

Equities

9 March 2012 | 19 pages

Coal India (COAL.BO)

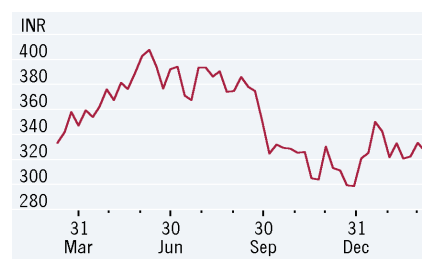
Buy: Worries Fading; Time to Warm Up

- All in the price?** — The overhang of higher wages /concerns on the use of cash seem to have faded. Coal India's (CIL) stock appears to be factoring in current coal price trends and the Draft Mining Bill. In our view, there is limited downside from here with the odds in favour of a price hike, faster clearances and a high dividend payout. The triggers are likely to be more event-based than secular in their stock price impact; but we would stay positioned for them. CIL has underperformed the Sensex by 16% over six months. At 11.8x FY13E PE (excl OBR adj) vs Asian peers at 8-11x, some valuation lustre vs peers has worn off. With upside to pricing, we would be long-term buyers.
- CIL unlikely to import in the near term** — Despite the directive asking CIL sign FSAs/meet the shortfall on contracted volumes using imported coal, we think CIL is unlikely to resort to imports over the next couple of years. If adequate rakes are made available, CIL would be able to meet its contractual commitments by enhancing production and de-stocking in the near term. We think CIL will need to import long term and estimate ~50mt of imports by CIL in FY17. While imported coal pricing remains uncertain, we feel that CIL will find a way to pass on the higher costs.
- Estimate changes** — We cap e-auction volumes at 45mt in FY13-14 but raise e-auction prices by 13-23% in FY12-14 on recent trends. We cut FY12 PAT by 6% on higher wages (+33% yoy vs +21%). We hike FY13 PAT by 2% on higher despatches (460mt vs 451mt); stronger e-auction prices offset by higher wages; lower e-auction volumes and lower prices for raw/high grade/washed coal. We expect CIL to raise prices of FSA coal (including A/B grades) by 4% in Apr12; with potential upside risk.
- Valuations** — Our TP is based on two scenarios: #1 assumes no profit sharing – derived price Rs388 (vs Rs393); #2 assumes 26% profit sharing from FY14, derived price Rs362 (vs Rs367); with a 50:50 weighting. At our TP, CIL would trade at 13.4x FY13PE (excl OBR adj).
- Sensitivity/risks** — PAT would rise 3% if average realizations rise 1%. A 1% change in wage costs impacts PAT by 1.3%. 1% change in volumes would impact PAT by 1.7%.

- Company Update
- Target Price Change
- Estimate Change

Buy	1
Price (09 Mar 12)	Rs332.00
Target price	Rs375.00
	<i>from Rs380.00</i>
Expected share price return	13.0%
Expected dividend yield	3.0%
Expected total return	16.0%
Market Cap	Rs2,097,033M
	US\$41,874M

Price Performance (RIC: COAL.BO, BB: COAL IN)



Statistical Abstract

Year to	Net Profit	Diluted EPS	EPS growth	P/E	P/B	ROE	Yield
31 Mar	(RsM)	(Rs)	(%)	(x)	(x)	(%)	(%)
2010A	98,337	15.57	142.1	21.3	8.1	43.9	1.1
2011A	108,674	17.21	10.5	19.3	6.3	36.8	1.2
2012E	137,744	21.81	26.8	15.2	5.1	37.2	3.0
2013E	152,951	24.22	11.0	13.7	4.1	33.3	2.4
2014E	169,188	26.79	10.6	12.4	3.4	30.0	3.0

Source: Powered by dataCentral

Raashi Chopra, CFA

 +91-22-6631-9862
 raashi.chopra@citi.com

Pradeep Mahtani

 +91-22-6631-9882
 pradeep.mahtani@citi.com

See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

Citi Investment Research & Analysis is a division of Citigroup Global Markets Inc. (the "Firm"), which does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Coal India (COAL.BO)

9 March 2012

COAL.BO: Fiscal year end 31-Mar						Price: Rs332.00; TP: Rs375.00; Market Cap: Rs2,097,033m; Recomm: Buy					
Profit & Loss (Rsm)	2010	2011	2012E	2013E	2014E	Valuation ratios	2010	2011	2012E	2013E	2014E
Sales revenue	466,843	526,162	599,162	655,440	697,560	PE (x)	21.3	19.3	15.2	13.7	12.4
Cost of sales	-362,481	-395,918	-456,360	-501,323	-524,418	PB (x)	8.1	6.3	5.1	4.1	3.4
Gross profit	104,362	130,244	142,802	154,117	173,141	EV/EBITDA (x)	15.6	11.7	10.1	8.8	7.3
Gross Margin (%)	22.4	24.8	23.8	23.5	24.8	FCF yield (%)	4.1	3.4	8.8	8.5	9.2
EBITDA	117,656	146,973	163,294	173,823	193,149	Dividend yield (%)	1.1	1.2	3.0	2.4	3.0
EBITDA Margin (%)	25.2	27.9	27.3	26.5	27.7	Payout ratio (%)	22	23	46	33	37
Depreciation	-13,295	-16,729	-20,492	-19,706	-20,008	ROE (%)	43.9	36.8	37.2	33.3	30.0
Amortisation	0	0	0	0	0	Cashflow (Rsm)	2010	2011	2012E	2013E	2014E
EBIT	104,362	130,244	142,802	154,117	173,141	EBITDA	117,656	146,973	163,294	173,823	193,149
EBIT Margin (%)	22.4	24.8	23.8	23.5	24.8	Working capital	63,910	-12,081	39,192	37,305	35,912
Net interest	-886	-791	-482	-466	-466	Other	-75,611	-44,918	17,024	6,709	3,808
Associates	0	0	0	0	0	Operating cashflow	105,956	89,974	219,509	217,837	232,870
Non-op/Except	36,711	35,781	56,732	68,018	72,525	Capex	-19,815	-17,832	-34,600	-39,000	-39,500
Pre-tax profit	140,186	165,234	199,053	221,669	245,200	Net acq/disposals	2,230	2,185	0	0	0
Tax	-43,425	-55,959	-61,308	-68,717	-76,012	Other	27,082	22,622	0	0	0
Extraord./Min.Int./Pref.div.	1,576	-602	0	0	0	Investing cashflow	9,497	6,975	-34,600	-39,000	-39,500
Reported net profit	98,337	108,674	137,744	152,951	169,188	Dividends paid	-22,100	-24,634	-63,164	-50,531	-63,164
Net Margin (%)	21.1	20.7	23.0	23.3	24.3	Financing cashflow	-21,621	-29,108	-62,145	-49,497	-62,130
Core NPAT	98,337	108,674	137,744	152,951	169,188	Net change in cash	93,832	67,841	122,764	129,340	131,240
Per share data	2010	2011	2012E	2013E	2014E	FCF ex acquisns & explorn	88,371	74,327	184,909	178,837	193,370
Reported EPS (Rs)	15.57	17.21	21.81	24.22	26.79						
Core EPS (Rs)	15.57	17.21	21.81	24.22	26.79						
DPS (Rs)	3.50	3.90	10.00	8.00	10.00						
CFPS (Rs)	16.77	14.24	34.75	34.49	36.87						
FCFPS (Rs)	13.64	11.42	29.27	28.31	30.61						
BVPS (Rs)	40.84	52.75	64.55	80.77	97.56						
Wtd avg ord shares (m)	6,316	6,316	6,316	6,316	6,316						
Wtd avg diluted shares (m)	6,316	6,316	6,316	6,316	6,316						
Growth rates	2010	2011	2012E	2013E	2014E						
Sales revenue (%)	14.4	12.7	13.9	9.4	6.4						
EBIT (%)	365.9	24.8	9.6	7.9	12.3						
Core NPAT (%)	142.1	10.5	26.8	11.0	10.6						
Core EPS (%)	142.1	10.5	26.8	11.0	10.6						
Balance Sheet (Rsm)	2010	2011	2012E	2013E	2014E						
Cash & cash equiv.	390,782	458,623	581,387	710,727	841,967						
Accounts receivables	21,686	30,256	36,114	39,506	42,045						
Inventory	44,018	55,856	68,004	66,988	69,945						
Net fixed & other tangibles	142,461	150,610	164,718	184,012	203,504						
Goodwill & intangibles	9,620	8,766	8,766	8,766	8,766						
Financial & other assets	99,583	109,862	90,862	95,862	100,862						
Total assets	708,151	813,973	949,851	1,105,861	1,267,088						
Accounts payable	43,358	52,828	52,908	57,968	62,401						
Short-term debt	0	0	0	0	0						
Long-term debt	19,631	15,536	15,536	15,536	15,536						
Provisions & other liab	386,973	412,111	473,328	521,858	572,628						
Total liabilities	449,963	480,475	541,772	595,362	650,564						
Shareholders' equity	257,952	333,172	407,753	510,173	616,198						
Minority interests	236	326	326	326	326						
Total equity	258,188	333,498	408,079	510,499	616,524						
Net debt	-371,151	-443,087	-565,851	-695,191	-826,431						
Net debt to equity (%)	-143.8	-132.9	-138.7	-136.2	-134.0						

