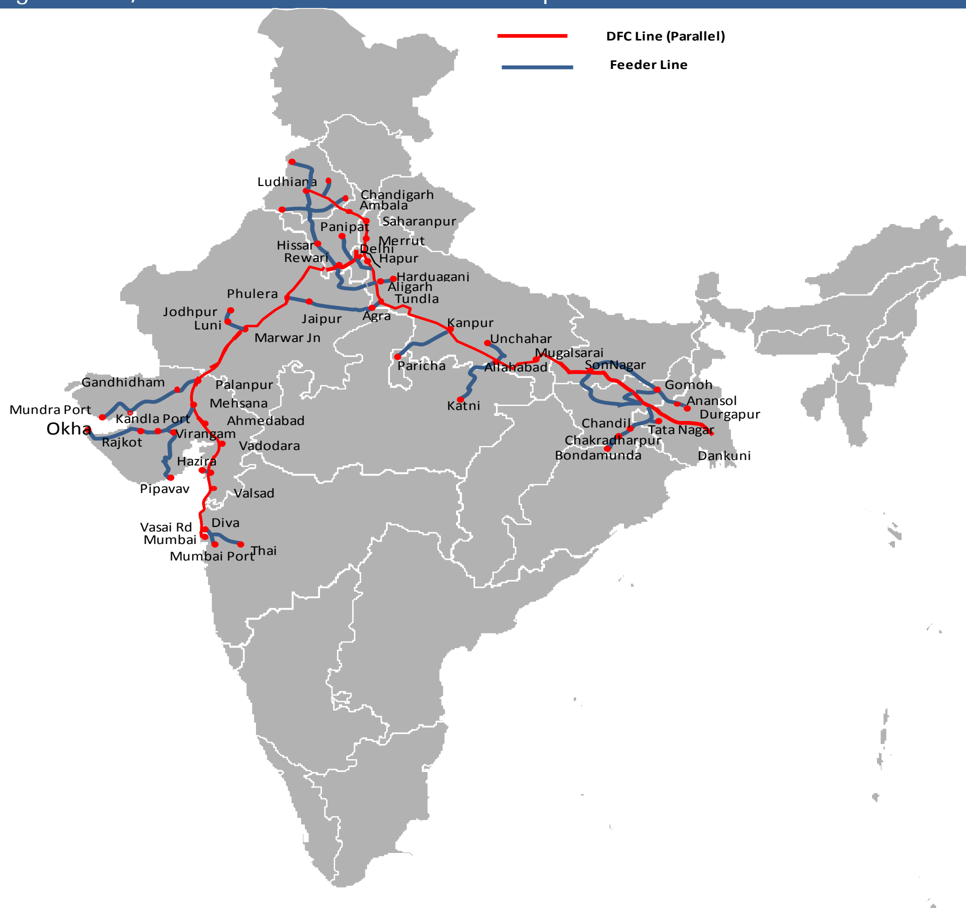
Secondly, preparatory work for feeder routes is completed; ordering is the next step

Indian Railways has drawn up an additional programme of connecting the trunk routes to various beneficiaries through feeder routes from the trunk route on the DFC. Work on two type of feeder routes is being undertaken.

1) Firstly, the construction and upgrade of many existing feeder lines to ensure they can carry 25-tonne axle loads (vs. 20-tonne axle loads being carried today): Close to

2,587km of feeder routes will be developed on the eastern corridor and an additional 2,082km will be constructed on the western corridor. These upgrades will form part of the track renewal works of Indian Railways. Over the next four years, the capex awards in the first and last mile projects will total cINR300bn. Figure 9 shows the connectivity of these feeder routes.

Figure 9: ~4,500km of feeder routes to be developed



Source: DFFCIL, Ministry of Railways, Deutsche Bank

2) Secondly, Indian Railways and the ministries of coal, power and shipping and private sector players have already sanctioned 17 projects that would ensure first and last mile connectivity on a greenfield basis for a wide spectrum of projects in varied sectors. Figure 10 lists some of the projects identified for last mile connectivity projects under PPP.

The show case project, i.e. Dhamra rail of L&T and Kutch railways are completed and are making good returns

Figure 10: Last mile connectivity projects under PPP route

<table>
<tr><th>Port connectivity projects</th><th>Location</th><th>Length (km)</th><th>INR bn</th><th>Remarks</th></tr>
<tr><td>Dhamra</td><td>Odisha</td><td>64</td><td>7.6</td><td>In-principle approvals from railways.</td></tr>
<tr><td>Astranga</td><td>Odisha</td><td>80</td><td>7.0</td><td>In-principle approvals from railways.</td></tr>
<tr><td>Dighi</td><td>Maharashtra</td><td>50</td><td>3.6</td><td>In-principle approvals from railways.</td></tr>
<tr><td>Palanpur-Samakhiali</td><td>Gujarat</td><td></td><td>12.7</td><td>In-principle approvals from railways.</td></tr>
<tr><td>Total</td><td></td><td></td><td>30.9</td><td>Railway Ministry expects INR38bn investment under PPP for 12th plan</td></tr>
<tr><td colspan="5">Additional port connectivity projects under consideration</td></tr>
<tr><td>Rewas</td><td>Maharashtra</td><td>24</td><td rowspan="2">9.0</td><td>Proposals being received by the ministry.</td></tr>
<tr><td>Jaigad</td><td>Maharashtra</td><td>35</td><td>Proposals being received by the ministry.</td></tr>
<tr><td>Hazira Port</td><td>Gujarat</td><td>47</td><td>-</td><td>Expected to send proposal for rail line connectivity.</td></tr>
<tr><td>Karaikal Port</td><td>Puducherry</td><td></td><td>4.3</td><td></td></tr>
<tr><td>Madras Cement and two other cement players</td><td>Andhra Pradesh</td><td></td><td>1.3</td><td></td></tr>
<tr><td colspan="5">Coal connectivity projects</td></tr>
<tr><td>Constructing a private line at the Parsa-Kanta coal mines</td><td>Chhattisgarh</td><td></td><td>9.0</td><td>Proposals under consideration by the govt</td></tr>
<tr><td>Connecting the Gare Palma coal mines with KSK's power plant.</td><td>Chhattisgarh</td><td></td><td>8.0</td><td>Project by KSK Mahanadi</td></tr>
<tr><td>Tori Shivpur–Kathotia</td><td>Jharkhand</td><td>93</td><td rowspan="3">40.0</td><td rowspan="3">Coal India would entirely fund two of the three projects while the remaining project will be shared by the Indian Railways, Chhattisgarh government and CIL.</td></tr>
<tr><td>Barpali-Jharsugda-Gopalpur-Manoharpur</td><td>Orissa</td><td>59</td></tr>
<tr><td>Bhupdeopur-Korba-Gevraroad-Pendraroad</td><td>Chhattisgarh</td><td>180</td></tr>
<tr><td>Total</td><td></td><td></td><td>57.0</td><td>Ministry expects to raise INR40bn under PPP for 12th plan</td></tr>
<tr><td colspan="5">Iron ore Connectivity projects</td></tr>
<tr><td>Kirandul mines</td><td>Karnataka</td><td></td><td>9.0</td><td>To be funded by NMDC. Project approved under the MoU by NMDC and Railways</td></tr>
</table>

Source: Ministry of Railways, Ministry of Shipping, Ministry of Mines, Ministry of Coal, Deutsche Bank

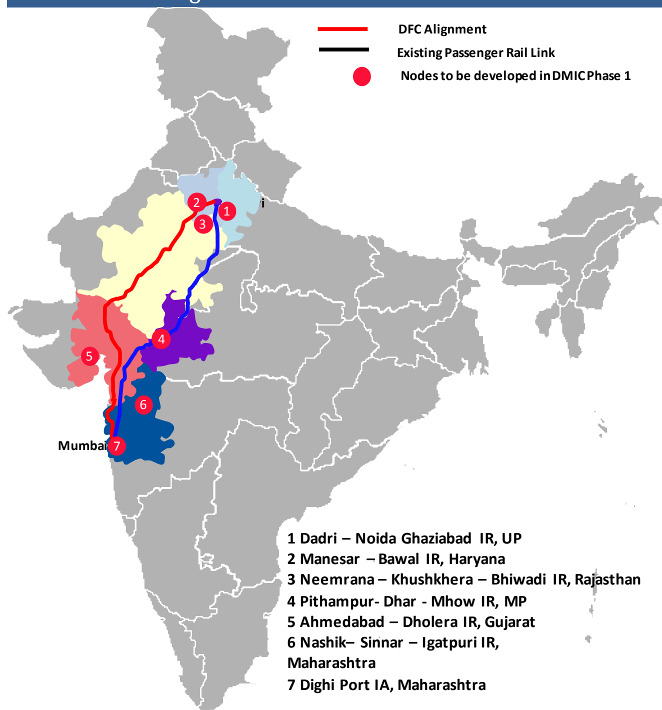
DMIC is now working on detailed project report; ordering to start in FY15E

On the back of the fast track rail corridor and the feeder routes, the Government of India recently announced that the Delhi-Mumbai Industrial Corridor, which will probably be the largest set of urban infrastructure projects, may leverage the economic benefits arising from the western dedicated freight corridor. Under the DMIC project, the focus is primarily on ensuring high impact developments within a radius of 150km on either side of the alignment of the DFC. The key focus areas of DMIC are:

Develop seven new cities with world class infrastructure. The core infrastructure is to be built by DMIC, while the rest of the work is to be bid out through the PPP route. These new cities should be able to compete with the best international manufacturing and investment destinations.

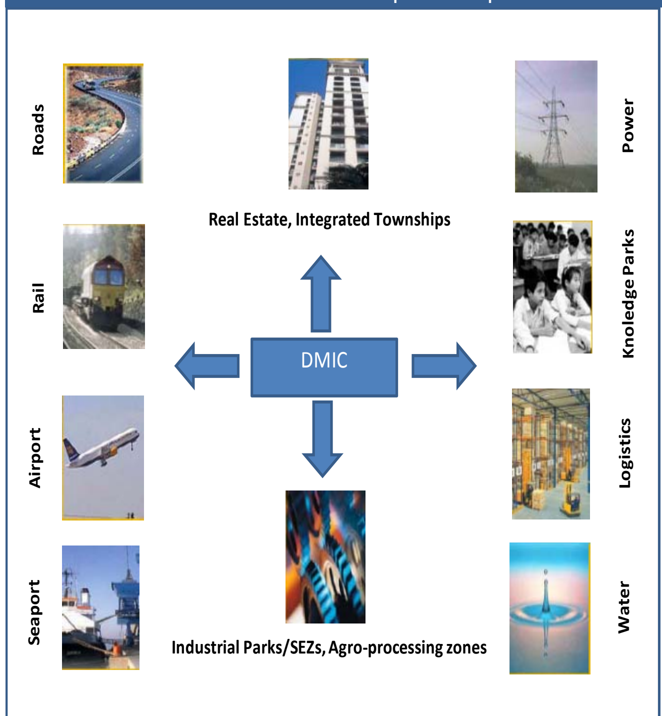
Figure 12 depicts the areas targeted to be developed in DMIC and the components of DMIC.

Figure 11: Developments within a band of 150km on either side of alignment of DFC



Source: DMIC, Deutsche Bank

Figure 12: Components of DMIC span across various infrastructure sectors and township development



Source: DMIC, Deutsche Bank

Under the first phase of the DMIC project, the government has laid out the development of seven nodes comprising one investment region in each of the six states and an industrial area in Maharashtra. The development plans also include integrated industrial townships, mega industrial parks, knowledge cities, expressways and highways, intermodal logistics parks, water supply and sanitation projects, power projects (conventional and renewable energy options), airports, mass transport facilities, high speed railways, ports, and smart cities, with an estimated investment of cUSD100bn. A brief snapshot of various projects to be undertaken under DMIC is presented in Appendix C.

Project Parceling risk analysis is complete; DPR reports for early bid projects are targeted to be ready by September to March 2014. Awards to begin from FY15

Figure 13: Nodes to be developed under phase I of DMIC project

Nodes	Consultants	Area (Sq Km)
Dadri-Noida-Ghaziabad Investment Region, Uttar Pradesh	Consortium led by M/s Halcrow, UK	200
Manesar-Bawal Investment Region, Haryana	Consortium led by M/s Jurong, Singapore	354
Khushkhera-Bhiwadi-Neemrana Investment Region, Rajasthan	Consortium led by M/s Kuiper Compagnons, Holland	160
Pithampur-Dhar-Mhow Investment Region, Madhya Pradesh	Consortium led by M/s Lea Associates South Asia	372
Ahmedabad-Dholera Investment Region, Gujarat	Consortium led by M/s Halcrow, UK	903
Shendra-Bidkin Investment Region, Maharashtra (Mega Additionally EBP of Industrial Park, Shendra of 84sqkm)	M/s AECOM, Hong Kong	84
Dighi Port Industrial Area, Maharashtra	M/s AECOM, Hong Kong	253

Source: DMIDC, Deutsche Bank

DFC as the spark to drive sustained investment in India

Our detailed channel checks based on preliminary work to be done on these three investments covers ~0.09% of land of India. But the states through which the DFC runs contribute to c60% of India's GDP.

Figure 14: Potential areas to be developed

	Area (sq km)	Remarks
DFC	107	Mainly for route development
DMIC	2750	Areas for seven early bird projects meant for development of tertiary infrastructure such as industrial parks, knowledge cities, townships etc
Feeder routes	150	Mainly for route development
Total	**3007**	
As a %age of Indian's total area	0.09	
As a %age of Eastern and Western DFC states	0.20	59% of India's FY11 GDP contribution from DFC states

Source: Deutsche Bank' DFC states are Delhi, Uttar Pradesh, Haryana, Rajasthan, Gujarat, Maharashtra, Bihar, West Bengal, Punjab, MP

Figure 15 gives a brief snapshot of the basic infrastructure works that could be ordered by the DFC/DMIC

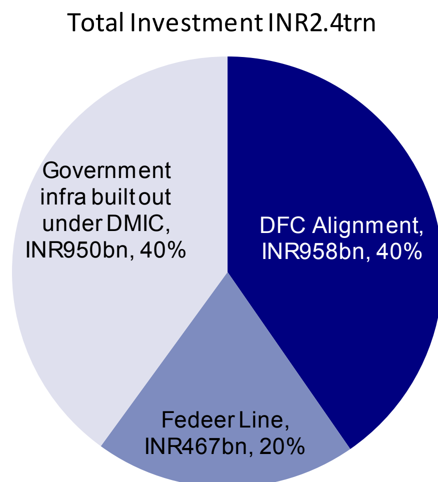
Figure 15: Infrastructure volumes that could be built out

Basic infrastructure to be developed	Units	Volume of order	Time line for order	Remarks
Under DFC				
Track works	Km	3300	FY14-15	
Electrification work	Km	1400	FY14-15	opportunities for players like Siemens and Alstom
Construction of bridges	No.	366	FY14-15	Eastern corridor 104 bridges and western corridor 262 bridges
Construction of flyovers	No.	54	FY14-15	Eastern corridor 21 flyovers and Western corridor 33 flyovers
Construction of road over bridges (ROBs) and road under bridges (RUBs)	No	1262	FY14-15	Eastern corridor -368 ROB & 189 RUBs; Western corridor – 505 ROBs & 200 RUBs
Reconstruction/ Lengthening of existing ROBs and RUBs	No	34	FY14-15	Western corridor – reconstruction of 24 existing ROBs and lengthening 10 existing RUBs
Signal and Telecom works	Km	3300	FY14-15	
Under Feeder Routes(rail)				
Upgradation/new routes to fit for 25 tonne axle load	Km	4500	FY15-19e	Beneficiaries would be groups such as Adani JSPL, Coal India
Electrification of lines	Km	2082	FY15-19e	Companies such L&T, KEC(unrated) etc do these work
Signal and Telecom works		4500	FY15-19e	L&T, Siemens India
Under DMIC				
Manufacturing areas/ SEZs/ Processing industries	Sq km	1200		Creation of high quality industrial infrastructure region over an area of about 2000sq km with over 60% of land use under manufacturing areas/ SEZs/ Processing industries
Road linkages	km	7000		Construction/augmentation
Ports				
Greenfield Projects	*No*	*3*		*Greenfield Port Projects at Dholera and Maroli in Gujarat, one Greenfield Port Project at Dighi in Maharashtra*
Augmentation	*No*	*2*		*Dahej and Hazira Ports in Gujarat;*
Airports				
Augmentation	*No*	*7*		
New	*No*	*2*		*Construction of air strips*
Power Gen and T&D	MW	10,000		Ensuring reliable power supply in DMIC region with provision for at least 10,000MW of power
Logistic	Sq km	1700		Construction, operation/ maintenance of logistics infra with multi-modal integrated transport infrastructure

Source: Ministry of Railways, DFCCIL, DMIC, Deutsche Bank

We estimate that the total investment potential in the connectivity programmes would be to the tune of INR2.4tr (cUSD44bn) for creating just this infrastructure. Only 40% of this would be for building the trunk routes.

Figure 16: Massive investment to the tune of INR2.4tr is expected



Source: Ministry of Railways, DFCCIL, Deutsche Bank

The phasing details of the capex programme with regard to connectivity projects are estimated in Figure 17. We believe that the entire capex for the DFC will be completed by FY17, with the bulk of it being done during FY14E and FY15E, when approx. 1,500km of line is expected to be awarded in each of the periods.

Figure 17: Phasing of capital expenditure

INR bn	Total	FY08	FY09	FY10	FY11	FY12	FY13	FY14e	FY15e	FY16e	FY17e	FY18e	FY19e	Remarks
Total DFC alignment cost	958	0	21	12	18	23	93	245	282	117	146			Assumes EPC ordering is completed by FY16
Feeder routes	565						0	56	81	71	105	117	135	A gradual pick up in ordering seen
Government infra built out under DMIC	950									95	190	285	380	Investments estimated to pick up from FY16 onwards
Total	**2473**	**0**	**21**	**12**	**18**	**23**	**93**	**301**	**363**	**283**	**441**	**402**	**515**	
% of Phasing		*0*	*1*	*0*	*1*	*1*	*4*	*12*	*15*	*11*	*18*	*16*	*21*	

Source: Deutsche Bank estimates

Why do we believe in this rollout this time around?

Reason 1: Constitutional amendment has made land acquisition seamless

What has been missed by investors (and us so far) is the progress made on the land acquisition front. While it's a well known fact that land acquisition is the single biggest hurdle for initiating projects in India, the Indian government, first through an ordinance and then followed by a special legislation, passed the Railway Amendment Act of 2008 to acquire land in a seamless manner. As highlighted in Figure 18, this act enabled the government to offer far superior compensation (as compared to those offered under the Land Acquisition Act of 1894).

Figure 18: Better compensation than Land Acquisition Act of 1894

	Land Acquisition Act of 1894	Railway Amendment Act 2008
Calculation of compensation	Compensation based on market rates, intended use of the land, standing crops, and the higher average of either neighboring property, land purchased for the project, or minimum value from sale deeds	Compensation based on market rates, intended use of the land, standing crops, and the higher average of either neighboring property, or minimum value from sale deeds
Compensation in the case of compulsory acquisition	In addition to the market value of the land, the Court is authorised to award a sum of 30% on such market value	In addition to the market value of the land, the Court is authorised to award a sum of 60% on such market value
Sharing of consideration on transfer of land acquired under Act	Not defined	80% of the difference between the acquisition cost and the consideration received from the sale will be shared with the land owners
Percentage of Sale Deeds used to compute market value	Not defined	Recently concluded sale prices for similar land, ascertained from not less than 50%" of the transactions, where higher price has been paid
Unused land	Not defined	No specific limitations stated; land unused for 5 years shall return to the central government
Verification of land	Collector is responsible for survey and standardisation of land and property values	Competent authority appointed by the Railways is responsible for survey and standardisation of land and property values

Source: Ministry of Railways, Department of Land Resources, Deutsche Bank

The important provisions of the Railway Amendment Act of 2008 are:

- **Acquisition power of the central government**: The central government may declare its intention to acquire any land if it is satisfied that the land is required for implementing a railway project.
- **Power to enter for survey**: The competent authority may authorise any person to: a) make any inspection, survey, measurement, valuation or enquiry; b) take levels; c) dig or bore into sub-soil; and d) set out boundaries, etc.
- **Evaluation of damages during survey**: Compensation will be given for land which is damaged during survey, particularly for land which is outside the purview of the acquisition proceedings within six months from the completion of the said works.
- **Hearing of objections**: In the case of an objection to the land being acquired, the person may within a period of 30 days from the date of publication of the notification raise objections to the competent authority. The decision of the competent authority will be final.
- **Declaration of acquisition**: Following the above stages, the central government will declare that the land should be acquired and the land will vest absolutely in government, free from all encumbrances. It is important to note that the

declaration by the central government will not be challenged in any court or by any other authority.

- **Compensation**: The compensation amount will be determined by the competent authority. It will be based on *the market value of the land.* The compensation will also include, amongst others, a) expenses required in case the land owner is compelled to change his residence or place of business as a result of the acquisition, and b) damages, if any. What is noteworthy is that *the competent authority or the arbitrator is authorised to award, in addition to the market value, a sum of 60% of the market value, in compulsory nature of the acquisition*.
- **Land Acquisition Act of 1894**: The Land Acquisition Act of 1894 will not be applicable under the Railways Amendment Act of 2008.
- **Sharing with landowners the difference in the price of a land when transferred for a higher consideration**: In cases where the land acquired under the Act is transferred to any person, *80% of the difference between the acquisition cost and the consideration received* from the sale will be shared with the land owners from whom the land was acquired.
- **Competent authority to have certain powers of civil court**: The competent authority will have the power of the civil courts in respect of a) enforcing the attendance of any person, b) reception of evidence on affidavits, c) requisitioning any public record from any court, and d) issuing commission for examination of witnesses.

Reason 2: 73% of land has been acquired; remainder to be done by end of year

According to press statements by the ministry, 86% of total land has been acquired, and for contracts awarded this year, 98% of the land has been acquired

As per Economic Survey, 7768 hectares (73%) of the 10,703 hectares of total land required for the corridors has been acquired, and the entire land acquisition process is expected to be completed by the end of 2013. Recent press statements have suggested 86% of the total land has been acquired, and for contracts that will be awarded this year, 98% of the land has been acquired A brief snapshot of the same till March 2012 is given in Figure 19.

Figure 19: Land acquisition progress is 73% completed

	Total Scope		Section/area notified under 20A			Section/area notified under 20E			Section/area notified under 20F		
Project Section	**Length (km)**	**Area (Ha.)**	**Length (km)**	**Area (Ha.)**	**% of total**	**Length (km)**	**Area (Ha.)**	**% of total**	**Length (km)**	**Area (Ha.)**	**% of total**
Khurja-Bhaupur (APL 1)	343	1,320	343	1,320	100%	343	1,320	100%	314	1,172	89%
Bahupur – Mughalsarai (APL 2)	393	1,400	393	1,400	100%	393	1,400	100%	363	1,083	77%
Ludhiana – Khurja (APL 3)	447	802	447	802	100%	447	802	100%	317	520	65%
Mughalsarai – Sonnagar (Railway Funded)	118	319	118	319	100%	106	303	95%	74	186	58%
Sonnagar – Dhankuni	538	1,002	123	180	18%	0	0	0%	0	0	0%
Total Eastern Dedicated freight corridor	**1,839**	**4,843**	**1,424**	**4,021**	**83%**	**1,289**	**3,825**	**79%**	**1,068**	**2,961**	**61%**
Rewari – Vadodara – Phase 1	930	3,608	930	3,608	100%	826	3,205	89%	776	2,998	83%
Vadodara JNPT & Rewari – Dadri – Phase 2	569	2,252	569	2,252	100%	464	1,718	76%	143	782	35%
Total Western Dedicated freight corridor	1,499	5,860	1,499	5,860	100%	1,290	4,923	84%	919	3,780	65%
Total Eastern and Western DFC	**3,338**	**10,703**	**2,923**	**9,881**	**92%**	**2,579**	**8,748**	**82%**	**1,987**	**6,741**	**63%**

Source: Deutsche Bank, Note: The data is as of March 2012

Reason 3: FY14 marks the critical year for funds tie-up

The DFC project (eastern and western) is expected to involve a project cost of over INR950bn and to be funded by a combination of: (a) debt from bilateral/multilateral agencies, (b) equity from Ministry of Railways, and (c) public-private partnership.

The funding for the DFC is structured so that the entire equity will be funded by Indian Railways from the budgetary support of the government to Indian Railways. The debt funds, to the tune of 73%, will be financed by JICA (Japanese International Corporation Agency) for the western corridor and World Bank for a large portion of the eastern corridor.

In addition, the government from time to time has ensured that adequate equity funding is made available for the corridor project. As late as in the budget speech of 2013-14, the Finance Minister indicated, "the Delhi Mumbai Industrial Corridor (DMIC) project has made rapid progress….In order to dispel any doubt about funding, I wish to make it clear that we shall provide, if required, additional funds during 2013-14 within the share of the Government of India in the overall outlay for the project". To ensure that the committed liabilities for debt servicing of JICA and World Bank loans are taken for the DFC projects, the government has also decided to create a corpus by setting up a debt service fund. In FY14, the government announced an allocation of INR41.63bn to the fund for repaying the loan taken from these agencies.

Figure 20: JICA to fund western corridor; Indian Railways, World Bank, PPP to fund eastern corridor

Corridor	Length (km)	Targeted completion	Remarks
western corridor	**1483**		**40-year Special Terms of Economic Partnership loan of JPY 677bn signed with Japan Government**
Phase I Rewari – Vadodara	920	2016	First tranche of JPY 90bn signed with JICA
Phase II Vadodara – JNPT	430	2017	First tranche of JPY 266bn under negotiation with JICA
Phase III Rewari – Dadri	140	2017	
Eastern Corridor	**1839**		
Phase I-APL1 Khurja – Kanpur	343	2016	First tranche of USD975m already signed with IBRD
Phase II-APL2 Kanpur – Mughalsarai	390	2016	To be funded by World Bank
Phase III-APL3 Khurja – Ludhiana	397	2016	To be funded by World Bank
Phase IV Dankuni – Sonnagar	550	2016	To be finance through PPP Mode
Phase IA Sonnagar – Mugal Sarai	125	2016	To be funded by Ministry of Railways
Grand total	**3322**		**INR450bn on 2009 costs. Likely completion cost is INR950bn**

Source: DFCCIL, Deutsche Bank

Reason 4: Contract awarding is well defined by international standards, and an itemized contract method will not be followed henceforth

DFCC has decided to go ahead with the yellow book – which is basically for lump-sum contracts on milestones with the plant and design-build undertaken by the contractors (unlike the scheduled itemized contracts followed in most government projects)

From the contract award point of view, the engineering standards and designs have, encouragingly, already been finalised. The contracts award process is as per the FIDIC standards – the only applicable international standard for awarding contracts. Of the four strategies (red book, green book, silver book and yellow book) DFCC has decided to go ahead with the yellow book – which is basically for lump-sum contracts on milestones with the plant and design-build undertaken by the contractors (unlike the scheduled itemized contracts followed in most government projects).

The engineering consultants have also been appointed (Nippon Koei Co, Tokyo in the case of the western corridor) as well as the people who will be verifying the work done by the contractors. Other facets, such as the key packages in each of the corridors, including civil, building and track works (three packages), construction of special steel bridges (one package), and signal and telecom works (one package), have also been identified.

In the case of the western corridor, the STEP component is 30% of the overall work, which will be awarded to the Japanese entities (given funding from JICA). This involves work towards project components (plant and equipment for operation and maintenance, procurement cum maintenance of electric locomotives and construction of a new maintenance depot and facilities for electric locomotives). As far as the other packages are concerned, they are likely to be given to consortiums where 51% or more is owned by a Japanese entity.

Reason 5: FY14 could well be an inflection point for civil contract awards

It is heartening that progress for the DFC is not just related to land acquisition. A lot of civil contracts have been called for and ~54 bridges have already been constructed on the corridor, especially on the western side. So far, DFFCIL has awarded contracts worth INR50.4bn, and a greater chunk of the contracts were awarded between FY10 and FY13.

Figure 21: Orders awarded so far by DFCCIL

INR bn	Corridor	Awarded to	FY08	FY09	FY10	FY11	FY12	FY13
Construction of 54 major bridges in the Vasai-Bharuch section	Western	Soma Enterprises		6.15				
Civil construction contract for 109 km section from New Ganjkhwaja to New Karwandia (Phase I (a) Mughalsarai–Sonnagar stretch)	Eastern	BSCPL Infrastruct ure Ltd		7.8				
Civil construction, building and track works for Khurja-Bhaupur	Eastern							32.7
Miscellaneous contracts awarded			0.4	1.6	0.3	0.4	1.0	0.2
Total			0.4	15.4	0.3	0.4	1.0	32.9

Source: DFCCIL, Deutsche Bank

Khurja-Kanpur order has been awarded, starting the programme of large ticket construction orders

Going forward, looking at preparatory work for awards of civil contracts, FY14 should be the period when the DFCC orders large awards. In fact, toward late FY13, the Khurja Kanpur order on the eastern corridor was given out to Tata Aldesa JV. Following this, we expect INR145bn of civil contracts to be awarded each in FY14E and FY15E.

Figure 22: Preparatory work for major contract works to be awarded has been completed

INR bn	Length	Corridor	FY13	FY14	FY15	Remarks
Civil construction, building and track works						
Rewari-Ajmer	283	Western		27		RFQ over
Ajmer-Ikbalgarh	342	Western		33		RFQ over
Ikbalgarh-Vadodara	305	Western		30		RFQ over
Vadodara JNPT & Rewari – Dadri	569	Western		55		
Bahupur – Mughalsarai	393	Eastern			38	
Ludhiana – Khurja	447	Eastern			43	
Khurja – Bhaupur	343	Eastern	33			Tata Aldesa JV won the bid
Mughalsarai – Sonnagar	118	Eastern			11	RFQ done for 66km stretch (New Karwandiya to Durgawati). L&T, Kalindee – Isolux JV, Siemens India Ltd and KEC-KIEL JV have qualified for 2*25 kV electrification and signaling works Whereas 22 firms including L&T and Tata Projects have qualified for design, procurement and construction of track
Sonnagar – Dhankuni	538	Eastern			52	
Systems contract (electrical, signaling and telecom) for Phase I (Khurja-Kanpur section)		Eastern				Bid submission expected soon
Design & construction of special Steel Bridges across rivers Mahi & Sabarmati involving Bridge Structure		Western				Invitation for Prequalification on Dec 30, 2011
Signaling and Telecommunication Works for Contract Package ST P-5, Rewari-Vadodara		Western				Notice inviting tender has been issued
Estimated total value of civil works to be awarded			33	145	145	

Source: DFCCIL, Deutsche Bank

Reason 6: Project progress monitoring has been laid out

The DFCCIL has also clearly spelt out the timelines for the progress to be monitored across the various packages and the progress that is actually being made.

Figure 23: Progress of dedicated freight corridor

	To date				Progress					
	Land Acquisition			Financial	FY12	FY13E	FY14E	FY15E	FY16E	FY17E
	20A	20E	20F							
Khurja-Bhaupur (eastern corridor)	100%	100%	89%	√	RFQ, RFP	Civil Tender award	E&M, S&T, O&M equipment Tender award	40% of length of stretch for test and handover	100% of length of stretch for test and handover	
Bahupur – Mughalsarai (eastern corridor)	100%	100%	77%	World Bank loan	RFQ	RFP	Civil Tender award	E&M, S&T, O&M equipment Tender award	40% of length of stretch for test and handover	100% of length of stretch for test and handover
Ludhiana – Khurja (eastern corridor)	100%	100%	65%	World Bank loan	RFQ	RFP	Civil Tender award	E&M, S&T, O&M equipment Tender award	40% of length of stretch for test and handover	100% of length of stretch for test and handover
Mughalsarai – Sonnagar (eastern corridor)	100%	95%	58%	Railway funding	RFQ	RFP	Civil Tender award	E&M, S&T, O&M equipment Tender award	40% of length of stretch for test and handover	100% of length of stretch for test and handover
Sonnagar – Dhankuni (eastern corridor)	18%	0%	0%	PPP		RFQ, RFP	Civil Tender award	E&M, S&T, O&M equipment Tender award	40% of length of stretch for test and handover	100% of length of stretch for test and handover
Rewari – Vadodara (western corridor)	100%	89%	83%	√	RFQ, RFP		Civil Tender, E&M, S&T, O&M equipment Tender award	40% of length of stretch for test and handover	100% of length of stretch for test and handover	
Vadodara JNPT & Rewari – Dadri (western corridor)	100%	76%	35%	STEP Loan sought from JICA		RFQ, RFP	Civil Tender award	E&M, S&T, O&M equipment Tender award	40% of length of stretch for test and handover	100% of length of stretch for test and handover

Source: Dedicated Freight Corridor Corporation of India, Ministry of Railways, Deutsche Bank

Reason 7: Railways have now offered various options and uncapped returns to developers to kick-start the first and last mile connectivity projects

The success and failure of railways across the world is largely due to their ability (or inability) to match the road network in terms of services and connectivity. There is no doubt that railway shipment is far cheaper than road-ways, but the issue of connectivity makes industry apprehensive of moving goods on railways; and by and large railways get relegated to moving only bulk traffic, which is not remunerative enough. In this context, we were shocked to see the extent of Indian Railways' preparedness in tackling the most critical aspect of the plan, i.e. the usage of the new trunk route at the beginning of the project by getting a buy-in from their customers to use their network before the trunk route is fully ordered.

This message from Indian Railways to all investors, stakeholders and customers is loud and clear:**"I would do the trunk route ; if you want last mile connectivity, I ill clear the regulatory hurdles; and most important you can make as much returns as possible on your investments – there is no cap."**

The government in its budget for 2013-14 stated that the connectivity improvement projects would entail an investment of INR90bn (INR38bn for port connectivity projects, INR40bn for coal mine connectivity and INR8bn for iron ore mines connectivity).

Figure 24: For developers, substantial improvement in returns and risk distribution is far more acceptable

	New participative models	Earlier		Remarks
		R3I	R2CI	
Coming into effect	**10-Dec-12**	**20-Jul-10**	**21-Feb-11**	
Applicability	All	Not applicable to Coal and Iron ore Mines	Applicable for Coal and Iron ore Mines	One policy to for all eliminates the confusion for applicability of law-
Number of Models	Five :-Non-Government Railway Model, Joint Venture Model, Capacity Augmentation with Customer Funding, Build Own Transfer, Capacity Augmentation-Annuity Model	Four :-Cost sharing-freight rebate model, Full contribution- Apportioned earning Model, the SPV model and the Private Line Model	Two :-Capital Cost and SPV model	Lot of options available-
Eligibility	NA	New line proposals which are 20km or more in length	New line proposals which are 20km or more in length	-
Private line model	95% of freight revenue shall accrue to the developer. 95% of the net apportioned revenue will be shared with the private party, after deducting the operation and maintenance costs.	95% was shared over the gross revenue.	NA	Attractive for developers-
Private line model	No takeover of private infrastructure by the railways	At the end of the 30 years period, Railways will have the right to take over the line at zero cost.	NA	Leading to reduction in risk-
Joint Venture model	Removed the cap of 14% rate of return on investment	Proposes Financial Internal Rate of Return of 14% under Cost sharing-freight rebate and SPV model	NA	Opportunity to earn higher returns-
Joint Venture model	Traffic guarantee will be signed wherever such guarantees are considered necessary to mitigate the demand risk	Compulsory Minimum Traffic guarantees by the private party	NA	Attractive to private players-
Joint Venture model	Offers a minimum concession period of 25 years, extendable up to 35 years	The concession shall lapse as soon as the NPV on the project equity reaches zero at a discounted rate of 14%.	NA	Extendable concession period would make the lending institution comfortable in lending money
Customer-funded model	Railways to return up to 7% of the amount invested through freight rebate every year till full amount is recovered with interest rate equal to dividend rate	Railways offered a return of 10-12% only on incremental outward traffic.	NA	Likely to reduce the risk-

Source: Deutsche Bank

Options to participate for private players have also increased

Indian Railways has approved five different models for private participation in the sector to encourage building last mile or first mile connectivity. These participative models for rail connectivity and capacity augmentation projects have also been approved by the Cabinet Committee on Infrastructure. Out of five models, three models harness the interests of strategic investors to implement projects and two models are slated to be awarded through competitive bidding.