For further data queries on Citi's full coverage universe please contact CIRA Data Services Asia Pacific at CIRADataServicesAsiaPacific@citi.com or +852-2501-2791



Contents

Investment Summary	4
Estimate Changes	5
Volumes	7
CIL unlikely to import in the near term	8
Clearances	10
Pricing	11
Wages	12
Balance sheet, Capex and Dividend	12
Coal India	13
Appendix A-1	14

Investment Summary

New FSAs to be signed by Coal India have been a cause of concern as CIL has reported sluggish volume growth in the past few years. News reports suggest that CIL would not be able to meet the additional demand and would have to resort to imports (and whether the higher pricing would be passed on).

CIL is unlikely to import in the next couple of years and should be able to meet coal supply under the new FSA directive if adequate rakes are available. CIL is likely to import long term but likely to pass the cost of imports. E-auction volumes may be capped.

We expect stock upside from a price hike announcement, faster clearances and high dividend payout.

Our analysis suggests that signing new FSAs need not be a major negative for CIL:

- 1) The additional volume required in FY13 (for plants commissioned by Dec11) would be around 33mt and would require 18-19 additional rakes per day (vs 170-175/day in FY12);
- 2) Imported coal may not be required for the next few years;
- 3) There is a limitation to the level of imported coal that can be blended (20-30%) by Indian power companies;
- 4) While imported coal pricing remains uncertain (pass through or pooling), we feel that CIL will find a way to pass on the higher costs;
- 5) We cap e-auction volumes (based on press reports) at 45mtpa – this could have upside risk.

The focus on coal by government officials may be a blessing and help in faster clearances. The overhang of wage negotiations, use of cash, delays in price hikes, negative impact of the Draft Mining Bill seem to be factored into the stock price. We believe there is limited downside from current levels. Upside triggers could come from a price hike (wef April12), higher volumes and a high dividend payout.

The triggers are likely to be more event-based than secular in their stock price impact, but we would stay positioned for them. CIL has underperformed the Sensex by 16% over six months. It trades at 11.8x FY13E PE (excl OBR adj) vs Asian peers at 8-11x. Some valuation lustre vs peers has worn off – with upside to pricing, we would be long-term buyers.

We tweak our target price marginally to Rs375 (from Rs380) to incorporate higher wages, revised volumes and prices. Our TP is based on two scenarios: #1 assumes no profit sharing – derived price Rs388; #2 assumes 26% profit sharing from FY14, derived price Rs362; with a 50:50 weighting. At our TP, CIL would trade at 13.4x FY13PE (excl OBR adj).

Estimate Changes

Figure 1. Estimate changes, FY12- 14E

	FY12E			FY13E			FY14E		
	Old	New	% chg	Old	New	% chg	Old	New	% chg
Rs/US\$ rate	47.1	48.0		47.1	49.5		45.9	48.9	6%
Net sales (Rs bn)	592.7	599.2	1%	643.4	655.4	2%	713.0	697.6	-2%
EBITDA (Rs bn)	173.3	163.3	-6%	169.5	173.8	3%	208.1	193.1	-7%
Net profit (Rs bn)	146.5	137.7	-6%	149.5	153.0	2%	179.1	169.2	-6%
EPS (Rs)	23.2	21.8	-6%	23.7	24.2	2%	28.4	26.8	-6%
Coal production volumes (mt)	417.0	430.0	3%	447.0	456.0	2%	474.0	481.0	1%
Coal despatch volumes (mt)	430.0	431.0	0%	451.0	460.1	2%	476.2	483.2	1%
Raw coal sales excl e-auction (mt)	365.3	362.2	-1%	377.7	393.5	4%	382.9	401.6	5%
E-auction sales (mt)	46.7	48.7	4%	49.2	45.0	-8%	52.1	45.0	-14%
Washed coal sales (mt)	15.4	14.7	-5%	19.1	16.6	-13%	32.5	28.1	-13%
Average realisation (Rs/t)	1,376	1,387	1%	1,434	1,427	0%	1,516	1,456	-4%
Average realisation (\$/t)	28	28	1%	29	29	0%	30	29	-4%

Source: Citi Investment Research and Analysis estimates

New Target Price vs Old

Figure 2. New TP vs old

	New	Old
EPS (Rs)	24.2	23.7
PE multiple (x)	9.0	9.0
PE based target price - 40%	218	213
DCF (+30%) based target price (Rs) - 60%	479	491
Target price (Rs), weighted 40:60	375	380

Source: Citi Investment Research and Analysis estimates. *Note - The TP assumes 26% profit sharing to commence from FY14 (based on our interaction with the Secretary, Ministry of Mines). The values are based on the average of two scenarios.

CIL does not have a long valuation history since it listed only in November 2010. We arrive at our target price of Rs375 using: (1) a valuation based on DCF + 30% premium (Rs479 vs. Rs491 earlier) and (2) 9x FY13 PE based valuation (Rs218 vs. Rs213), with a 60/40 weighting. The Indonesian and Chinese coal producers are currently trading in a range of 8-11x.

Our TP calculation incorporates both CIL's asset valuation and also its earnings potential. Our DCF valuation is enhanced by 30% to account for the probable reserves (8.3bn tonnes - an additional 78% over the proven reserves) that we have not incorporated in our valuation. We have not taken a terminal value and thus also use a PE-based valuation as it assumes new reserves replace the ones exhausted. The lower weightage to PE seems justified given CIL's limited exposure to international prices and that the benefits of beneficiation are likely to have a meaningful impact only after 3-4 years - thus PE alone cannot fully capture a fair valuation. At our TP, CIL would trade at 13.4x FY13 PE (excluding overburden removal adjustment).

Global Valuations

Figure 3. Global Comps

Company Name	RIC Code	Rating	YE	Mkt Cap USD \$m	Ccy	Share			P/E (x)		EV/EBITDA (x)		P/B (x)	
						Price	Target	Upside	2012E	2013E	2012E	2013E	2012E	2013E
Australia														
Whitehaven Coal Ltd	WHC.AU	1	30-Jun	2,779	AUD	5.31	6.50	22%	23.2	9.8	12.4	6.0	2.3	1.9
Indonesia														
Bumi Resources	BUMI.ID	1	31-Dec	5,399	IDR	2,375	2,900	22%	7.8	5.1	4.9	3.5	2.0	1.6
Adaro Energy	ADRO.ID	1	31-Dec	6,686	IDR	1,910	2,250	18%	8.2	7.2	4.9	4.0	2.1	1.7
Indo Tambangraya	ITMG.ID	1	31-Dec	5,126	IDR	41,450	45,450	10%	9.5	7.0	5.5	3.8	3.8	2.9
PT Bukit Asam	PTBA.ID	1	31-Dec	5,207	IDR	20,650	23,000	11%	10.8	9.6	6.6	5.4	4.2	3.5
China														
China Coal Energy	1898.CN	1	31-Dec	15,917	HKD	9.32	10.30	11%	8.1	6.5	4.9	4.1	1.1	1.0
China Shenhua Energy	1088.CN	1	31-Dec	87,875	HKD	34.30	40.70	19%	11.2	10.5	6.0	5.3	2.1	1.9
USA														
Arch Coal	ACI.US	1	31-Dec	2,536	USD	11.89	21.00	77%	11.8	9.9	6.3	5.5	0.7	0.7
Peabody Energy	BTU.US	1	31-Dec	8,369	USD	30.74	54.00	76%	9.6	6.2	5.1	3.7	1.3	1.1
CONSOL Energy	CNX.US	1	31-Dec	7,471	USD	32.90	40.00	22%	19.7	11.8	10.6	7.9	1.9	1.7
Diversified Coal														
Anglo American PLC	AAL.GB	2	31-Dec	52,186	GBP	25.02	30.00	20%	8.4	7.2	4.5	3.5	1.1	1.0
BHP Billiton Ltd	BHP.AU	1	30-Jun	179,559	AUD	34.05	45.00	32%	10.0	9.1	5.1	4.8	2.8	2.3
Rio Tinto Ltd	RIO.AU	1	31-Dec	95,317	AUD	62.42	95.00	52%	8.3	7.3	3.1	2.5	1.6	1.3

Source: Citi Investment Research and Analysis estimates

Volumes

The Prime Minister's Office (PMO) asked CIL to sign Fuel Supply Agreements (FSAs) with power plants that have entered into long-term PPAs and commissioned by 31 Mar 2015. For plants set up by 31 Dec 2011, FSAs will be signed before 31 Mar 2012. The FSAs will be for full quantity of coal in the Letters of Assurance (LoAs) for 20 years. CIL will have to pay compensation if they supply less than 80% and a premium for more than 90%. For any shortfall, CIL will arrange for imports or through State/Central PSUs who have been allotted coal blocks.

CIL is not likely to import in FY13.

Our analysis (below) seems to suggest that CIL is unlikely to import coal over the next couple of years. If adequate rakes are made available, CIL would be able to meet 80% of the Annual Contracted Quantity (ACQ) under the new FSAs (still to be signed) and 90% of the ACQ under the old FSAs by enhancing production and de-stocking.

Expect FY12 despatches at 431mt (+1.5%) and FY13 despatches at 460mt (+7% yoy).

While rake availability has improved considerably to ~200rakes/day currently vs 167rakes/day during 9MFY12; we believe rake availability for FY13 is likely to be 185-190/day and estimate despatches at 460mt in FY13, +7% yoy (451mt earlier). Inventory is likely to be 65-68mt by the end of FY12. Citi est: FY12 production at 430mt (flat yoy) and despatches at 431mt (+1.5% yoy).

E-auction volumes maybe capped; upside to pricing.

We lower our e-auction volume estimates to 45mt (10% of despatches) in FY13 (vs 49mt 11% of despatches earlier). Media reports (Bloomberg) indicate e-auction volumes are likely to be capped at 45mtpa till 2017 or 7% of output (vs 10-12% currently) to meet the requirements of the power sector. We believe there could be upside to e-auction volumes as 80% of the e-auction quantity is currently transported via road and may not be a feasible option for power producers. Our analysis suggests for every tonne of e-auction coal diverted at FSA prices, profits would decline 0.8%. There could be upside to e-auction prices if volumes are capped – given the demand from the non-power producers.

We expect 30% of production to be washed by FY15 vs 5% in FY13.

We expect 5% of production to be washed in FY13 and 30% by FY15 (vs 33% earlier). Of the 20 washeries planned (111mtpa), environmental clearance has been obtained for three washeries; the formal agreement is yet to be signed and it would take around two years for the washeries to become operational. CIL expects an additional 20mt to be washed by the end of FY14 and the 111mt capacity to be in place by end FY17.

CIL unlikely to import in the near term

Figure 4. Fuel Supply Agreements

	For power utilities existing as on 31 Mar09	For power projects commissioned after 31 Mar09	
Valid for	20 yrs	<u>OLD</u> 5 yrs	<u>NEW</u> 20 yrs
Penalty trigger	Below 90% of ACQ	Below 50% of ACQ	Below 80% of ACQ
Performance incentive	Above 90% of ACQ	Above 90% of ACQ	Above 90% of ACQ

Source: Ministry of Coal, Citi Investment Research and Analysis

The old FSA regime

Power plants commissioned before 31 March 09: Under the current FSAs with power utilities existing as on 31 Mar 2009, CIL had signed contracts for 20 years and would have to pay compensation if it supplied less than 90% of the contracted quantity. Supply in excess of 90% attracts a pricing premium.

- The Annual Contracted Quantity (ACQ) by CIL for the plants commissioned before 31 March 09 is 304.8mt (Source: Ministry of Coal).
- The trigger level for the penalty continues to be below 90%.
- Media reports indicate that CIL has been supplying coal at ~95-96% to earn a premium.

Power plants commissioned after 31 March 09: Due to a shortage of coal, compensation was payable only if 50% of the contracted quantity could not be supplied (rather than 90%).

CIL asked to sign new FSAs

The Prime Minister's Office (PMO) asked CIL to sign FSAs with power plants that have entered into long-term PPAs and commissioned by 31 Mar 2015. For plants set up by 31 Dec 2011, FSAs will be signed before 31 Mar 2012. CIL will have to pay compensation if they supply less than 80% (vs 50% earlier) and will earn a premium for supplying more than 90%. For any shortfall, CIL will arrange for imports or through State/Central PSUs who have been allotted coal blocks.

- According to the Ministry of Coal, 172 LoAs have been issued as of 25 Jan 2012 for a power capacity of 108,900MW – the quantity of coal being 424mt (in addition to the 305mt committed for plants commissioned before 31 March 2009).
- Of the 109GW of capacity; 19,800MW has been commissioned upto Dec 11 with a coal requirement of ~83mt. Another 8,450MW is likely to be commissioned by March 12 with an additional coal requirement of 36mt.
- According to the PMO's directive, CIL will have to sign FSAs for the 19,800MW of capacity commissioned between Apr 09 and Dec 11 by March 12 (assuming the entire 19,800MW has long term PPAs). This implies that in addition to 305mt (for plants commissioned before 31 March 2009), CIL would have to provide an additional 66mt in FY13 (80% of 83mt).
- Imports unlikely in FY13: Our analysis suggests that CIL is currently supplying ~19mt to the new power plants (commissioned after Mar 09). To meet the additional 47mt, CIL could use 1) incremental production of 26mt expected in

Though the PMO's directive suggests that CIL should meet its shortfall using imported coal; our analysis indicates that CIL is unlikely to resort to coal imports over the next couple of years. If adequate rakes are made available, CIL would be able to meet 80% of the ACQ (Annual Committed Quantity) under the new FSAs (still to be signed) and 90% of the ACQ under the old FSAs by enhancing production and de-stocking.

Figure 5. CIL despatch breakdown

(mt)	FY10	FY11	FY12	FY13
Old FSAs	293	290	290	275
New MOUs/FSAs	5	14	19	66
Non-power sector	118	121	122	122
Total despatches	416	425	434	464

Source: Citi Investment Research and Analysis

FY13; 2) divert ~14mt from existing FSAs (currently 95% is being supplied vs 90% of the 305mt committed); 3) divert ~30mt of inventory – if enough rakes were made available.

- As CIL can divert some quantity (~14mt) from existing contracts FSA contracts and already supplies ~19mt to new power plants, incremental rail/road capacity would only be required for 33mt of coal in FY13 to meet the new FSA commitment (80%). If we assume railways are used for ~75% of the volumes, CIL would need additional 18-19 rakes per day vs FY12 (3,500 tonnes per rake). Average rake availability in FY12 is estimated at ~170-175 per day. Hence, if rake availability is not a constraint in FY13, CIL is not likely to import coal.

Media reports indicate that, if CIL is able to supply the coal but rake availability is a constraint; CIL is not likely to be penalized. Note that under its current agreements with the buyers, CIL makes the coal available at the pit head and transporting the coal is the responsibility of the buyer. The hike in rail freight (~20%) announced on 7 March 12 due to reclassification will have to be borne by buyers.

Long term: CIL likely to import

- Of the total 108,900MW for which CIL has signed FSAs for ~424mt of coal, 273mt pertains to the 12th 5-year plan (FY13-17) according to CIL. This implies roughly 70,000MW (for which FSA's have been signed) are likely to be commissioned by FY17. CIL does not expect all the capacities to come on-stream as planned. If we assume 80% of these capacities are commissioned by FY17 (making the requirement ~220mt), then CIL would have to supply 175mt of coal by FY17 (80% of the ACQ) for the new plants assuming the entire 70,000MW has signed long-term PPAs. Our estimates suggest CIL's production should rise by ~120mt on a conservative basis by FY17 (from FY12). CIL believes if all clearances are in place its FY17, production could rise to 615mt, i.e. an increase of 185mt over FY12. **Our sense is that imports in FY17 by CIL could be ~50mt .**

We however lack clarity on a few issues with respect to imports:

- **Power plants may prefer importing directly:** CIL was mandated to import 6mt of coal in FY10 but could find customers for only 0.4mt. The target was to import 6mt in FY11 again – but CIL has been unable to conclude terms and conditions. CIL was seeking to deliver coal at the port but customers have not agreed to it.
- **Pricing of imported coal:** We feel that CIL is likely to pass on the higher cost of imports to buyers. The question that remains unanswered is whether imported coal prices would be a pass through for CIL or whether there would be a pooling of prices. Our view is that clarity on this issue is unlikely to emerge in the near future as CIL may not need to import coal anytime soon. If pooling is permitted, power companies are likely to purchase imported coal through CIL, or else they may prefer importing on their own.