Figure 25: Snapshot of models being proposed by the government

	Strategic Investors			Strategic/Financial Investors	
	Non Governmental Railway Private Line	**Joint Venture Model**	**Capacity Augmentation with Customer Funding**	**Build Own Transfer**	**Capacity Augmentation-Annuity Model**
Applicability	Ports, large mines, logistic parks or cluster of industries handling consignments for multiple users can build and maintain rail line on private land.	For Bankable projects with identifiable strategic stakeholders (State Govt, ports, mines ,industries)	Pure financing of a railway project through project advance by Customers	Normally for freight oriented lines like DFCs.	Construction of Double Line/Third line/Fourth line where specific users are not identified
Project development and project structuring	Project Developer	Railways or its PSU through consulting firms	NA	Railways	Railways
Land Acquisition	Project Developer	Railways or by JV	Railways	Railways	Railways
Bidding	NA	NA	NA	Competitive bidding process; bid parameters being Viability Gap Funding from Govt.	Competitive bidding on annuity payment basis; Annuity is the bidding parameter
Operation and revenue collection	Railways	Railways	Railways	Railways	Railways. The concessionaire would be paid through annuity
Joint Venture	NA	Railways with a minimum of 26% equity	NA	NA	NA
Construction	Private Railway either through its own private agency or through Railways as special deposit work.	JV	Railways	Concessionaire	Concessionaire
Funding	Pure private funding including land	JV	Major customers who want such projects	Concessionaire	Concessionaire
Maintenance	Developer or railways	Railways or Joint Venture	Railways	Concessionaire	
User fee	Infrastructure provider to get a user fee equivalent to 95% of apportioned traffic revenue for the line net of cost of operation	User fee to JV by apportionment of freight revenue on distance basis	Railways to return up to 7% of the amount invested through freight rebate every year till full amount is recovered with interest rate equal to dividend rate	Concessionaire to be given user fee equivalent to 50% of the apportioned freight	Railways to provide annuity as user charges
Concession period	Since project line is on private land and the assets are fully private infrastructure, it will be transferred to IR in the case of violations of specified terms of agreement	Normal period is 30. Concession period beyond 25 years linked with materialisation of traffic.	NA	Normal Concession period is 25 years with a traffic review after 20 years to increase or decrease the concession period	Concession period will be fixed in the range of 15-20 years

Source: Ministry of Railways, Deutsche Bank

Reason 8: Indian Railways seems to have incorporated past experience into current PPP project offerings

Clearly, at this juncture, returns in all other infrastructure segments have come down and the only unexplored sector for the private sector remains railways. To address this (and also thereby lower funding requirements), Indian Railways is going all out to woo investors with a risk-return profile that seems comparable to the best assets that other Indian infrastructure concessions have so far awarded.

Figure 26: Showcase project concessions in Indian infrastructure

	Units	Best in Roads	Best in Power	Best In Port	What is Railways offering
Project Name		Mumbai- Pune Express way	JSPL-1000MW	Chennai Container terminal/JNPT Berth 2	Feeder routes of 4500km
Project Cost	INR bn	38	43.38		~ INR200m/km
Concession Period		15			Typically 30 years
When was project commissioned		Sep 06	Dec'2007-Sep'2008		Probably in FY14/15
Were there large participants		only Gammon India (JV with Ashoka Buildcon, Viva Highways and Viva Infrastructure Pvt Ltd)	none	very few	Right now 6 bidders have shown interest
Difference between L1 and L2		0.9%	n/a	n/a	n/a
Project IRR		80% plus	100%	60% plus	Cap of 14% on returns are removed
Equity IRR		80% plus	155% plus	80% plus	
Key reason for good returns		First of large BOT projects	First of Integrated, IPP in India	First of Major Ports in India	
User charge fee regulated		No	no		No
Increase in user fee		Annual in line with WPI	Market driven	Cost push is allowed as tariff increase	yes
Did this spur investments		yes	yes	yes	yes
Quantum of sector investments over next three years		14000 km of road awards in 6 years	52GW of private IPP ordered		INR300bn would rise to INR900
Time before sanity hit the sector					4-5 years

Source: Deutsche Bank

Where could the slip between cup and lip be?

Risk 1: Relationship between the DFC and Indian Railways is somewhat ambiguous

The Dedicated Freight Corridor is being executed through a SPV structure within Indian Railways. What is the relationship between Indian Railways and the SPV, the Dedicated Freight Corridor Corporation of India (DFCCIL)? ***Indian Railways is the owner and largest customer of this service from the SPV.*** The owner looks for enhanced income and the buyer is on the lookout for reduced costs.

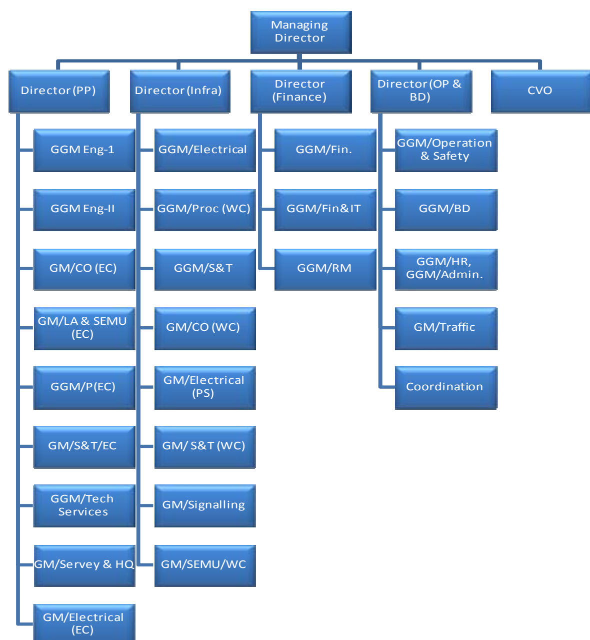
The DFCCIL is allowed to construct, maintain and operate the corridor but not to fix prices. Till now, the DFCCIL did not have autonomy on spare track capacity, available after serving Indian Railways' freight traffic. As far as Indian Railways is concerned, it is unwilling to provide tariff setting power to the DFCCIL. Worry for investors could emerge if Indian Railways starts treating the DFC as a new competitor to Indian Railways by setting lower tariffs than the Indian Railways network. Under the current system of the cost-plus ideology, Indian Railways may merely provide track access charges to the DFCCIL that will cover operational and maintenance costs, and such a system will not encourage or incentivise the DFCCIL to increase profitability or reduce cost.

Deutsche Bank view: We believe the best thing for Indian infra development is that infrastructure tariffs are set in such a manner that benefits user industry and gives reasonable returns to investors. In the case of the DFC, the operating cost is likely to be one-third that of Indian Railways. The ministry as well as the DFC is keen that a large part of this benefit should be passed on to the user industry – implying that tariffs in the DFC are likely to be quite low and returns should be nominal to cover the cost of capital. Further, the way the infrastructure is being laid out **is the greater the use, the lower the charges, and vice versa.** This is the first time that such an initiative is being planned for infrastructure charges and should dissipate most investors' doubts, especially as the western and eastern corridors are largely constructed on an EPC basis. However, for PPP modes to be successful in other corridors, setting up a rail tariff regulator with an authority to fix tariffs would be a welcome change.

Risk 2: Organisational structure of the DFC does not look commercial

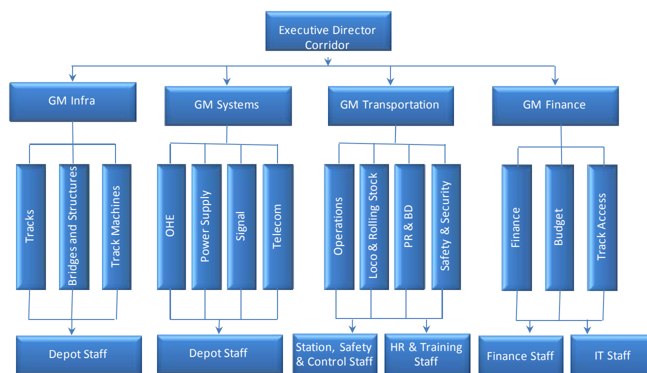
The dedicated freight corridor is being implemented through a SPV, "Dedicated Freight Corridor Corporation of India (DFCCIL)," set up under the administrative control of the Ministry of Railways. The corporate structure of the DFCCIL in the present form (Figure 27 and Figure 28) with a focus on functional classification is similar to any government organisation, which may affect efficient coordination across departments. The decision-making process may also be affected given that Indian Railways is the sole owner and customer of the DFCCIL.

Figure 27: Corporate headquarters of DFCCIL



Source: DFCCIL, Deutsche Bank

Figure 28: Corridor headquarters



Source: DFCCIL, Deutsche Bank

Deutsche Bank view: We believe that the DFCC project is still in its initial stages and there is a case for making the organisational structure more robust and aligned to (a) consumer interest, (b) functional aspects of the organisation for growth, and (c) review of progress for existing projects.

Risk 3: Will government monitoring increase?

Few investors feel that increased monitoring by the government of India could cause a push-back of projects similar to what was seen in roads. This risk seems all the more valid given that multilateral loans have come with a sovereign guarantee.

Deutsche Bank view: With funding being driven by multilateral aid, there is a three-way understanding between central/state as well as multilateral agencies on the progress of the work. Both JICR as well as world bank send teams for monitoring once a month and the entire process is coordinated in such a manner - that we have not seen work getting delayed unless there are issues of corruption, etc. Looking at the fact that the entire bidding is being done on international FIDIC based contracting - we find little risk that The Dedicated Freight Corridor has an investment potential of INR2.4tr and at this juncture a higher level of monitoring may not be a bad idea.

Risk 4: Will railways reduce returns on feeder routes progressively?

One of the biggest worries of developers is that returns for the projects will keep coming down as we move forward. Whether it is ports, power or roads, the returns from concessions continue to decrease. So the ability of railways to fund PPP projects of first mile and last mile connectivity could face delays due to the risk of lower returns on those projects.

Deutsche Bank view: Looking into various regulatory processes, Indian regulatory actions do not have a grandfather clause. So yes, there does remain a risk that

sometime in the future returns could get reduced as the risk becomes lower – but that would not mean that existing contracts would see lower returns. The recent examples of cases of power and roads suggest that regulators have in fact helped developers to work out returns which are reasonable.

Risk 5: How critical is the risk from government changes?

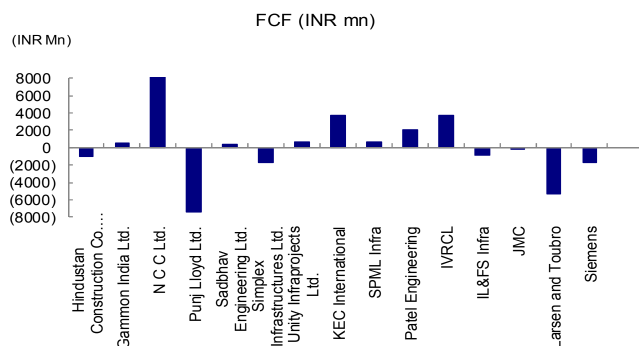
With elections in eight states and the national elections scheduled over the next 12-15 months, a worry for most investors is like most other projects, would the DFC project be pushed back.

Deutsche Bank view: Cabinet approval is required for any project concession awards or any government EPC award. So if the government is reduced to minority status, this would be a genuine risk. Having said that, so far the limited commentary that we have heard given by business leaders on the land acquisition bill suggests that more debate is needed for the bill to make it more market-friendly. But considering that the monitoring of all early parts of the DFC project is done by the multilateral agencies, the risk of a massive slowdown looks quite remote.

Risk 6: Cash flows available with prospective bidders

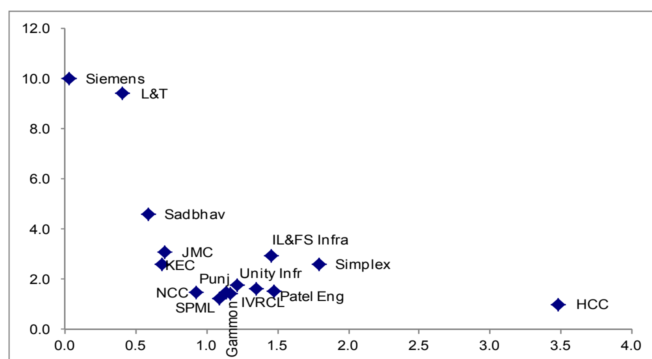
Most of the infrastructure companies are in high leverage and the ability to tap equity markets looks less likely. The balance sheets of these companies also appear stretched. Where would the equity funding come from?

Figure 29: FCF does not look comfortable



Source: Company data, Bloomberg Finance LP, Deutsche Bank

Figure 30: D/E is slightly stretched



Source: Company data, Bloomberg Finance LP, Deutsche Bank

Deutsche Bank view: On the face of it, the concerns are reasonable. Unlike roadways where NHAI has stated that the traffic risk estimation is that of the developer, we like that this rail programme has identified end-users who will see tangible benefits as and when these lines develop. Also, for a few companies like L&T and large end use players such as NTPC, Coal India and Adani Ports, funding will not be an issue. In addition, we have newer participants coming in the infrastructure space, such as Piramal Group as well unlisted players such as Shapoorji Paloonji.

Risk 7: Risk of building regional monopolies-

Can Indian Railways and the dedicated freight corridor SPV ensure a level playing field and non-discriminatory access to infrastructure to all the operators on DFC?

Deutsche Bank view: Indian Railways continues to be the operator and hence the situation may not go the way Australian rail privatisation did.

Who are the beneficiaries?

Rail capex has multiple beneficiaries

As India embarks on the rail capex plan, we outline a gamut of industries which are likely to receive the benefits of this large capex.

- Project developers, construction players (including track laying companies) and equipment suppliers are likely to be the key beneficiaries in the first leg of the capex.
- Raw material suppliers such as cement, aggregates, and steel are likely to benefit with a small lag.
- As the project moves ahead towards completion, the rolling stock suppliers could start to see the benefits.
- At the end of the project are the key user industries- both bulk cargo customers like power, steel, cement and mining companies which supply the raw material for these user industries. Container train operators and shipping lines are likely to benefit out of faster turnaround times and cheaper movement, which could have a cascading impact on the large manufacturing outfits in the country.

Figure 31: The railway capex, particularly the DFC, could have manifold impacts on the economy

Source: Deutsche Bank

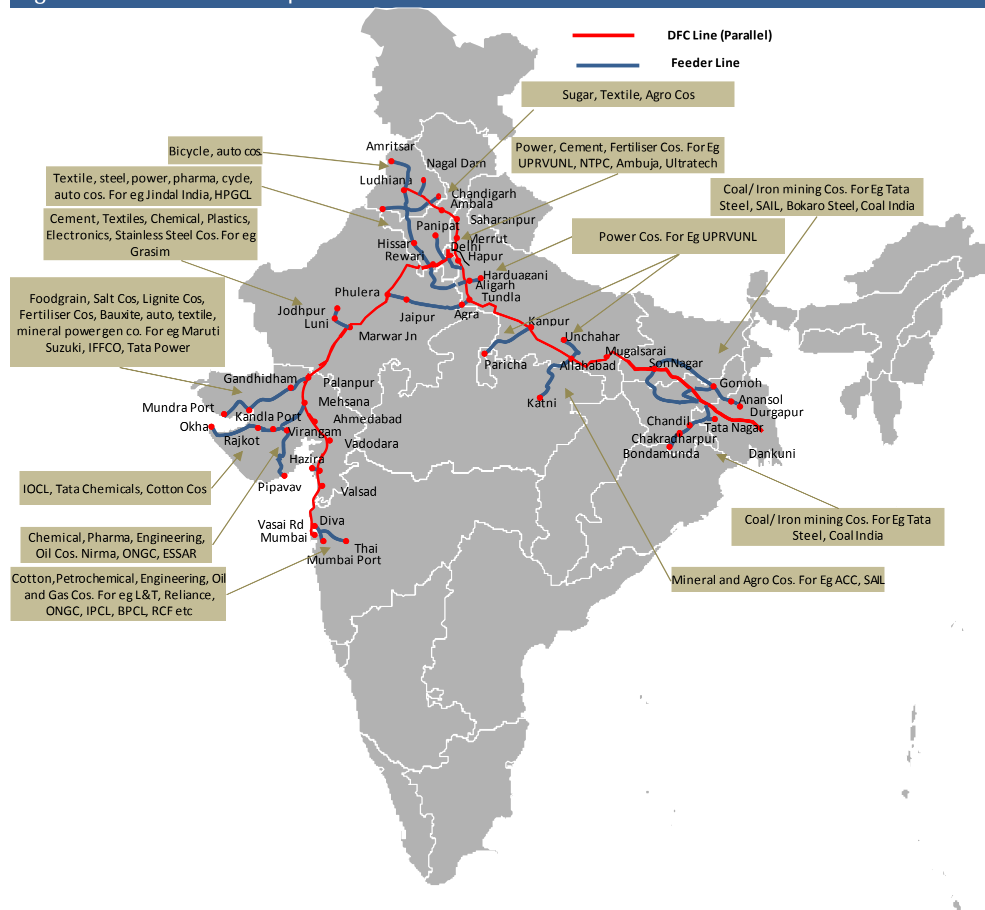
- While these key customers and user industries are likely to benefit across the lifecycle of the project construction and conclusion, the second derivative benefit (i.e. once the projects benefits start getting realised, a more broader

spectrum of industries can benefit) is likely to include all industries in the value chain of any of the above listed beneficiaries (ranging from housing, financing companies, equipment suppliers for the new capex in these industries, utilities, etc.).

Railway PPP programme has a set of natural beneficiaries

The development of DFCs also includes the upgrading of feeder routes fit for the 25-tonne axle loads – c1,379km on the eastern corridor and c2,841km on the western corridor. Some of the key routes with identified end-user industries across both the western and eastern corridors (refer to Figure 32) form part of the track renewal works of Indian Railways.

Figure 32: Some of the specific beneficiaries across the feeder routes



Source: Deutsche Bank

DMIC contracts could open up doors – Japanese companies seem to be frontrunners

Based on our field trips as well as government data on work being done for new industrial corridors, we find that the Japanese companies have made significant inroads into the various projects being undertaken across the states – in effect making them a natural contender for new orders as and when the work picks up.

Figure 33: Prospective projects for Japan's USD4.5bn DMIC facility (as of 19 November 2012)

State	Name of the project	Sector	Interested Company
Gujarat	Smart community platform (e.g. industrial wastewater treatment and reclamation, lithium-ion battery infrastructure) in industrial parks at Sanand	Urban Development	Mitsubishi Heavy Industries' consortium
Gujarat	Grand design development focusing on water supply to an industrial park through seawater desalination, and on photovoltaic power generation at Dahej	Water	Hitachi's consortium
Gujarat	Mobile Phone Recycle Project	Others	Japan Environment Planning (JEPLAN)
Gujarat	Concentrated Solar Power Project	Power	Mitsui Engineering Shipbuilding Co., Ltd.
Gujarat	Transmission Project with Smartgrid	Power	Hitachi
Gujarat	Dholera Providing industrial grade Recycled Waste Water to Dholera Special Investment Region	Water	-
Gujarat	Ahmedabad-Dhorela Railway Project	Transportation	-
Haryana	Establishment of a compound microgrid (electricity and heat) including industrial water treatment in an existing industrial park at Manesar.	Power	Toshiba's consortium
Haryana	Regional MRTS between Delhi-Manesar-Bawal-Neemrana with feeder service to enhance connectivity between Delhi and the upcoming manufacturing hubs	Transportation	
Maharashtra	Urban development centering on a smart water treatment system, including water supply, water reuse, and sewage at Shendra	Urban Development	JGC's consortium
Maharashtra	High-Efficient Gas-firing Combined Cycle Power Producer	Power	Mitsubishi Corp.
Maharashtra	Gas-Fired IPP Project	Power	Marubeni Corp.
Maharashtra	Light Rail Transit system at Pune	Transportation	Toshiba
Rajasthan	Efficient and stable supply of high-quality electricity in a Japanese-affiliated industrial park at Neemrana.	Power	Mitsui-KEPCO consortium
Rajasthan	Treated Water Conveyance System from Okhla to Neemrana	Water	-
Madhya Pradesh	Water Supply from Narmada at Pithampur	Water	-
Uttar Pradesh	Transport connectivity to Dadri- NOIDA- Ghaziabad Investment Region	Transportation	-
Non-State specific	Logistic Data Bank Project	Logistics	NEC
Non-State specific	Automobile Freight Train Operator Transportation in DMICDC corridor	Transportation	Sojitz

Source: DMIC, Deutsche Bank

Among the companies under our coverage, we list the various key companies that can benefit

L&T as an EPC company looks favourably placed

On the western corridor, the DFCC has already begun the tendering process for the phase-I Vadodara in Gujarat to Rewari in the Haryana package, which spans a length of 930km across three contract packages. If one were to assume the bid levels similar to the Tata-Aldesa bid in the eastern corridor (~INR97m per km), the potential size of the contract opportunity is likely to be around INR90bn.

Figure 34: Packages and expected size of phase 1 of the western corridor

	Length (km)	Expected size (INR bn)	Qualified bidders	Composition of Bidders
Rewari – Ajmer	283	27	Sojitz-L&T Consortium	Sojitz Corp (Lead Partner), Larsen and Toubro (Partner)
			Mitsui-Leighton Consortium	Mitsui & Co., Ltd, Japan (Lead Partner), IRCON International Ltd (Partner), Leighton Welspun Contractors Pvt. Ltd (Partner)
Ajmer – Ikbalgarh	342	33	Sojitz-L&T Consortium	Sojitz Corp (Lead Partner), Larsen and Toubro (Partner)
			Mitsui-Leighton Consortium	Mitsui & Co., Ltd, Japan (Lead Partner), IRCON International Ltd (Partner), Leighton Welspun Contractors Pvt. Ltd (Partner)
Ikbalgarh – Vadodra	305	30	Sojitz-L&T	Sojitz Corporation (Lead Partner), Larsen & Toubro Limited (Partner-1)
			Express Freightliner Consortium (Mitsui TakenakaIrcon Leighton)	Mitsui & Co., Ltd. (Lead Partner), Takenaka Civil Engineering & Construction Co. Ltd. (Partner-1), IrconInternational Limited (Partner-2), Leighton Welspun Contractors Private Limited (Partner-3)
			M – I JV (Marubeni Tata KEC IVRCL Simplex Gammon)	Marubeni Corporation (Lead Partner), Tata Projects Limited (Partner-1), KEC International Limited (Partner-2), IVRCL Limited (Partner-3), Simplex Infrastructures Limited (Partner-4), Gammon India Limited (Partner-5)
Total	930	90		

Source: DFCCIL Deutsche Bank

Preparedness of some of the other listed Indian companies

Indian Railways' spend would encompass a lot of segments in the economy, and our sample list is in no way a complete and exhaustive list. A look at the ratings would let you know that we do not cover a lot of stocks, and within our coverage, we still have Sell and Hold ratings for many companies, as we find the valuations a bit rich.

Figure 35: Listed Indian companies that could benefit from the various facets of this large railway capex

Company	Segment	M.Cap (INR m)	Recommendation	Company description
ABB India	Automation & control equipment	107,766	Yes	Have few verticals catering to Rail capex demand
ACC	Cement	226,456	Yes	Pan India Cement player - subsidiary of Holcim
Adani Enterprises	Freight terminals, Logistic providers	238,659	No	A conglomerate with interests in trading, logistics, ports and power
Adani Port & SEZ	Port operator	295,100	No	Largest private sector port player
Adani Power	Power genco	115,834	Yes	Leading private utility player
Ambuja Cements	Cement	252,750	Yes	North and Western Indian cement player - subsidiary of Holcim
ARSS Infra	Track-laying	488	No	A leading railway track - laying contractor
Concor	Container lines & handling	140,381	No	Leading container transportation player
Elecon Engineering	Material handling equipment	3,176	No	Material handling player
Essar Port	Port operator	36,810	Yes	Leading private sector port player
Everest Industries	Industrial parks	3,097	No	Leading pre-fab buildings and asbestos cement roofing manufacturer
Gateway Distriparks	Container lines & handling	13,238	No	Leading private container transportation player
Gujarat Pipavav	Port operator	23,229	No	Leading container port operator
India Cements	Cement	25,081	Yes	Southern India cement player
Jindal Steel & Power	Long steel	307,281	Yes	A conglomerate with interests in steel, power, mining
Kalindi Rail	Track-laying	627	No	A leading railway track - laying contractor
Mcnally Bharat	Material handling equipment	2,205	No	Material handling player
NTPC	Power genco	1,229,398	Yes	India's largest power utility
SAIL	Long steel	258,357	Yes	India's largest steel player
Shree Cement	Cement	151,890	Yes	Northern India cement player
Siemens India	Signaling equipment	178,442	Yes	One of the largest equipment contractors for Railways
Simplex Infrastructure	Preparatory civil works	5,887	No	Largely a civil contractor
Tata Power	Power genco	224,752	Yes	Integrated power company
TexRail	Rolling stock	9,010	No	leading Indian rolling stock manufacturer
Titagarh Wagons	Rolling stock	3,442	No	leading Indian rolling stock manufacturer
TRF	Material handling equipment	1,893	No	Material handling player
Ultratech Cement	Cement	510,906	Yes	Pan India Cement player

Source: Company Data, Deutsche Bank, Price related information as of April 23, 2013

What are the expectations?

Figure 36 gives a snapshot of the valuations of the rated and unrated companies. Valuations of unrated companies are based on Bloomberg Finance LP consensus numbers.

Figure 36: Valuations of the key beneficiaries

Company	Rating	Current Market Price	Market Cap	P/E (x)		EV/EBITDA (x)		P/B (x)		ROE (%)	
		INR	INR m	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E
Rated stocks											
ABB India	Sell	509	107,766	21.8	19.6	13.9	12.4	3.3	2.8	16.0	15.4
Adani Port & SEZ	Buy	147	295,100	19.4	15.1	13.1	10.6	4.2	3.4	23.8	24.9
ACC	Hold	1,215	226,456	17.8	14.1	10.7	7.9	2.9	2.6	16.6	19.2
Adani Power	Hold	48	115,834	23.4	12.5	9.9	8.3	2.0	1.8	9.8	15.1
Ambuja Cements	Hold	186	252,750	18.0	14.3	7.9	6.2	2.9	2.5	17.1	19.1
Essar Port	Buy	86	36,810	11.5	7.6	7.9	5.9	1.2	1.0	11.1	14.7
India Cements	Buy	82	25,081	10.3	10.0	4.9	4.5	0.6	0.6	5.8	5.9
Jindal Steel & Power	Buy	329	307,281	8.8	6.3	7.1	5.0	1.3	1.1	15.4	18.2
Reliance Power	Sell	75	209,403	21.5	11.3	16.6	10.4	1.1	1.0	2.3	2.6
NTPC	Buy	149	1,229,398	10.1	9.5	9.2	8.7	1.4	1.3	14.4	14.1
SAIL	Buy	63	258,357	5.7	5.7	5.0	4.0	0.6	0.5	10.2	10.7
Shree Cement	Buy	4,360	151,890	14.3	12.5	5.9	4.5	3.2	2.5	25.7	22.7
Siemens India	Sell	529	178,442	25.3	20.8	13.3	10.7	3.8	3.3	15.7	17.0
Tata Power	Hold	95	224,752	18.2	15.7	9.2	7.9	1.6	1.5	9.1	9.9
Ultratech Cement	Buy	1,864	510,906	16.2	13.2	10.2	8.2	2.8	2.4	18.9	19.4
Unrated stocks											
Adani Enterprises	Unrated	217	238,659	8.5	6.6	7.3	5.7	1.0	0.9	11.8	14.1
ARSS Infra	Unrated	33	488	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concor	Unrated	1,080	140,381	14.1	12.8	9.9	8.7	2.0	1.8	14.9	14.9
Elecon Engineering	Unrated	34	3,176	4.8	3.7	4.3	4.2	0.6	0.6	12.5	11.6
Everest Industries	Unrated	204	3,097	4.3	3.5	2.8	2.4	0.8	0.7	21.1	21.6
Gateway Distriparks	Unrated	122	13,238	8.4	7.3	5.2	4.5	1.3	1.2	16.9	18.2
Gujarat Pipavav	Unrated	48	23,229	15.9	16.3	9.5	8.4	1.6	1.5	10.3	10.4
Kalindi Rail	Unrated	51	627	6.7	N/A	4.0	N/A!	0.4	N/A	6.1	N/A
Mcnally Bharat	Unrated	71	2,205	3.3	N/A	3.7	N/A	0.5	N/A!	15.0	N/A
Simplex Infrastructure	Unrated	119	5,887	6.3	5.2	4.6	4.1	0.4	0.4	6.2	7.0
TexRail	Unrated	50	9,010	7.3	N/A	6.6	N/A	1.3	N/A	18.5	N/A
Titagarh Wagons	Unrated	172	3,442	3.2	N/A	2.4	N/A	0.5	N/A	10.1	N/A
TRF	Unrated	172	1,893	122.9	9.8	9.6	6.7	1.3	1.2	0.6	13.3

Source: Bloomberg Finance LP, Deutsche Bank. The estimates for non covered companies are based on consensus estimates as per Bloomberg Finance LP
**Prices as on April 23 2013*

Rating
Buy

Asia
India

Conglomerates

Company
Larsen & Toubro Ltd

Reuters	Bloomberg
LART.BO	LT IN

Price at 25 Apr 2013 (INR)	1,518.75
Price target - 12mth (INR)	2,045.00
52-week range (INR)	1,711.40 - 1,134.50
BSE 30	19,407

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Looks set to break shackles of flat orders; raising TP on top of Street

Better order inflow outlook + NWC reversal = re-rating

We estimate that L&T's order inflow growth may well break the INR 700-800bn barrier of FY10-13 and touch INR 1trn in FY14E, driven by a combination of rail capex and m/s gains in the power sector. The kick-start of the investment cycle could help reverse the 1200 bps slide in NWC/sales (FY13E: NWC/sales at 21%). Further aggressive cost cuts and weak commodity prices could help cushion the margin fall and raises consensus estimates. We raise our SOTP-based TP to the top of the Street's INR 2,045/sh and retain Buy on valuation.

Won't be surprised if company guides for 15-25% FY14E order intake growth

Over the last three years, Larsen has managed to bag new orders in the range of INR 700-800bn p.a. Thanks to the improving outlook on railways as well as the power sector order pipeline, L&T could well break this band and get new orders of INR 950bn to INR 1,000bn in FY14E vs. Street expectations of flat-to-negative 20% order inflow expectations – **a big driver for re-rating.**

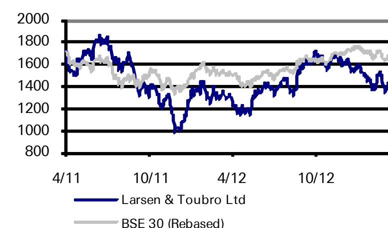
Our revised estimates factors in some of the perils of downturn

Based on our revised forecast, we have raised our order-inflow expectations for FY14E/FY15E by 12%, implying a 15-25% increase in order inflows for FY14E. Accordingly, we now raised our EPS for core engineering business (standalone basis) in FY15E by 11%. On a consolidated basis, the impact is muted, as we have built in delays/pushback in commissioning of projects in L&T-IDPL-but still our estimates are now a good 6% ahead of consensus.

Raising 12M SOTP-based target price to INR 2,045/sh (top of the Street)

We have arrived at our INR 2,045 target price using SOTP, which values the both long cycle as well as short cycle at an exit multiple of 20x FY14E (earlier 19x for long cycle and 23x for short cycle) as we find both businesses earnings factoring in business outlook which are similar and earnings based on low utilization levels. L&T IT is valued at 10x (earlier 8x) in line with its peers and L&T-IDPL at exit P/B of 1x.Key risks: 1) Pushback in new orders and rise in NWC/sales beyond 30%; 2) 1% lower margin could hurt FY14E EPS by 10%.

Price/price relative



Performance (%)	1m	3m	12m
Absolute	11.0	-5.5	23.7
BSE 30	3.9	-3.5	13.2

Forecasts And Ratios

Year End Mar 31	2011A	2012A	2013E	2014E	2015E
Sales (INRm)	516,139.4	637,314.4	786,161.4	896,352.2	1,059,274.5
EBITDA (INRm)	72,000.8	81,603.2	96,805.8	111,005.3	136,105.1
Reported NPAT (INRm)	44,561.7	46,369.2	47,744.1	55,202.4	70,972.0
DB EPS FD (INR)	69.52	76.35	78.42	90.67	116.57
OLD DB EPS FD (INR)	69.52	76.35	79.32	97.28	115.03
% Change	0.0%	0.0%	-1.1%	-6.8%	1.3%
DB EPS growth (%)	21.1	9.8	2.7	15.6	28.6
PER (x)	25.8	19.2	19.4	16.8	13.0
EV/EBITDA (x)	18.5	16.1	13.5	11.9	9.7
DPS (net) (INR)	14.50	14.56	17.95	17.95	17.95
Yield (net) (%)	0.8	1.0	1.2	1.2	1.2

Source: Deutsche Bank estimates, company data

[1] DB EPS is fully diluted and excludes non-recurring items, 2 Multiples and yields calculations use average historical prices for past years and spot prices for current and future years, except P/B which uses the year end close

Model updated:22 April 2013

Running the numbers

Asia

India

Conglomerates

Larsen & Toubro Ltd

Reuters: LART.BO | Bloomberg: LT IN

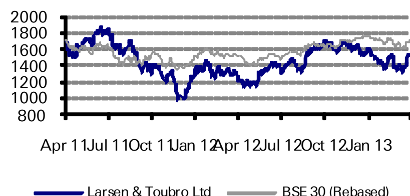
Buy

Price (25 Apr 13)	INR 1,518.75
Target Price	INR 2,045.00
52 Week range	INR 1,134.50 - 1,711.40
Market Cap (m)	INRm 924,694
	USDm 17,062

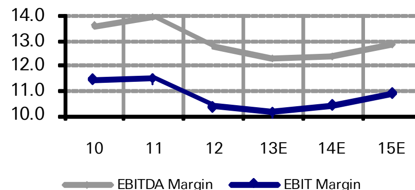
Company Profile

Larsen & Toubro Ltd is India's largest engineering and construction company. L&T's business model has evolved into a distinct E&C and non-E&C business. The long-cycle E&C portion is cyclical and dependent largely on new project capex. The short-cycle non-E&C business largely comprises business segments such as electrical and electronics, industrial products, IT(L&T Infotech), Financial services (L&T Finance) and various infrastructure projects under public private partnership. The company commands an international presence with operations in the Middle East, Malaysia and China.