Pass through or pooling?

Blending limits for imported coal.

- **Proportion of imports:** There is a limit to the amount of imported coal Indian power plants can blend. Technology used at many power stations prevents them from going beyond a certain limit for blending local and imported coal. The plants likely to be commissioned over the next 4-5 years are likely to be able to blend 20-30% of imported coal.

Clearances

Status of Environment and Forest clearances

- According to media reports (Times of India), an environment ministry's panel has recommended three CIL projects, including one for capacity augmentation, for green clearance. The projects include: 1) Samleshwari (IB valley, Orissa) – plans to enhance capacity from 5mtpa to 11mtpa; 2) Gose (11mtpa, Central Coalfields); 3) Dakra (1mtpa) – awaiting renewal of mining lease.
- Currently ~168 projects of CIL are awaiting environment and forest clearances; of which 67 are greenfield. 114 projects are awaiting stage one clearance, 92 of which are at the State level and the remaining from the Ministry of Environment and Forests. 54 proposals are awaiting final clearance, including 31 at the State level.

CEPI moratorium lifted on ~60% of impacted clusters

- The Ministry of Environment and Forests had imposed a moratorium on coal projects in India on critically polluted clusters in Jan 2010 until Aug 2010, further extended in several stages up to March 2011 and subsequently to Sep 2011. 43 clusters were impacted during the initial moratorium. As of 31 July 2011, the moratorium has been lifted on projects in 25 clusters (out of 43). The moratorium on the remaining 18 clusters has been extended to 31 March 2012.
- The moratorium was imposed on seven CIL coalfields - Chandrapur, Korba, Dhanbad, Talcher, Singrauli, Asansol and IB Valley. It has been lifted on all the coalfields except Korba and Chandrapur. A high-level committee has recommended the moratorium be lifted in order to ensure sufficient production of coal in the country. Korba's proven and probable reserves are estimated at ~2.4bn tonnes (of CIL's total of 18.9bn).

Pricing

CIL is likely to review its prices in April 12. We expect CIL to raise prices of FSA coal (including A/B grades) by 4% in Apr 12; with potential upside risk.

CIL has changed the pricing mechanism of non-coking coal from Useful Heat Value (UHV) based grading system to Gross Caloric Value (GCV) based wef 1Jan 12. Under the new GCV grading, coal would be classified under 17 slabs (300kcal each) from 2,200-7,000kcal and above 7,000kcal. This compares to the earlier UHV classification into seven grades (based on ash and moisture). Based on the pricing data, we believe the new prices are largely revenue neutral.

Figure 6. Price forecast changes (FY12-14E)

	FY12E			FY13E			FY14E		
	Old	New	% chg	Old	New	% chg	Old	New	% chg
Average realisation (Rs/t)	1,376	1,387	1%	1,434	1,427	0%	1,516	1,456	-4%
Average realisation (\$/t)	28	28	1%	29	29	0%	30	29	-4%
Raw coal realisation excl E-auction (Rs/t)	1,221	1,192	-2%	1,287	1,242	-3%	1,363	1,269	-7%
Raw coal realisation excl E-auction (Rs/t)	25	24	-2%	26	25	-3%	28	26	-7%
E-auction realisation (Rs/t)	2,326	2,634	13%	2,316	2,850	23%	2,375	2,907	22%
E-auction realisation (\$/t)	47	54	13%	47	58	23%	48	59	22%
Washed coal realisation (Rs/t)	2,222	2,152	-3%	2,061	1,945	-6%	1,943	1,810	-7%
Washed coal realisation (\$/t)	45	44	-3%	42	40	-6%	40	37	-7%

Source: Citi Investment Research and Analysis estimates

Figure 7. Citi Global Forecasts

	FY08A	FY09A	FY10A	FY11A	FY12E	FY13E	FY14E	LT
Thermal coal (US\$/t)	56	125	70	98	130	123	138	109
- yoy chg (%)		123%	-44%	40%	33%	-5%	12%	
Coking coal (US\$/t)	97	305	128	215	291	260	245	200
- yoy chg (%)		214%	-58%	68%	36%	-11%	-6%	

Source: Citi Investment Research and Analysis estimates

The financial outflow on account of wage revision will be is likely to be Rs65bn pa.

Given the lack of clarity on the exact breakdown of the wage increases, there could be upside risk to our profits.

Wages

Compensation for CIL's non-executive employees is governed by the National Coal Wage Agreement between the trade unions and CIL, which is fixed from time to time for five years. The wage revision was due in July 2011 and was finalized on 31 Jan 2012 with retrospective effect. The revision was concluded in six months vs 13 months for the previous revision.

According to CIL, the financial outflow on account of wage revision will be is likely to be Rs65bn pa. Gross wages for non-executive employees have been raised by 25%. Other highlights include a special allowance of 4% of revised basic; HRA of 2% of the basic pay for those who have not been provided with residential accommodation in other than urban area; post retirement medicare scheme for retired non-executives and their spouses (to be finalized). Of the Rs65bn impact, Rs17bn is expected to be on account of gratuity and leave encashment.

Compensation for executive employees is determined by the Government of India and fixed for ten years. Current compensation was finalized in May 2009 and is effective for ten years from 1 January 2007.

Our earlier estimates assumed a 50% increase in cost per employee over two years, i.e. FY12 and FY13, including the impact of inflation. Assuming an annual impact of Rs65bn+ inflation, we now expect the cost per employee to increase 56% over FY12 and FY13. Given the lack of clarity on the exact breakdown of the wage increases, there could be upside risk to our profits.

Balance sheet, Capex and Dividend

CIL has ~\$11bn of cash on its books.

Capex: CIL expects to spend ~\$1bn pa on expansion capex.

Investment in railways: According to press reports (Indiamart), the government has asked CIL to invest in rail infrastructure linking major projects. CIL has decided to take up two rail connectivity projects linking Mand-Raigarh deposits in Chhattisgarh in a JV with SAIL and other PSUs. This will have a potential to produce 200mtpa of coal and the project cost is estimated at Rs15.5bn (~\$320m). In addition, CIL is likely to fund 100 kms of Tori-Shibpur-Hazaribagh rail project to fulfill 100mtpa of coal requirements.

Dividend: Media reports (Economic Times) indicate CIL has proposed to pay a dividend of Rs 56.8bn to the government (90% shareholder) for FY12. This amounts to Rs63.2bn for 100% holding or Rs10/share (46% payout) compared to Rs3.9/share (22% payout) in FY11.

Coal India

Company description

Coal India (CIL) is the world's largest coal producer, with production of 431mt (flat yoy), despatches of 424mt (+2%) in FY11, 18.9bn tonnes of proven and probable reserves. It has eight subsidiaries in India - seven of which carry out coal production and Central Mine Planning and Design Institute Ltd, which provides technical expertise and consultancy to CIL/others. CIL was established in 1973 and 90% of its equity is currently held by the Indian government. Non-coking coal accounted for ~90% of production in FY11 and accounts for ~95% of the company's reserve estimates. CIL accounts for ~80% of India's coal production. Power generation accounts for ~70-75% of CIL's volumes. NTPC is its largest customer and accounted for ~27-28% of its raw coal despatches. ~90% of CIL's production is from open-cast mines, where production cost (\$12/t) is significantly cheaper than underground mines (\$62/t). CIL has ~374k employees as of 31 Jan12.

Investment strategy

We rate CIL as Buy (1) with a target price of Rs375. The overhang of wage negotiations and concerns on the potential use of cash seem to have faded away. CIL's stock appears to be factoring in current coal price trends and implementation of the Draft Mining Bill. In our view, there is limited downside from here with the odds in favour of a price hike, faster clearances and a high dividend payout. The triggers are likely to be more event-based than secular in their stock price impact; but we would stay positioned for them. The stock trades at 11.8x FY13E PE (excl OBR adj) vs Asian peers at 8-11x. Some valuation lustre vs peers has worn off - with upside to pricing, we would be long-term buyers.