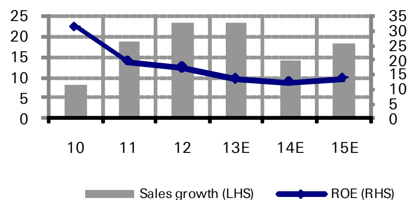
Price Performance



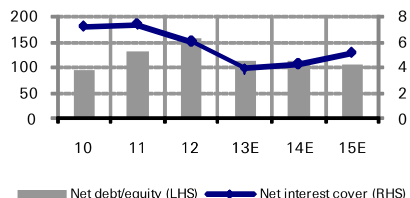
Margin Trends



Growth & Profitability



Solvency



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Fiscal year end 31-Mar	2010	2011	2012	2013E	2014E	2015E
Financial Summary						
DB EPS (INR)	57.41	69.52	76.35	78.42	90.67	116.57
Reported EPS (INR)	92.27	74.11	76.35	78.42	90.67	116.57
DPS (INR)	12.61	14.50	14.56	17.95	17.95	17.95
BVPS (INR)	358.7	411.4	482.7	691.2	793.9	920.9
Weighted average shares (m)	585	597	609	609	609	609
Average market cap (INRm)	865,712	1,071,346	893,131	924,694	924,694	924,694
Enterprise value (INRm)	880,812	1,328,623	1,315,258	1,306,878	1,316,846	1,313,426
Valuation Metrics						
P/E (DB) (x)	25.8	25.8	19.2	19.4	16.8	13.0
P/E (Reported) (x)	16.0	24.2	19.2	19.4	16.8	13.0
P/BV (x)	4.53	4.02	2.71	2.20	1.91	1.65
FCF Yield (%)	nm	nm	nm	nm	0.3	0.2
Dividend Yield (%)	0.9	0.8	1.0	1.2	1.2	1.2
EV/Sales (x)	2.0	2.6	2.1	1.7	1.5	1.2
EV/EBITDA (x)	14.9	18.5	16.1	13.5	11.9	9.7
EV/EBIT (x)	17.7	22.4	19.9	16.4	14.1	11.4
Income Statement (INRm)						
Sales revenue	435,136	516,139	637,314	786,161	896,352	1,059,275
Gross profit	59,135	72,001	81,603	96,806	111,005	136,105
EBITDA	59,135	72,001	81,603	96,806	111,005	136,105
Depreciation	9,273	12,714	15,523	16,978	17,478	20,783
Amortisation	0	0	0	0	0	0
EBIT	49,862	59,287	66,080	79,828	93,527	115,322
Net interest income(expense)	-6,919	-8,028	-11,019	-20,512	-22,119	-22,420
Associates/affiliates	1,060	796	375	895	1,017	1,164
Exceptionals/extraordinaries	20,593	2,761	0	0	0	0
Other pre-tax income/(expense)	11,275	13,986	14,106	12,075	11,592	12,111
Profit before tax	74,811	68,007	69,167	71,390	83,000	105,013
Income tax expense	20,387	23,456	22,826	23,664	26,799	32,733
Minorities	975	786	348	876	2,016	2,472
Other post-tax income/(expense)	0	0	0	0	0	0
Net profit	54,508	44,562	46,369	47,744	55,202	70,972
DB adjustments (including dilution)	-20,593	-2,761	0	0	0	0
DB Net profit	33,915	41,800	46,369	47,744	55,202	70,972
Cash Flow (INRm)						
Cash flow from operations	21,178	-10,634	-70,868	383,292	105,208	49,503
Net Capex	-38,139	-94,911	-73,588	-407,366	-102,330	-48,100
Free cash flow	-16,961	-105,544	-144,455	-24,073	2,878	1,403
Equity raised/(bought back)	36	4,725	7	80,798	12,236	10,531
Dividends paid	-7,528	-7,562	-10,627	-16,792	-18,705	-23,096
Net inc/(dec) in borrowings	36,910	148,277	134,179	58,667	-11,769	21,154
Other investing/financing cash flows	6,168	-36,665	18,235	-35,403	-37,852	-32,780
Net cash flow	18,626	3,231	-2,661	63,196	-53,212	-22,788
Change in working capital	*15,091*	*-209,655*	*-127,263*	*304,003*	*30,511*	*-44,724*
Balance Sheet (INRm)						
Cash and other liquid assets	33,216	36,446	33,786	96,982	43,770	20,982
Tangible fixed assets	189,789	279,865	343,135	719,831	804,683	832,000
Goodwill/intangible assets	0	0	0	0	0	0
Associates/investments	208,630	92,158	87,895	137,895	187,895	237,895
Other assets	277,996	538,872	725,128	686,992	785,297	944,133
Total assets	709,632	947,341	1,189,943	1,641,700	1,821,645	2,035,010
Interest bearing debt	246,073	375,621	526,273	599,302	605,660	628,699
Other liabilities	242,773	310,955	352,268	603,773	714,462	826,689
Total liabilities	488,847	686,576	878,541	1,203,075	1,320,122	1,455,388
Shareholders' equity	209,913	250,506	293,868	420,866	483,365	560,712
Minorities	10,873	10,260	17,535	17,759	18,157	18,909
Total shareholders' equity	220,785	260,766	311,402	438,625	501,522	579,621
Net debt	*212,857*	*339,175*	*492,487*	*502,320*	*561,890*	*607,717*
Key Company Metrics						
Sales growth (%)	8.3	18.6	23.5	23.4	14.0	18.2
DB EPS growth (%)	14.3	21.1	9.8	2.7	15.6	28.6
EBITDA Margin (%)	13.6	13.9	12.8	12.3	12.4	12.8
EBIT Margin (%)	11.5	11.5	10.4	10.2	10.4	10.9
Payout ratio (%)	13.5	19.4	19.1	22.9	19.8	15.4
ROE (%)	31.2	19.4	17.0	13.4	12.2	13.6
Capex/sales (%)	8.8	18.4	11.5	51.8	11.4	4.5
Capex/depreciation (x)	4.1	7.5	4.7	24.0	5.9	2.3
Net debt/equity (%)	96.4	130.1	158.2	114.5	112.0	104.8
Net interest cover (x)	7.2	7.4	6.0	3.9	4.2	5.1

Source: Company data, Deutsche Bank estimates

Management guidance may surprise on order inflow

We would not be surprised if management suggests a band of 15-20% growth in new orders for FY14E

Over the last three years, Larsen has managed to bag new orders in the range of INR 700-800 bn per year. We believe that thanks to the improving outlook on railways as well as the power sector order pipeline, L&T could well break this band and get new orders of INR 950bn to INR 1,000bn in FY14E vs. Street expectations of flat-to-negative 20% order inflow expectations.

L&T could well break last three year's band of order inflows of INR 700-800bn and get new orders of INR 950bn to INR 1,000bn in FY14E vs. Street expectations of flat-to-negative 20% order inflow expectations

Important large ticket orders to watch out for are: (a) Civil orders on the western corridor and (b) wagon tippler orders, as L&T is the only Indian company pre-qualified for use in western DFC. In western DFC, L&T is competing with fewer competitors. For instance, on the Rewari-Vadodara route of the western corridor, only three consortiums are qualified (refer to Figure 37 for details).

Figure 37: Packages and expected size of Phase 1 of the western corridor

	Length (kms)	Expected size (INR bn)	Qualified bidders	Composition of Bidders
Rewari – Ajmer	283	27	Sojitz-L&T Consortium	Sojitz Corp (Lead Partner), Larsen and Toubro (Partner)
			Mitsui-Leighton Consortium	Mitsui & Co., Ltd, Japan (Lead Partner), IRCON International Ltd (Partner), Leighton Welspun Contractors Pvt. Ltd (Partner)
Ajmer – Ikbalgarh	342	33	Sojitz-L&T Consortium	Sojitz Corp (Lead Partner), Larsen and Toubro (Partner)
			Mitsui-Leighton Consortium	Mitsui & Co., Ltd, Japan (Lead Partner), IRCON International Ltd (Partner), Leighton Welspun Contractors Pvt. Ltd (Partner)
Ikbalgarh – Vadodra	305	30	Sojitz-L&T	Sojitz Corporation (Lead Partner), Larsen & Toubro Limited (Partner-1)
			Express Freightliner Consortium (Mitsui TakenakaIrcon Leighton)	Mitsui & Co., Ltd. (Lead Partner), Takenaka Civil Engineering & Construction Co. Ltd. (Partner-1), IrconInternational Limited (Partner-2), Leighton Welspun Contractors Private Limited (Partner-3)
			M – I JV (Marubeni Tata KEC IVRCL Simplex Gammon)	Marubeni Corporation (Lead Partner), Tata Projects Limited (Partner-1), KEC International Limited (Partner-2), IVRCL Limited (Partner-3), Simplex Infrastructures Limited (Partner-4), Gammon India Limited (Partner-5)
Total	930	90		

Source: DFCCIL Deutsche Bank

Other key orders to watch out for in the next 12-24 months are:

(a) Signalling packages on the western corridor

(b) Electrification packages on the western corridor

(c) Tenders in Kochi Metro award

(d) Ahmedabad Metro Rail

(e) Pune Metro Rail

(f) Delhi Metro Phase-3 signalling as well as electrical

The following table depicts our key assumptions and rationale for estimating order inflows for FY14E being 15-25% higher than FY13E. Note our inflow assumptions factor in 40% compression from building and road infrastructure.

Our inflow assumptions factor in 40% compression from building and road infrastructure

Figure 38: Railways a big driver of demand in FY14

	FY11	FY12	FY13	FY14	Remarks
Railways	0.0	4.1	9.3	100.0	Orders expected from DFC, DMIC and metros
Urban Infra	59.0	4.7	12.0	22.0	Kochi, Ahmedabad and Pune are ripe for orders
Power Gen	125.3	37.4	95.9	183	4000MW of order expected each year, with L&Ts market share being 35%
Power T&D	0.0	27.8	63.2	55.0	
Power BOP	63.3	6.1	4.1	10.0	
Fertiliser	0.0	0.0	0.0	33.0	Assumed market share of 25%. Assumed fertilizer industry to invest INR500bn over FY14-17E following revised policy on Urea
Nuclear	0.0	0.0	7.3	0.0	No orders assumed in FY14e
Process Hydrocarbon	33.0	14.5	15.3	15.0	No upcycle assumed and at same levels over last three years.
Process-Metals/Chemicals	99.2	37.6	4.6	0.0	
Other Infrastructure	96.5	175.9	252.2	150.0	Estimates factor a 40% contraction from FY13e. Our assumptions factors in 3000Km of Roads order award every year with L&T's market share being 10%
Others	32.8	53.6	66.4	95.0	Orders from electrical, and MIP division
Unannounced orders	235.9	244.2	239.5	250.0	
Exports (announced)	53.2	100.1	35.0	90.0	
Total Orders Inflow (reported)	797.7	706.0	804.7	1003	

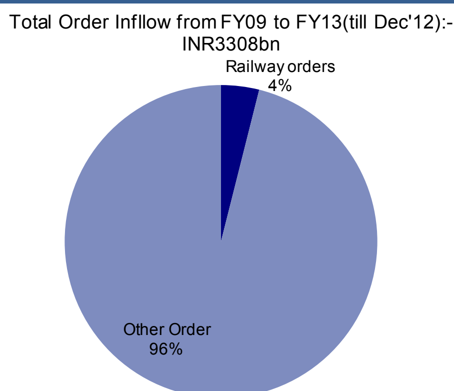
Source: Deutsche Bank

Additionally, over the next 24 months the underground rail in Mumbai between Colaba to Andheri could start construction. This is a giant USD 6bn project. The growth areas for L&T include the fertilizers and water segments. To recap, the new urea investment policy could attract fresh capex of ~ INR500bn, and L&T has the potential to capture close to 25% of the market. And finally, in the power sector, thanks to the aggressive cost-cutting initiatives carried out by Larsen, the company appears ripe to garner 30-35% m/s vs. less than 10% last year, in our view.

We agree that railways have historically not driven new orders for Larsen and Toubro

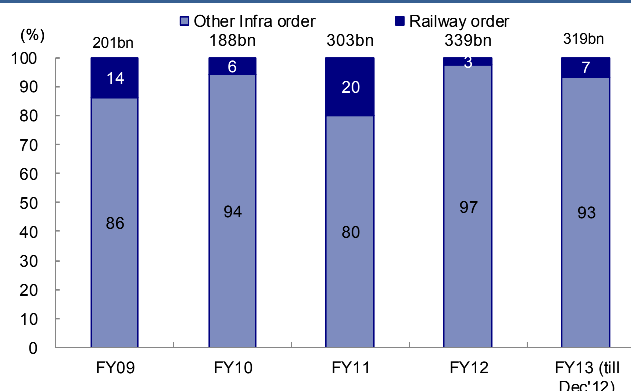
Railways continue to represent a very small portion of the total order book for L&T. As seen in Figure 40, the maximum contribution of railways towards L&T's infra order booking was 20% in FY11, and for other years it has remained well below 15%.

Figure 39: Merely ~4% of the aggregate order inflows (FY09-December 2012) from railways



Source: Company Data, Deutsche Bank

Figure 40: Railways represents a small portion of total infrastructure order inflows



Source: Company Data, Deutsche Bank

Figure 41: Key orders in railways segment

Particulars	From	Period	Value (INR bn)
Design and construction work of Elevated Corridor, Station buildings, Electrical & Signalling works and Railway Construction works	L&T Metro Rail (Hyderabad) Ltd	Q4FY11	59.0
LSTK contract for first monorail system	Mumbai Metropolitan Region Development Authority (MMRDA)	10-Nov-08	13.6
Cast Steel Wheel manufacturing plant in Bihar	Indian Railways	8-Jul-08	10.5
Construction of tunnel between Shankar Vihar and Hauz Khas as well as underground stations.	Delhi Metro Rail Corporation	5-Nov-12	8.5
Railway electrification works between Guntakal –Raichur -Wadi stations of South Central Railway and construction, track work, signaling & telecommunication in the Lucknow and Izatnagar divisions of North Eastern Railway.	Rail Vikas Nigam Limited	26-Sep-12	5.4
Construction of a via-duct including Electrical, Signaling and Telecommunication works between Villupuram – Virudhachalam - Ariyalur section	Multiple	30-Dec-11	4.1
Delhi Metro Phase-II	Delhi Metro Railway Corporation Limited	Q4FY07	3.6
Construction of a via-duct, including two station buildings, for Kolkata Metro railway	Multiple	7-Dec-11	3.5
Design and construction of via-ducts and three elevated stations plus additional works from ongoing projects	Delhi Metro Rail Corp	7-Jun-12	3.5

Source: Company Data, Deutsche Bank

But L&T has build-out competencies in this segment

L&T, which has a strong presence in the E&C business, has over the past few years built competencies in delivering integrated railway projects which involve the construction of formation, bridges, track, OHE, signalling, etc. Projects such as JNPT doubling, railway siding and yard for the Hirmi Cement plant, Tiruvallur-Arakkonam third line, and Hyderabad metro clearly demonstrate its focus on strengthening its presence in the segment to capture a major part of the surge in railway capex. Effectively, rail orders can be divided into two segments: civil and systems. Within systems, L&T has competencies to do electrification and track work. What it does not have is competencies to do rolling stock, automatic fare collection and communications. But within India, L&T has become a very good integrator.

Figure 42: Track record of L&T in integrated railway projects

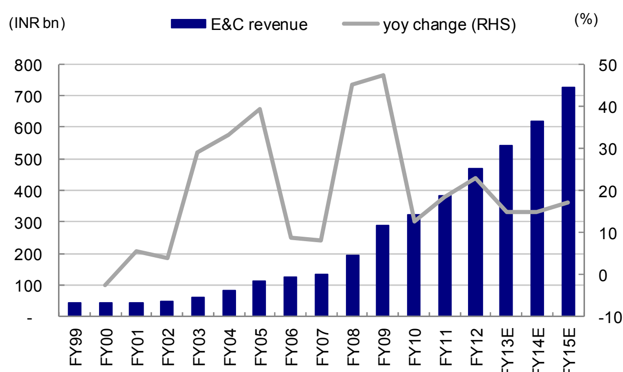
	Done	Ongoing
25 kV AC OHE (Track km)	6550	3054
Rigid overhead contact (TKm)	40	
Third Rail Electrification (TKm)	24	56
Traction Power Supply		
Traction Sub-stations (AC/DC)	25	18
Gas Insulated	3	
Switching Stations	220	
Ballastless track work (Track Km)	350	1205
Ballastless track work (TKm)	10	110
Signalling		
Centralised Traffic Control (nos)	1	-
Electronic Interlocking (Stations)	10	17
Panel/ Route Relay Inter (Stations)	40	22

Source: Company Data, Deutsche Bank

Our forecast factors in perils of downturn

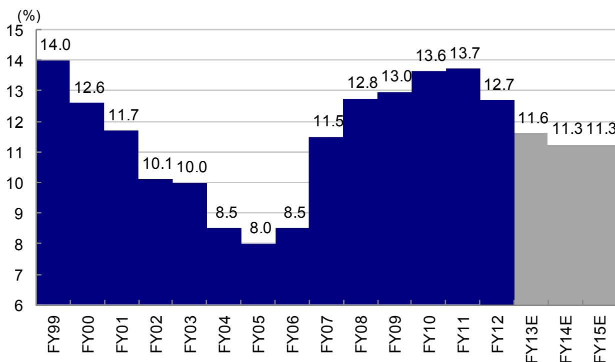
We believe that the healthy order book coupled with declining commodity prices is likely to benefit the company. We have, however, factored in a 28bps decline in EBITDA margin (standalone) for FY14E. On the E&C segment front, we have assumed a margin of 11.3% in FY14E and FY15E, which is lower than the last six-year range of 11.5%-13.7%. This adequately reflects the risk of lower margins arising from heightened competitive intensity.

Figure 43: E&C revenue to grow at a CAGR (FY12-14E) of 16%



Source: Deutsche Bank, Company data

Figure 44: E&C margin expected to be lower than last six years



Source: Deutsche Bank, Company data

Considering the encouraging order awards announced in the March quarter, we estimate the company will report 15% growth in E&C revenue for FY14E. For FY15E, we believe that the E&C sales growth could be better at 17%. Standalone earnings for FY14 and FY15 are expected to grow at 11% yoy and 22% yoy.

Figure 45: Standalone sales/ PAT to increase at a three-year CAGR of 13%/8%

INR Bn	FY12A	FY13e	FY14e	FY15e	3 year CAGR
Sales	532	611	702	819	15
EBITDA	63	65	72	87	12
PAT	45	45	50	61	11
EBITDA %	12	11	10	11	
PAT %	8	7	7	8	

Source: Company Data, Deutsche Bank

We have factored in sluggish order inflow and revenue growth

Considering the recent quarter encouraging order inflows and a sign of revival in the order inflow environment with massive orders expected in railways and urban infra segment, we revise our numbers for FY14E and FY15E. We have raised our order inflow numbers for FY14E and FY15E by 12% each. Accordingly, we have raised topline numbers for FY15E by 6%. On the margin front, we have raised our E&C margin assumptions for FY14E and FY15E by 25bps each. Overall, our revised estimates lead to standalone sales CAGR (FY13E-15E) of 16% and a standalone PAT CAGR (FY13E-15E) of 16%.

Figure 46: Raising our order inflow (E&C) numbers FY14e and FY15e by 12% each

Standalone Business	FY13E			FY14E			FY15E		
Particulars	New estimates	Old estimates	% chg	New estimates	Old estimates	% chg	New estimates	Old estimates	% chg
Order inflow	804,792	796,409	1	1,002,771	891,978	12	1,153,187	1,025,775	12
Order book	1,636,960	1,628,577	1	1,921,704	1,802,528	7	2,237,317	2,034,219	10
Book to Bill	2.7	2.7	1	2.7	2.6	7	2.7	2.6	4
Sales (INR m)	610,994	610,994	0	702,123	702,123	0	819,159	776,147	6
EBITDA (INR m)	64,617	64,617	0	72,321	70,821	2	87,341	78,623	11
EBIT (INR m)	57,541	57,541	0	65,005	63,505	2	79,875	71,156	12
PAT (INR m)	45,347	45,347	0	50,487	49,440	2	61,495	55,409	11
EPS (INR)	76.0	76.0	0	84.6	82.8	2	103.0	92.8	11
E&C margins (%)	11.6	11.6	-	11.3	11.0	25	11.3	11.0	25

Source: Deutsche Bank estimates

Where we differ from consensus

On standalone level our earnings estimates are 7%/4% lower than consensus for FY13E/FY14E. However, for FY15E, our earnings estimate is 5% higher than consensus.

Figure 47: Standalone FY15E earnings 5% ahead of consensus

Standalone	----------------- FY13E -----------------			----------------- FY14E ----------------			----------------- FY15E -----------------		
	DB estimate	Consensus	Variation (%)	DB estimate	Consensus	Variation (%)	DB estimate	Consensus	Variation (%)
Revenues (INR bn)	611	622	(2)	702	712	(1)	819	815	0
EBITDA (INR bn)	65	69	(7)	72	79	(8)	87	89	(2)
PAT (INR bn)	45	49	(7)	50	53	(4)	61	59	5
EPS (INR/sh)	76	79	(4)	85	85	(1)	103	97	7

Source: Deutsche Bank, Bloomberg Finance LP

On a consolidated level, our earnings estimates are 9% / 5% lower than consensus for FY13E and FY14E. However, for FY15E, our earnings estimate is 6% higher than consensus.

Figure 48: Consolidated FY15E earnings 6% ahead of consensus

Consolidated	----------------- FY13E -----------------			----------------- FY14E ----------------			----------------- FY15E -----------------		
	DB estimate	Consensus	Variation (%)	DB estimate	Consensus	Variation (%)	DB estimate	Consensus	Variation (%)
Revenues (INR bn)	786	740	6	896	843	6	1059	967	10
EBITDA (INR bn)	109	100	9	123	114	8	148	132	12
PAT (INR bn)	48	52	(9)	55	58	(5)	71	67	6
EPS (INR/sh)	78	85	(8)	91	94	(3)	117	109	7

Source: Deutsche Bank, Bloomberg Finance LP

Valuations

Raising our 12m target price to INR 2,045/sh

We continue to value L&T on an SOTP basis – Buy with a revised 12-month target price of INR 2,045. We use a target earnings multiple for the long-cycle engineering business of 20x FY14E (19x earlier), as these earnings adequately represent bottom-cycle numbers (also, 40% of the capital employed is working at low utilizations); and we use 20x FY14E (23x earlier) for the short-cycle engineering business, in line with peers from the engineering products business. 16-year P/E bands suggest the stock has historically traded between 6x and 47x earnings, with an average of 23x during FY06-10, and our target P/E multiple is lower than this average to factor in these negatives. Also, our current earnings estimate for the E&C division factors in losses of upcoming facilities, suggesting that our estimates are closer to bottom-cycle earnings.

For other businesses, we use the following method. 1) We assume L&T-IDPL's investments at P/B of 1.0x FY13E; 2) we value the software division at P/E of 10x FY14E (in line with mid-cap peers); 3) we value L&T Finance Holdings at FY14 P/B of 1.5x, since the business has demonstrated RoEs of 16%, justifying this multiple; and 4) we do not apply any conglomerate discount, given that management has successfully listed L&T Finance Holdings to unlock shareholder value. Also, our earnings estimates already reflect significant 'stress' levels across the company's businesses. Our SOTP-derived target price of INR 2,045/share implies a consolidated P/E of 22.6x FY14E.

Figure 49: SOTP valuation

Segments	PAT (INR bn)	BV (INR bn)	Valuation measure	Market cap (INR bn)	Value (INR/sh)	Remarks
Long cycle engineering business	39.9		20x exit P/E 1yr forward	798	1,318	Mid-cycle multiples as 25% of CE is working at less than 10% utilization
Short cycle non E&C business	6.8		20x exit P/E 1yr forward	135	223	Lower than peers such as Cummins India, ABB India, Siemens India
Software company	6.9		10x exit P/E 1yr forward	69	113	In line with mid-cap peers
Finance companies	7.0	59	1.5x P/B for FY14	73	120	Adjusted for L&T's stake of 82.64%
L&T IDPL		90	1x P/B for FY13	90	149	L&T's effective share of NPV
Add: Invt in Infra & other subs		74	Price/Book of 1x	74	122	Valued at Book Value
Equity Value				**1,239**	**2,046**	
Target price of L&T (rounded off)					**2,045**	.

Source: Deutsche Bank

Reverse DCF suggests expectations could be met

We perform a reverse-DCF analysis (three-stage) to determine the market expectation of growth as implied by the current market price (INR 1,534). Our analysis suggests that the market is factoring in annual order inflow growth of 13% over the medium term (FY16E-21E). Figure 48 details our cash flow forecast; FY13-15 is the explicit forecast period, FY16-21 is the semi-explicit period and our terminal cash flow growth assumption is 2%.

Figure 50: Cash flow projection for reverse DCF

	FY11	FY12	FY13e	FY14e	FY15e	FY16e	FY17e	FY18e	FY19e	FY20e	FY21	CAGR FY15-21e
EBIT	50,403	55,832	57,541	65,005	79,875	85,630	96,762	109,341	123,556	139,618	157,768	12.0%
Margin (%)	11.6	10.5	9.4	9.3	9.8	9.3	9.3	9.3	9.3	9.3	9.3	
Taxes on EBIT	(15,121)	(16,749)	(17,262)	(19,501)	(23,962)	(25,689)	(29,029)	(32,802)	(37,067)	(41,885)	(47,330)	
NOPLAT	41,177	45,889	47,355	52,820	63,379	68,378	77,267	87,312	98,663	111,489	125,982	12.1%
Working capital	54,734	96,141	102,689	81,447	99,402	112,973	127,659	144,255	163,008	184,199	208,145	
% of sales	12.6	18.1	16.8	11.6	12.1	12.2	12.2	12.2	12.2	12.2	12.2	
Change in working capital	-17,865	-41,408	-6,547	21,241	-17,955	-13,570	-14,686	-16,596	-18,753	-21,191	-23,946	
Capex	-15,950	-15,300	-9,969	-8,000	-8,000	-9,257	-10,460	-11,820	-13,356	-15,092	-17,055	
% of sales	3.7	2.9	1.6	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Cash flow												
FCFF	7,362	(10,819)	30,838	66,061	37,424	45,551	52,121	58,897	66,553	75,205	84,982	14.6%
Stage I	7,362	(10,819)	30,838	66,061	37,424	-	-	-	-	-	-	
Stage II	-	-	-	-	-	45,551	52,121	58,897	66,553	75,205	84,982	
Terminal value	-	-	-	-	-	-	-	-	-	-	775,329	
Total FCFF	7,362	(10,819)	30,838	66,061	37,424	45,551	52,121	58,897	66,553	75,205	860,311	

Source: Deutsche Bank, Company data

Figure 51: Reverse DCF valuation to arrive at the current implied market valuation of E&C business

Enterprise value	**INR mn**	**% of total NPV**
NPV of Stage I	99,288	15%
NPV of Stage II	219,492	33%
NPV of TV	337,173	51%
NPV of FCFF	655,952	100%
Net cash/ (debt)	(28,020)	
Total market cap	627,933	

Per share basis		
NPV of Stage I	163
NPV of Stage II	361
NPV of TV	554
NPV of FCFF	1,077
Net cash	(46)
Total Equity Value	1,031

Sensitivity to key assumptions

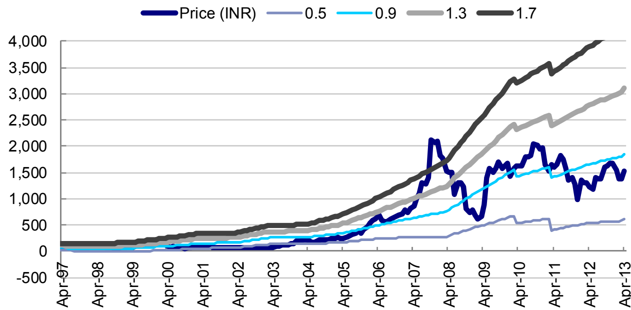
	Cost of Equity (%)					
Terminal growth rate (%)	1,178	11.18	12.18	13.18	14.18	15.18
	-	1,114	1,018	938	869	810
	1.00	1,180	1,071	981	904	839
	2.00	1,261	1,135	1,031	945	872
	3.00	1,361	1,212	1,092	993	911
	4.00	1,490	1,308	1,165	1,051	957

Source: Deutsche Bank

Stock is trading in lower quartile of trading band

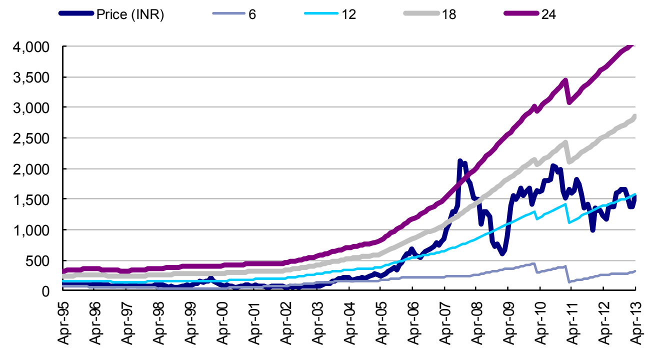
The stock is currently trading at a forward EV/EBITDA multiple of 11.7. The historical bands suggest the stock has historically traded between 7x and 28x with an average of 14x during FY06-12. On an EV/order book basis too, the stock is trading at 0.80x vs. an average of 1.05x, with a range between 0.58x and 2.22x seen during the same period.

Figure 52: Stock is trading in the second quartile of the long term 1-year forward EV/order book bands



Source: Deutsche Bank, Annual reports, Bloomberg Finance LP

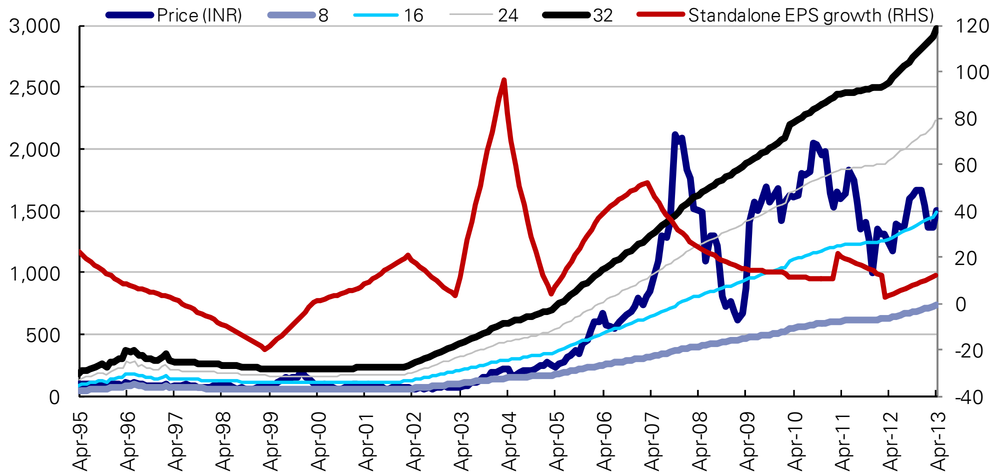
Figure 53: Stock is trading in the second quartile of the long term 1-year forward EV/EBITDA bands



Source: Deutsche Bank, Annual reports, Bloomberg Finance LP

On a P/E basis, the stock is trading in the upper end of the second quartile of the long term 1-year forward P/E band. Historically, the stock has traded within a range of 10.7-46.3x during FY06-12.

Figure 54: P/E band vs. earnings growth



Source: Bloomberg Finance LP, Deutsche Bank

Rating
Buy

Asia
India

Resources
Construction Materials

Company
UltraTech Cement

Reuters	Bloomberg
ULTC.BO	UTCEM IN

Price at 26 Apr 2013 (INR)	1,907.30
Price target - 12mth (INR)	2,100.00
52-week range (INR)	2,052.10 - 1,363.35
BSE 30	19,407

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Emerging as a leader in every sense

ULTC: by far the biggest beneficiary in cement sector; remains top sector pick

In the Indian cement sector, UltraTech (ULTC) should be amongst the biggest beneficiaries of the upcoming railway capex for the following three reasons: a) it has possibly the best access to the upcoming network for despatches; b) 75% of its capacity is in close proximity to the areas falling under the rail capex; and c) it is one of the few companies coming up with dedicated bulk terminals in southern India, a region that's bereft of any upcoming freight corridors, and this can prove to be the key differentiator. Our revised estimates factor in 12% volume growth for FY15E (vs industry volume growth of 8%) leading to a 7% increase in FY15E EPS (6% above consensus).

An early-cycle beneficiary

UltraTech, with 43mt of cement capacity (75% of total sales) catering to regions of the DFC and the DMIC, is likely to be the biggest cement demand beneficiary of the 1,100 sq km of area being developed in these regions. Jaiprakash, with 25mt of cement capacity (70% of its sales), is a distant second. A 5% higher utilization in the forecast period raises our FY15E earnings by 7%.

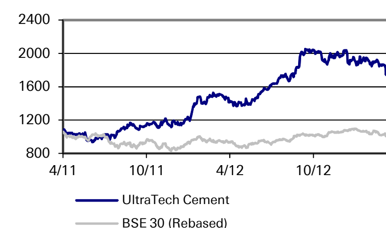
Logistics initiatives could emerge as the key differentiator

UltraTech has also taken a big lead over peers in investing in logistics, in terms of both handling and shipments. With logistics accounting for 35% of the total cost of cement, the differential owing to a vertically integrated structure on sustainable margins is likely to be quite high. An INR200/t lower freight (vs. current freight cost of INR1,200/t) could widen the profitability gap between UltraTech and large-cap peers to INR200-450/t (vs. current gap of INR 0-350/t).

Retaining Buy with a target price of INR2,100/share; risks

We continue to use an average of FY14E P/E of 18x and EV/EBITDA of 10x to arrive at our 12-month target price. Key downside risks are near-term demand concerns having a bearing on prices and an adverse ruling in the ongoing competition case.

Price/price relative



Performance (%)	1m	3m	12m
Absolute	3.1	-0.6	33.3
BSE 30	3.8	-3.5	13.3

Forecasts And Ratios

Year End Mar 31	2011A	2012A	2013E	2014E	2015E
Sales (INRm)	132,099.1	181,663.8	200,179.4	224,282.2	263,573.9
EBITDA (INRm)	25,423.6	40,006.7	45,184.8	53,038.3	64,721.8
Reported NPAT (INRm)	14,042.3	24,461.9	26,554.3	31,560.1	38,613.1
DB EPS FD(INR)	51.24	89.26	96.87	115.11	140.83
OLD DB EPS FD(INR)	51.24	89.26	96.87	115.11	131.89
% Change	0.0%	0.0%	0.0%	0.0%	6.8%
DB EPS growth (%)	-41.6	74.2	8.5	18.8	22.3
PER (x)	19.6	12.8	19.7	16.6	13.5
EV/EBITDA (x)	10.9	7.9	11.6	9.9	7.9
Yield (net) (%)	0.6	0.7	0.5	0.5	0.5

Source: Deutsche Bank estimates, company data

[1] DB EPS is fully diluted and excludes non-recurring items
[2] Multiples and yields calculations use average historical prices for past years and spot prices for current and future years, except P/B which uses the year end close

Model updated:22 April 2013

Running the numbers

Asia

India

Construction Materials

UltraTech Cement

Reuters: ULTC.BO — Bloomberg: UTCEM IN

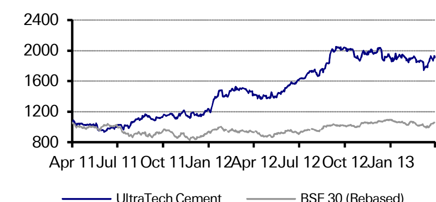
Buy

Price (26 Apr 13)	INR 1,907.30
Target Price	INR 2,100.00
52 Week range	INR 1,363.35 - 2,052.10
Market Cap (m)	INRm 522,676
	USDm 9,644

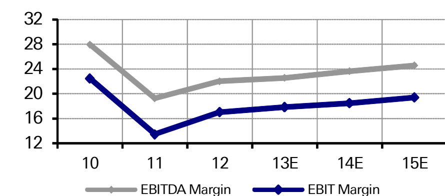
Company Profile

Cement business of Larsen & Toubro Limited demerged and vested in company in 2004, Grasim Industries hold 51% sake in Ultratech.

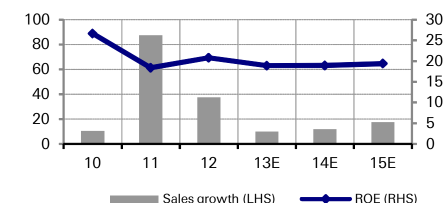
Price Performance



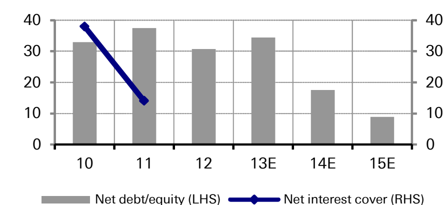
Margin Trends



Growth & Profitability



Solvency



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Financial Summary

DB EPS (INR)	87.82	51.24	89.26	96.87	115.11	140.83
Reported EPS (INR)	87.82	51.24	89.26	96.87	115.11	140.83
DPS (INR)	6.00	6.00	8.00	9.00	9.00	9.00
BVPS (INR)	370.2	389.2	469.2	555.7	660.2	790.5
Weighted average shares (m)	124	274	274	274	274	274
Average market cap (INRm)	100,545	275,578	313,174	522,676	522,676	522,676
Enterprise value (INRm)	99,058	278,191	314,770	524,087	523,433	510,937

Valuation Metrics

P/E (DB) (x)	9.2	19.6	12.8	19.7	16.6	13.5
P/E (Reported) (x)	9.2	19.6	12.8	19.7	16.6	13.5
P/BV (x)	3.12	2.91	3.21	3.43	2.89	2.41
FCF Yield (%)	12.3	nm	1.1	0.6	0.7	2.9
Dividend Yield (%)	0.7	0.6	0.7	0.5	0.5	0.5
EV/Sales (x)	1.4	2.1	1.7	2.6	2.3	1.9
EV/EBITDA (x)	5.0	10.9	7.9	11.6	9.9	7.9
EV/EBIT (x)	6.3	15.7	10.2	14.7	12.6	10.0

Income Statement (INRm)

Sales revenue	70,497	132,099	181,664	200,179	224,282	263,574
Gross profit	32,853	53,971	77,497	87,029	100,069	117,732
EBITDA	19,711	25,424	40,007	45,185	53,038	64,722
Depreciation	3,881	7,657	9,026	9,454	11,577	13,557
Amortisation	0	0	0	0	0	0
EBIT	15,830	17,766	30,981	35,731	41,461	51,165
Net interest income(expense)	-417	-1,261	1,480	953	1,555	1,755
Associates/affiliates	0	0	0	0	0	0
Exceptionals/extraordinaries	0	0	0	0	0	0
Other pre-tax income/(expense)	469	1,357	1,468	1,570	1,750	1,850
Profit before tax	15,882	17,862	33,929	38,254	44,766	54,770
Income tax expense	4,949	3,820	9,467	11,700	13,206	16,157
Minorities	0	0	0	0	0	0
Other post-tax income/(expense)	0	0	0	0	0	0
Net profit	10,932	14,042	24,462	26,554	31,560	38,613
DB adjustments (including dilution)	0	0	0	0	0	0
DB Net profit	10,932	14,042	24,462	26,554	31,560	38,613

Cash Flow (INRm)

Cash flow from operations	15,140	30,070	35,490	38,957	35,326	50,382
Net Capex	-2,762	-80,703	-31,948	-35,968	-31,785	-35,000
Free cash flow	12,378	-50,632	3,541	2,989	3,542	15,382
Equity raised/(bought back)	-344	2,597	-691	83	0	0
Dividends paid	-871	-1,911	-2,548	-2,887	-2,887	-2,887
Net inc/(dec) in borrowings	-5,371	25,319	1	12,559	11,000	11,000
Other investing/financing cash flows	-5,999	25,238	131	-13,200	20,000	0
Net cash flow	-208	611	434	-455	31,655	23,495
Change in working capital	*-999*	*-1,839*	*-830*	*-1,556*	*0*	*0*

Balance Sheet (INRm)

Cash and other liquid assets	837	1,448	1,882	1,427	33,081	56,576
Tangible fixed assets	52,011	125,056	147,978	174,492	194,700	216,144
Goodwill/intangible assets	0	0	0	0	0	0
Associates/investments	16,696	37,303	37,888	51,087	31,087	31,087
Other assets	13,887	36,139	41,684	47,420	51,475	58,085
Total assets	83,430	199,946	229,432	274,426	310,344	361,893
Interest bearing debt	16,045	41,364	41,365	53,925	64,925	75,925
Other liabilities	21,298	51,922	59,469	68,154	64,398	69,221
Total liabilities	37,343	93,286	100,834	122,078	129,323	145,145
Shareholders' equity	46,087	106,660	128,598	152,348	181,021	216,747
Minorities	0	0	0	0	0	0
Total shareholders' equity	46,087	106,660	128,598	152,348	181,021	216,747
Net debt	*15,208*	*39,916*	*39,483*	*52,498*	*31,843*	*19,348*

Key Company Metrics

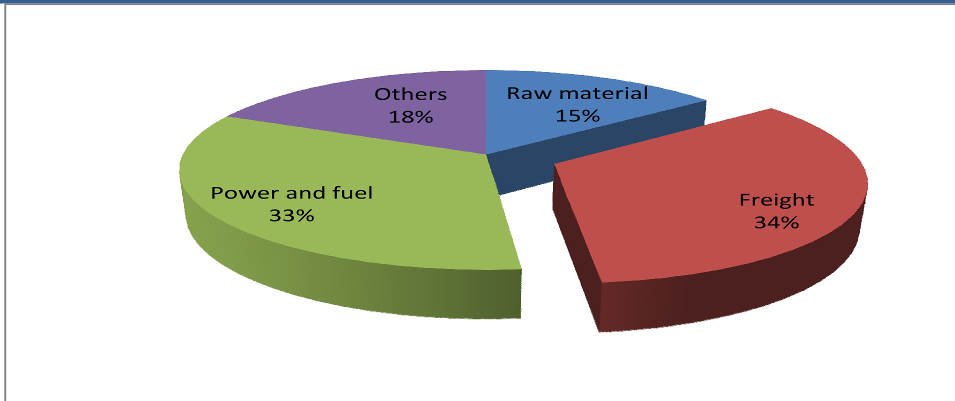
Sales growth (%)	10.4	87.4	37.5	10.2	12.0	17.5
DB EPS growth (%)	11.9	-41.6	74.2	8.5	18.8	22.3
EBITDA Margin (%)	28.0	19.2	22.0	22.6	23.6	24.6
EBIT Margin (%)	22.5	13.4	17.1	17.8	18.5	19.4
Payout ratio (%)	6.8	11.7	9.0	9.3	7.8	6.4
ROE (%)	26.6	18.4	20.8	18.9	18.9	19.4
Capex/sales (%)	3.9	61.1	17.6	18.0	14.2	13.3
Capex/depreciation (x)	0.7	10.5	3.5	3.8	2.7	2.6
Net debt/equity (%)	33.0	37.4	30.7	34.5	17.6	8.9
Net interest cover (x)	38.0	14.1	nm	nm	nm	

Emerging as a leader in every sense

Logistics initiatives could emerge as the key differentiator

Cement companies with proximate plants to markets or superior connectivity to logistics networks clearly enjoy an advantage on the industry cost curve – given the inherent characteristics of the product being extremely voluminous and lowest in terms of value add (c35% of overall costs).

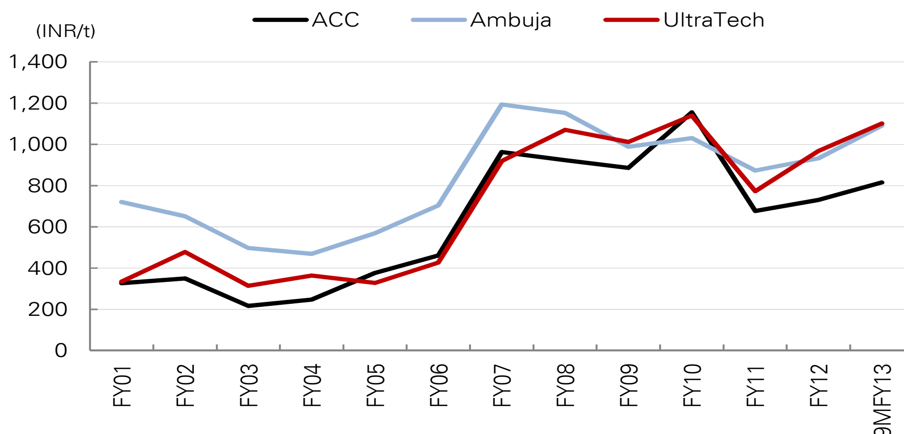
Figure 55: Freight forms almost 35% of the overall cost of cement



Source: Company data, Deutsche Bank

ULTC is poised to move further down the industry cost curve, thanks to its logistics initiatives

Figure 56: Reported EBITDA/t differential to large cap peers has narrowed



Source: Company data, Deutsche Bank. Normalized data for fiscal years ending March

ULTC, already among the lowest-cost producers of cement in India, is poised to improve its competitiveness further and emerge as the biggest beneficiary of the upcoming railway capex.

Its plants have possibly the easiest access to the network

Among the cement industry players, ULTC probably has a larger proportion of its capacity with easy access to upcoming and existing railway networks.

Figure 57: Its lead in installing dedicated bulk terminals and plants with proximity to upcoming network could further improve its competitiveness

Source: Ministry of Railways, Dedicated Freight Corridor Corporation of India Ltd, Company data, Deutsche Bank

Among the biggest exposures to states benefiting from DFC capex

With over 60% of its overall sales in these markets, ULTC is likely to emerge as one of the largest beneficiaries of the rail capex being undertaken, the related allied infrastructure being created and the overall likely improvement in economic activity in these regions (as in the case of NHAI capex in the early 2000s).

Possibly the only player with dedicated bulk terminals near key markets in South India

In South India, where such a network has yet to be conceived, ULTC's lead in coming up with dedicated bulk terminals near key markets could prove to be the key differentiator. Please note that South India has the highest level of oversupply in the country and lacks inexpensive logistics infrastructure to move this material to neighbouring regions over long distances. Accordingly, the southern region is likely to remain a key constraint to inter-regional flow and the consequent impact on the demand-supply balance.

We raise FY15E earnings by 7% (6% above consensus)

We have revised our volume growth assumptions from 7% in FY15E to 12% vs industry volume growth of 8%) given the company's higher presence in the markets where the DFC and the DMIC are coming up, and the company's latent capacities in these regions. This has led to a 7% increase in our FY15E EPS to INR140/share (6% above consensus).

Figure 58: Our estimates are now 6% above consensus

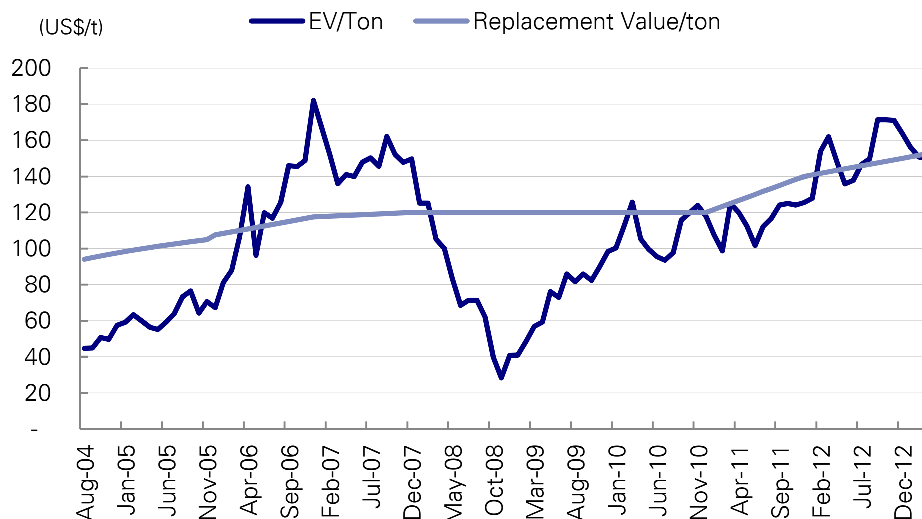
	FY14E			FY15E		
Particulars	Revised	Old	Variation (%)	Revised	Old	Variation (%)
Net Sales	224,282	224,282.2	-	263,574	253,691.2	3.9
EBITDA	54,788	54,788.3	-	66,572	63,459.6	4.9
PAT	31,560	31,560.1	-	38,613	36,160.7	6.8
EPS	115.1	115.1	-	140.8	131.9	6.8
Consensus EPS	113.8			133.1		
% Above consensus	1.1			5.8		

Source: Bloomberg Finance LP, Deutsche Bank

Retaining Buy with a target price of INR2,100/share; risks

While near-term concerns on demand growth remain, the group's cost leadership, upcoming expansions, and strong balance sheet provide comfort. On the valuations front, the stock is trading at replacement cost, which, considering the likely sector upturn in the coming 12-18 months, seems attractive. Please note that in the previous cycles, industry leaders ACC and Ambuja traded at up to a 100% premium during an upturn. Given that the company is emerging as the industry leader in terms of both capacity and profitability, this seems reasonable. Buy.

Figure 59: Trading at replacement cost, which, considering the likely sector upturn in the coming 12-18 months, seems attractive



Source: Deutsche Bank

We continue to use an average of FY14E P/E of 18x and EV/EBITDA of 10x to arrive at our 12-month target price. The multiples are at a premium to large-cap peers ACC and Ambuja, largely on the back of the company emerging as the industry leader in terms of both capacity and profitability. This is in line with previous cycles, when industry leaders typically commanded a premium to peers.

Risks

Key downside risks are near-term demand concerns having a bearing on prices or an adverse ruling in the ongoing competition case. Furthermore, any acquisition at a significant premium to replacement cost that is not earnings-accretive could pose a downside risk.

Rating
Buy

Asia
India

Transportation
Logistics

Company
Adani Ports & SEZ Ltd

Reuters	Bloomberg
APSE.NS	ADSEZ IN

Price at 26 Apr 2013 (INR)	144.50
Price target - 12mth (INR)	172.00
52-week range (INR)	155.85 - 108.00
BSE 30	19,407

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Market share gains could accelerate

Operating leverage + large SEZ land bank = a heady concoction

Adani Ports & SEZ (APSEZ) could be one of the largest late-cycle beneficiaries of the upcoming DFC and DMIC capex, given (a) it has 270m tonnes of capacity across four ports, which are currently operating at below 50% utilisation; (b) the possible impact on the parent company's large trading operations, with likely market share gains; and (c) an improved outlook for APSEZ's large land bank in the SEZ area, given its multi-modal connectivity and the increasing challenges for land acquisition in the country. We retain Buy with a target price of INR172/sh.

Operates four underutilised ports with evacuation infrastructure along the DFC

APSEZ has four large port facilities with a cumulative cargo handling capacity of 270mt (currently operating below 50% utilisation). In this scenario, the upcoming railway and industrial capex could create an entirely new level of cargo demand for these ports and drive operating leverage-led earnings growth for APSEZ. According to our model, a 1% higher market share in a 1% incremental demand growth scenario lifts our NPV by 4%.

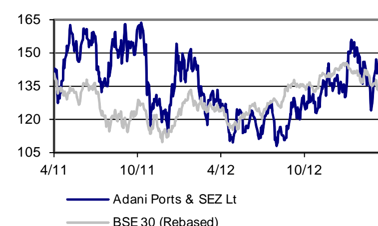
The large land bank could gain value in the current scenario

APSEZ's 15,995 acre land bank (probably India's largest port-based industrial area), with its multi-modal connectivity and large power facilities, offers an ideal location for industry. With land acquisition becoming increasingly challenging, this land bank could become an attractive location for a host of industries – particularly when the DFC and DMIC are ready.

Retaining Buy with a target price of INR172/sh (based on NPV); risks

We use the SOTP of all port concessions, wherein the concession value is estimated using NPV with zero terminal value (using 12.91% CoE), to arrive at our target price. Key downside risks: consensus downgrades following weak economic activity and any acquisition at a significant premium to replacement.

Price/price relative



Performance (%)	1m	3m	12m
Absolute	10.0	10.9	16.7
BSE 30	3.8	-3.5	13.3

Forecasts And Ratios

Year End Mar 31	2011A	2012A	2013E	2014E	2015E
Sales (INRm)	20,001.1	32,708.0	48,721.4	47,182.5	55,763.8
EBITDA (INRm)	12,994.0	20,652.5	31,210.2	29,209.6	34,907.8
Reported NPAT (INRm)	9,181.5	11,020.7	11,647.6	15,191.7	19,586.0
Reported EPS FD(INR)	4.583	5.501	5.814	7.583	9.776
DB EPS FD(INR)	4.583	5.501	5.814	7.583	9.776
DB EPS growth (%)	31.9	20.0	5.7	30.4	28.9
PER (x)	19.6	26.1	24.9	19.1	14.8
EV/EBITDA (x)	16.4	21.9	16.0	12.9	10.5
DPS (net) (INR)	0.900	1.000	1.108	1.108	1.108
Yield (net) (%)	1.0	0.7	0.8	0.8	0.8

Source: Deutsche Bank estimates, company data

[1] DB EPS is fully diluted and excludes non-recurring items
[2] Multiples and yields calculations use average historical prices for past years and spot prices for current and future years, except P/B which uses the year end close

Model updated:17 April 2013

Running the numbers

Asia

India

Logistics

Adani Ports & SEZ Ltd

Reuters: APSE.NS Bloomberg: ADSEZ IN

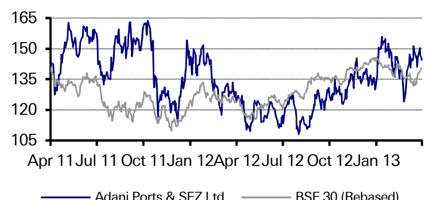
Buy

Price (26 Apr 13)	INR 144.50
Target Price	INR 172.00
52 Week range	INR 108.00 - 155.85
Market Cap (m)	INRm 289,490
	USDm 5,342

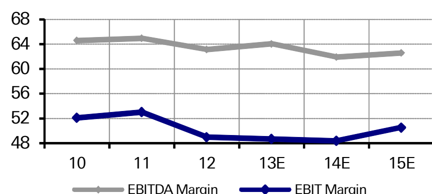
Company Profile

Adani Ports & Special Economic Zone (APSEZ) - a part of India's leading infrastructure conglomerate the Adani Group - is India's largest private multi-port operator. APSEZ is the only private sector port operator with presence across six ports in India. The company's aim is to increase annual cargo handling capacity from 78 million MT in 2012 to 200 million MT by 2020.

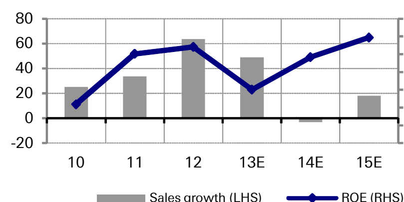
Price Performance



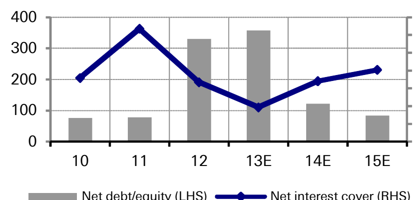
Margin Trends



Growth & Profitability



Solvency



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Fiscal year end 31-Mar	2010	2011	2012	2013E	2014E	2015E
Financial Summary						
DB EPS (INR)	3.48	4.58	5.50	5.81	7.58	9.78
Reported EPS (INR)	3.37	4.58	5.50	5.81	7.58	9.78
DPS (INR)	0.80	0.90	1.00	1.11	1.11	1.11
BVPS (INR)	17.2	20.9	24.2	28.7	35.0	43.4
Weighted average shares (m)	2,003	2,003	2,003	2,003	2,003	2,003
Average market cap (INRm)	44,388	179,827	287,204	289,490	289,490	289,490
Enterprise value (INRm)	70,056	213,557	452,082	500,919	377,906	364,852
Valuation Metrics						
P/E (DB) (x)	6.4	19.6	26.1	24.9	19.1	14.8
P/E (Reported) (x)	6.6	19.6	26.1	24.9	19.1	14.8
P/BV (x)	1.80	6.46	5.33	5.04	4.13	3.33
FCF Yield (%)	nm	nm	nm	nm	4.9	5.4
Dividend Yield (%)	3.6	1.0	0.7	0.8	0.8	0.8
EV/Sales (x)	4.7	10.7	13.8	10.3	8.0	6.5
EV/EBITDA (x)	7.3	16.4	21.9	16.0	12.9	10.5
EV/EBIT (x)	9.0	20.1	28.2	21.1	16.5	12.9
Income Statement (INRm)						
Sales revenue	14,955	20,001	32,708	48,721	47,183	55,764
Gross profit	9,663	12,994	20,653	31,210	29,210	34,908
EBITDA	9,663	12,994	20,653	31,210	29,210	34,908
Depreciation	1,868	2,388	4,630	7,485	6,375	6,731
Amortisation	0	0	0	0	0	0
EBIT	7,795	10,606	16,022	23,725	22,835	28,177
Net interest income(expense)	-2,177	-1,671	-4,796	-12,317	-6,725	-6,986
Associates/affiliates	0	0	0	0	0	0
Exceptionals/extraordinaries	-203	0	0	0	0	0
Other pre-tax income/(expense)	1,939	1,100	596	1,549	1,435	1,507
Profit before tax	7,353	10,036	11,822	12,957	17,545	22,698
Income tax expense	601	874	896	1,163	2,262	2,875
Minorities	-8	-20	-94	147	91	237
Other post-tax income/(expense)	0	0	0	0	0	0
Net profit	6,760	9,181	11,021	11,648	15,192	19,586
DB adjustments (including dilution)	203	0	0	0	0	0
DB Net profit	6,963	9,181	11,021	11,648	15,192	19,586
Cash Flow (INRm)						
Cash flow from operations	8,462	14,268	21,783	1,515	19,228	26,377
Net Capex	-17,788	-19,762	-148,512	-45,345	-5,150	-10,735
Free cash flow	-9,326	-5,495	-126,729	-43,830	14,078	15,642
Equity raised/(bought back)	-1	0	0	0	0	0
Dividends paid	-1,603	-1,804	-2,329	-2,588	-2,588	-2,588
Net inc/(dec) in borrowings	8,105	-1,138	139,725	38,760	-124,550	3,212
Other investing/financing cash flows	-130	954	-1,759	-229	111,614	237
Net cash flow	-2,954	-7,482	8,908	-7,887	-1,446	16,502
Change in working capital	*-1,214*	*1,569*	*-6,372*	*-17,618*	*-2,339*	*60*
Balance Sheet (INRm)						
Cash and other liquid assets	9,997	2,515	11,422	3,535	2,089	18,592
Tangible fixed assets	67,682	84,683	217,843	255,702	153,676	157,680
Goodwill/intangible assets	29	404	11,125	11,125	404	404
Associates/investments	2,219	667	697	941	941	941
Other assets	7,194	6,918	18,111	38,498	36,864	38,434
Total assets	87,122	95,186	259,198	309,802	193,974	216,051
Interest bearing debt	37,062	35,925	175,650	214,410	89,859	93,071
Other liabilities	14,699	16,375	33,815	36,452	32,480	34,110
Total liabilities	51,762	52,300	209,465	250,862	122,339	127,181
Shareholders' equity	34,538	41,899	48,385	57,444	70,048	87,046
Minorities	822	987	1,349	1,495	1,586	1,824
Total shareholders' equity	35,361	42,886	49,734	58,940	71,634	88,869
Net debt	*27,066*	*33,410*	*164,227*	*210,874*	*87,770*	*74,479*
Key Company Metrics						
Sales growth (%)	25.2	33.7	63.5	49.0	-3.2	18.2
DB EPS growth (%)	53.3	31.9	20.0	5.7	30.4	28.9
EBITDA Margin (%)	64.6	65.0	63.1	64.1	61.9	62.6
EBIT Margin (%)	52.1	53.0	49.0	48.7	48.4	50.5
Payout ratio (%)	23.7	19.6	18.2	19.1	14.6	11.3
ROE (%)	21.2	24.0	24.4	22.0	23.8	24.9
Capex/sales (%)	118.9	98.8	454.1	93.1	10.9	19.3
Capex/depreciation (x)	9.5	8.3	32.1	6.1	0.8	1.6
Net debt/equity (%)	76.5	77.9	330.2	357.8	122.5	83.8
Net interest cover (x)	3.6	6.3	3.3	1.9	3.4	4.0

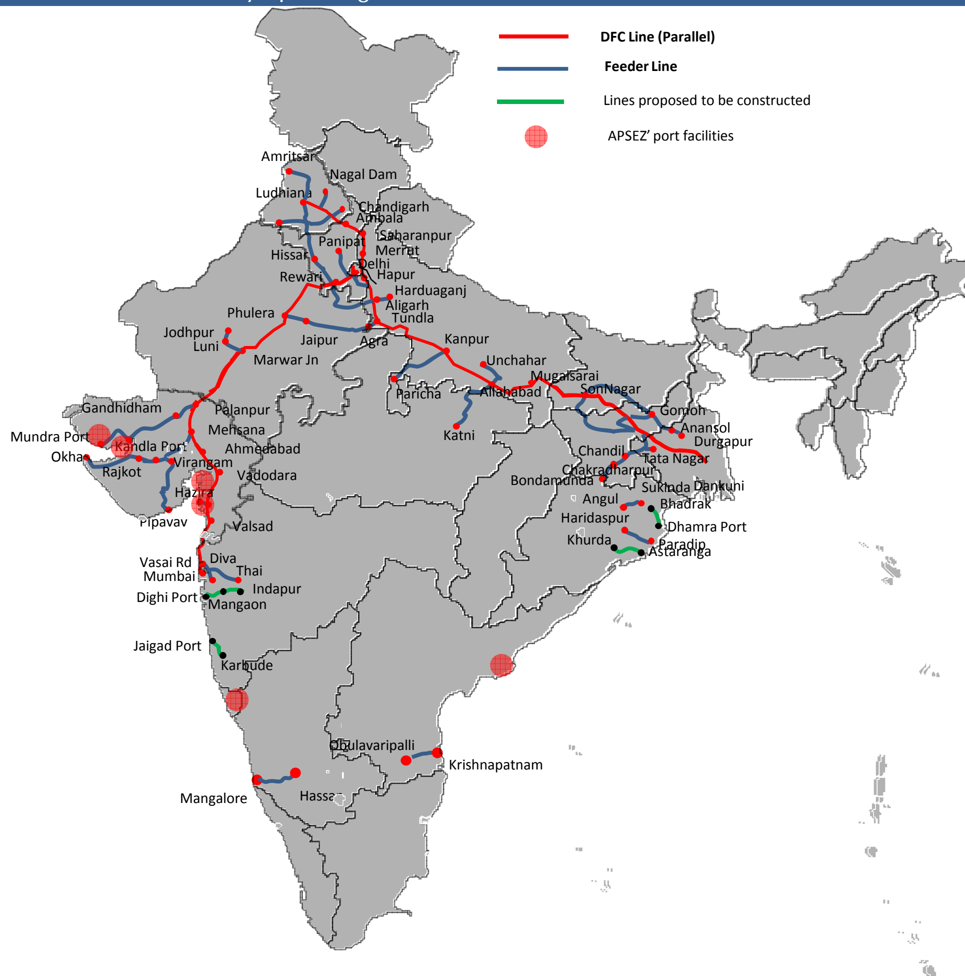
Source: Company data, Deutsche Bank estimates

A late-cycle beneficiary

Operates four underutilised ports with evacuation infrastructure along DFC

APSEZ, a late-cycle beneficiary of the DFC and DMIC capex, has four large port facilities with a cumulative cargo-handling capacity of 270mt, which are currently operating at below 50% utilisation. In this scenario, the upcoming railway and industrial capex could create an entirely new level of cargo demand for these ports and drive operating leverage-led earnings growth for APSEZ. According to our model, a 1% higher market share in a 1% incremental demand growth scenario lifts our NPV by 4%.

Figure 60: APSEZ has 270m tonnes of cargo-handling facilities along the DFC and DMIC that are currently operating at below 50% utilisation



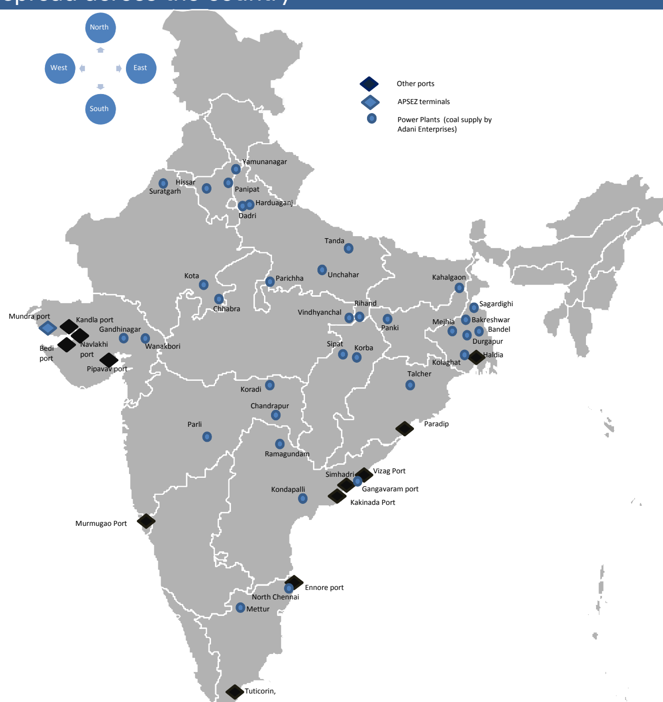
Source: DFCCIL, Company data, DMIC, Deutsche Bank

Could continue to gain from parent's large trading business

Adani Enterprises (AEL), the parent company of Adani Ports & SEZ, has one of the largest trading operations in the country and is the market leader in coal imports into

the country (for its power subsidiary, as well as for third-party customers). In FY12, AEL imported 36m tonnes, which it aims to increase to 100m tonnes in FY20. This large trading operation is spread across both its own facilities and other ports (both major and minor) in the country. The upcoming DFC and DMIC development could effectively open up a new level of demand for the parent's trading business and the port could continue to gain from this.

Figure 61: Its newer ports can benefit from the parent group channelling traffic from a wide clientele spread across the country



Source: Company data, Deutsche Bank

The large land bank could gain value in the current scenario

APSEZ's 15,995 acre land bank (probably India's largest port-based industrial area), with its multi-modal connectivity and large power generation facilities, offers an ideal location for most industries. With land acquisition becoming an increasingly challenging exercise in the country, this land bank could become an increasingly attractive asset for a host of industries – particularly when the DFC and DMIC are ready.

Retaining Buy with a target of INR172/sh (based on NPV)

As with other ports, we use the SOTP of all port concessions, wherein the concession value is estimated using NPV with zero terminal value (using 12.91% CoE) to arrive at our target price. We believe this is reasonable, considering that the company seems to have built a business model for managing long-duration port concessions (25 years-plus in most cases) across six ports on the Indian coastline, and also the company's firm long-term contracts with some large customers. Note that our CoE of 12.91% for operational ports is based on Deutsche Bank's estimates of a risk premium of 7.9% for India and a risk-free rate of 5.8%. We use a beta of 0.9. For projects under development, we assume a 20% higher beta to factor in the development risk.

Figure 62: Our 12-month target price is derived using SOTP of all port concessions (concession value estimated using NPV with zero terminal value)

SOTP	INR/Sh	Remarks
Mundra Port	147	NPV using CoE of 12.91%
Dahej Port	14	NPV using CoE of 12.91%
Hazira Port	9	NPV using CoE of 12.91%
Mormugao	1	NPV using CoE of 14.33% incl 20% higher beta for execution risk
Vizag	1	NPV using CoE of 14.33% incl 20% higher beta for execution risk
Kandla	0	NPV using CoE of 14.33% incl 20% higher beta for execution risk
Abbot Point - Book value	1	1x Book value (9MFY13E estimated BV as per quarterly earnings release)
Total NAV (INR/sh)	172	
Exit P/B (x)	4.9	
Exit P/E (x)	22.6	
Exit EV/EBITDA (x)	14.7	

Source: Company data, Deutsche Bank estimates

Risks

Key downside risks:

- Delay/pushback in the Abbot Point assets being transferred to the Adani promoter family, resulting in debt remaining elevated in the forecast period and multiples drifting down.
- Assets getting transferred below book value of INR1.3bn – resulting in the Street using a significant conglomerate discount for valuations (Deutsche Bank estimates assume no conglomerate discount, as we have not estimated any value for land owned by company).
- Consensus downgrades following weak interims due to low economic activity.
- Acquisitions at a significant premium to replacement.

Key sensitivities

Our earnings model implies that 1% higher market share raises our FY14E EPS by 1.5% and has a 30bp RoE impact. Furthermore, a % higher All India volume growth is likely to help see a 4% rise in FY14E EPS and a 80bp RoE impact. Lastly, a 1% change in WPI inflation impacts EPS by 5% and leads to 90bp RoE expansion.

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Rating
Buy

Asia
India

Utilities
Utilities

Company
NTPC Limited

Reuters	Bloomberg
NTPC.BO	NTPC IN

Price at 26 Apr 2013 (INR)	154.80
Price target - 12mth (INR)	180.00
52-week range (INR)	174.45 - 138.10
BSE 30	19,407

Back to an era of fuel sufficiency?

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A late-cycle beneficiary through better fuel availability; preferred Buy

NTPC's stock has underperformed the Sensex by ~20% over the past 12 months, primarily due to 15-16 quarters of earnings disappointment, nil generation growth and a decline in the availability of plant (PAF) – leading to a decline in ROEs and limited EPS growth. While in the near-to-medium term, improving coal availability from higher coal production would offer respite, building up the freight corridor and PPP lines of Coal India and NTPC could alter the availability paradigm back to 92% levels vs. our long-term forecast of 87%. Our DCF value for this change consequently rises by 9%. At 1.4x P/B, valuations are attractive; we reiterate NTPC's top-pick status and Buy rating.

10.5GW capacities to get fillip from DFC

The development of the East-West dedicated freight corridor could help the movement of coal through the eastern coal belt to NTPC's northern coal projects. 10.5GW capacities, which receive less coal as of now, are likely to see the most benefit. Dadri, a non pit-head project, could be a key beneficiary. Amongst the expansion projects, 1GW Rihand III and 0.5GW Vindhyachal-V could get the benefits of better logistical connectivity.

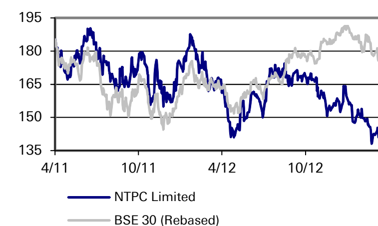
Management focus to be back on core competence of power generation

Over the last few years, management's focus has shifted from new capacity to fuel sourcing. A rise in fuel availability through better rail corridors would allow NTPC to refocus on growth of the core power business. Our estimates factor in 8.5% book growth; 2% higher growth from FY17E raises DCF value by 7%.

SOTP and P/B for 12-month target price; key risks (refer pp63-65 for detail)

Our 12-month TP is INR180/sh. We have used the average of a three-stage DCF and exit P/BV multiple to value the regulated earnings business model of NTPC. Valuations are attractive at 1.4x P/B and 10x PE for a utility model – at a 30% discount to historical averages and a ~15% discount to comparable regional peers such as CLP/KEPCO. Risks: lower coal availability (imbroglio with CIL), major delay in new mines and regulatory tightening, if any.

Price/price relative



Performance (%)	1m	3m	12m
Absolute	8.6	-2.8	-3.9
BSE 30	3.8	-3.5	13.3

Forecasts And Ratios

Year End Mar 31	2011A	2012A	2013E	2014E	2015E
Sales (INRm)	576,072	658,932	712,203	766,735	874,816
EBITDA (INRm)	150,945	154,410	166,062	188,552	210,486
Reported NPAT (INRm)	93,482	98,146	107,045	121,937	129,872
DB EPS FD (INR)	11.3	11.9	13.0	14.8	15.8
DB EPS growth (%)	7.0	5.0	9.1	13.9	6.5
PER (x)	17.3	14.6	11.9	10.5	9.8
Price/BV (x)	2.3	1.8	1.6	1.4	1.3
EV/EBITDA (x)	12.7	11.9	10.5	9.4	8.9
Yield (net) (%)	1.9	2.5	3.0	3.5	3.7
ROE (%)	14.2	13.6	13.7	14.4	14.1

Source: Deutsche Bank estimates, company data

[1] DB EPS is fully diluted and excludes non-recurring items
[2] Multiples and yields calculations use average historical prices for past years and spot prices for current and future years, except P/B which uses the year end close

Model updated:16 April 2013

Running the numbers

Asia
India
Utilities

NTPC Limited

Reuters: NTPC.BO Bloomberg: NTPC IN

Buy

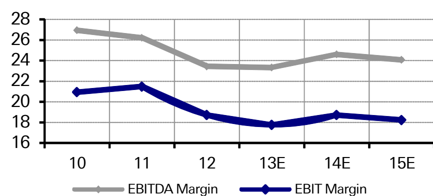
Price (26 Apr 13)	INR 154.80
Target Price	INR 180.00
52 Week range	INR 138.10 - 174.45
Market Cap (m)	INRm 1,276,397
	USDm 23,552

Company Profile

NTPC Limited, established in 1975, is India's largest thermal-power generating company, and also the country's largest power utility. NTPC's installed capacity, as of 1 March 2013, is 40,174 MW, through its 15 coal-based and 7 gas/liquid fuel-based (3,955 MW) projects, and its 5 JVs. NTPC is aggressively increasing capacity through greenfield projects and expansion of existing stations, and foray into hydro-power and non-conventional and nuclear power generation.