Valuation

Our TP is derived using a combination of two scenarios: #1 assumes no profit sharing - derived price Rs388; #2 assumes 26% profit sharing in FY14 and beyond (based on our interactions with the Secretary, Ministry of Mines) - derived price Rs362; with a 50:50 weighting. CIL does not have a long valuation history since it listed in Nov 2010. We arrive at our TP of Rs375 using: (1) a valuation based on DCF+30% premium (Rs479) and (2) 9x FY13 PE based valuation (Rs218); with a 60/40 weighting. The 9x multiple lies within the current trading range (8-11x) of the Indonesian and Chinese coal producers. At our TP, CIL would trade at 13.4x FY13PE (excl OBR adj).

Risks

Key downside risks to our investment thesis on CIL are: risks of restrictions imposed by regulators related to forest clearance and environmental safeguards; difficulties in obtaining reserves/resources; a proposed 26% profit-sharing requirement contained in the New Mining Bill; land acquisition; ban on e-auction coal; logistical constraints including rail transport bottlenecks; restricted ability to raise coal prices; coal imports without a pass through; unrelated investments; disruption of operations in politically unstable areas; auction for future reserves; and non-availability of critical equipment.

Appendix A-1

Analyst Certification

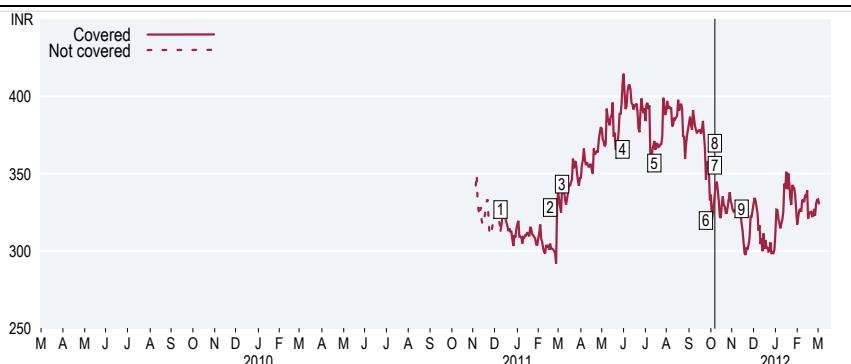
The research analyst(s) primarily responsible for the preparation and content of this research report are named in bold text in the author block at the front of the product except for those sections where an analyst's name appears in bold alongside content which is attributable to that analyst. Each of these analyst(s) certify, with respect to the section(s) of the report for which they are responsible, that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc and its affiliates. No part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this report.

IMPORTANT DISCLOSURES

Coal India (COAL.BO)

Ratings and Target Price History Fundamental Research

Analyst: Raashi Chopra, CFA
Covered since December 9 2010



	Date	Rating	Target Price	Closing Price
1	9-Dec-10	*1L	*358.00	313.10
2	17-Feb-11	1L	*350.00	304.80
3	7-Mar-11	1L	*395.00	340.95

	Date	Rating	Target Price	Closing Price
4	31-May-11	1L	*471.00	408.45
5	14-Jul-11	1L	*430.00	371.20
6	26-Sep-11	1L	*418.00	346.20

	Date	Rating	Target Price	Closing Price
7	7-Oct-11	Stock rating system changed		
8	7-Oct-11	*1	418.00	337.25
9	15-Nov-11	1	*380.00	317.60

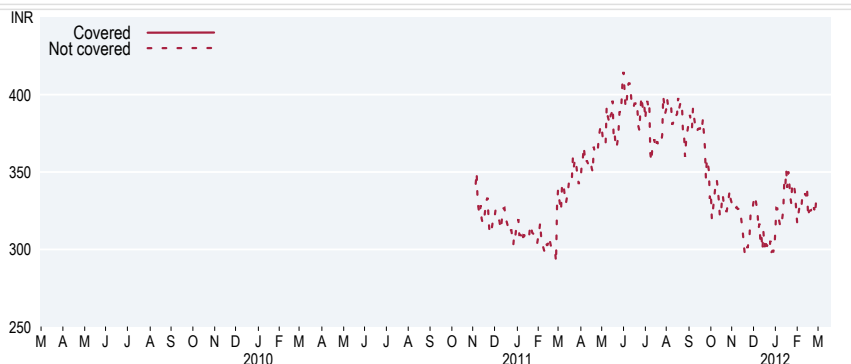
* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Coal India (COAL.BO)

Ratings and Target Price History Best Ideas Research Relative Call (3 Month)

Analyst: Raashi Chopra, CFA
Covered since December 9 2010



* Indicates change

Rating/target price changes above reflect Eastern Standard Time

An employee of Citigroup Global Markets or its affiliates is a non - executive director of Anglo American Plc.

Citigroup Global Markets Inc. or its affiliates beneficially owns 1% or more of any class of common equity securities of Arch Coal. This position reflects information available as of the prior business day.

Within the past 12 months, Citigroup Global Markets Inc. or its affiliates has acted as manager or co-manager of an offering of securities of China Coal Energy, Arch Coal, Peabody Energy.

Citigroup Global Markets Inc. or its affiliates has received compensation for investment banking services provided within the past 12 months from Coal India, China Shenhua Energy, China Coal Energy, Arch Coal, BHP Billiton Ltd, Peabody Energy, Tambang Batubara Bukit Asam, Rio Tinto Ltd.

Citigroup Global Markets Inc. or its affiliates expects to receive or intends to seek, within the next three months, compensation for investment banking services from Coal India, China Shenhua Energy, China Coal Energy.

Citigroup Global Markets Inc. or an affiliate received compensation for products and services other than investment banking services from Coal India, China Shenhua Energy, China Coal Energy, Anglo American PLC, Arch Coal, BHP Billiton Ltd, Peabody Energy, CONSOL Energy, Indo Tambang Raya Megah, Tambang Batubara Bukit Asam, Rio Tinto Ltd in the past 12 months.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as investment banking client(s): Coal India, China Shenhua Energy, China Coal Energy, Arch Coal, BHP Billiton Ltd, Peabody Energy, Tambang Batubara Bukit Asam, Rio Tinto Ltd.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, securities-related: Coal India, China Shenhua Energy, China Coal Energy, Anglo American PLC, Arch Coal, BHP Billiton Ltd, Peabody Energy, CONSOL Energy, Indo Tambang Raya Megah, Tambang Batubara Bukit Asam, Rio Tinto Ltd.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, non-securities-related: Coal India, China Shenhua Energy, China Coal Energy, Anglo American PLC, Arch Coal, BHP Billiton Ltd, Peabody Energy, CONSOL Energy, Indo Tambang Raya Megah, Tambang Batubara Bukit Asam, Rio Tinto Ltd.

Citigroup Global Markets Inc. or an affiliate received compensation in the past 12 months from Arch Coal.

Analysts' compensation is determined based upon activities and services intended to benefit the investor clients of Citigroup Global Markets Inc. and its affiliates ("the Firm"). Like all Firm employees, analysts receive compensation that is impacted by overall firm profitability which includes investment banking revenues.

The Firm is a market maker in the publicly traded equity securities of China Shenhua Energy, Anglo American PLC, BHP Billiton Ltd, Peabody Energy.

For important disclosures (including copies of historical disclosures) regarding the companies that are the subject of this Citi Investment Research & Analysis product ("the Product"), please contact Citi Investment Research & Analysis, 388 Greenwich Street, 28th Floor, New York, NY, 10013, Attention: Legal/Compliance [E6WYB6412478]. In addition, the same important disclosures, with the exception of the Valuation and Risk assessments and historical disclosures, are contained on the Firm's disclosure website at https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures. Valuation and Risk assessments can be found in the text of the most recent research note/report regarding the subject company. Historical disclosures (for up to the past three years) will be provided upon request.

Citi Investment Research & Analysis Ratings Distribution

Data current as of 31 Dec 2011	12 Month Rating			Relative Rating		
	Buy	Hold	Sell	Buy	Hold	Sell
Citi Investment Research & Analysis Global Fundamental Coverage	57%	34%	9%	10%	79%	10%
<i>% of companies in each rating category that are investment banking clients</i>	45%	41%	40%	49%	43%	41%

Guide to Citi Investment Research & Analysis (CIRA) Fundamental Research Investment Ratings:

CIRA's stock recommendations include an investment rating and an optional risk rating to highlight high risk stocks.