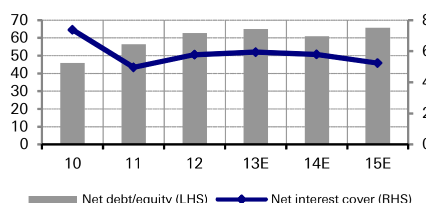
Price Performance

Margin Trends



Growth & Profitability

Solvency



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Fiscal year end 31-Mar	2010	2011	2012	2013E	2014E	2015E
Financial Summary						
DB EPS (INR)	10.60	11.34	11.90	12.98	14.79	15.75
Reported EPS (INR)	10.60	11.34	11.90	12.98	14.79	15.75
DPS (INR)	3.82	3.80	4.31	4.70	5.35	5.70
BVPS (INR)	76.3	83.6	91.0	98.4	107.0	116.1
Weighted average shares (m)	8,245	8,245	8,245	8,245	8,245	8,245
Average market cap (INRm)	1,715,509	1,613,754	1,428,831	1,276,397	1,276,397	1,276,397
Enterprise value (INRm)	1,886,564	1,919,067	1,833,925	1,751,543	1,775,093	1,878,987
Valuation Metrics						
P/E (DB) (x)	19.6	17.3	14.6	11.9	10.5	9.8
P/E (Reported) (x)	19.6	17.3	14.6	11.9	10.5	9.8
P/BV (x)	2.71	2.31	1.79	1.57	1.45	1.33
FCF Yield (%)	nm	nm	nm	nm	2.2	nm
Dividend Yield (%)	1.8	1.9	2.5	3.0	3.5	3.7
EV/Sales (x)	3.9	3.3	2.8	2.5	2.3	2.1
EV/EBITDA (x)	14.5	12.7	11.9	10.5	9.4	8.9
EV/EBIT (x)	18.7	15.5	14.9	13.9	12.4	11.8
Income Statement (INRm)						
Sales revenue	482,245	576,072	658,933	712,203	766,735	874,816
Gross profit	153,302	180,155	190,066	210,620	235,876	263,976
EBITDA	129,954	150,945	154,410	166,062	188,552	210,486
Depreciation	28,944	27,197	31,071	39,613	45,042	50,982
Amortisation	0	0	0	0	0	0
EBIT	101,010	123,748	123,340	126,449	143,510	159,504
Net interest income(expense)	-13,706	-24,929	-21,347	-21,291	-24,780	-30,456
Associates/affiliates	0	0	0	0	0	0
Exceptionals/extraordinaries	473	1,094	0	0	0	0
Other pre-tax income/(expense)	21,716	24,010	29,380	35,691	37,600	37,456
Profit before tax	109,020	122,830	131,372	140,849	156,330	166,503
Income tax expense	22,114	30,441	33,226	33,804	34,393	36,631
Minorities	0	0	0	0	0	0
Other post-tax income/(expense)	0	0	0	0	0	0
Net profit	87,379	93,482	98,146	107,045	121,937	129,872
DB adjustments (including dilution)	0	0	0	0	0	0
DB Net profit	87,379	93,482	98,146	107,045	121,937	129,872
Cash Flow (INRm)						
Cash flow from operations	104,491	112,782	132,749	88,232	196,758	156,824
Net Capex	-133,827	-122,918	-186,825	-112,982	-168,704	-205,754
Free cash flow	-29,337	-10,136	-54,075	-24,750	28,054	-48,931
Equity raised/(bought back)	0	0	0	0	0	0
Dividends paid	-37,720	-36,720	-43,429	-45,302	-51,605	-54,963
Net inc/(dec) in borrowings	53,259	29,504	79,031	41,019	59,936	75,014
Other investing/financing cash flows	-816	34,203	18,120	13,125	13,125	13,125
Net cash flow	-14,614	16,851	-353	-15,908	49,510	-15,755
Change in working capital	*-5,993*	*-6,204*	*-4,258*	*-58,426*	*29,779*	*-24,031*
Balance Sheet (INRm)						
Cash and other liquid assets	160,530	178,598	180,917	165,009	214,519	198,764
Tangible fixed assets	763,838	859,559	1,015,312	1,088,681	1,212,343	1,367,115
Goodwill/intangible assets	0	0	0	0	0	0
Associates/investments	117,776	83,573	65,453	52,329	39,204	26,079
Other assets	176,508	244,391	290,932	313,179	292,927	311,921
Total assets	1,218,652	1,366,121	1,552,614	1,619,197	1,758,993	1,903,879
Interest bearing debt	449,360	567,484	651,464	692,483	752,419	827,433
Other liabilities	140,223	109,352	151,173	114,994	124,521	119,483
Total liabilities	589,583	676,836	802,636	807,476	876,940	946,916
Shareholders' equity	629,069	689,286	749,984	811,727	882,059	956,969
Minorities	0	0	0	0	0	0
Total shareholders' equity	629,069	689,286	749,984	811,727	882,059	956,969
Net debt	*288,830*	*388,886*	*470,547*	*527,474*	*537,900*	*628,669*
Key Company Metrics						
Sales growth (%)	13.5	19.5	14.4	8.1	7.7	14.1
DB EPS growth (%)	11.5	7.0	5.0	9.1	13.9	6.5
EBITDA Margin (%)	26.9	26.2	23.4	23.3	24.6	24.1
EBIT Margin (%)	20.9	21.5	18.7	17.8	18.7	18.2
Payout ratio (%)	36.0	33.5	36.2	36.2	36.2	36.2
ROE (%)	14.5	14.2	13.6	13.7	14.4	14.1
Capex/sales (%)	27.8	21.3	28.4	15.9	22.0	23.5
Capex/depreciation (x)	4.6	4.5	6.0	2.9	3.7	4.0
Net debt/equity (%)	45.9	56.4	62.7	65.0	61.0	65.7
Net interest cover (x)	7.4	5.0	5.8	5.9	5.8	5.2

Source: Company data, Deutsche Bank estimates

Concrete steps for enhancing fuel availability

NTPC has submitted firm proposals for PPP with Indian Railways

According to the Ministry of Railways, NTPC's proposals for rail infrastructure investments could qualify under new the PPP program – implying no cap on returns; i.e., investments would not be RoE dilutive. To recap, NTPC, alongside Indian Railways, is working on 7-8 common feeder lines, especially for coal evacuation from the central coal belt for its power projects / captive mine evacuation (see Figure 63).

Figure 63: Railway feeder lines for NTPC mines / power projects

Project	Rail feeder line	Current status	Completion
Captive Coal			
Pakri Barwadih	Hazaribagh-Banadag Line	Construction by EC Railways from Nov'12	Completion by April'13
Chatti Bariatu & South Kerandari	Tori-Shivpur & Shivpur-Kathautia	Forest clearance and land acquisition to be done	Not certain - CCI to take up
	Shivpur-Chatti Bariatu	Feasibility study in progress	NA
Power project			
Barh	Hazaribagh-Koderma	Manpur rail over bridge INR 1.44bn funded by NTPC	Work to start in Apr'13
	Koderma-Tilaiya line	Forest clearance of Bihar pending	NA
Mouda	Line from Chacher station	Plan approved	NA
Solapur	Rail-over bridge at Hotgi	Railway started work	14-15 months
Khargone	Gauge conversion from Khandwa	DPR approval with Railways	NA
Kudgi	Doubling Hotgi-Bilaspur-Kudgi line	Cost sharing proposal with railways	NA

Source: Company, Ministry of Railways, Deutsche Bank

We forecast 10.5GW (27% of NTPC's capacity) to get fillip from DFC post FY17e

The development of the East-West dedicated freight corridor could help the movement of coal through the eastern coal belt to a few of NTPC's northern coal projects. While 11.7GW of projects will be connected via feeder lines to DFC, most of the benefits are likely to be for 10.5GW capacities, which receive less coal as of now. Dadri, a non pit-head project, could be a key beneficiary.

Among the expansion projects, 1GW Rihand III and 0.5GW Vindhyachal-V could get the benefits of better logistical connectivity. The rest of the expansion in capacity over the next four years is planned to come in the states of Bihar, Maharashtra, Karnataka and Tamil Nadu, and may not see any significant direct gains.

Figure 64: New feeder lines reach to NTPC projects

Source: Deutsche Bank

Figure 65: NTPC projects – beneficiaries of expansion in railway network

Project	Type	FY13 Cap (MW)	Issues
Singrauli	Pithead	2,000	Lower coal availability due to mine expansion delays
Rihand	Pithead	2,500	Additional unit added – back-down by discoms and planned outage
Vindhyachal	Pithead	3,760	Additional unit added, lower domestic coal availability
Tanda	Non-Pit	440	Planned outages, and back-down by states
Dadri Thermal	Non-Pit	1,820	Less coal for new units and severe back-down by discoms
Unchahar	Non-Pit	1,050	NA
Expansion			
Rihand – III	Pithead	1,000	Likely to commission by 2013-14
Vindhyachal – V	Pithead	500	Likely to commission by 2013-14

Source: CEA, Company, Deutsche Bank

Historically, fuel availability has been the bane of some plants' operations

NTPC's 10 super thermal projects, totaling 21GW (55% of total capacity), have suffered generation loss and lower utilization rates in recent years. This has been due to lower fuel availability, as a result of delays in coal mine expansion and/ or limited logistics to ferry domestic coal. Also, various bottlenecks in railways from ports have led to limited movement of imported coal to projects in North India – especially the one at Mughalsarai junction. Logistical issues have been one of the key factors leading to lower ROEs and loss of incentives.

Figure 66: NTPC projects witnessed falling utilization rates

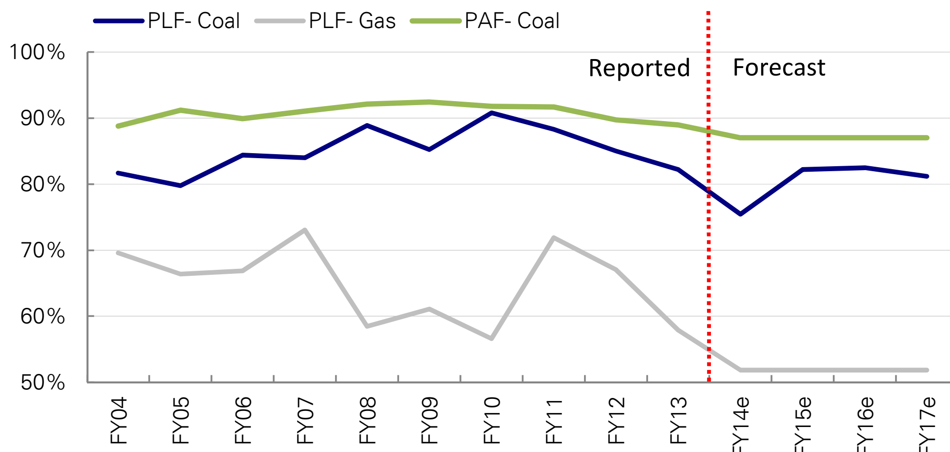
Project	Type	FY13 Cap (MW)	PLF (%)						Issues
			FY08	FY09	FY10	FY11	FY12	FY13	
Singrauli	Pithead	2,000	92	91	93	97	89	92	Lower coal availability due to mine expansion delays
Rihand	Pithead	2,500	96	97	96	93	92	77	Additional unit added – back-down by discoms and planned outage
Vindhyachal	Pithead	3,760	91	93	97	95	91	82	Additional unit added, lower domestic coal availability
Tanda	Non-Pit	440	92	89	92	93	88	84	Planned outages, and back-down by states
Dadri Thermal	Non-Pit	1,820	98	99	67	76	89	82	Less coal for new units and severe back-down by discoms
Unchahar	Non-Pit	1,050	98	94	97	93	90	93	NA
Korba	Pithead	2,600	96	96	98	94	79	90	NA
Farakka	Pithead	2,100	84	77	73	60	57	63	Logistic and mine expansion issues
Kahalgaon	Pithead	2,340	93	59	70	68	66	72	Logistic and mine expansion issues
Talcher STPS	Pithead	3,000	94	86	90	86	83	82	Logistic constraints ; poor quality coal
Talcher TPS	Pithead	470	87	93	91	94	93	94	NA
Sipat-II - Unit IV and V	Pithead	2980	0	54	93	97	80	74	New expansion, technical issues led to forced outages
Ramagundam	Non-Pit	2,600	90	94	95	90	93	91	NA
Simhadri	Non-Pit	2,000	89	97	97	64	93	72	Outages; coal handling not well equipped to handle imported coal

Source: CEA, Company, Deutsche Bank

Accordingly, average PLF has declined by 9% in last three years, and our forecast factors in average PLF and availability

The average utilization factor (PLF) for NTPC's coal projects has declined by 9ppts over the last three years, since the inception of coal availability constraints in the system. Similarly, plant availability (PAF) has dropped by 3ppts over the same timeframe and we assume in our forecasts that it will fall by a further ~2ppts. Gas projects have seen a massive 14ppt correction in PLFs over the past two years, as KG-D6 gas availability has declined sharply, and we assume in our forecasts that PLFs will fall by a further 6ppts in FY14E.

Figure 67: PLF and PAFs have weakened over the last three years, and future assumptions do not build in any recovery



Source: Company, Deutsche Bank

Sensitivity to earnings and ROE is material

A 500bps improvement in plant availability and utilization factors over a five-year period could increase ROEs by 100bps to over 15%, and earnings could get an additional 9-10% fillip over the current base case estimates of mild recovery.

Our SOTP and DCF estimated fair valuation is at INR180/sh

We use the average of a three-stage DCF methodology and a target exit P/BV multiple to arrive at a target price of INR180/sh. The DCF approach is based on a three-stage forecast of cash flows. Stage 1 covers an explicit forecast over FY12-17E. Stage 2 assumes a semi-explicit period of FY18-22E with free cash flow growth at a 6% CAGR. Stage 3 is the terminal growth phase, with a terminal growth rate of free cash flow assumed at 3%.

Our cost of equity is 12.4% (no change), based on a risk-free rate of 8.1%, an equity risk premium of 5.3% and beta of 0.8. Our terminal growth rate of 3% looks reasonable as it is lower than the long-term GDP forecast of 6-7% for India. This yields a value of INR185/sh.

In addition, we have used a sum-of-the-parts valuation methodology wherein we have maintained exit P/BV for the operating power assets at 2.25x FY14E, as the RoE of these assets are assumed to remain within a 21-23% range, based on our current forecast. We have used the exit P/B of 1.5x for the power assets under implementation, in line with the Gordon Growth Model, and 1x for investments and cash. We have valued the coal assets using NPV methodology, considering 14% cost of equity. This SOTP approach yields a value of INR175/sh. The average of the two methods results in INR180/sh, which is our target price for NTPC.

Figure 68: NTPC SOTP valuations

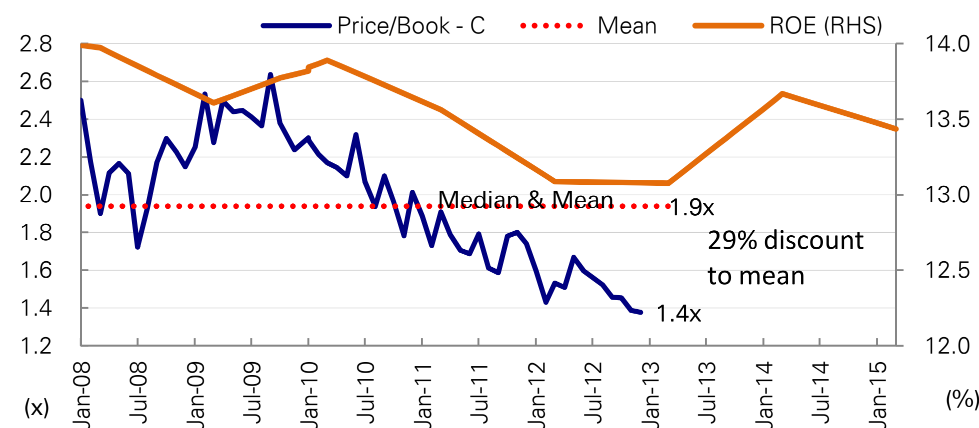
	Valuation multiple	Value in Rs bn	Value in Rs/share
Operating assets	2.25x FY14E regulated book	779	94
Investment in JVs and Subs	2.25x FY14E invested equity	161	20
Equity in CWIP	1.5x equity portion of FY14E CWIP	135	16
Investments	1x FY14E	39	5
Cash and cash equivalents	1x FY14E	215	26
Mining assets as on FY13E	NPV at CoE of 14%	103	12
Consultancy business	2x FY14E EV/Sales	13	2
Equity Value from P/B approach (A)		**1,445**	**175**
Method II: DCF Approach (B)	CoE of 12.4%; Terminal growth 3%	**1,526**	**185**
Average of the two methods		**1,485**	**180**

Source: Deutsche Bank estimates

Sharp 30% discount to historical averages

Certainty of earnings and growth visibility does not seem to be factored into current NTPC valuations, which are at a historically high 30% discount to the historical mean, due to coal unavailability issues. Improving domestic coal visibility is likely to be positive for driving NTPC's operating leverage and, in turn, a re-rating.

Figure 69: NTPC 22% discount to mean should revert as ROE decline reverses



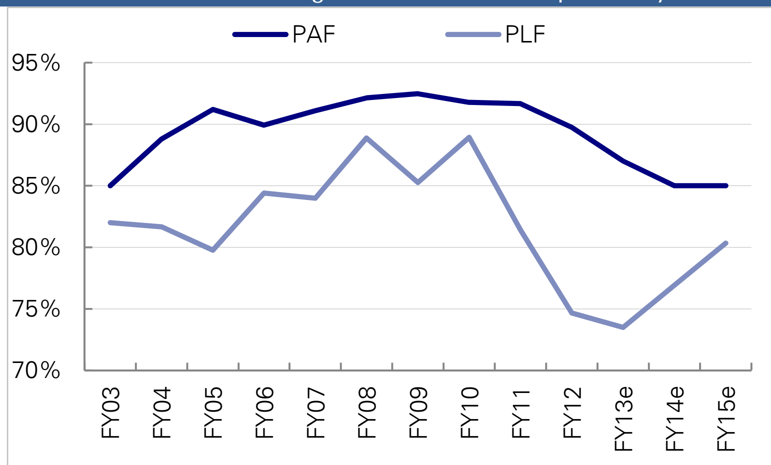
Source: Company data, Bloomberg Finance LP, Deutsche Bank

Risks

Unavailability of reasonable domestic coal, and hence the loss of marginal ROE

Lower coal availability – either from Coal India or logistics challenges in transporting imported coal to its project site – has affected the company's generation (read PLFs) and availability-led incentives (read PAF).

Figure 70: PAF and PLF have seen significant decline over past 2-3 years

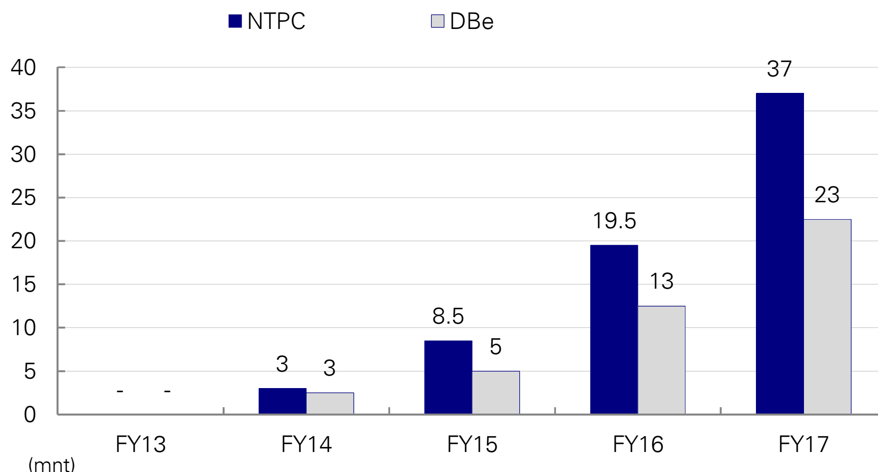


Source: Company data, Deutsche Bank

Delays in captive coal mining, which can accentuate the above concern

In its last presentation, the company highlighted a 37mt revised target for the captive coal mining business by 2017. We, however, forecast 23mt of coal production, leaving a shortfall of 14mt of coal, which needs to be filled either by imports (~9mt) or by curtailing output – leading to lower utilization rates (PLF) for its projects. The reason for our lower assumptions are: a) work-speed being affected at three mines de-allocated by the Coal Ministry in June 2011 and re-allocated after 1.5 years; b) land acquisition issues; c) local unrest; and d) delays in the development of evacuation infrastructure (Tori-Shivpur railway line) for coal evacuation.

Figure 71: Captive coal mining estimates



Source: Company data, Deutsche Bank estimates

Rating
Hold

Asia
India

Resources
Metals & Mining

Company
Coal India Limited

Reuters	Bloomberg
COAL.BO	COAL IN

Price at 25 Apr 2013 (INR)	317.05
Price target - 12mth (INR)	345.00
52-week range (INR)	382.35 - 294.45
BSE 30	19,407

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New rail network could completely revamp Coal India

Evacuation of stuck coal is not a distant dream

Current efforts to augment railway infrastructure have three-fold long-term positive effects on Coal India (CIL). Firstly, the new feeder lines planned by CIL would enable it to raise long-term annual mine production by 290mt (64% of FY13 production). Secondly, upcoming eastern corridor would beef up its desptach capacity, especially in northern India (40% of current despatches). Lastly, track access charges on new corridors are likely to be one-third of the current charges potentially giving CIL some pricing power, which is currently limited by high transportation cost. However, we retain Hold as we find CIL has limited pricing power in the near term.

Upcoming rail Infrastructure – a panacea for its long-standing problems

The lack of an adequate rail line and rake availability has constrained CIL time and again with inventory levels back to c60mt in Mar'13 (vs. 45mt in Dec'12). CIL is planning to lay three new railway lines (feeder lines) in Jharkhand, Chhattisgarh and Odisha, which could help tap c290mt from existing and new coal mines. Moreover, with c200mt of CIL's freight movement with leads greater than 100km proposed along the eastern Dedicated Freight Corridor (DFC), the extent of any inventory build-out post FY2017e would be limited (from weak demand).

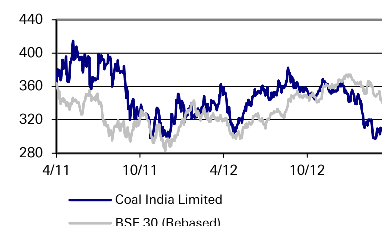
An indirect benefit from new railway line could be flexibility in pricing

With transportation costs greater than the price of coal, a drop in transportation costs could give some leeway to CIL for greater market-linked prices. Additionally, our sensitivity analysis suggests if CIL is able to ship out 100mt more coal annually from FY18e, our life-of-mine DCF rises by 10%.

We value CIL on average of life-of-mine DCF and P/E; maintaining Hold

We continue to value CIL on an average of P/E and life-of-mine DCF. On the P/E methodology, we valued the regulated sales business at 14x FY14E, in line with the utilities business, and the merchant sales business at 7x FY14E. We agree that a high FCF yield of 11% provides downside support, but we remain concerned on upcoming interims owing to CIL's ability to pass through costs. Accordingly, a higher/lower-than-expected price change is the key up/down risk.

Price/price relative



Performance (%)	1m	3m	12m
Absolute	6.6	-7.1	-9.3
BSE 30	3.9	-3.5	13.2

Forecasts And Ratios

Year End Mar 31	2011A	2012A	2013E	2014E	2015E
Sales (INRm)	502,292.8	624,154.3	684,097.0	711,158.9	810,605.2
EBITDA (INRm)	153,850.7	178,589.7	181,094.9	178,142.3	227,713.4
EBIT(INRm)	136,197	158,898	159,881	155,453	203,593
Reported NPAT (INRm)	108,673.6	147,882.1	159,781.5	150,679.0	192,758.5
DB EPS growth (%)	12.9	36.1	4.2	-2.2	27.9
DB EPS FD(INR)	17.21	23.41	24.39	23.86	30.52
PER (x)	18.6	15.0	13.0	13.3	10.4
DPS (net) (INR)	3.90	10.00	10.00	10.50	11.00
Yield (net) (%)	1.2	2.8	3.2	3.3	3.5

Source: Deutsche Bank estimates, company data

[1] DB EPS is fully diluted and excludes non-recurring items, 2 Multiples and yields calculations use average historical prices for past years and spot prices for current and future years, except P/B which uses the year end close

Model updated:23 April 2013

Running the numbers

Asia

India

Metals & Mining

Coal India Limited

Reuters: COAL.BO | Bloomberg: COAL IN

Hold

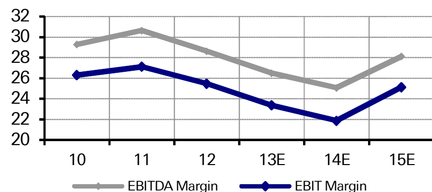
Price (25 Apr 13)	INR 317.05
Target Price	INR 345.00
52 Week range	INR 294.45 - 382.35
Market Cap (m)	INRm 2,002,603
	USDm 36,952

Company Profile

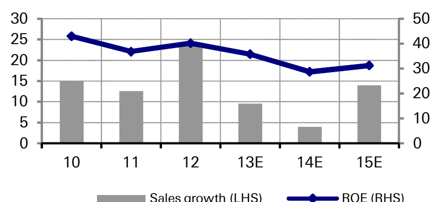
Coal India Limited produces and markets coal and coal products, and provides related consulting services. It has extractable coal reserves of 22.3bn tons. CIL is an apex body with 7 wholly owned coal producing subsidiaries and 1 mine planning and consultancy company. It also has a mining company in Mozambique ("Coal India Africana Limitada").

Price Performance

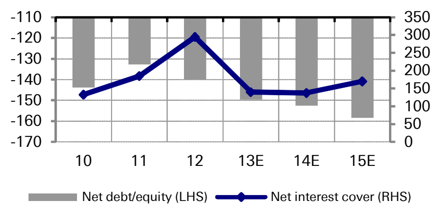
Margin Trends



Growth & Profitability



Solvency



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Fiscal year end 31-Mar	2010	2011	2012	2013E	2014E	2015E
Financial Summary						
DB EPS (INR)	15.23	17.21	23.41	24.39	23.86	30.52
Reported EPS (INR)	15.23	17.21	23.41	25.30	23.86	30.52
DPS (INR)	3.50	3.90	10.00	10.00	10.50	11.00
BVPS (INR)	40.8	52.7	64.0	77.5	89.0	106.5
Weighted average shares (m)	6,316	6,316	6,316	6,316	6,316	6,316
Average market cap (INRm)	na	2,018,954	2,225,383	2,002,603	2,002,603	2,002,603
Enterprise value (INRm)	na	1,574,624	1,648,821	1,259,007	1,134,102	925,476
Valuation Metrics						
P/E (DB) (x)	na	18.6	15.0	13.0	13.3	10.4
P/E (Reported) (x)	na	18.6	15.0	12.5	13.3	10.4
P/BV (x)	0.00	6.58	5.36	4.09	3.56	2.98
FCF Yield (%)	na	4.7	9.4	12.1	10.1	14.5
Dividend Yield (%)	na	1.2	2.8	3.2	3.3	3.5
EV/Sales (x)	nm	3.1	2.6	1.8	1.6	1.1
EV/EBITDA (x)	nm	10.2	9.2	7.0	6.4	4.1
EV/EBIT (x)	nm	11.6	10.4	7.9	7.3	4.5
Income Statement (INRm)						
Sales revenue	446,153	502,293	624,154	684,097	711,159	810,605
Gross profit	384,739	470,763	570,901	609,205	643,247	739,638
EBITDA	130,618	153,851	178,590	181,095	178,142	227,713
Depreciation	13,294	17,654	19,692	21,213	22,689	24,120
Amortisation	0	0	0	0	0	0
EBIT	117,324	136,197	158,898	159,881	155,453	203,593
Net interest income(expense)	-886	-737	-540	-1,144	-1,133	-1,200
Associates/affiliates	0	0	0	0	0	0
Exceptionals/extraordinaries	-537	-474	912	5,700	0	0
Other pre-tax income/(expense)	23,748	29,647	53,457	66,142	65,593	78,935
Profit before tax	139,649	164,632	212,727	230,579	219,913	281,328
Income tax expense	43,425	55,959	64,845	70,798	69,234	88,569
Minorities	0	0	0	0	0	0
Other post-tax income/(expense)	0	0	0	0	0	0
Net profit	96,225	108,674	147,882	159,781	150,679	192,759
DB adjustments (including dilution)	0	0	0	-5,700	0	0
DB Net profit	96,225	108,674	147,882	154,081	150,679	192,759
Cash Flow (INRm)						
Cash flow from operations	148,081	118,259	242,850	301,567	243,165	330,613
Net Capex	-26,473	-24,198	-34,124	-60,000	-40,000	-40,000
Free cash flow	121,608	94,061	208,726	241,567	203,165	290,613
Equity raised/(bought back)	-16	16	0	0	0	0
Dividends paid	-29,871	-29,068	-74,533	-74,533	-78,260	-81,986
Net inc/(dec) in borrowings	-1,853	-4,096	-262	-1,941	0	0
Other investing/financing cash flows	2,447	10,784	-8,007	0	0	0
Net cash flow	92,315	71,698	125,924	165,093	124,905	208,626
Change in working capital	*63,968*	*-51,462*	*57,605*	*111,345*	*65,631*	*98,426*
Balance Sheet (INRm)						
Cash and other liquid assets	390,782	458,064	582,028	747,121	872,026	1,080,652
Tangible fixed assets	142,461	149,005	163,437	202,223	219,534	235,414
Goodwill/intangible assets	0	0	0	0	0	0
Associates/investments	12,821	2,127	10,344	10,344	10,344	10,344
Other assets	162,070	249,450	313,658	280,805	285,302	301,827
Total assets	708,135	858,646	1,069,466	1,240,493	1,387,206	1,628,237
Interest bearing debt	19,631	15,536	15,274	13,333	13,333	13,333
Other liabilities	430,331	509,642	649,126	736,846	811,139	941,398
Total liabilities	449,963	525,178	664,400	750,178	824,472	954,731
Shareholders' equity	257,936	333,142	404,530	489,779	562,198	672,970
Minorities	236	326	536	536	536	536
Total shareholders' equity	258,172	333,468	405,066	490,315	562,734	673,506
Net debt	*-371,151*	*-442,529*	*-566,754*	*-733,788*	*-858,693*	*-1,067,319*
Key Company Metrics						
Sales growth (%)	15.0	12.6	24.3	9.6	4.0	14.0
DB EPS growth (%)	155.0	12.9	36.1	4.2	-2.2	27.9
EBITDA Margin (%)	29.3	30.6	28.6	26.5	25.0	28.1
EBIT Margin (%)	26.3	27.1	25.5	23.4	21.9	25.1
Payout ratio (%)	23.0	22.7	42.7	39.5	44.0	36.0
ROE (%)	43.0	36.8	40.1	35.7	28.6	31.2
Capex/sales (%)	5.9	4.8	5.5	8.8	5.6	4.9
Capex/depreciation (x)	2.0	1.4	1.7	2.8	1.8	1.7
Net debt/equity (%)	-143.8	-132.7	-139.9	-149.7	-152.6	-158.5
Net interest cover (x)	132.4	184.8	294.4	139.7	137.2	169.7

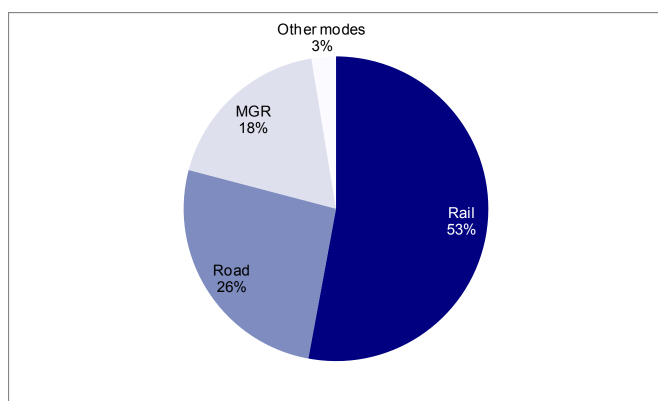
Source: Company data, Deutsche Bank estimates

Benefits may percolate to Coal India

Despatch growth has started to lag production growth once again

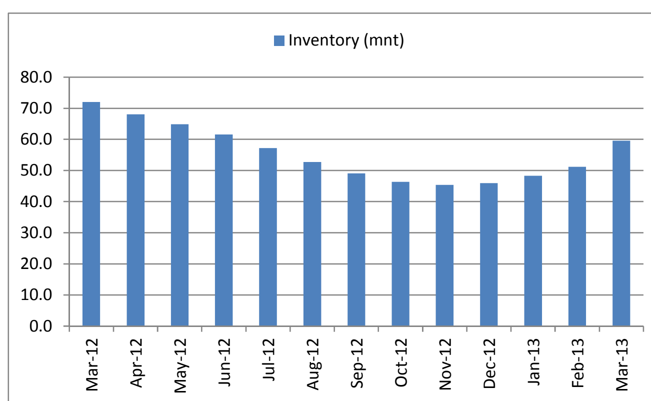
Coal India transports c70% of its output by rail (including MGR), which is the most cost-effective method considering its transportation needs spans long distances. While CIL's continued co-ordination with the Indian Railways, slower economic activity and ban on iron ore exports have enabled it to lower inventory levels from 72m tonnes to less than 45m tonnes (December 2012), the lack of rail lines and rake availability at its mines has once again led to a rise in its inventory levels to c60m tonnes in March.

Figure 72: Over 70% of CIL's despatches are through rail



Source: Deutsche Bank

Figure 73: Inventory has once again started to pile up



Source: Company Data, Deutsche Bank

Coal India planning to install new railway lines to sustain volume growth

To address this issue and to support its expansion plans across new mines, CIL is planning to lay new railway lines for dedicated coal evacuation in the eastern region of the country. A look at Figure 74 reveals that close to 290mt of coal across three coalfields of CIL subsidiaries and 8mt of coal across Singareni Colleries is stuck due to lack of infrastructure in these regions. Media reports suggest that that the company has set aside close to INR70.45bn for building infrastructure in three lines, i.e. the Tori-Shivpur line in Jharkhand, the Bhupdeopur-Korichappar-Korba line in Chhattisgarh and the Jharsuguda-Barpali line in Odisha.

Figure 74: Coal evacuation in 12th Plan hampered due to lack of rail infrastructure

Railway Line	Length (km)	CIL/ CIL subsidiary	Coal Field	Area	Potential coal evacuation (m tons)	Remarks
Tori-Shivpur-Hazaribagh	Tori-Shivpur section (44Km) Shivpur-Kathotia (47 Km)	CCL	North Karanpur	Jharkhand	100	Tori-Shivpur section about 44km has been accorded Stage-1 forest clearance. NoC under FRA 2006 obtained from DC, Chatra, and the same is awaited from Latehar, which is expected shortly. Completion of Tori-Shivpur section is critical as projects like Magadh {20mtpa), Amrapali (12 mtpa), Koed Manatu (10 mtpa) and Pachra (15 mtpa) can come up only after completion of Tori-Shivpur section. Railways would finalise the tender for construction of Tori-Shivpur line by December 2013.
Bhupdevpur-Korichhapar/Baroud-Dharamjaygarh up to Korba	180	SECL	Mand Raigarh	Chhattisgarh	100	In-Principle clearance from the Planning Commission has been obtained for Bhupdeopur-Korichhapar/ Baroud section. Railways to seek approval of the cabinet for formation of SPV. Project to be taken up as deposit work by Railways for a single line initially, which will be converted to double line subsequently.
Jharsuguda-Barpali	52	MCL	Ib & Talcher	Odisha	90	Land acquisition by the Railways is progressing very slowly. The slow progress is also due to inadequate manpower provided by the Railways. Forest Clearance is an issue. NoC to be obtained from Jharsuguda and Sundergarh districts. MCL will fund the entire project.
Sattupalli-Bhadrachalam Road rail line	60	SCCL	Sattupalli opencast project	Andhra Pradesh	8	SCCL would fund the entire project cost of INR3.4bn and take up land acquisition with the help of the state government of Andhra Pradesh.
Total	-	-	-	-	298	-

Source: Ministry of Railways, Deutsche Bank

New railways lines are under old railway return guidelines (R2C1)

The new railway lines, i.e. Tori-Shivpur, Bhupdeopur-Korichappar-Korba and Jharsuguda-Barpali, will not result in additional returns for CIL as these lines will be developed under the R2CI policy. It is important to note that this policy, which was formulated by the government in May 2011 to provide necessary support for investments in railway connectivity projects from coal and iron ore mines, does not ensure any returns on the equity invested (ROE) or permit a recovery in borrowing costs. Under the R2CI policy, it is the applicant that bears the cost of building the new railway line, and not the railways. However, for CIL the potential benefit from the proposed investment is the attractive incremental volume growth (~290mt) arising from the evacuation of the inventory via the new railway lines.

Incremental volume to push up valuation

Our sensitivity test of incremental volume on the NAV suggests significant upside. Our sensitivity analysis factors in incremental production volume from FY18E onwards. We have run our sensitivity test for volume increments of ~50mt to 200mt, and the NAV is expected to rise by 4-14% from the current level of INR391/share.

Figure 75: CIL's NAV could move up by 4-14%

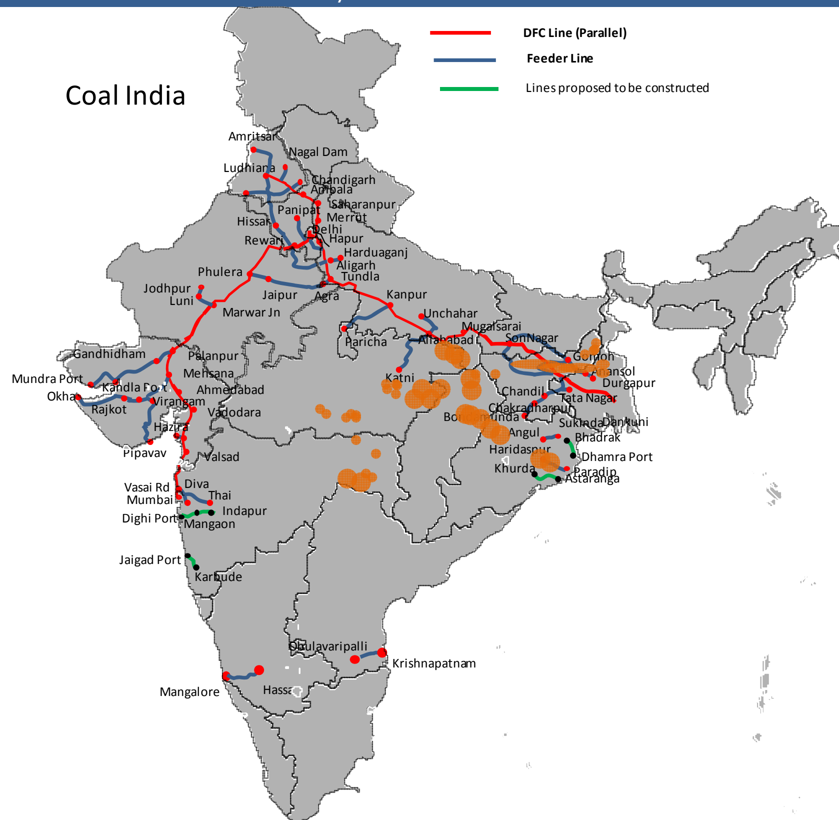
	Current	Revised						
Volume Increment		**50**	**75**	**100**	**125**	**150**	**175**	**200**
Revised NAV (INR)	391	405	411	418	425	431	438	444
% increase from the current level		4	5	7	9	10	12	14

Source: Deutsche Bank

Eastern DFC will largely cater to bulk commodities

The Eastern DFC is being planned with the objective of primarily catering for the movement of bulk commodities, especially coal and steel. The Eastern DFC would provide necessary infrastructure to the areas where there is substantial movement between the coalfields and the steel plants in the eastern region to the power stations and industries in the western and northern regions. Coal India, which has coal reserves primarily on the eastern side of India, should be a major beneficiary of the DFCs. According to media reports, Coal India has stated that close to 35% of total coal demand in the country would pass through Eastern DFCs by FY17, and the coal major itself would account for~200mt of freight movement on these lines.

Figure 76: Coal India – one of the key beneficiaries of DFCs



Source: Deutsche Bank

With average lead of 600-plus km and DFC freight costs being one-third, this is a significant value driver for Coal India

The average lead distance for coal movement in India is 630km, and due to the longer distance required by certain bulk commodities, railways clearly emerge as a more cost-effective mode of transport than the road. With the proposed DFC, the average lead is likely to lower further. Meanwhile, features such as 15,000 tons of carrying capacity (vs 4,000 tons currently) and maximum speed of 100km/hour (vs an average of 26km/hr and a maximum of 75km/hr currently) are likely to ensure faster turnaround times for large bulk users like Coal India. In addition to these advantages, Indian Railways, in order to capture the lost market share on the freight front to road, is expected to offer a tariff concession of c20% on the proposed DFC, which will bring down the cost of transport for users, including CIL. As of March 2012, c26% of the coal by CIL was

dispatched by roads. Using road as the mode of transport on certain occasions could lead to a situation where costlier fuel is being burnt to carry a cheaper fuel and consumers pay more for transportation than for the price of the coal. The DFC could divert some of the load from road to rail and thus result in a lower cost to consumers.

Lastly, it allows more flexibility in pricing

The average realisation of regulated coal at CIL's mines is about INR1,250/t. If one were to add the logistics on the average lead of 630km and the average tariff rate of INR 1.4/NTKM, the logistics cost (including various duties and levies) alone works out to INR1,150/t (90% of CIL's realisation) for the customer. If one were to assume the key customers are likely to benefit from anywhere between a 20% and 30% lower tariff, the resultant savings are likely to be fairly high. While we concede that the entire savings go to the customer, CIL also benefits indirectly, as it is likely to get more flexibility to lower the gap between the regulated price and the cost of imported coal for consumers.

We continue to value the stock based on the average of life-of-mine DCF and P/E

We continue to value the stock based on the average of life-of-mine DCF and P/E, which yields our 12-month target price of INR345/share. Please note that we have rolled over our valuation to FY14E.

In the life-of-mine DCF methodology, we value the currently stated extractable coal reserves of 22.3bn tons. This excludes any upside from conversion of the company's remaining c.30.1bn tons of proven reserves into extractable reserves. We assume volume growth of 4% from FY14 onwards until extractable reserves become zero. We assume constant prices post-FY17 and rising costs, implying diminishing profitability. We assume a discount rate of 12.3% (a beta of 0.7, a risk-free rate of 8.1% and an equity risk premium of 6.7%). This implies a target price of INR391/share.

On P/E methodology, we have valued the regulated sales business at 14x, in line with utilities, resulting in a value of INR295/share. However, given a 17% CAGR earnings decline over FY12-14E, we value the merchant sales business at a lower exit P/E of 7x. This seems reasonable given that regional peers in China and Indonesia are trading at an average P/E of 10.5x for an average EPS CAGR decline of 10%. Please note that e-auction prices are in sync with global seaborne thermal coal prices. This results in a value of INR39/share for the merchant sales business.

The average of the life-of-mine DCF and P/E results in a target price of INR345/share and offers 15% upside potential.

Reverse DCF suggests expectations could be met

We perform a reverse-DCF analysis (three-stage) to determine the market expectation of growth as implied by the current market price (INR299/share). We have performed reverse DCF under three different scenarios:

1. Assuming price growth of 3%: Under this scenario, the market is factoring in a negative CAGR for volume of ~4% over FY15E-20E.

2. Assuming price growth of 5%: Under this scenario, the market is factoring in a negative CAGR for volume of ~5.7% over FY15E-20E.

3. Assuming volume growth of 3%: Under this scenario, the market is factoring in negative price growth of ~3.9% over FY15E-20E.

Figure 77 details our cash flow forecasts; FY13-15 is the explicit forecast period and FY16-21 is the semi-explicit period, and our terminal cash flow growth assumption is 2%.

Figure 77: Cash flow projection for reverse DCF

Coal India	FY13e	FY14e	FY15e	FY16e	FY17e	FY18e	FY19e	FY20e	FY21e	CAGR (FY15E-20E)
EBIT	159,881	155,453	200,076	186,111	184,249	182,407	180,583	178,777	176,989	
Margin (%)	23.4	21.9	24.8	23.3	23.3	23.3	23.3	23.3	23.3	
Taxes on EBIT	-53,081	-51,610	-66,425	-61,789	-61,171	-60,559	-59,954	-59,354	-58,760	
NOPLAT	128,014	126,532	157,771	148,201	146,719	145,252	143,799	142,361	140,938	-1.90%
Working capital	-451,674	-521,470	-632,403	-626,079	-619,819	-613,620	-607,484	-601,409	-595,395	
% of sales	*-66*	*-73.3*	*-78.5*	*-78.5*	*-78.5*	*-78.5*	*-78.5*	*-78.5*	*-78.5*	
Change in working capital	120,572	69,797	110,933	-6,324	-6,261	-6,198	-6,136	-6,075	-6,014	
Capex	-40,000	-40,000	-40,000	-39,600	-39,204	-38,812	-38,424	-38,040	-37,659	
% of sales	*5.8*	*5.6*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	
Cash flow										
FCFF	208,586	156,328	228,704	102,277	101,254	100,242	99,239	98,247	97,264	-13.30%
Stage I	208,586	156,328	228,704	-	-	-	-	-	-	
Stage II	-	-	-	102,277	101,254	100,242	99,239	98,247	97,264	
Terminal value	-	-	-	-	-	-	-	-	956,699	
Total FCFF	208,586	156,328	228,704	102,277	101,254	100,242	99,239	98,247	1,053,963	
Assumed Price growth of 3%										
Implied Sales volume (mnt)	467	485	507	487	468	450	433	416	400	-3.90%
Net realisation/ ton (INR mn)	1,466	1,466	1,589	1,637	1,686	1,737	1,789	1,843	1,898	3.00%
Assumed Price growth of 5%										
Implied Sales volume (mnt)	467	485	507	478	451	425	401	378	356	-5.7%
Net realisation/ ton (INR mn)	1,466	1,466	1,589	1669	1752	1840	1932	2028	2130	5.0%
Assumed volume growth of 3%										
Sales volume (mnt)	467	485	507	522	538	554	571	588	605	3.0%
Implied Net realisation/ ton (INR mn)	1,466	1,466	1,589	1,528	1,468	1,411	1,356	1,304	1,253	-3.9%

Source: Deutsche Bank estimates

Figure 78: Reverse DCF valuation to arrive at the current implied market price

Enterprise value	INR mn	% of total NPV
NPV of Stage I	359,856.21	31%
NPV of Stage II	362,413.19	32%
NPV of TV	422,885.36	37%
NPV of FCFF	1,145,154.76	100%
Net cash	747,121	
Total EV	1,892,275	

Per share basis	
NPV of Stage I	57
NPV of Stage II	57
NPV of TV	67
NPV of FCFF	181
Net cash	118
Total Equity Value	300

Sensitivity to key assumptions

	Cost of Equity (%)					
Terminal growth rate (%)	300	10.37	11.37	12.37	13.37	14.37
	-	312	299	288	278	270
	1.00	321	306	293	283	274
	2.00	332	314	300	288	278
	3.00	346	324	307	294	283
	4.00	364	337	317	301	288

Assumptions	
Terminal growth rate (%)	2.00
Tax rate (%)	33.20
Cost of Equity (%)	12.37
Risk free rate (%)	6.70
Equity risk premium (%)	8.10
Beta	0.70
No. of shares (mn)	6,316

Source: Deutsche Bank

Rating
Buy

Asia
India

Resources
Construction Materials

Company
Shree Cement

Reuters	Bloomberg
SHCM.BO	SRCM IN

In the right place at the right time – once again

Early-cycle beneficiary; remains top mid-cap sector pick

Shree Cement (SHCM), among the mid-cap cement, is the biggest beneficiary of the upcoming railway capex for the following reasons: 1) its upcoming 5mt expansion in northern India, along the upcoming rail network, is timely; 2) its entire operations and key raw material suppliers are also along the upcoming rail network, which will help reduce its logistics and input costs; and 3) its under-utilised merchant power capacity could start to derive operating leverage benefits. With 2013-15E FCF yields of more than 8%, despite sustainable capex, valuations are attractive, at an EV/t of USD108 (c.30% below replacement). SHCM remains our preferred mid-cap sector pick; Buy.

As with the GQ rollout, Shree's 5mt expansion ahead of DFC seems timely

Shree's current 5mt expansion, ahead of the DFC and DMIC capex, seems to bear an uncanny resemblance to its series of capacity expansions (a decade ago) in northern India, ahead of the NHAI's Golden Quadrilateral project. The current expansion – coming up in two phases – will help the company to build on its market leadership in the northern Indian region.

Continued cost leadership and industry-exceeding expansion to sustain growth

The upcoming rail capex could further reduce the company's cost of operations (already the lowest in the industry), as its logistics costs, for servicing the markets as well as sourcing raw materials, are likely to come down. This, coupled with the company's expansions (which are in excess of the industry), and the operating leverage benefits of the merchant power business, are likely to help sustain earnings growth in the medium term.

Retaining Buy with a target price of INR5,100/share; risks

We value Shree at an exit EV/EBITDA of 7.15x (25% discount to large-cap peers) to arrive at our 12-month target price of INR5,100/sh. An adverse ruling in the competition case and lower-than-expected price rises are the key risks.

Price at 26 Apr 2013 (INR)	4,324.15
Price target - 12mth (INR)	5,100.00
52-week range (INR)	4,651.45 - 2,354.00
BSE 30	19,407

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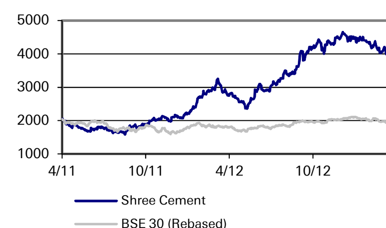
Price/price relative



Performance (%)	1m	3m	12m
Absolute	6.3	-3.0	57.3
BSE 30	3.8	-3.5	13.3

Forecasts And Ratios

Year End Jun 30	2011A	2012A	2013E	2014E	2015E
Sales (INRm)	35,121.9	58,706.9	55,605.0	63,213.3	71,481.3
EBITDA (INRm)	8,856.4	16,457.6	17,235.9	20,095.8	22,396.6
Reported NPAT (INRm)	2,097.0	6,185.0	7,560.1	10,620.8	12,183.1
Reported EPS FD(INR)	60.19	177.54	217.01	304.87	349.72
DB EPS FD(INR)	60.19	177.54	217.01	304.87	349.72
DB EPS growth (%)	-69.0	194.9	22.2	40.5	14.7
PER (x)	31.7	12.6	19.9	14.2	12.4
EV/EBITDA (x)	7.9	4.2	7.5	5.8	4.4
DPS (net) (INR)	14.00	20.00	20.00	20.00	20.00
Yield (net) (%)	0.7	0.9	0.5	0.5	0.5

Source: Deutsche Bank estimates, company data

[1] DB EPS is fully diluted and excludes non-recurring items
[2] Multiples and yields calculations use average historical prices for past years and spot prices for current and future years, except P/B which uses the year end close

Model updated:26 April 2013

Running the numbers

Asia

India

Construction Materials

Shree Cement

Reuters: SHCM.BO | Bloomberg: SRCM IN

Buy

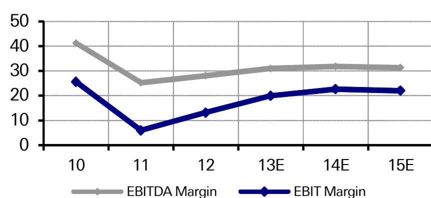
Price (26 Apr 13)	INR 4,324.15
Target Price	INR 5,100.00
52 Week range	INR 2,354.00 - 4,651.45
Market Cap (m)	INRm 150,641
	USDm 2,780

Company Profile

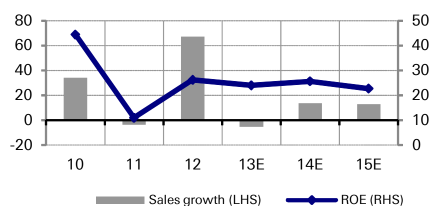
Shree Cement is one of the largest cement producers in Rajasthan, and has the largest cement plant in northern India at a single location. Its present cement capacity is 13.5 million tons p.a., with manufacturing plants at Beawar, Ras, Khushkhera and Suratgarh in Rajasthan, and at Laksar (Roorkee) in Uttarakhand. The company follows a multi-brand strategy, and sells cement under the brands Shree Ultra, Bangur and Rockstrong.

Price Performance

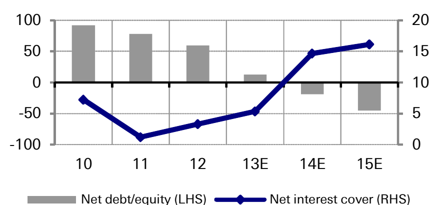
Margin Trends



Growth & Profitability



Solvency



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Fiscal year end 30-Jun	2010	2011	2012	2013E	2014E	2015E
Financial Summary						
DB EPS (INR)	194.07	60.19	177.54	217.01	304.87	349.72
Reported EPS (INR)	194.07	60.19	177.54	217.01	304.87	349.72
DPS (INR)	13.00	14.00	20.00	20.00	20.00	20.00
BVPS (INR)	526.2	570.1	784.8	1,024.3	1,351.7	1,724.0
Weighted average shares (m)	35	35	35	35	35	35
Average market cap (INRm)	64,891	66,407	78,005	150,641	150,641	150,641
Enterprise value (INRm)	65,867	69,913	68,846	130,105	116,729	98,515
Valuation Metrics						
P/E (DB) (x)	9.6	31.7	12.6	19.9	14.2	12.4
P/E (Reported) (x)	9.6	31.7	12.6	19.9	14.2	12.4
P/BV (x)	3.84	3.08	3.84	4.22	3.20	2.51
FCF Yield (%)	2.1	nm	14.6	7.0	8.4	11.6
Dividend Yield (%)	0.7	0.7	0.9	0.5	0.5	0.5
EV/Sales (x)	1.8	2.0	1.2	2.3	1.8	1.4
EV/EBITDA (x)	4.4	7.9	4.2	7.5	5.8	4.4
EV/EBIT (x)	7.1	33.3	8.9	11.7	8.1	6.3
Income Statement (INRm)						
Sales revenue	36,423	35,122	58,707	55,605	63,213	71,481
Gross profit	21,192	16,447	27,854	27,353	31,279	34,828
EBITDA	15,025	8,856	16,458	17,236	20,096	22,397
Depreciation	5,704	6,758	8,731	6,154	5,764	6,636
Amortisation	0	0	0	0	0	0
EBIT	9,321	2,099	7,727	11,082	14,332	15,761
Net interest income(expense)	-1,291	-1,753	-2,354	-2,078	-978	-978
Associates/affiliates	0	0	0	0	0	0
Exceptionals/extraordinaries	-634	-485	-123	0	0	0
Other pre-tax income/(expense)	1,284	1,243	1,628	1,797	1,819	2,622
Profit before tax	8,679	1,103	6,878	10,800	15,173	17,404
Income tax expense	1,918	-994	693	3,240	4,552	5,221
Minorities	0	0	0	0	0	0
Other post-tax income/(expense)	0	0	0	0	0	0
Net profit	6,761	2,097	6,185	7,560	10,621	12,183
DB adjustments (including dilution)	0	0	0	0	0	0
DB Net profit	6,761	2,097	6,185	7,560	10,621	12,183
Cash Flow (INRm)						
Cash flow from operations	13,184	9,550	16,079	18,093	21,091	24,429
Net Capex	-11,841	-11,513	-4,706	-7,500	-8,500	-7,000
Free cash flow	1,343	-1,962	11,373	10,593	12,591	17,429
Equity raised/(bought back)	0	0	0	0	0	0
Dividends paid	-529	-568	-810	-815	-815	-815
Net inc/(dec) in borrowings	6,101	-983	704	-11,000	0	0
Other investing/financing cash flows	-7,474	3,958	-11,285	1,898	1,600	1,600
Net cash flow	-559	444	-18	676	13,376	18,214
Change in working capital	*-375*	*3,473*	*1,963*	*1,139*	*154*	*389*
Balance Sheet (INRm)						
Cash and other liquid assets	4,164	4,608	4,590	5,265	18,641	36,855
Tangible fixed assets	17,194	21,949	17,924	19,270	22,006	22,371
Goodwill/intangible assets	0	0	0	0	0	0
Associates/investments	15,922	11,965	25,352	25,054	25,054	25,054
Other assets	11,782	10,503	11,860	13,395	14,541	15,787
Total assets	49,062	49,025	59,726	62,984	80,243	100,067
Interest bearing debt	21,062	20,079	20,783	9,783	9,783	9,783
Other liabilities	9,667	9,084	11,604	17,517	23,370	30,226
Total liabilities	30,729	29,163	32,387	27,300	33,153	40,009
Shareholders' equity	18,332	19,862	27,339	35,684	47,090	60,058
Minorities	0	0	0	0	0	0
Total shareholders' equity	18,332	19,862	27,339	35,684	47,090	60,058
Net debt	*16,899*	*15,471*	*16,193*	*4,517*	*-8,859*	*-27,072*
Key Company Metrics						
Sales growth (%)	34.2	-3.6	67.2	-5.3	13.7	13.1
DB EPS growth (%)	11.0	-69.0	194.9	22.2	40.5	14.7
EBITDA Margin (%)	41.3	25.2	28.0	31.0	31.8	31.3
EBIT Margin (%)	25.6	6.0	13.2	19.9	22.7	22.0
Payout ratio (%)	6.7	23.3	11.3	9.2	6.6	5.7
ROE (%)	44.4	11.0	26.2	24.0	25.7	22.7
Capex/sales (%)	32.5	32.8	8.0	13.5	13.4	9.8
Capex/depreciation (x)	2.1	1.7	0.5	1.2	1.5	1.1
Net debt/equity (%)	92.2	77.9	59.2	12.7	-18.8	-45.1
Net interest cover (x)	7.2	1.2	3.3	5.3	14.7	16.1

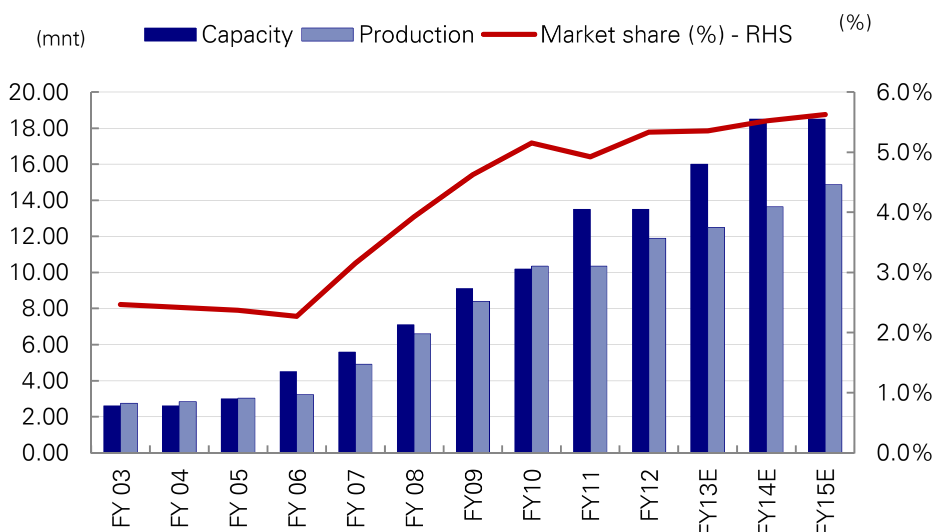
Source: Company data, Deutsche Bank estimates

In the right place at the right time – once again

As with the GQ rollout, Shree's current 5mt expansion, ahead of DFC, seems timely

Shree's current 5mt expansion, ahead of the DFC and DMIC capex, seems to bear an uncanny resemblance to its series of capacity expansions (a decade ago) in northern India, ahead of the NHAI's Golden Quadrilateral project. The current expansion – coming up in two phases – will help the company to build on its market leadership in the northern Indian region.

Figure 79: Market share gains are likely to continue

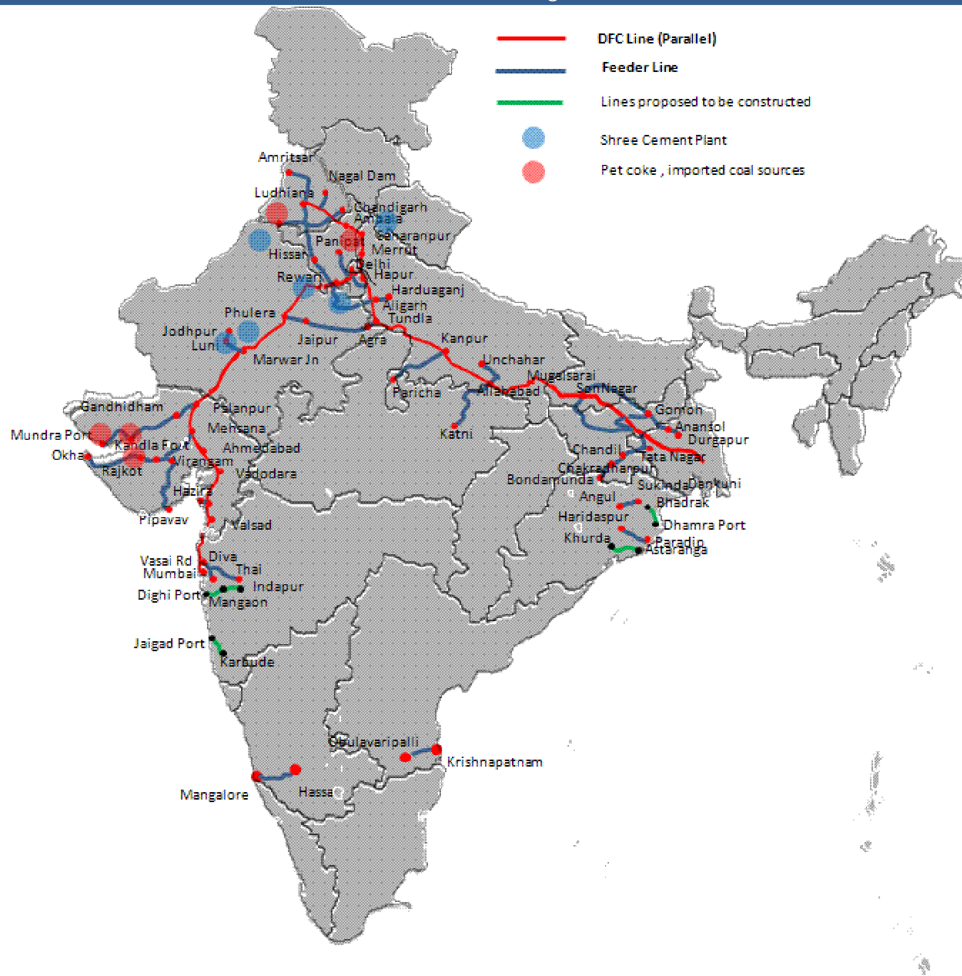


Source: Company data, Deutsche Bank estimates

Continued cost leadership and in-excess-of-industry expansion to sustain growth

The upcoming rail capex could further reduce the company's cost of operations (already the lowest in the industry), as its logistics costs for servicing the markets, as well as sourcing raw materials, are likely to come down. Please note that, for cement companies, proximity to markets or superior connectivity to logistics networks help provide an advantage on the industry cost curve – given the inherent characteristics of the product as extremely voluminous and the lowest in terms of value-added (c.35% of overall costs). As can be seen from Figure 80, Shree's entire capacity (18.5mt capacity across Ras, Beawar, Khuskhera, Suratgarh, Jaipur and Laksar), as well as the key raw material sources (pet coke/imported coal), i.e. ports such as Kandla, Mundra, Bedi, Navlakhi, and refineries such as Jamnagar, Vadinar, Panipat, Bhatinda, are located along the DFC and the feeder routes.

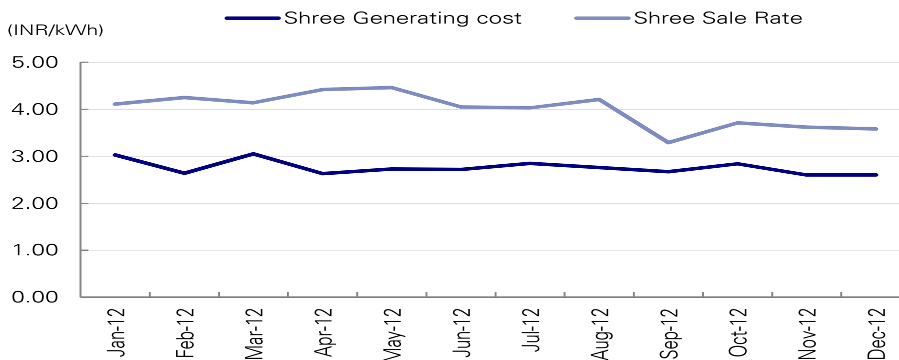
Figure 80: Likely to be a key beneficiary of railway capex, as its plants and markets, as well as its raw material sources, are situated along the DFC and feeder routes



Source: Company data, Deutsche Bank

This, coupled with the company's expansions (which are in excess of the industry), and the operating leverage benefits of the merchant power business, are likely to help sustain earnings growth in the medium term.

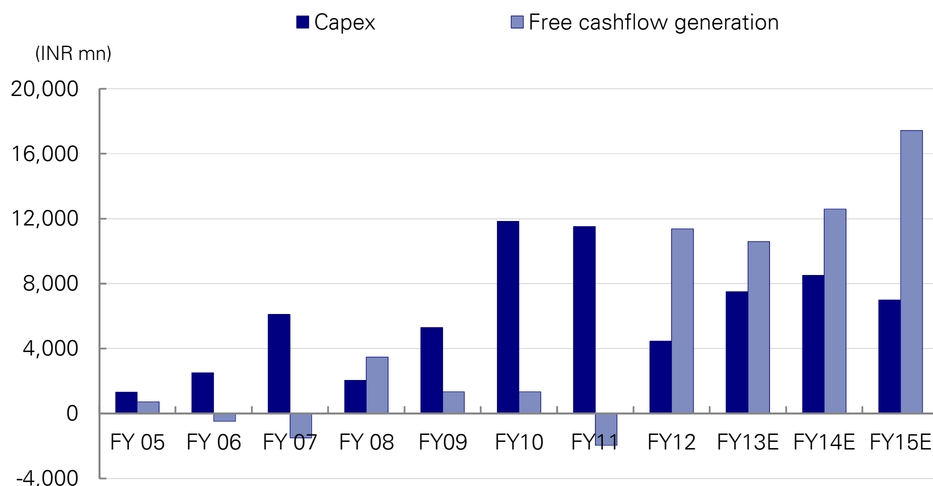
Figure 81: Shree's operating costs, given the largely depreciated assets, make it competitive ,even at merchant power tariffs of INR3/kWh



Source: Company data, Deutsche Bank

Despite the sustainable capex, FCF yields, at 8%+, seem attractive

Figure 82: Despite sustainable capex, FCF, at more than INR12bn, implies attractive 2014E FCF yield of more than 8%



Source: Company data, Deutsche Bank estimates

The **company,** despite its sustained capex over the next 18 months to grow its capacity from 13.5mt to 18.5mt, is likely to generate FCF in excess of INR 12bn. This effectively implies that the stock is offering an attractive FCF yield of 8-12% over the forecast period.

Retaining Buy with a target price of INR5,100/share; risks

We value Shree at an exit EV/EBITDA of 7.15x (a 25% discount to large-cap peers) to arrive at our 12-month target price of INR5,100/share. We have not used an exit P/E multiple, given the company's aggressive depreciation policy vs. its peers, leading to profits being understated in comparison with those of peers. At our target price, the stock would trade at a target exit EV/t of USD135, which is at a 20-35% discount to its larger peers.

Risks

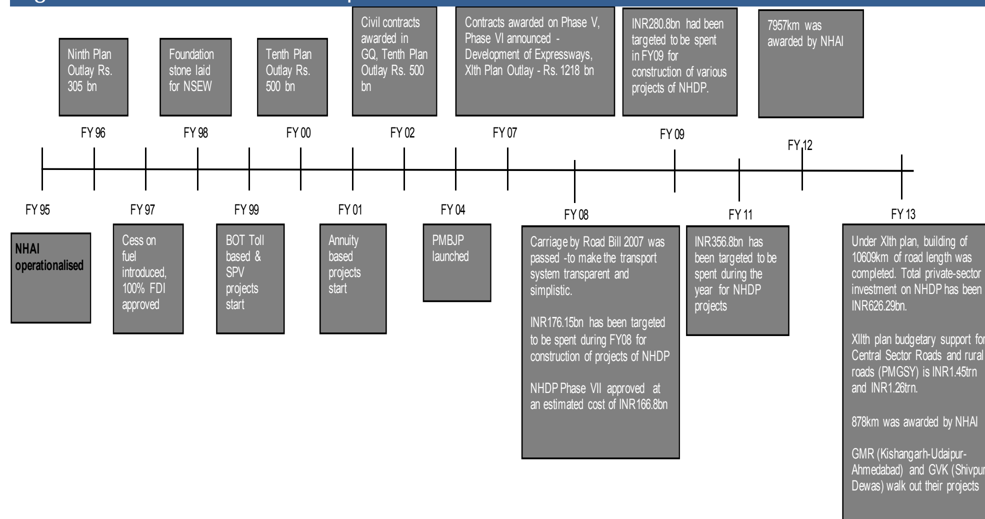
An adverse ruling by the higher courts in the competition case remains the key risk. Please note that CCI's order, dated 30 July 2012, alleging contravention of provisions of the Competition Act, 2002, imposed a penalty of INR3.97bn on the company. The company is contesting this and accordingly has not made any provision for it. On the operational front, lower-than-expected price rises and demand growth are key risks.

Appendix A: Indian Railways programme shows it has learnt well from the experience of other sectors

Roads have had their share of success and failure

Road capex could be seen as a good basis of comparison with rail capex. Figure 83 depicts the path the Indian road sector has taken. Like the rail sector, road sector awards picked up with the Golden Quadrilateral, which originally took place through EPC mode. Later on, with fund constraints, NHAI moved towards BOT concession awards. The big difference between NHAI and Indian Railways is that NHAI is quite clear that most of the trunk route is likely to be built through EPC, and the feeder route will be built through privatisation with identified end-users and adequate risk-return trade-off.

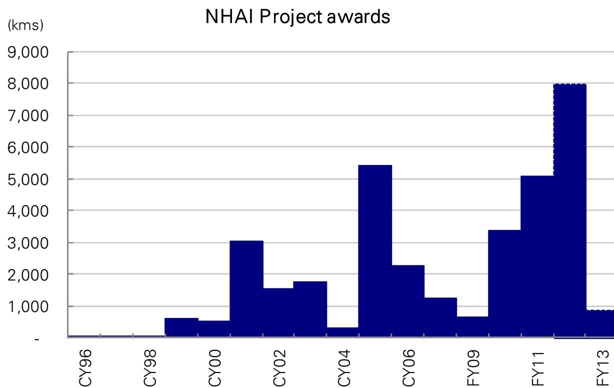
Figure 83: Road sector development



Source: Deutsche Bank

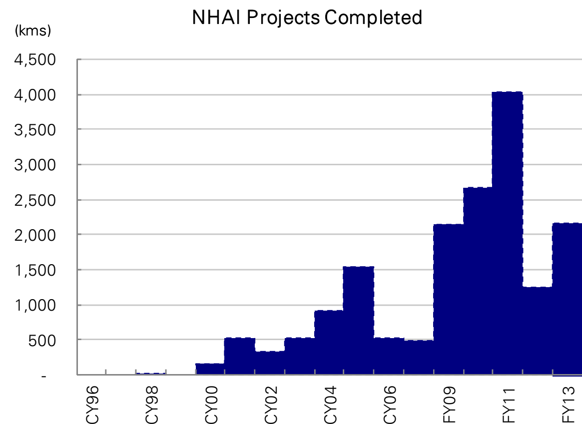
NHAI has had its moments of pick-up and slowdown, though of late the work done by NHAI suggests that the stalled projects are getting cleared. What we would like to see from Railways is the maturity with which they can deal with problems.