Risk rating takes into account both price volatility and fundamental criteria. Stocks will either have no risk rating or a High risk rating assigned.

Investment Ratings: CIRA's investment ratings are Buy, Neutral and Sell. Our ratings are a function of analyst expectations of expected total return ("ETR") and risk. ETR is the sum of the forecast price appreciation (or depreciation) plus the dividend yield for a stock within the next 12 months. The Investment rating definitions are: Buy (1) ETR of 15% or more or 25% or more for High risk stocks; and Sell (3) for negative ETR. Any covered stock not assigned a Buy or a Sell is a Neutral (2). For stocks rated Neutral (2), if an analyst believes that there are insufficient valuation drivers and/or investment catalysts to derive a positive or negative investment view, they may elect with the approval of CIRA management not to assign a target price and, thus, not derive an ETR. Analysts may place covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and / or trading in the company's securities (e.g. trading suspension). As soon as practically possible, the analyst will publish a note re-establishing a rating and investment thesis. To satisfy regulatory requirements, we correspond Under Review and Neutral to Hold in our ratings distribution table for our 12-month fundamental rating system. However, we reiterate that we do not consider Under Review to be a recommendation.

Relative three-month ratings: CIRA may also assign a three-month relative call (or rating) to a stock to highlight expected out-performance (most preferred) or under-performance (least preferred) versus the geographic and industry sector over a 3 month period. The relative call may highlight a specific near-term catalyst or event impacting the company or the market that is anticipated to have a short-term price impact on the equity securities of the company. Absent any specific catalyst the analyst(s) will indicate the most and least preferred stocks in the universe of stocks under consideration, explaining the basis for this short-term view. This three-month view may be different from and does not affect a stock's fundamental equity rating, which reflects a longer-term total absolute return expectation. For purposes of NASD/NYSE ratings-distribution-disclosure rules, most preferred calls correspond to a buy recommendation and least preferred calls correspond to a sell recommendation. Any stock not assigned to a most preferred or least preferred call is considered non-relative-rated (NRR). For purposes of NASD/NYSE ratings-distribution-disclosure rules we correspond NRR to Hold in our ratings distribution table for our 3-month relative rating system. However, we reiterate that we do not consider NRR to be a recommendation.

Prior to October 8, 2011, the firm's stock recommendation system included a risk rating and an investment rating. **Risk ratings**, which took into account both price volatility and fundamental criteria, were: Low (L), Medium (M), High (H), and Speculative (S). **Investment Ratings** of Buy, Hold and Sell were a function of CIRA's expectation of total return (forecast price appreciation and dividend yield within the next 12 months) and risk rating. Additionally, analysts could have placed covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and/or trading in the company's securities (e.g. trading suspension). Stocks placed "Under Review" were monitored daily by management and as practically possible, the analyst published a note re-establishing a rating and investment thesis. For securities in developed markets (US, UK, Europe, Japan, and Australia/New Zealand), investment ratings were: Buy (1) (expected total return of 10% or more for Low-Risk stocks, 15% or more for Medium-Risk stocks, 20% or more for High-Risk stocks, and 35% or more for Speculative stocks); Hold (2) (0%-10% for Low-Risk stocks, 0%-15% for Medium-Risk stocks, 0%-20% for High-Risk stocks, and 0%-35% for Speculative stocks); and Sell (3) (negative total return). For securities in emerging markets (Asia Pacific, Emerging Europe/Middle East/Africa, and Latin America), investment ratings were: Buy (1) (expected total return of 15% or more for Low-Risk stocks, 20% or more for Medium-Risk stocks, 30% or more for High-Risk stocks, and 40% or more for Speculative stocks); Hold (2) (5%-15% for Low-Risk stocks, 10%-20% for Medium-Risk stocks, 15%-30% for High-Risk stocks, and 20%-40% for Speculative stocks); and Sell (3) (5% or less for Low-Risk stocks, 10% or less for Medium-Risk stocks, 15% or less for High-Risk stocks, and 20% or less for Speculative stocks).

Investment ratings are determined by the ranges described above at the time of initiation of coverage, a change in investment and/or risk rating, or a change in target price (subject to limited management discretion). At other times, the expected total returns may fall outside of these ranges because of market price

movements and/or other short-term volatility or trading patterns. Such interim deviations from specified ranges will be permitted but will become subject to review by Research Management. Your decision to buy or sell a security should be based upon your personal investment objectives and should be made only after evaluating the stock's expected performance and risk.

NON-US RESEARCH ANALYST DISCLOSURES

Non-US research analysts who have prepared this report (i.e., all research analysts listed below other than those identified as employed by Citigroup Global Markets Inc.) are not registered/qualified as research analysts with FINRA. Such research analysts may not be associated persons of the member organization and therefore may not be subject to the NYSE Rule 472 and NASD Rule 2711 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account. The legal entities employing the authors of this report are listed below:

Citigroup Global Markets India Private Limited	Raashi Chopra, CFA; Pradeep Mahtani
Citicorp Pty Ltd	Clarke Wilkins; Craig Sainsbury
Citigroup Global Markets Inc	Brian Yu, CFA
Citigroup Global Markets Ltd	Heath R Jansen
PT Citigroup Securities Indonesia	Kim Kwie Sjamsudin, CFA
Citigroup Global Markets Asia	Scarlett Y Chen, CFA

OTHER DISCLOSURES

The subject company's share price set out on the front page of this Product is quoted as at 09 March 2012 10:24 AM on the issuer's primary market.

Citigroup Global Markets Inc. and/or its affiliates has a significant financial interest in relation to Anglo American PLC, Arch Coal, BHP Billiton Ltd, Peabody Energy. (For an explanation of the determination of significant financial interest, please refer to the policy for managing conflicts of interest which can be found at <http://www.citiVelocity.com>.)

Citigroup Global Markets Inc. or its affiliates beneficially owns 2% or more of any class of common equity securities of Arch Coal.

For securities recommended in the Product in which the Firm is not a market maker, the Firm is a liquidity provider in the issuers' financial instruments and may act as principal in connection with such transactions. The Firm is a regular issuer of traded financial instruments linked to securities that may have been recommended in the Product. The Firm regularly trades in the securities of the issuer(s) discussed in the Product. The Firm may engage in securities transactions in a manner inconsistent with the Product and, with respect to securities covered by the Product, will buy or sell from customers on a principal basis.

Securities recommended, offered, or sold by the Firm: (i) are not insured by the Federal Deposit Insurance Corporation; (ii) are not deposits or other obligations of any insured depository institution (including Citibank); and (iii) are subject to investment risks, including the possible loss of the principal amount invested. Although information has been obtained from and is based upon sources that the Firm believes to be reliable, we do not guarantee its accuracy and it may be incomplete and condensed. Note, however, that the Firm has taken all reasonable steps to determine the accuracy and completeness of the disclosures made in the Important Disclosures section of the Product. The Firm's research department has received assistance from the subject company(ies) referred to in this Product including, but not limited to, discussions with management of the subject company(ies). Firm policy prohibits research analysts from sending draft research to subject companies. However, it should be presumed that the author of the Product has had discussions with the subject company to ensure factual accuracy prior to publication. All opinions, projections and estimates constitute the judgment of the author as of the date of the Product and these, plus any other information contained in the Product, are subject to change without notice. Prices and availability of financial instruments also are subject to change without notice. Notwithstanding other departments within the Firm advising the companies discussed in this Product, information obtained in such role is not used in the preparation of the Product. Although Citi Investment Research & Analysis (CIRA) does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of CIRA to provide research coverage of the/those issuer(s) mentioned therein, including in response to news affecting this issuer, subject to applicable quiet periods and capacity constraints. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security. Any decision to purchase securities mentioned in the Product must take into account existing public information on such security or any registered prospectus.

Investing in non-U.S. securities, including ADRs, may entail certain risks. The securities of non-U.S. issuers may not be registered with, nor be subject to the reporting requirements of the U.S. Securities and Exchange Commission. There may be limited information available on foreign securities. Foreign companies are generally not subject to uniform audit and reporting standards, practices and requirements comparable to those in the U.S. Securities of some foreign companies may be less liquid and their prices more volatile than securities of comparable U.S. companies. In addition, exchange rate movements may have an adverse effect on the value of an investment in a foreign stock and its corresponding dividend payment for U.S. investors. Net dividends to ADR investors are estimated, using withholding tax rates conventions, deemed accurate, but investors are urged to consult their tax advisor for exact dividend computations. Investors who have received the Product from the Firm may be prohibited in certain states or other jurisdictions from purchasing securities mentioned in the Product from the Firm. Please ask your Financial Consultant for additional details. Citigroup Global Markets Inc. takes responsibility for the Product in the United States. Any orders by US investors resulting from the information contained in the Product may be placed only through Citigroup Global Markets Inc.

Important Disclosures for Morgan Stanley Smith Barney LLC Customers: Morgan Stanley & Co. LLC (Morgan Stanley) research reports may be available about the companies that are the subject of this Citi Investment Research & Analysis (CIRA) research report. Ask your Financial Advisor or use smithbarney.com to view any available Morgan Stanley research reports in addition to CIRA research reports.

Important disclosure regarding the relationship between the companies that are the subject of this CIRA research report and Morgan Stanley Smith Barney LLC and its affiliates are available at the Morgan Stanley Smith Barney disclosure website at www.morganstanleysmithbarney.com/researchdisclosures. For Morgan Stanley and Citigroup Global Markets, Inc. specific disclosures, you may refer to www.morganstanley.com/researchdisclosures and https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures.

This CIRA research report has been reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval was conducted by the same person who reviewed this research report on behalf of CIRA. This could create a conflict of interest.

The Citigroup legal entity that takes responsibility for the production of the Product is the legal entity which the first named author is employed by. The Product is made available in **Australia** through Citigroup Global Markets Australia Pty Ltd. (ABN 64 003 114 832 and AFSL No. 240992), participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in Australia to Private Banking wholesale clients through Citigroup Pty Limited (ABN 88 004 325 080 and AFSL 238098). Citigroup Pty Limited provides all financial product advice to Australian Private Banking wholesale clients through bankers and relationship managers. If there is any doubt about the suitability of investments held in Citigroup Private Bank accounts, investors should contact the Citigroup Private Bank in Australia. Citigroup companies may compensate affiliates and their representatives for providing products and services to clients. The Product is made available in **Brazil** by Citigroup Global Markets Brasil - CCTVM SA, which is regulated by CVM - Comissão de Valores Mobiliários, BACEN - Brazilian Central Bank, APIMEC - Associação dos Analistas e Profissionais de Investimento do Mercado de Capitais and ANBID - Associação Nacional dos Bancos de Investimento. Av. Paulista, 1111 - 11º andar - CEP. 01311920 - São Paulo - SP. If the Product is being made available in certain provinces of **Canada** by Citigroup Global Markets (Canada) Inc. ("CGM Canada"), CGM Canada has approved the Product. Citigroup Place, 123 Front Street West, Suite 1100, Toronto, Ontario M5J 2M3. This product is available in **Chile** through Banchile Corredores de Bolsa S.A., an indirect subsidiary of Citigroup Inc., which is regulated by the Superintendencia de Valores y Seguros. Agustinas 975, piso 2, Santiago, Chile. The Product is made available in **France** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 1-5 Rue Paul Cézanne, 8ème, Paris, France. The Product is distributed in **Germany** by Citigroup Global Markets Deutschland AG ("CGMD"), which is regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin). CGMD, Reuterweg 16, 60323 Frankfurt am Main. Research which relates to "securities" (as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong)) is issued in **Hong Kong** by, or on behalf of, Citigroup Global Markets Asia Limited which takes full responsibility for its content. Citigroup Global Markets Asia Ltd. is regulated by Hong Kong Securities and Futures Commission. If the Research is made available through Citibank, N.A., Hong Kong Branch, for its clients in Citi Private Bank, it is made available by Citibank N.A., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citibank N.A. is regulated by the Hong Kong Monetary Authority. Please contact your Private Banker in Citibank N.A., Hong Kong, Branch if you have any queries on or any matters arising from or in connection with this document. The Product is made available in **India** by Citigroup Global Markets India Private Limited, which is regulated by Securities and Exchange Board of India. Bakhtawar, Nariman Point, Mumbai 400-021. The Product is made available in **Indonesia** through PT Citigroup Securities Indonesia. 5/F, Citibank Tower, Bapindo Plaza, Jl. Jend. Sudirman Kav. 54-55, Jakarta 12190. Neither this Product nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable capital market laws and regulations. This Product is not an offer of securities in Indonesia. The securities referred to in this Product have not been registered with the Capital Market and Financial Institutions Supervisory Agency (BAPEPAM-LK) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market laws and regulations. The Product is made available in **Israel** through Citibank NA, regulated by the Bank of Israel and the Israeli Securities Authority. Citibank, N.A, Platinum Building, 21 Ha'arba'ah St, Tel Aviv, Israel. The Product is made available in **Italy** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. Via dei Mercanti, 12, Milan, 20121, Italy. The Product is made available in **Japan** by Citigroup Global Markets Japan Inc. ("CGMJ"), which is regulated by Financial Services Agency, Securities and Exchange Surveillance Commission, Japan Securities Dealers Association, Tokyo Stock Exchange and Osaka Securities Exchange. Shin-Marunouchi Building, 1-5-1 Marunouchi, Chiyoda-ku, Tokyo 100-6520 Japan. If the Product was distributed by SMBC Nikko Securities Inc. it is being so distributed under license. In the event that an error is found in an CGMJ research report, a revised version will be posted on the Firm's Citi Velocity website. If you have questions regarding Citi Velocity, please call (81 3) 6270-3019 for help. The Product is made available in **Korea** by Citigroup Global Markets Korea Securities Ltd., which is regulated by the Financial Services Commission, the Financial Supervisory Service and the Korea Financial Investment Association (KOFIA). Citibank Building, 39 Da-dong, Jung-gu, Seoul 110-180, Korea. KOFIA makes available registration information of research analysts on its website. Please visit the following website if you wish to find KOFIA registration information on research analysts of Citigroup Global Markets Korea Securities Ltd. <http://dis.kofia.or.kr/fs/dis2/fundMgr/DISFundMgrAnalystPop.jsp?companyCd2=A03030&pageDiv=02>. The Product is made available in **Malaysia** by Citigroup Global Markets Malaysia Sdn Bhd (Company No. 460819-D) ("CGMM") to its clients and CGMM takes responsibility for its contents. CGMM is regulated by the Securities Commission of Malaysia. Please contact CGMM at Level 43 Menara Citibank, 165 Jalan Ampang, 50450 Kuala Lumpur, Malaysia in respect of any matters arising from, or in connection with, the Product. The Product is made available in **Mexico** by Acciones y Valores Banamex, S.A. De C. V., Casa de Bolsa, Integrante del Grupo Financiero Banamex ("Accival") which is a wholly owned subsidiary of Citigroup Inc. and is regulated by Comision Nacional Bancaria y de Valores. Reforma 398, Col. Juarez, 06600 Mexico, D.F. In **New Zealand** the Product is made available to 'wholesale clients' only as defined by s5C(1) of the Financial Advisers Act 2008 ('FAA') through Citigroup Global Markets Australia Pty Ltd (ABN 64 003 114 832 and AFSL No. 240992), an overseas financial adviser as defined by the FAA, participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in **Pakistan** by Citibank N.A. Pakistan branch, which is regulated by the State Bank of Pakistan and Securities Exchange Commission, Pakistan. AWT Plaza, 1.1. Chundrigar Road, P.O. Box 4889, Karachi-74200. The Product is made available in the **Philippines** through Citicorp Financial Services and Insurance Brokerage Philippines, Inc., which is regulated by the Philippines Securities and Exchange Commission. 20th Floor Citibank Square Bldg. The Product is made available in the Philippines through Citibank NA Philippines branch, Citibank Tower, 8741 Paseo De Roxas, Makati City, Manila. Citibank NA Philippines NA is regulated by The Bangko Sentral ng Pilipinas. The Product is made available in **Poland** by Dom Maklerski Banku Handlowego SA an indirect subsidiary of Citigroup Inc., which is regulated by Komisja Nadzoru Finansowego. Dom Maklerski Banku Handlowego S.A. ul.Senatorska 16, 00-923 Warszawa. The Product is made available in the **Russian Federation** through ZAO Citibank, which is licensed to carry out banking activities in the Russian Federation in accordance with the general banking license issued by the Central Bank of the Russian Federation and brokerage activities in accordance with the license issued by the Federal Service for Financial Markets. Neither the Product nor any information contained in the Product shall be considered as advertising the securities mentioned in this report within the territory of the Russian Federation or outside the Russian Federation. The Product does not constitute an appraisal within the meaning of the Federal Law of the Russian Federation of 29 July 1998 No. 135-FZ (as amended) On Appraisal Activities in the Russian Federation. 8-10 Gasheka Street, 125047 Moscow. The Product is made available in **Singapore** through Citigroup Global Markets Singapore Pte. Ltd. ("CGMSPL"), a capital markets services license holder, and regulated by Monetary Authority of Singapore. Please contact CGMSPL at 1 Temasek Avenue, #39-02 Millenia Tower, Singapore 039192, in respect of any matters arising from, or in connection with, the analysis of this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). The Product is made available by The Citigroup Private Bank in Singapore through Citibank, N.A., Singapore Branch, a licensed bank in Singapore that is regulated by Monetary Authority of Singapore. Please contact your Private Banker in Citibank N.A., Singapore Branch if you have any queries on or any matters arising from or in connection with this