Figure 84: NHAI awards



Source: MORTH, Deutsche Bank

Figure 85: NHAI projects completed

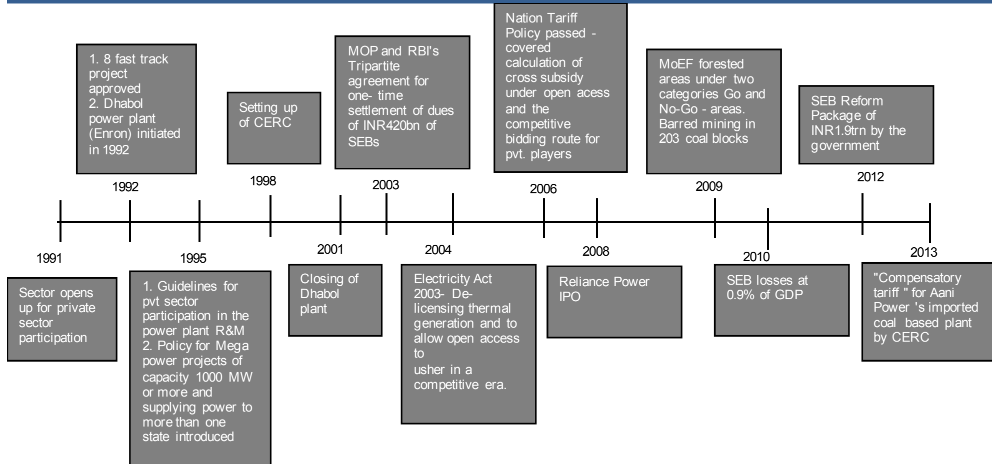


Source: MORTH, Deutsche Bank

Despite reforms, the power sector still has not created a well-rounded payment structure mechanism

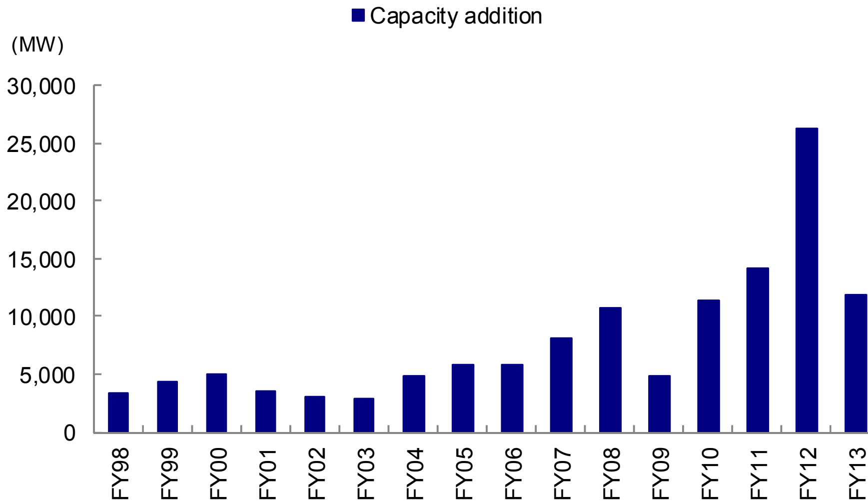
The Indian power sector has evolved from the nascent stage to a developing one, with various regulatory reforms initiated by the government to make the sector attractive. As presented in Figure 86, the reform measures started in 1991 were further supplemented by the enactment of the Electricity Act of 2003, open access regulations, national electricity policy and national tariff and SEB relief packages. However, fuel supply issues with less than required capex on this front have hampered the capacity addition plans of power producers. Moreover, the lack of fuel price pass-throughs for the private power projects under competitive bid has affected the viability of the plants and in return has affected the ROI. In comparison, the western and eastern corridors under the DFC programme are being awarded through EPC, which provides a stable option for developers. Also, feeder routes/last mile connectivity projects provide an attractive opportunity, with the cap of a 14% rate of return on investment being abolished.

Figure 86: Developments in power sector



Source: Deutsche Bank

Figure 87: Power capacity addition

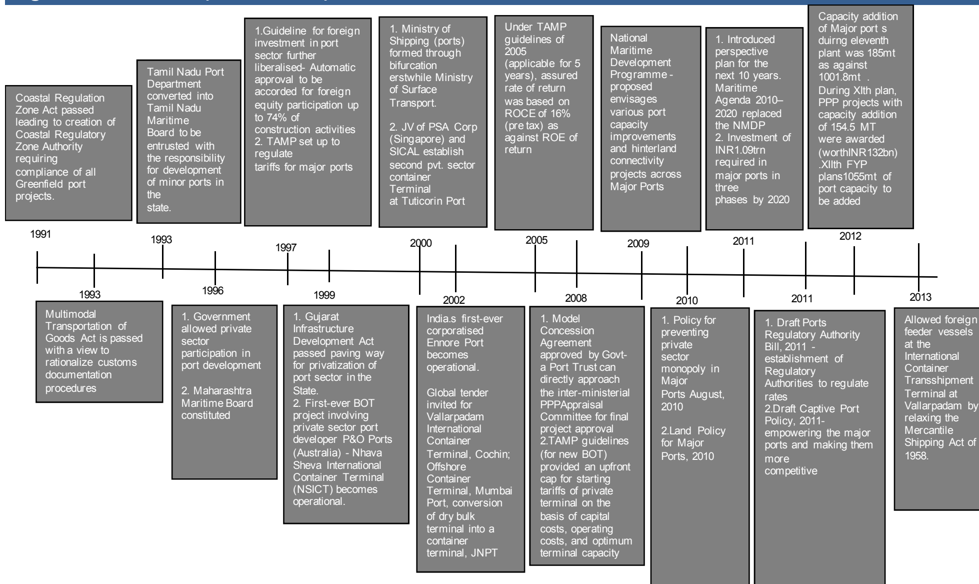


Source: CEA, Deutsche Bank

Ports started with a bang – but railway and regulatory hurdles have dragged down the sector

What started in the late 1990s as a policy which allowed a pass-through of revenue share slowly moved to a cost-plus regime of capital cost and O&M. Later, the regulators unveiled their norms and returns were dependent on the ability of the developer to meet or beat the norms. The tariff is set based on capping the ROCE at 16%. In comparison, the return cap under PPP for feeder routes does not exist.

Figure 88: Developments in ports sector



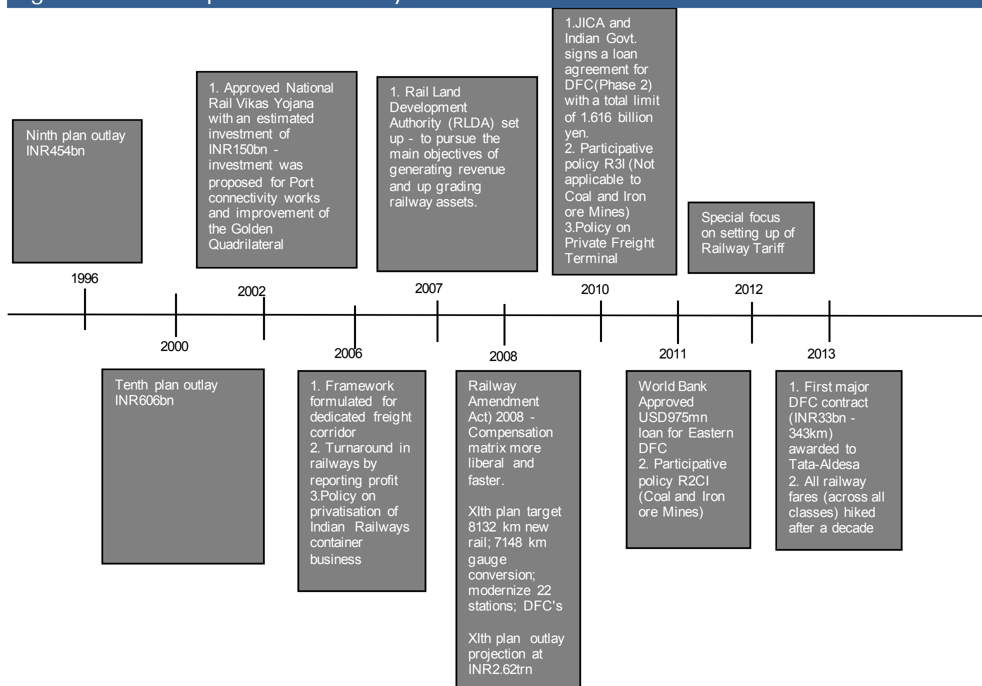
Source: Deutsche Bank

Indian Railways offers the most promise – largely as interest is the lowest and it probably will need the highest amount of funding

Indian Railways has been on the reform path for quite a while now. However, major reforms have taken place only over the last 7-8 years, when policies like R2C1/ R3I and dedicated freight corridor projects were initiated. It is important to highlight that the policy on the privatisation of Indian Railways' container trains and private freight terminals was probably the most significant policy towards substantial privatisation over the coming periods.

Indian Railways offers huge opportunities for investment, as the network (which was built mostly under British colonial rule) now struggles with supply disruptions and overcapacity. A look at the railway line addition clearly indicates the opportunities that are available due to under-investment in the sector. Over the last 61 years, only ~11,000km of lines were added, which translates to merely 180km per year. This indicates far less development on the line addition front than on the network inherited from the British Raj.

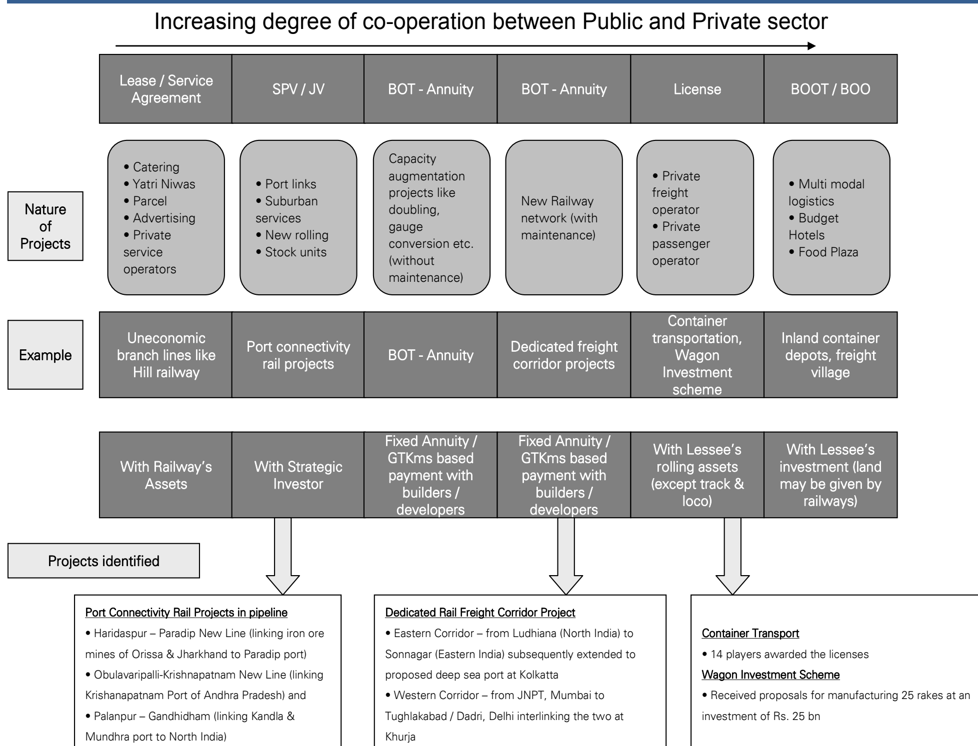
Figure 89: Developments in railway sector



Source: Deutsche Bank

The following tables depict various initiatives taken by Indian Railways to boost private sector participation.

Figure 90: Initiatives, private sector participation and identified projects by Indian Railways



Source: Deutsche Bank

Appendix B: Viability of DFC funding

India's logistics emerging as among the best in the world

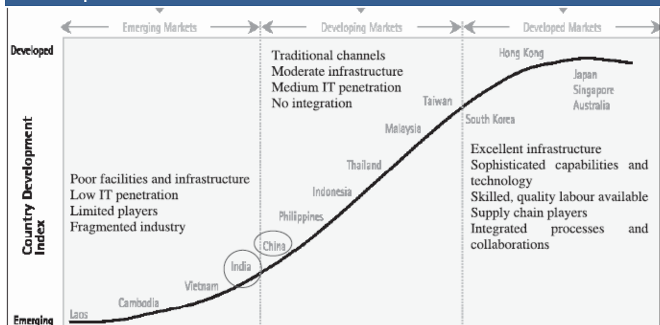
At present, India's manufacturing competitiveness is seriously affected by critical bottlenecks in the transport infrastructure and by poor logistics management, leading to time delays and high transaction costs. The time taken in inland transport is too long on account of deficiencies in the road network as well as delays at the inter-state borders. The performance of the railways is improving, but it is still not possible to have assured transportation of a consignment within a given time frame. Both the vessel turnaround time and vessel waiting time to obtain berth at ports do not measure up to world standards.

Logistics costs as a percentage of gross domestic product (GDP) range from around 9% in the US to 11-12% in France and the UK and 10-15% in China, India, Japan and Singapore, as can be seen in Figure 91.

Figure 91: India has one of the highest logistics costs as a percent of GDP

Source: Planning Commission of India, Deutsche Bank

Figure 92: Good logistics is critical to a country's development



Source: Planning Commission of India, Deutsche Bank

Largely due to higher utilisation level of railway line

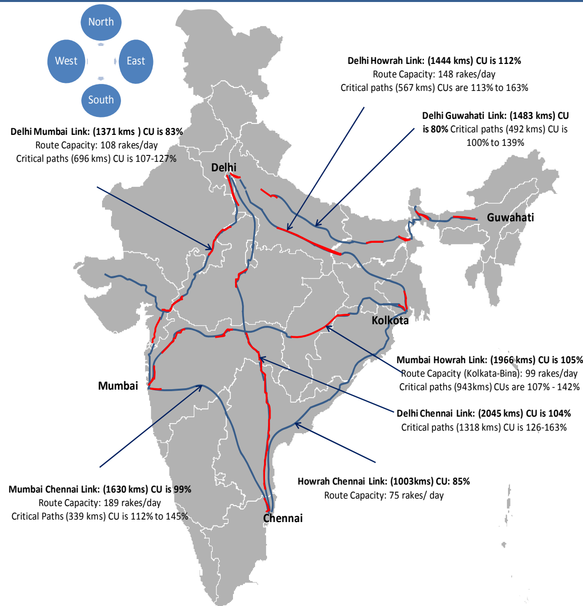
According to the data given by Indian Railways, we find that in high-density routes, the capacity utilisation is greater than 100%, i.e. in simple terms more trains are travelling in a line vs. the safe capacity stated by Indian Railways. The high-density integrated routes account for about 28% of the total IR route kilometres and 76% of the total freight (71% of the total passenger plus freight). These seven routes, as highlighted in Figure 93, are (i) Delhi-Howrah, (ii) Mumbai-Howrah, (iii) Delhi-Mumbai, (iv) Delhi-Guwahati, (v) Delhi-Chennai, (vi) Howrah-Chennai, and (vii) Mumbai-Chennai.

Solution is Dedicated Freight Corridor on the trunk routes

Dedicated freight corridors with an overall outlay of INR1tr (for the first phase) are the most ambitious and largest greenfield railway capex undertaken in independent India. In the first phase the project envisages connecting Delhi-Mumbai on the western

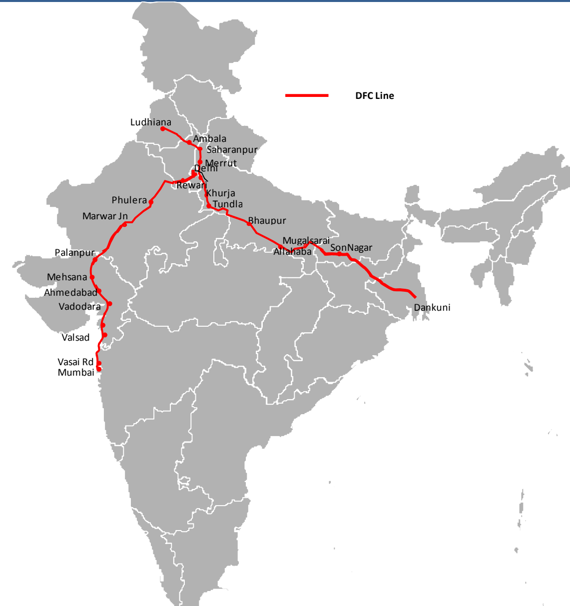
corridor and Ludhiana-Kolkata on the eastern corridor, spanning an overall length of nearly 3,300km.

Figure 93: Utilisation levels in key railways routes are alarmingly high



Source: Ministry of Railways, Deutsche Bank

Figure 94: Dedicated Freight Corridors could ease capacity constraints on high-density trunk routes



Source: Dedicated Freight Corporation of India, Deutsche Bank

Improvement in freight transport

DFCs would result in improving the existing carrying capacity by modifying basic design features. The freight corridors will encompass higher design features to enable the railway to withstand heavier loads at higher speeds (100kmph vs. average 26kmph and maximum 75kmph currently). With the DFC, an enlarged dimension of the rolling stock is being proposed. The loading capacity on a DFC would improve to 15,000 tons from the present 4,000 tons. All these features will enable longer and heavier trains to use the DFCs.

Figure 95: Significant upgrade in dimensions

Moving Dimensions Features

	Existing	On DFC
Height	4.265 m	7.1 m for Western DFC 5.1 m for Eastern DFC
Width	3200 mm	3660 mm
Container Stack	Single Stack	Double Stack
Train Length	700 m	1500 m
Train Load	4000 Ton	15000 Ton

Source: Ministry of Railways, Deutsche Bank

Figure 96: Upgraded design features on DFC

Upgraded Design Features of DFC

Heavier Axle Loads	Existing	On DFC
Axle Load	22.9t/25t	32.5t/25t for Track Superstructure
Track Loading density	8.67 t/m	12 t/m
Maximum Speed	75 kmph	100 kmph
Grade	Up to 1 in 100	1 in 200
Curvature	Up to 10 degree	Up to 2.5 degree
Traction	Electrical(25 KV)	Electrical(2x25 KV)
Station Spacing	7-10 Km	40 Km
Signalling	Absolute/Automatic with 1 Km spacing	Automatic with 2 Km spacing
Communication	Emergency Sockets/Mobile Train Radio	Mobile Train Radio

Source: Dedicated Freight Corporation of India, Deutsche Bank

Incremental freight traffic to be supported by DFCs

As per the study by RITES, the traffic on the two dedicated freight corridors (eastern and western) in FY17 is expected to reach ~91mt each by FY22.

Figure 97: Traffic projections (in mtpa)

Western DFC			Easter DFC		
	2016-17	2021-22		2016-17	2021-22
UP Direction					
Food grains, Fertiliser	1.2	1.8	Power House coal	54.5	62.0
POL	0.3	0.5	Public Coal	0.6	1.0
Cement, Salt, Miscellaneous	0.4	0.8	Steel	8.2	9.7
Containers	26.6	37.8	Others	1.6	3.0
Containers (in mn TEUs)	1.9	2.7	Logistic Park	1.2	2.4
Sub-Total	**28.5**	**40.9**	**Sub-Total**	**66.1**	**78.0**
Down Direction					
Coal, Cement, Iron & Steel	6.3	9.4	Fertilizer	0.2	0.4
Fertiliser, Foodgrains, Salt	1.6	2.6	Cement	0.8	1.5
POL	1.0	1.5	Limestone for the Steel Plants	5.0	5.0
Containers	26.6	36.4	Salt	0.7	1.0
Containers (in mn TEUs)	1.9	2.6	Others	1.6	3.0
			Logistic Park	1.2	2.4
Sub-Total	**35.5**	**49.9**	**Sub-Total**	**9.5**	**13.3**
Total	**64.0**	**90.8**	**Total**	**75.6**	**91.3**

Source: DFCCIL,, Deutsche Bank

Appendix C: DMIC a game changer

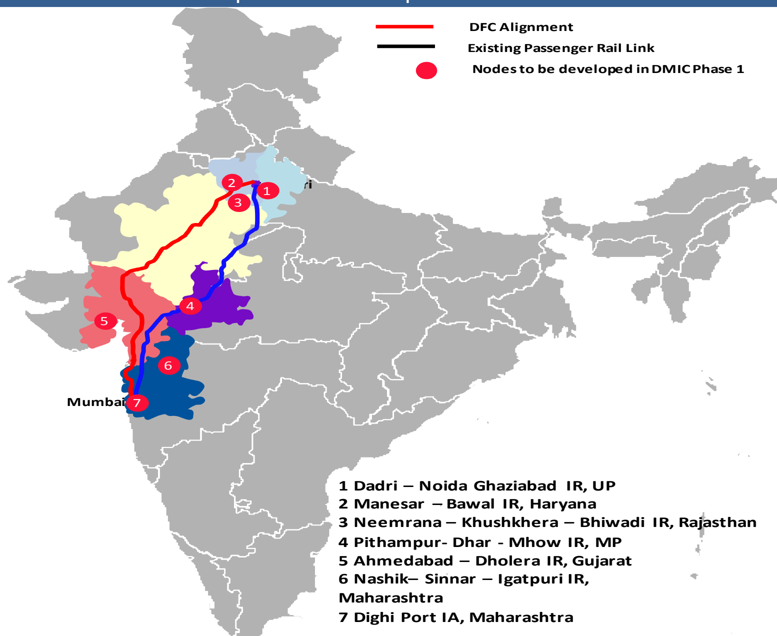
DMIC development is tracking DFC development

The DMIC project being initiated by the government of India is aimed at leveraging the economic benefits arising from the western dedicated freight corridor. To recap, the government of India accorded 'in principle' approval to the DMIC project outline in August 2007. The basic idea of the project is to ensure high-impact developments within a band of 150km on either side of the alignment of the DFC.

Real estate sweetener is left for the public – courtesy of DMIC

The DMIC project is expected to open a plethora of opportunities for real estate players, as it is expected to make large tracts of land along the western corridor available for industrial and other real estate development purposes in the form of investment regions and industrial estates.

Figure 98: DMIC – Nodes for phase-1 development



Source: DMIICDC, Deutsche Bank

Snapshot of projects to be developed

Most of the projects in the DMIC region are expected to be implemented through public-private partnership. Some of the projects coming up in the DMIC regions are given in Figure 99.

Figure 99: Snapshot of projects coming up in DMIC

	Gujarat	Madhya Pradesh	Haryana	Maharashtra	Rajasthan	Uttar Pradesh
Power Projects	1,000-1,200MW Gas based project at Patan and Mehsana	1,000-1,200MW gas based project at Guna (MP)		1,000-1,200MW gas based project at Raigad and Pune	Solar Power at Neemrana (5.00 MW, 1 MW, 2.00 MW – Diesel Generator)	Development of Power Project at Greater Noida
Early Bird Projects						
Rail/ Roads connectivity	Six-lane expressway from Ahmedabad to Dholera			* 4-lane road connectivity from Shirdi to Igatpuri via Sinnar; * Connectivity by 4 lane Road and Rail of Nevali Growth center (Thane) to DFC * Connectivity of Alewadi Port by Rail to DFC and to Alewadi Port by 4 lane road to Mumbai-Ahmadabad Highway and	*Road Link Connecting Bhiwadi – Tapokara Industrial Complex via Ajarka to Neemrana *Development of Sojat – Pali By – Pass road	Development of Greater Noida (Boraki) Railway Station as a passenger and commercial cargo hub
Metros/ transit system	Metro connectivity between Gandhinagar to Ahmedabad		Mass Rapid Transit System (MRTS) between Gurgaon and Bawal		Mass Rapid Transit System (Jodhpur Pali Marwar)	
Industrial parks	Mega Industrial Park at Dholera SIR			*Mega Industrial Park at Shendra-Bidkin Region *Dhule Mega Industrial Park		
Water projects	Water Desalination Project, Dahej	Water Supply System & Wastewater Management for Pithampur Industrial Area	Water supply project (from Tajewala)		Water supply and Waste Water Management in Jodhpur – Pali – Marwar Industrial Area	
Airports	Dholera International Airport				*Development of Airport near Jodhpur; *Development of Aerotropolis	Development of International Airport near Greater Noida
Economic Corridor	From Pithampur to Indore Airport					
Knowledge city	Knowledge City in Ujjain			Development of the Knowledge City		
Logistic Hub	Multimodal Logistic Hub Project near Maksi and Pithampur Industrial Area	Integrated Multi Modal Logistics Hub Project at Rewari	Multi – Modal Logistics Park at Talegaon	Development of Multi Modal Logistic Hub	Development of Integrated Multi–modal Logistic Hub at Greater Noida near Dadri	
Convention Centre		Exhibition cum convention Centre at Panchgaon Chowk	Exhibition cum convention Centre at Aurangabad			

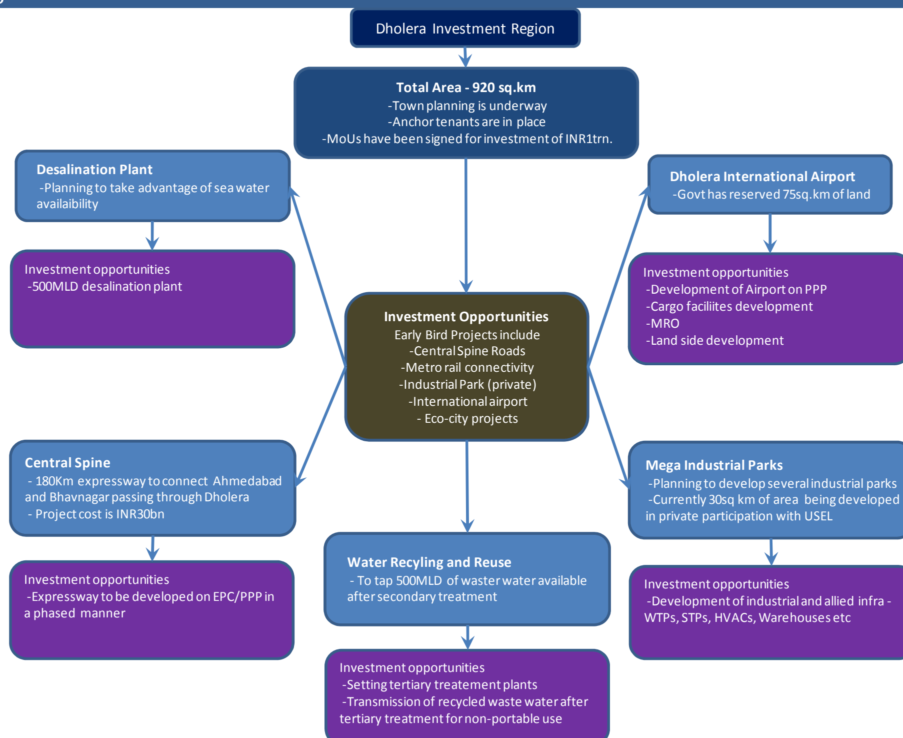
Source: DMIC, Deutsche Bank

Appendix D: Dholera – Being created on similar lines as Singapore

Creation of bigger cities

The DMIC programme is expected to attract massive interest from investors, developers and builders as new cities are proposed to be created on a larger scale. For instance, Dholera (Gujarat) will be 903sqkm in size, larger than Singapore, which is just 670sqkm. The work on Dholera is expected to commence during the current fiscal period. A significant point to note here is that the DMIC infrastructure development will be based on a public-private partnership model. With this objective in mind, the government is facilitating private investment through a policy framework, concessional agreements, viability gap funding and long-term financing through IIFCL.

Figure 100: Potential for investment in Dholera



Source: Government of Gujarat, Deutsche Bank

Appendix E: What is the state of rail finances?

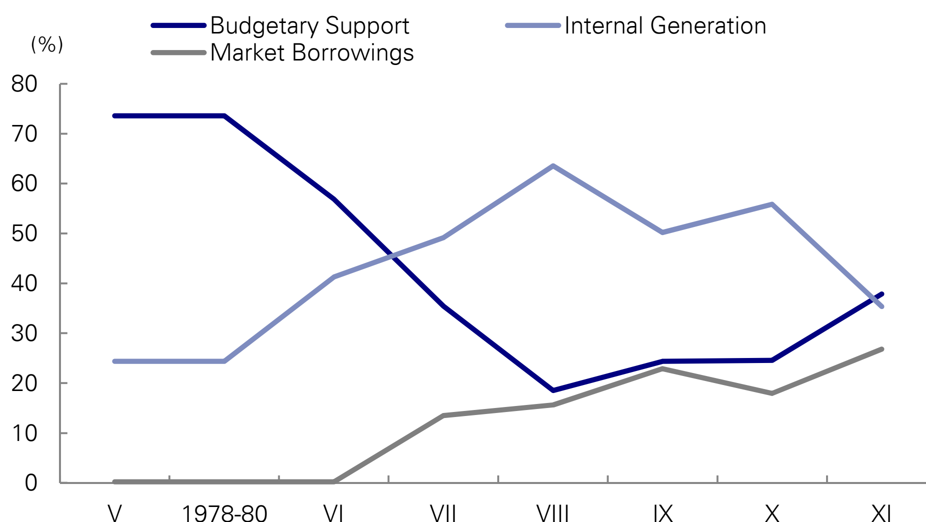
Financing of last two plan periods: FY02-07 and FY07-12E

The plan expenditure of Indian Railways is financed through three different sources, namely:

- Gross Budgetary Support (GBS): Capital from General Exchequer; plus Railway Safety Fund (Indian Railways' share in Central Road Fund);
- Internal Generation of Resources;
- Extra Budgetary Resources, including Market Borrowings through IRFC, PPP, States' share etc. Also includes Bonds, Wagon Investment Schemes (WIS), Public-Private Partnership (PPP) and Green Energy Fund, state sharing, etc.

Over the last decade, Indian Railways' target achievements vs. plan were a mixed bag. In the tenth plan, i.e. FY02-07, we had a big positive surprise. The government approved an outlay of INR606bn, and the total outlay achieved was INR847bn, about 36% higher than the approved plan outlay. From a financing side, all three elements, i.e. internal resource generation, gross budgetary support and extra budgetary resources (market borrowings), saw a big jump. The actual mobilisation of internal resources increased from INR31.1bn in 2002-03 to INR.122.06bn in 2006-07. The Total Gross Budgetary Support of INR381.63bn was higher than the earlier allocation of INR27.6bn.

Figure 101: Budgetary support stepped in as internal resource generation fell



Source: Ministry of Railways, Deutsche Bank

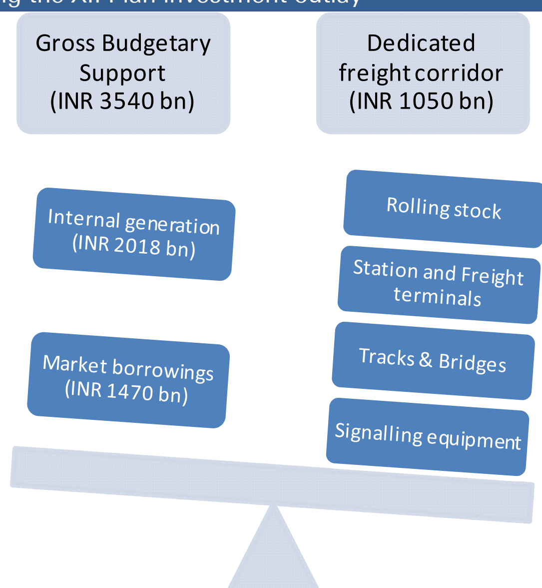
Things reversed in the XI Plan. The investment in the XI plan was approved for INR2,332bn, constituting INR636bn as Gross Budgetary Support, the Internal Resource component constituting INR900bn and Extra Budgetary Sources INR796bn. The financial achievement of the Plan is short of the target by INR299bn (12.9%). The

internal resource component is short by INR.181bn (20.1%) and the Extra Budgetary Sources are short by INR251.96bn (31.6%). However, the Gross Budgetary Support has exceeded the target of INR133.86bn (21%). In the XI Plan, the internal resource generation was affected due to the increase in salaries and allowances of railway employees and the additional outflow due to the increase in pension payments with the implementation of the recommendations of the VI Pay Commission in the Plan period.

One could argue XII Plan targets are over-ambitious

According to the Ministry of Railways, the requirement for the plan expenditure for railways will be met broadly by about INR3,540bn from GBS, INR2,018bn from internal resources and INR1,470bn from the Extra Budgetary Resources. The good part about financing this outlay is each category of financing is meant for a specific purpose.

Figure 102: Financing the XII Plan investment outlay



Source: Deutsche Bank

Gross Budgetary Support (INR3,540bn) – The major requirement of GBS is for New Lines (INR1,223bn), Gauge Conversion, Doubling, Traffic Facilities, Rolling Stock (INR1,578bn), Workshops including Investment in PSUs/JVs/SPVs, Metropolitan Transport Projects and Inventories. Under Investment in PSUs/JVs/SPVs, the projections include investment in dedicated freight corridors (INR964bn as equity and loan and INR100bn) and IRFC (INR51bn).

Internal Resources (INR2,018bn) Internal Resources is used to finance the Capital Fund, Depreciation Reserve Fund and Development Fund. These funds are required for renewals, replacements, upgrades and modernisation of assets and repayment of the principal component of lease charges. It is primarily required for Rolling Stock, Track Renewals, S&T, Other Electrical Works, Amenities for Staff, Passenger Amenities and Other Specified Works.

Extra Budgetary Resources (EBR) (INR1,470bn) – Investment from market borrowings through bonds are utilised for the procurement of rolling stock. An amount of INR900bn was estimated in the XII Plan for this. The PPP initiatives including WIS have been projected to bring INR570bn into the railway system. Investment through PPP is likely to flow into New Lines, Traffic Facilities, Workshops including PUs, Passenger

Amenities and Rolling Stock. In addition, investment from PPP is also projected for the DFC and High-Speed Rail Project

Where are the gaps, and can those be bridged?

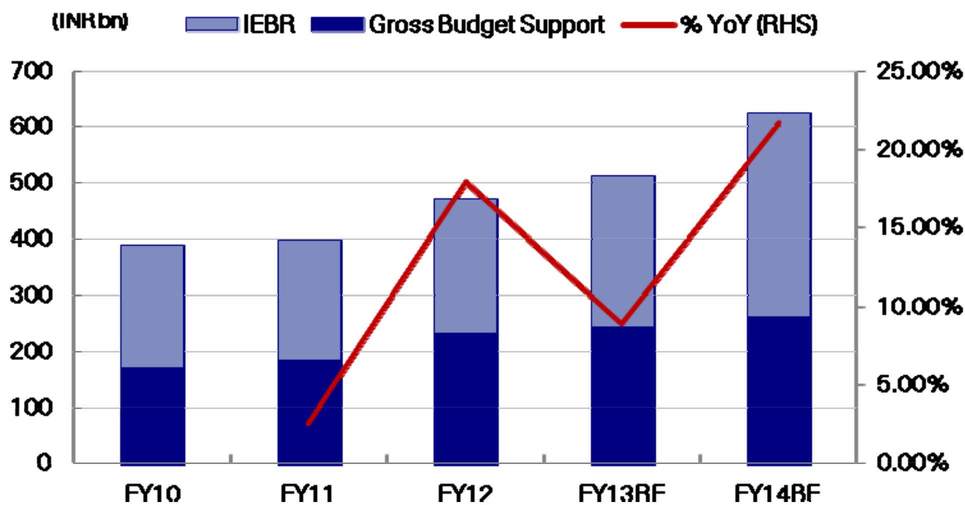
The total internal resources available are INR364bn, which is highly inadequate compared to the requirement of INR2,018bn, i.e. a gap of INR1,635bn

The quantum of GBS projected means an annual budgetary support of INR600bn vs. INR200bn at present. This seems a difficult proposition unless the government's priorities shift dramatically in favour of rail infrastructure.

Similarly, resources expected to be raised through EBR depend heavily on IRFC borrowing and PPP. While the debt servicing costs are already touching a very high level and Indian Railways is finding it difficult to sustain this borrowing, the decision to increase market borrowings will require careful consideration. The past record of Indian Railways in raising resources through PPP is not very encouraging, and an optimistic scenario of plan investment through this route presupposes putting in place marketable policies that appeal to the private sector.

So from a railway perspective, the biggest gap at this juncture seems to be on the internal resource generation. A quick sensitivity test of the railways earnings model would show that even if we assume freight traffic growth of 7.7% and passenger traffic growth of 7%, and assume operating expenses to rise as per inflation, the total internal resources available are INR364bn, which is highly inadequate compared to the requirement of INR2,018bn, i.e. a gap of INR1,635bn.

Figure 103: Financing the XII Plan investment outlay



Source: Deutsche Bank

Figure 104: Levers for Indian Railways to increase revenues

- Revenue
  - Freight
    - Volume
      - DFC
      - Existing lines
        - Higher speed
        - Rolling stock addition
        - Double stack
        - Higher axle loads
        - Incentives for empty flow routes
        - Faster turnaround time
    - Tariff
      - Hike
      - Premium services
  - Passenger
    - Volume
      - New lines
    - Tariff
      - Basic fare
      - Premium services
        - Express & Mail services
        - More Tatkal Coaches
        - More AC services

Source: Deutsche Bank

In order to bridge the gap, some measures that can be considered by the Ministry of Railways include those listed in Figure 105.

Figure 105: Measures that are being considered to enhance internal resources

Item	Amount (INR bn)
Indexing fare & freight with fuel, inflation	250
Dividend relief of 1%	60**
SRSF II	550
Operating losses (uneconomic)	71
Land & Advertisement	200
Market oriented fares	200
Fuel Efficiency surcharge	100
No addition of 1 lakh to staff strength	140
Total	**1,571**

** if reduced to 3% as per rly's request, it will go up to INR120bn

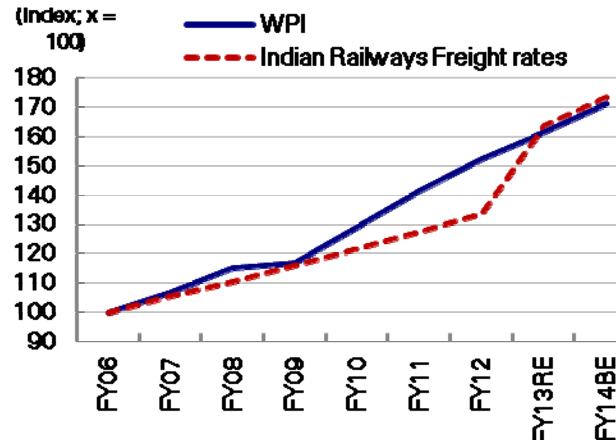
Source: Planning Commission of India, Deutsche Bank

The good news is that freight rates have already increased by a huge 20%-plus

While passenger fares on the basic services have remained stagnant for the past eight years, Indian Railways recently announced a 20% rise in freight rates across most commodities (except iron ore). In the case of iron ore, Indian Railways has announced a c30% fall in tariffs to attract the limited volumes (volumes dipped after the government banned iron ore exports). This rise, as per most user industries, is lower than the

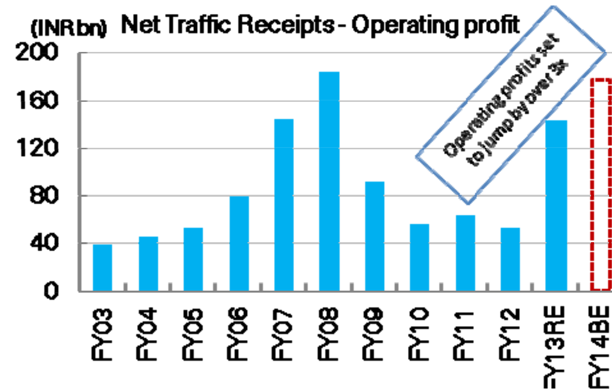
increase seen in the road segment (while higher than anticipated) and is hence unlikely to affect volumes for Indian Railways in any meaningful manner.

Figure 106: Recent tariff hikes on the freight front are ensuring that at least tariffs keep pace with inflation…



Source: Ministry of Railways, Deutsche Bank

Figure 107: …and should lead to net traffic receipts jumping by 3x from the FY12 levels

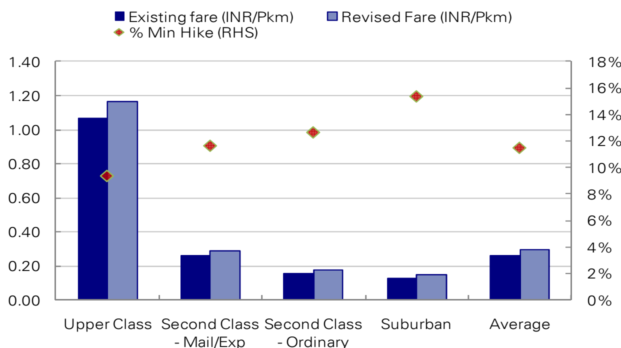


Source: Ministry of Railways, Deutsche Bank

Passenger rates are being hiked through indirect measures

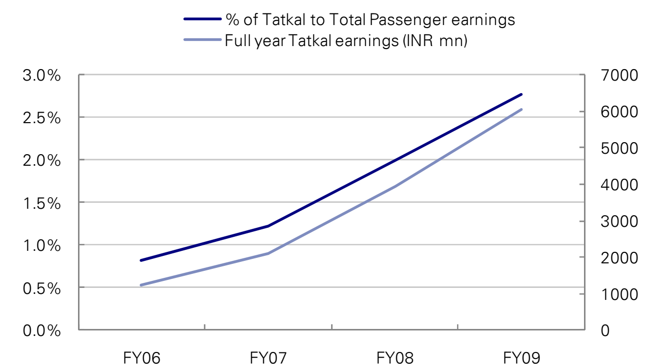
Indian Railways revised its Tatkal service of booking train tickets in 2009, allowing a reduced advance reservation period of to days. The Tatkal charges were fixed as a percentage of the fare at the rate of 10% of basic fare for second class and 30% of basic fare for all other classes, subject to minimum and maximum charges. In 2008-09, the Tatkal scheme earned INR6.05bn. The number of seats under the Tatkal scheme increased from 5.6% of the total reserved seats in 2005-06 to 14.2% in 2008-09. This has helped enhance passenger earnings without increasing fares.

Figure 108: Passenger fares raised by >10%...



Source: Ministry of Railways, Deutsche Bank

Figure 109: …and earnings from 'tatkal' on the rise



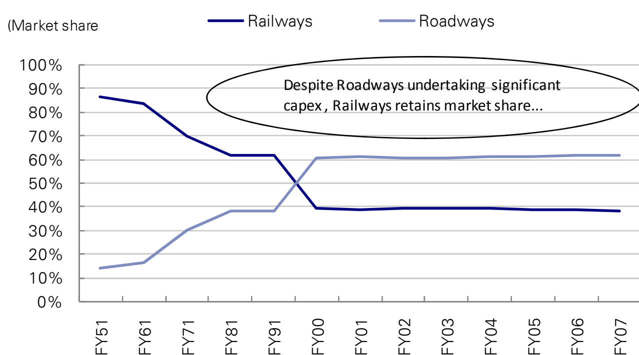
Source: Ministry of Railways, Deutsche Bank

Appendix F: Comparison of railways with other modes of transport

Railways have so far matched road traffic growth since reforms

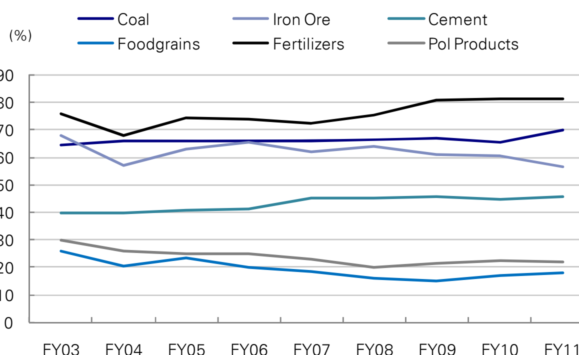
Indian Railways has recorded unprecedented incremental growth in freight traffic of 176 million tonnes in the last five years, and in FY13, the rail transporter achieved an originating freight loading of ~1,010mt. A look at the following graphs would show that in the administered price regime period of 1961-91, most users preferred roads for shipment. The road freight traffic saw a CAGR of 8.1% (FY61 – FY91) compared with the rail freight traffic CAGR of 4% over the same period. Interestingly, after the opening of the economy, thanks to the gain in market share by railways in the bulk commodities, railways have matched roadways in traffic growth.

Figure 110: Railways, surprisingly enough, have matched freight growth of roadways in the last decade…



Source: Planning Commission of India, Deutsche Bank

Figure 111: …largely driven by gaining market share in bulk commodities



Source: Ministry of Railways, Deutsche Bank

But railway lines now seem to be carrying an alarmingly high load

Indian Railways has a total track length of 113,611km. Of this, 88% of tracks are on concrete sleepers and 78% are Continuously Welded Rail (CWR) track. Line capacity has been severely constrained due to the introduction of more and more trains over the years. No technical aid is yet available on Indian Railways to run trains during foggy weather, which adversely affects train operations during the winter season of 2-3 months in northern India. Also, as mentioned in Appendix B, in high-density routes, the capacity utilisation is greater than 100%. As the railway lines are overloaded, the phenomenon has resulted in a shift in freight from railways to roads.

DFCs could capture incremental freight traffic

With the DFC taking shape, new corridors will reverse the trend of freight being transferred to roads, as the railways would be able to offer faster and cheaper transportation. Carrying load through rail is more efficient than roads. For instance, on rail, one freight with 59 wagons and one electric engine of 5,000-6,000 Hp, carries

~4,600 tonnes, whereas on road the same amount would require 400 trucks, with each having a 150 Hp engine and carrying a 10-tonne load.

Assuming a 35% improvement in fuel efficiency with the DFC, we believe that future energy demand will be far lower than without the DFC scenario. Without the DFC, demand for diesel is expected to rise almost five times between FY17 and FY47, as the economy would increase its reliance on freight movement by road considering the railway capacity is already saturated.

Figure 112: Fuel savings from DFC

	2016-17	2021-22	2026-27	2031-32	2036-37	2041-42	2046-47
Total Annual Freight Traffic (in billion NTKM)							
With DFC	**218**	**295**	**362**	**426**	**498**	**595**	**701**
5 year CAGR growth							
Without DFC							
Rail	152	166	171	179	186	184	179
5 year CAGR growth		*1.8*	*0.6*	*0.9*	*0.8*	*-0.3*	*-0.5*
Road	70	130	182	232	289	368	469
5 year CAGR growth		*13.2*	*6.9*	*5.0*	*4.5*	*5.0*	*5.0*
Total annual future energy requirements by type of fuel							
With DFC							
Diesel (M. Litres)	0	0	0	0	0	0	0
Electricity (M. KWh)	1622	2195	2690	3166	3702	4424	5216
Without DFC							
Diesel (M. Litres)	1237	2002	2646	3318	3932	4869	6109
Electricity (M. KWh)	764	893	961	921	1278	1387	1395

Source: Deutsche Bank

Appendix G: Important stages under land acquisition

A three-stage land acquisition process

20A

- This stage involves preliminary notification, DPR preparation, identification of survey numbers of the land, gazette notification, and the proposed alignments.
- After that a joint measurement survey is conducted, which super-imposes the corridors' alignment on the map with the identified land parcels.
- Once this is done, the land owners get an opportunity to object at the land acquisition offices.

20E

- At this stage after the notification, only the owners whose land is to be compensated are engaged.
- The relief and rehabilitation package in the case of a DFC has to match with the guidelines, if any, of the international agencies (such as JICA for the western corridor) funding the projects. This is based on both the circle rates and the market rates. Besides compensation for the land, compensation depends on the livestock owned, employment opportunities undertaken currently, tenants occupying the land, etc.
- This process typically takes about 5-6 months to be completed, as some landowners are NRIs. All owners' objections, meetings and compensation details are recorded on video.
- After the compensation stage when the land comes under 20E, the central government can, if needed, proceed to start work on the site.

20F

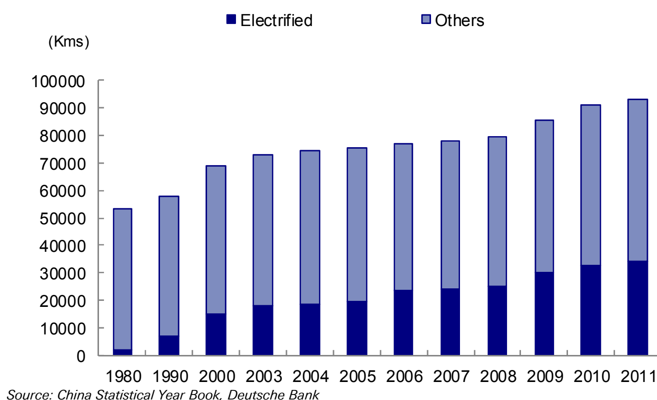
- In the case of the western corridor, 20E has been ready for over a year now, but 20F is pending for phase II as it needs the go-ahead of the Japanese authorities. In the case of the western DFC, the authorities cannot move ahead if all the above steps are not approved to the satisfaction of the Japanese lenders. Even though the Indian authorities have assured that any incremental compensation, if suggested by the Japanese authorities, would be made good when decided, they are not comfortable making an exception for a single project among the overall list of projects they are undertaking. The Relief and Rehabilitation proposal was expected to come up for hearing on 28 February as far as phase II is concerned and is likely to pass through.

Appendix H: China and India – a quick comparison

Railway line additions on the rise in China

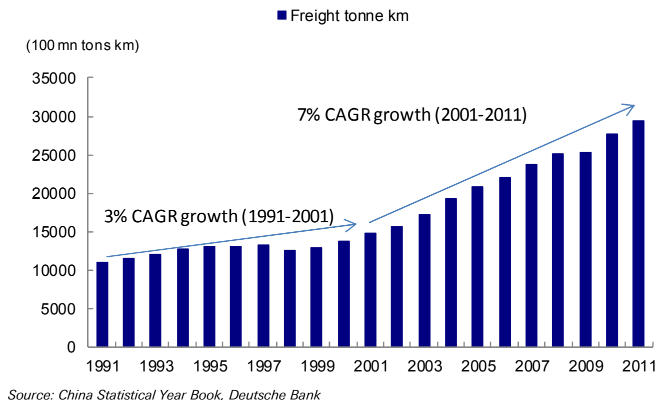
Railway programme in China got a boost with the adoption of Long-Term Plan (MLTP) adopted in 2004 and revised upwards in 2008. Following are some of the highlights of the China's Railway System. China has added 39,950km of railway line since 1980, which translates to 1,289km/year of addition. This is quite significant considering the freight transport has seen a significant rise since 2001 (CAGR of ~7% over 2001-2011).

Figure 113: Gradual rise in railway line addition for China



Source: China Statistical Year Book, Deutsche Bank

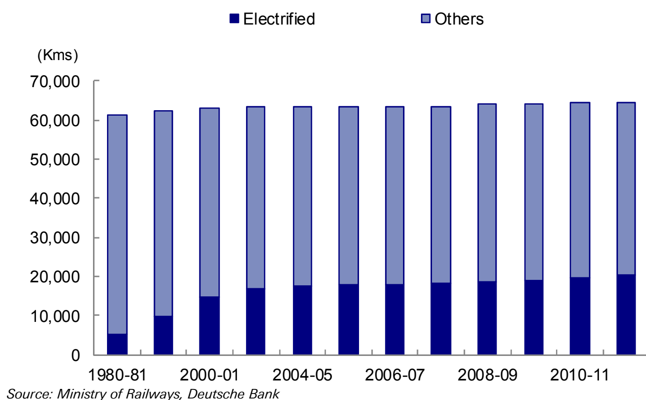
Figure 114: China's freight transport has seen a significant rise since 2001



Source: China Statistical Year Book, Deutsche Bank

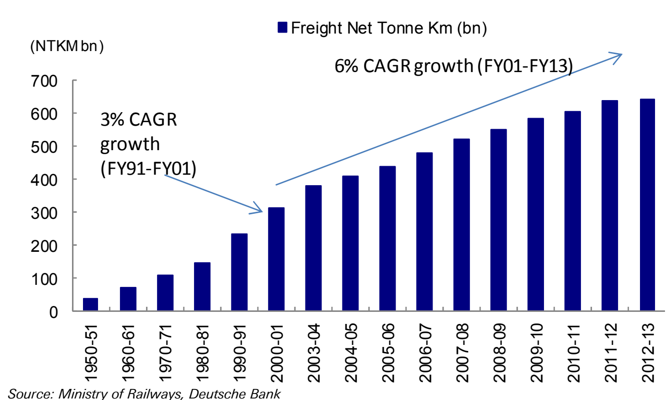
On the other hand, India, which had a higher railway length of 61,240km in 1980-81 vs. China, has added merely 3,360km of line over the past 30 years. This translates to a 108km/year of line being added since 1980-81.

Figure 115 Since 1980-81, Indian Railway has added only 3,360km of lines



Source: Ministry of Railways, Deutsche Bank

Figure 116: In India too, freight transport has seen a significant rise since 2001



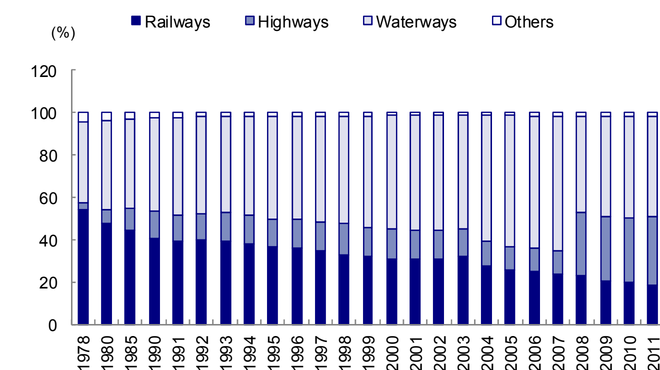
Source: Ministry of Railways, Deutsche Bank

China's Railways losing market share

In China, the railways' share of the national transport has declined since 1978 in the freight segment due to capacity constraints on key lines. Also on the passenger segment, the decline was steeper in the initial period (1978-1995) and then it stabilized. However, in the recent period, i.e. from 2009, the railways share has again started to fall with passenger preferring civil aviation over it.

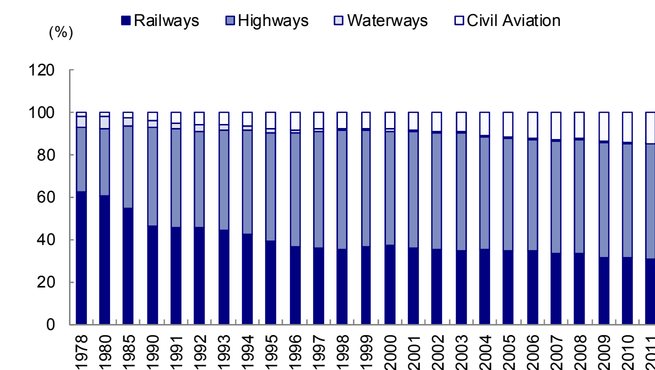
Broadly, the railway development is laggard before 2008. Lots of old railway lines have not increased their capacities for cargo transportation as more new high-speed railway lines (dedicated passenger lines) are still under construction and customers prefer roadway due to better service and more convenience.

Figure 117: Fall in railway share of the overall freight market in China



Source: China Statistical Year Book, Deutsche Bank

Figure 118: Passenger segment also experiencing gradual fall in China



Source: China Statistical Year Book, Deutsche Bank

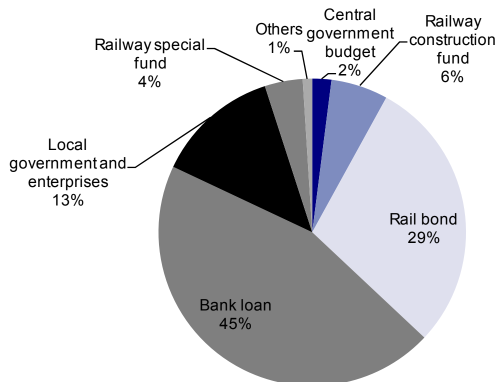
In India, on the freight side, Indian Railways has close to 32% share of country's freight, while remaining freight is being transported mainly through roads. As mentioned in Appendix F, Indian Railways after the opening of the economy has gained market share in the bulk commodities and the railways have matched roadways in traffic growth.

Capex plan well laid out in China

Our China infrastructure analyst (Phyllis Wang) forecasts rail infrastructure investment during 12th five-year railway plan (2011-2015) for China will be close to USD400bn (2.5tr yuan). This is 27% higher than 11th five-year plan of USD315bn (1.98tr yuan). For 2013, the budget spending for railway infrastructure construction has been pegged at Rmb520bn, which seems conservative and we see upside potential from continued government support. Phyllis Wang expects railway infrastructure spending in 2013 of Rmb550bn (6% higher than the MoR's budget).

China's portion is attributable to China Deutsche Bank Analyst infrastructure analyst Phyllis Wang

Figure 119: China - Capex set aside for railway infra in 2013 with funding for Rmb520bn already being resolved

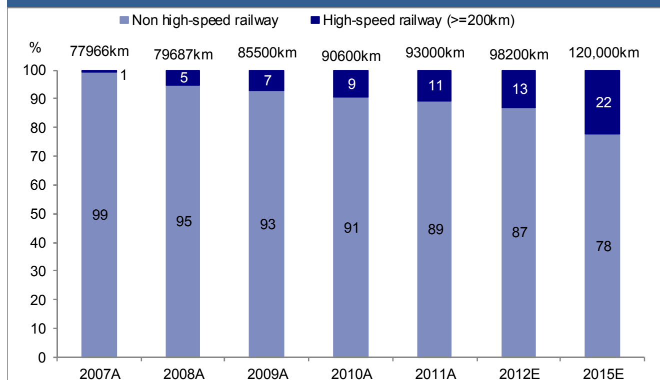


Source: DFCCIL, Deutsche Bank

High speed railway increasing its share in China

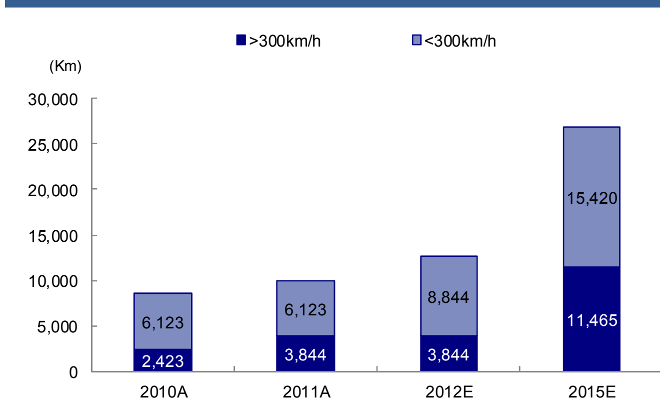
China's Ministry of Railway has set the current target of increasing the railway total rail network from 98,000km in 2012 to 120,000km by 2015. This would include 26,885km of high-speed line. Currently, close to 13% of the total network consist of high speed railway.

Figure 120: High speed railway increasing its presence in China



Source: Deutsche Bank

Figure 121: High Speed railway of >300km/h on the rise in China

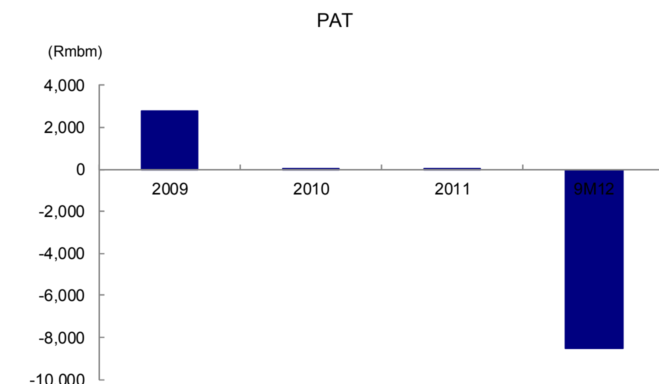


Source: Deutsche Bank

Profitability of China's railway on decline

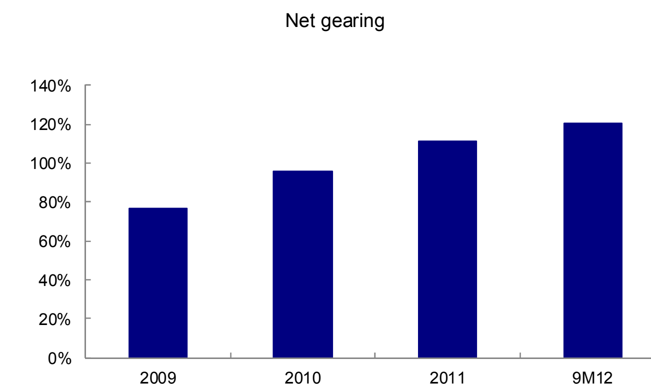
Most old railway lines in China made money whilst most new high-speed railway lines (such as Shanghai-Beijing, Wuhan-Guangzhou) that were launched in the past few years still made loss. A look at the table shows that the profitability of the Ministry of Railways, which owned all of the network, has taken a severe hit during the recent periods.

Figure 122: New railway lines has hit the profitability of China's Ministry of Railways



Source: Ministry of Railways, Deutsche Bank

Figure 123: Rising debt level of China's Ministry of Railways



Source: Ministry of Railways ,Deutsche Bank

Pick up in ordering activity in China

According to China Infrastructure Deutsche Bank analyst (Phyllis Wang) expects more than 30 new railway projects to start construction in 2013, with total infrastructure investment of above Rmb400bn (vs. more than 20 new railway projects with investment of Rmb250-300bn in 2012). Moreover, non-railway infrastructure orders from local government are also expected to gradually pick up in 2Q13 following the local government transition.

China's Railway on a major reform path

In a major development the Chinese government has ultimately decided to dissolve the Ministry of Railways. The administrative/ regulatory functions of ministry are being transferred to the Ministry of Transport and the commercial activity will be taken over by a newly-formed China Railway Corporation. The reshuffle of administrative and commercial functions could make it easier for China to attract private investment into the railway.

Issues with Chinese Railway System

Media reports suggest that the Ministry of Railways is sitting on a debt of Yuan 2.53tr (USD405.8bn) and debt ration is around 61%. How is this going to be managed by the newly formed entities? This is going to be a major challenge. Also, the Ministry of Railways has been marred by corruption allegation, which resulted in reshuffling the power and functions of the ministry.

Acknowledgement

The authors of this report wishes to acknowledge the contribution made by Bishnu Ram Sharma, employee of Irevna, a division of CRISIL Limited, a third-party provider to Deutsche Bank of offshore research support services.

Appendix 1

Important Disclosures

Additional information available upon request

Disclosure checklist

Company	Ticker	Recent price*	Disclosure
Larsen & Toubro Ltd	LART.BO	1,541.80 (INR) 26 Apr 13	14,17
Coal India Limited	COAL.BO	317.05 (INR) 25 Apr 13	NA
UltraTech Cement	ULTC.BO	1,907.30 (INR) 26 Apr 13	NA
Adani Ports & SEZ Ltd	APSE.NS	144.40 (INR) 25 Apr 13	NA

*Prices are sourced from local exchanges via Reuters, Bloomberg and other vendors. Data is sourced from Deutsche Bank and subject companies

Important Disclosures Required by U.S. Regulators

Disclosures marked with an asterisk may also be required by at least one jurisdiction in addition to the United States. See Important Disclosures Required by Non-US Regulators and Explanatory Notes.

14. Deutsche Bank and/or its affiliate(s) has received non-investment banking related compensation from this company within the past year.

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Analyst Certification

The views expressed in this report accurately reflect the personal views of the undersigned lead analyst about the subject issuers and the securities of those issuers. In addition, the undersigned lead analyst has not and will not receive any compensation for providing a specific recommendation or view in this report. Manish Saxena

Historical recommendations and target price: Larsen & Toubro Ltd (LART.BO)

(as of 4/26/2013)

Previous Recommendations

Strong Buy
Buy
Market Perform
Underperform
Not Rated
Suspended Rating

Current Recommendations

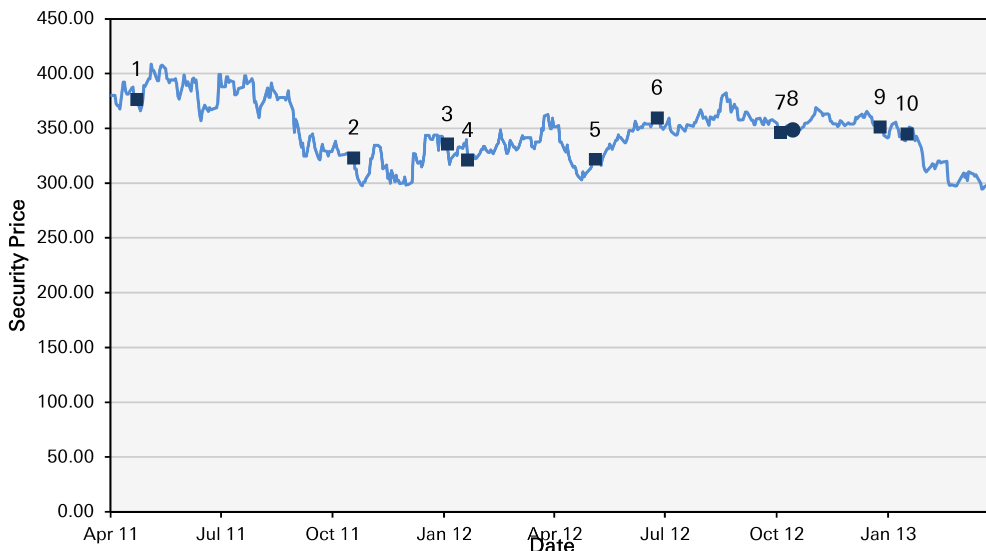
Buy
Hold
Sell
Not Rated
Suspended Rating

*New Recommendation Structure as of September 9,2002

1.	20/05/2011:	Hold, Target Price Change INR1,660.00	5.	14/05/2012:	Buy, Target Price Change INR1,450.00
2.	21/07/2011:	Hold, Target Price Change INR1,885.00	6.	17/08/2012:	Buy, Target Price Change INR1,585.00
3.	03/09/2011:	Upgrade to Buy, Target Price Change INR1,850.00	7.	28/09/2012:	Buy, Target Price Change INR1,805.00
4.	11/01/2012:	Buy, Target Price Change INR1,600.00	8.	17/12/2012:	Buy, Target Price Change INR1,925.00

Historical recommendations and target price: Coal India Limited (COAL.BO)

(as of 4/25/2013)



Previous Recommendations

Strong Buy
Buy
Market Perform
Underperform
Not Rated
Suspended Rating

Current Recommendations

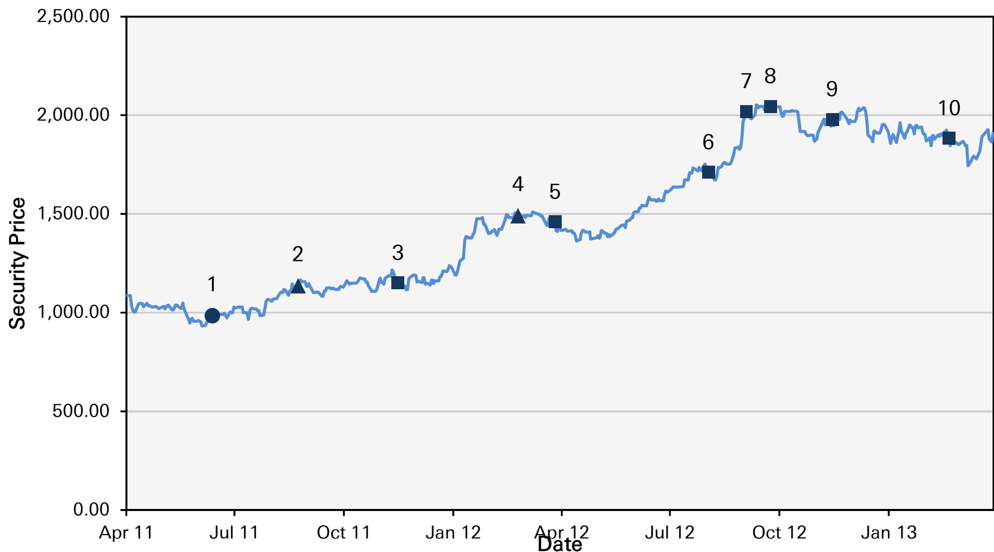
Buy
Hold
Sell
Not Rated
Suspended Rating

*New Recommendation Structure as of September 9,2002

1.	20/05/2011:	Buy, Target Price Change INR450.00	6.	22/07/2012:	Buy, Target Price Change INR400.00
2.	15/11/2011:	Buy, Target Price Change INR430.00	7.	01/11/2012:	Buy, Target Price Change INR380.00
3.	31/01/2012:	Buy, Target Price Change INR395.00	8.	11/11/2012:	Downgrade to Hold, Target Price Change INR355.00
4.	17/02/2012:	Buy, Target Price Change INR390.00	9.	22/01/2013:	Hold, Target Price Change INR340.00
5.	01/06/2012:	Buy, Target Price Change INR370.00	10.	13/02/2013:	Hold, Target Price Change INR345.00

Historical recommendations and target price: UltraTech Cement (ULTC.BO)

(as of 4/26/2013)



Previous Recommendations

Strong Buy
Buy
Market Perform
Underperform
Not Rated
Suspended Rating

Current Recommendations

Buy
Hold
Sell
Not Rated
Suspended Rating

*New Recommendation Structure as of September 9,2002

1.	10/07/2011:	Downgrade to Sell, Target Price Change INR857.00	6.	30/08/2012:	Buy, Target Price Change INR1,950.00
2.	20/09/2011:	Upgrade to Hold, Target Price Change INR1,160.00	7.	01/10/2012:	Buy, Target Price Change INR2,235.00
3.	13/12/2011:	Hold, Target Price Change INR1,165.00	8.	21/10/2012:	Buy, Target Price Change INR2,280.00
4.	23/03/2012:	Upgrade to Buy, Target Price Change INR1,800.00	9.	12/12/2012:	Buy, Target Price Change INR2,600.00
5.	23/04/2012:	Buy, Target Price Change INR1,875.00	10.	20/03/2013:	Buy, Target Price Change INR2,100.00

Historical recommendations and target price: Adani Ports & SEZ Ltd (APSE.NS)

(as of 4/26/2013)

Previous Recommendations

Strong Buy
Buy
Market Perform
Underperform
Not Rated
Suspended Rating

Current Recommendations

Buy
Hold
Sell
Not Rated
Suspended Rating

*New Recommendation Structure as of September 9,2002

1.	17/04/2013:	Upgrade to Buy, Target Price Change INR172.00

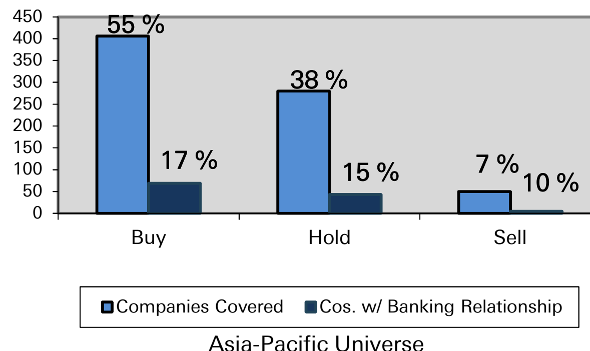
Equity rating key

Buy: Based on a current 12- month view of total share-holder return (TSR = percentage change in share price from current price to projected target price plus pro-jected dividend yield) , we recommend that investors buy the stock.
Sell: Based on a current 12-month view of total share-holder return, we recommend that investors sell the stock
Hold: We take a neutral view on the stock 12-months out and, based on this time horizon, do not recommend either a Buy or Sell.
Notes:

1. Newly issued research recommendations and target prices always supersede previously published research.
2. Ratings definitions prior to 27 January, 2007 were:

Buy: Expected total return (including dividends) of 10% or more over a 12-month period
Hold: Expected total return (including dividends) between -10% and 10% over a 12-month period
Sell: Expected total return (including dividends) of -10% or worse over a 12-month period

Equity rating dispersion and banking relationships



Asia-Pacific Universe

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