document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). This report is distributed in Singapore by Citibank Singapore Ltd ("CSL") to selected Citigold/Citigold Private Clients. CSL provides no independent research or analysis of the substance or in preparation of this report. Please contact your Citigold/Citigold Private Client Relationship Manager in CSL if you have any queries on or any matters arising from or in connection with this report. This report is intended for recipients who are accredited investors as defined under the Securities and Futures Act (Cap. 289). Citigroup Global Markets (Pty) Ltd. is incorporated in the **Republic of South Africa** (company registration number 2000/025866/07) and its registered office is at 145 West Street, Sandton, 2196, Saxonwold. Citigroup Global Markets (Pty) Ltd. is regulated by JSE Securities Exchange South Africa, South African Reserve Bank and the Financial Services Board. The investments and services contained herein are not available to private customers in South Africa. The Product is made available in **Spain** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 29 Jose Ortega Y Gassef, 4th Floor, Madrid, 28006, Spain. The Product is made available in the **Republic of China** through Citigroup Global Markets Taiwan Securities Company Ltd. ("CGMTS"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan and/or through Citibank Securities (Taiwan) Company Limited ("CSTL"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan, subject to the respective license scope of each entity and the applicable laws and regulations in the Republic of China. CGMTS and CSTL are both regulated by the Securities and Futures Bureau of the Financial Supervisory Commission of Taiwan, the Republic of China. No portion of the Product may be reproduced or quoted in the Republic of China by the press or any third parties [without the written authorization of CGMTS and CSTL]. If the Product covers securities which are not allowed to be offered or traded in the Republic of China, neither the Product nor any information contained in the Product shall be considered as advertising the securities or making recommendation of the securities in the Republic of China. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security or financial products. Any decision to purchase securities or financial products mentioned in the Product must take into account existing public information on such security or the financial products or any registered prospectus. The Product is made available in **Thailand** through Citicorp Securities (Thailand) Ltd., which is regulated by the Securities and Exchange Commission of Thailand. 18/F, 22/F and 29/F, 82 North Sathorn Road, Silom, Bangrak, Bangkok 10500, Thailand. The Product is made available in **Turkey** through Citibank AS which is regulated by Capital Markets Board. Tekfen Tower, Eski Buyukdere Caddesi # 209 Kat 2B, 23294 Levent, Istanbul, Turkey. In the **U.A.E.**, these materials (the "Materials") are communicated by Citigroup Global Markets Limited, DIFC branch ("CGML"), an entity registered in the Dubai International Financial Center ("DIFC") and licensed and regulated by the Dubai Financial Services Authority ("DFSA") to Professional Clients and Market Counterparties only and should not be relied upon or distributed to Retail Clients. A distribution of the different CIRA ratings distribution, in percentage terms for Investments in each sector covered is made available on request. Financial products and/or services to which the Materials relate will only be made available to Professional Clients and Market Counterparties. The Product is made available in **United Kingdom** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. This material may relate to investments or services of a person outside of the UK or to other matters which are not regulated by the FSA and further details as to where this may be the case are available upon request in respect of this material. Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB. The Product is made available in **United States** by Citigroup Global Markets Inc, which is a member of FINRA and registered with the US Securities and Exchange Commission. 388 Greenwich Street, New York, NY 10013. Unless specified to the contrary, within EU Member States, the Product is made available by Citigroup Global Markets Limited, which is regulated by Financial Services Authority. Pursuant to Comissão de Valores Mobiliários Rule 483, Citi is required to disclose whether a Citi related company or business has a commercial relationship with the subject company. Considering that Citi operates multiple businesses in more than 100 countries around the world, it is likely that Citi has a commercial relationship with the subject company.

Many European regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of investment research. The policy applicable to CIRA's Products can be found at https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures.

Compensation of equity research analysts is determined by equity research management and Citigroup's senior management and is not linked to specific transactions or recommendations.

The Product may have been distributed simultaneously, in multiple formats, to the Firm's worldwide institutional and retail customers. The Product is not to be construed as providing investment services in any jurisdiction where the provision of such services would not be permitted.

Subject to the nature and contents of the Product, the investments described therein are subject to fluctuations in price and/or value and investors may get back less than originally invested. Certain high-volatility investments can be subject to sudden and large falls in value that could equal or exceed the amount invested. Certain investments contained in the Product may have tax implications for private customers whereby levels and basis of taxation may be subject to change. If in doubt, investors should seek advice from a tax adviser. The Product does not purport to identify the nature of the specific market or other risks associated with a particular transaction. Advice in the Product is general and should not be construed as personal advice given it has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Accordingly, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to their objectives, financial situation and needs. Prior to acquiring any financial product, it is the client's responsibility to obtain the relevant offer document for the product and consider it before making a decision as to whether to purchase the product. With the exception of our product that is made available only to Qualified Institutional Buyers (QIBs), CIRA concurrently disseminates its research via proprietary and non-proprietary electronic distribution platforms. Periodically, individual CIRA analysts may also opt to circulate research posted on such platforms to one or more clients by email. Such email distribution is discretionary and is done only after the research has been disseminated via the aforementioned distribution channels. CIRA simultaneously distributes product that is limited to QIBs only through email distribution.

The level and types of services provided by CIRA analysts to clients may vary depending on various factors such as the client's individual preferences as to the frequency and manner of receiving communications from analysts, the client's risk profile and investment focus and perspective (e.g. market-wide, sector specific, long term, short-term etc.), the size and scope of the overall client relationship with Citi and legal and regulatory constraints.

CIRA product may source data from dataCentral. dataCentral is a CIRA proprietary database, which includes Citi estimates, data from company reports and feeds from Reuters and Datastream.

© 2012 Citigroup Global Markets Inc. Citi Investment Research & Analysis is a division of Citigroup Global Markets Inc. Citi and Citi with Arc Design are trademarks and service marks of Citigroup Inc. and its affiliates and are used and registered throughout the world. All rights reserved. Any unauthorized use, duplication, redistribution or disclosure of this report (the "Product"), including, but not limited to, redistribution of the Product by electronic mail, posting of the Product on a website or page, and/or providing to a third party a link to the Product, is prohibited by law and will result in prosecution. The information contained in the Product is intended solely for the recipient and may not be further distributed by the recipient to any third party. Where included in this report, MSCI sourced information is the exclusive property of Morgan Stanley Capital International Inc. (MSCI). Without prior written permission of MSCI, this

information and any other MSCI intellectual property may not be reproduced, disseminated or used to create any financial products, including any indices. This information is provided on an "as is" basis. The user assumes the entire risk of any use made of this information. MSCI, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. MSCI, Morgan Stanley Capital International and the MSCI indexes are services marks of MSCI and its affiliates. The Firm accepts no liability whatsoever for the actions of third parties. The Product may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the Product refers to website material of the Firm, the Firm has not reviewed the linked site. Equally, except to the extent to which the Product refers to website material of the Firm, the Firm takes no responsibility for, and makes no representations or warranties whatsoever as to, the data and information contained therein. Such address or hyperlink (including addresses or hyperlinks to website material of the Firm) is provided solely for your convenience and information and the content of the linked site does not in anyway form part of this document. Accessing such website or following such link through the Product or the website of the Firm shall be at your own risk and the Firm shall have no liability arising out of, or in connection with, any such referenced website.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST
