

Equities

4 April 2012 | 22 pages

Bharat Heavy (BHEL.BO)

Resume Coverage - Past Perfect, Present Imperfect, Future Tense

- Downgrade to Sell** — We resume coverage on BHEL with a Sell rating and a target price of Rs250. Severe coal/ gas shortages, high international coal prices, poor SEB financials and land acquisition/ environmental delays have shrunk the India BTG market. Over the last 5-6 years BHEL has faced competition from Chinese suppliers.
- and the problem has been compounded** — The rise of domestic equipment suppliers, such as L&T-MHI, Toshiba-JSW, Bharat Forge-Alstom, BGR-Hitachi, shows the Indian power BTG market is just like any other industry: an incumbent making super normal profits attracts new competitors, leading to overcapacity/ pricing collapse.
- Barriers and pricing are falling** — Once BHEL gets the last of the reserved bulk orders in FY13, every incremental order should be a hard-fought battle. Import duties can perhaps provide a sentiment +ve, but we wonder if it will make any difference as: (1) XIIIth Plan (FY13E-17E) ordering is over and (2) lack of fuel visibility implies XIIIth Plan (FY18E-22E) ordering will not start in a hurry. BGR-Hitachi's winning bids in the recently concluded bulk tender are not too far off vis-à-vis Chinese pricing.
- Target price Rs250** — Based on P/E of 10x Sep13E and set at ~ 30% discount to historical average ~14x given BHEL's (1) declining backlog ,(2) EPS CAGR of -4% over FY12E-14E and (3) RoEs falling from FY11 - 31% to FY15E - 17%. Our EPS estimates are not conservative as they assume (over next three years) (1) inflows of Rs400bn/year, (2) gross margins contracting only 66bps, (3) execution speed improving from 30% to 48% on expanded capacity and (4) maintenance capex Rs3bn/year.
- Introducing CIRA's new rating system** — In Oct 11 CIRA announced its new stock rating system. CIRA's investment ratings are Buy, Neutral and Sell. Our ratings are a function of analyst expectations of expected total return and risk. Risk rating takes into account price volatility and fundamental criteria. Stocks will either have no risk rating or a High risk rating. The sidebar and table on this page show our new rating, target price, and estimates for BHEL. See "Guide to CIRA Fundamental Research Investment Ratings" in the Important Disclosures section of Appendix A1 of this report for a description of our rating system.

- Company Update
- Rating Change
- Target Price Change
- Estimate Change

| | |
|------------------------------|--------------|
| Sell | 3 |
| <i>from Hold/Low Risk</i> | |
| Price (03 Apr 12) | Rs270.00 |
| Target price | Rs250.00 |
| <i>from Rs417.20</i> | |
| Expected share price return | -7.4% |
| Expected dividend yield | 2.5% |
| Expected total return | -4.9% |
| Market Cap | Rs660,852M |
| | US\$13,009M |

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



Statistical Abstract

| Year to | Net Profit | Diluted EPS | EPS growth | P/E | P/B | ROE | Yield |
|---------|------------|-------------|------------|------|-----|------|-------|
| 31 Mar | (RsM) | (Rs) | (%) | (x) | (x) | (%) | (%) |
| 2010A | 43,034 | 17.58 | 37.6 | 15.4 | 4.2 | 29.8 | 1.7 |
| 2011A | 55,160 | 22.54 | 28.2 | 12.0 | 3.3 | 30.6 | 2.3 |
| 2012E | 67,496 | 27.58 | 22.4 | 9.8 | 2.6 | 29.9 | 2.5 |
| 2013E | 63,940 | 26.12 | -5.3 | 10.3 | 2.3 | 23.6 | 2.7 |
| 2014E | 62,646 | 25.60 | -2.0 | 10.5 | 2.0 | 20.0 | 2.8 |

Source: Powered by dataCentral

Venkatesh Balasubramaniam

 +91-22-6631-9864
 venkatesh.balasubramaniam@citi.com

Deepal Delivala

 +91-22-6631-9857
 deepal.delivala@citi.com

Atul Tiwari, CFA

 +91-22-6631-9866
 atul.tiwari@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.

Bharat Heavy (BHEL.BO)

4 April 2012

| BHEL.BO: Fiscal year end 31-Mar | | | | | | Price: Rs270.00; TP: Rs250.00; Market Cap: Rs660,852m; Recomm: Sell | | | | | |
|---------------------------------|----------------|----------------|----------------|----------------|-----------------|---|----------------|----------------|----------------|----------------|----------------|
| Profit & Loss (Rsm) | 2010 | 2011 | 2012E | 2013E | 2014E | Valuation ratios | 2010 | 2011 | 2012E | 2013E | 2014E |
| Sales revenue | 327,180 | 385,720 | 469,931 | 481,601 | 500,330 | PE (x) | 15.4 | 12.0 | 9.8 | 10.3 | 10.5 |
| Cost of sales | -263,348 | -284,784 | -347,569 | -359,916 | -378,615 | PB (x) | 4.2 | 3.3 | 2.6 | 2.3 | 2.0 |
| Gross profit | 63,831 | 100,936 | 122,362 | 121,685 | 121,715 | EV/EBITDA (x) | 10.3 | 7.8 | 6.6 | 7.1 | 7.1 |
| Gross Margin (%) | 19.5 | 26.2 | 26.0 | 25.3 | 24.3 | FCF yield (%) | 1.2 | 2.9 | -1.6 | 7.7 | 6.8 |
| EBITDA | 54,266 | 72,097 | 86,919 | 81,009 | 77,665 | Dividend yield (%) | 1.7 | 2.3 | 2.5 | 2.7 | 2.8 |
| EBITDA Margin (%) | 16.6 | 18.7 | 18.5 | 16.8 | 15.5 | Payout ratio (%) | 27 | 28 | 25 | 28 | 30 |
| Depreciation | -4,580 | -5,932 | -7,459 | -8,576 | -9,100 | ROE (%) | 29.9 | 33.3 | 30.4 | 23.6 | 20.0 |
| Amortisation | 0 | 0 | 0 | 0 | 0 | Cashflow (Rsm) | 2010 | 2011 | 2012E | 2013E | 2014E |
| EBIT | 49,686 | 66,166 | 79,461 | 72,433 | 68,564 | EBITDA | 54,266 | 72,097 | 86,919 | 81,009 | 77,665 |
| EBIT Margin (%) | 15.2 | 17.2 | 16.9 | 15.0 | 13.7 | Working capital | -24,495 | -22,182 | -72,870 | -19,069 | -25,733 |
| Net interest | -335 | -547 | -634 | -634 | -634 | Other | -3,449 | -12,417 | -12,802 | -6,493 | -3,918 |
| Associates | 0 | 0 | 0 | 0 | 0 | Operating cashflow | 26,322 | 37,498 | 1,248 | 55,446 | 48,014 |
| Non-op/Except | 16,483 | 17,011 | 19,524 | 21,369 | 23,353 | Capex | -18,352 | -18,113 | -12,000 | -4,455 | -3,000 |
| Pre-tax profit | 65,834 | 82,629 | 98,350 | 93,167 | 91,283 | Net acq/disposals | -275 | -3,593 | -225 | -3,500 | -3,500 |
| Tax | -22,800 | -27,470 | -30,854 | -29,228 | -28,637 | Other | 0 | 0 | 0 | 0 | 0 |
| Extraord./Min.Int./Pref.div. | 73 | 4,952 | 1,184 | 0 | 0 | Investing cashflow | -18,627 | -21,706 | -12,225 | -7,955 | -6,500 |
| Reported net profit | 43,106 | 60,112 | 68,680 | 63,940 | 62,646 | Dividends paid | -13,221 | -17,747 | -19,373 | -20,513 | -21,652 |
| Net Margin (%) | 13.2 | 15.6 | 14.6 | 13.3 | 12.5 | Financing cashflow | -13,537 | -17,391 | -17,190 | -20,513 | -21,652 |
| Core NPAT | 43,034 | 55,160 | 67,496 | 63,940 | 62,646 | Net change in cash | -5,842 | -1,599 | -28,167 | 26,978 | 19,861 |
| Per share data | 2010 | 2011 | 2012E | 2013E | 2014E | Free cashflow to s/holders | 7,970 | 19,385 | -10,752 | 50,991 | 45,014 |
| Reported EPS (Rs) | 17.61 | 24.56 | 28.06 | 26.12 | 25.60 | | | | | | |
| Core EPS (Rs) | 17.58 | 22.54 | 27.58 | 26.12 | 25.60 | | | | | | |
| DPS (Rs) | 4.66 | 6.23 | 6.80 | 7.20 | 7.60 | | | | | | |
| CFPS (Rs) | 10.75 | 15.32 | 0.51 | 22.65 | 19.62 | | | | | | |
| FCFPS (Rs) | 3.26 | 7.92 | -4.39 | 20.83 | 18.39 | | | | | | |
| BVPS (Rs) | 65.03 | 82.34 | 102.00 | 119.75 | 136.49 | | | | | | |
| Wtd avg ord shares (m) | 2,448 | 2,448 | 2,448 | 2,448 | 2,448 | | | | | | |
| Wtd avg diluted shares (m) | 2,448 | 2,448 | 2,448 | 2,448 | 2,448 | | | | | | |
| Growth rates | 2010 | 2011 | 2012E | 2013E | 2014E | | | | | | |
| Sales revenue (%) | 25.4 | 17.9 | 21.8 | 2.5 | 3.9 | | | | | | |
| EBIT (%) | 47.4 | 33.2 | 20.1 | -8.8 | -5.3 | | | | | | |
| Core NPAT (%) | 37.6 | 28.2 | 22.4 | -5.3 | -2.0 | | | | | | |
| Core EPS (%) | 37.6 | 28.2 | 22.4 | -5.3 | -2.0 | | | | | | |
| Balance Sheet (Rsm) | 2010 | 2011 | 2012E | 2013E | 2014E | | | | | | |
| Cash & cash equiv. | 97,901 | 96,302 | 68,134 | 95,113 | 114,974 | | | | | | |
| Accounts receivables | 206,888 | 273,546 | 345,762 | 354,208 | 367,983 | | | | | | |
| Inventory | 92,355 | 109,630 | 131,586 | 135,207 | 141,616 | | | | | | |
| Net fixed & other tangibles | 54,722 | 73,267 | 79,829 | 73,708 | 65,608 | | | | | | |
| Goodwill & intangibles | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Financial & other assets | 33,004 | 39,861 | 41,805 | 47,355 | 52,905 | | | | | | |
| Total assets | 484,868 | 592,606 | 667,116 | 705,591 | 743,086 | | | | | | |
| Accounts payable | 75,798 | 85,099 | 115,952 | 119,143 | 124,791 | | | | | | |
| Short-term debt | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Long-term debt | 1,278 | 1,634 | 5,000 | 5,000 | 5,000 | | | | | | |
| Provisions & other liab | 248,619 | 304,334 | 296,502 | 288,360 | 279,213 | | | | | | |
| Total liabilities | 325,695 | 391,067 | 417,454 | 412,503 | 409,004 | | | | | | |
| Shareholders' equity | 159,174 | 201,538 | 249,662 | 293,088 | 334,082 | | | | | | |
| Minority interests | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Total equity | 159,174 | 201,538 | 249,662 | 293,088 | 334,082 | | | | | | |
| Net debt | -96,623 | -94,668 | -63,134 | -90,113 | -109,974 | | | | | | |
| Net debt to equity (%) | -60.7 | -47.0 | -25.3 | -30.7 | -32.9 | | | | | | |

For further data queries on Citi's full coverage universe please contact CIRA Data Services Asia Pacific at CIRADat@services.asiapacific@citi.com or +852-2501-2791
For definitions of the items in this table, please click [here](#).



FY12 Provisional Results Review

Decent profits – But inflows collapse

- Gross sales at Rs493bn were up 22% YoY and PBT at Rs98.3bn was up 19% YoY. Recurring PAT at Rs67.5bn was up 22% YoY on lower effective tax. We don't know if there are exceptional items in 4Q12 (similar to 2Q12). Cash balance down to Rs68 end Mar12 from Rs96bn end Mar11.
- Inflows at Rs221bn down 63% YoY leading to 18% decline in backlog (steepest decline in last 18 years). We are not sure if (1) inflows of Rs221bn are gross inflows or net of cancellations (Rs58.47bn in 3Q12) and (2) if there are more cancellations in 4Q12.
- **Top industrial picks** — Switch to L&T (LART.BO; Rs1,358.05; 1), Cummins (CUMM.BO; Rs485.95; 1) and Havells (HVEL.BO; Rs589.75; 1).

Figure 1. BHEL FY12 Provisional Results Review

| Year End Mar31 (Rsmn) | FY11 | FY11CIRA | FY12P | YoY |
|-----------------------|---------|----------|---------|------|
| Inflows (Rsbn) | 605 | 605 | 221 | -63% |
| Backlog (Rsbn) | 1,641 | 1,641 | 1,347 | -18% |
| Gross Sales | 433,799 | 405,642 | 493,010 | 22% |
| PBT | 90,057 | 82,629 | 98,350 | 19% |
| Tax | 30,722 | 27,470 | 30,854 | |
| Tax Rate | 34.1% | 33.2% | 31.4% | |
| PAT | 59,335 | 55,160 | 67,496 | 22% |
| Exceptional | - | 4,952 | 1,184 | |
| Reported PAT | 60,150 | 60,112 | 68,680 | 14% |
| Cash Balance | 96,302 | 96,302 | 68,134 | |
| Capex | 16,550 | 16,550 | 11,440 | |

Source: Company and Citi Investment Research and Analysis

Figure 2. BHEL Key Order Wins in FY12P

| 4Q12 | | Fuel | MW Client | Rsmn |
|-------------------------|--|-------------|---------------------------|-----------------|
| 20-Mar-12 | 300MW power plant in Vishakapatnam | Coal | 300 Abhijeet Projects | 6,300 |
| 27-Feb-12 | Onshore drilling rigs | | ONGC | 7,740 |
| NA | 2X660 TG Sets Bulk Bidding | Coal | 1320 NTPC-DVC | 15,665 |
| Overall Data For | | | | 29,705 |
| Actual | | | | 66,230 |
| 3Q12 | | | | |
| 1-Dec-11 | Steam Turbine Generator (STG) package in Ukraine | | 27 Arcelor Mittal | 400 |
| Overall Data For | | | | 400 |
| Actual | | | | (13,040) |
| 2Q12 | | Fuel | Capacity Client | Rsmn |
| NA | 5MW Grid Interactive SPV plant | Solar | IOCL | 630 |
| NA | CPP 1XFr6 FA GTG Cogen | Cogen | 72 KRIBHCO Hazira | 3,270 |
| NA | 2X150MW power plant | Coal | 300 Sintex Infra | 7,000 |
| 5-Oct-11 | 2X660MW BTG in Singrauli District of Madhya Pradesh. | Coal | 1320 Dainik Bhaskar Power | 37,830 |
| 15-Sep-11 | 2X600MW BTG for Adilabad project | Coal | 1320 Singareni Collieries | 40,720 |
| 5-Sep-11 | Raw Material Handling System package for NMDC's 3MMTPA steel plant | | NMDC | 13,950 |
| Overall Data For | | | | 103,400 |
| Actual | | | | 143,060 |
| 1Q12 | | Fuel | Capacity Client | Rsmn |
| NA | 4X6 frame GT CCP | | OPAL | 9300 |
| NA | 280TPH CFBC Boiler | | Kohinoor | |
| NA | 76MW STG from Bellary | | JSW Steel | |
| NA | 20 100MVA transformers | | PSTCL | 1000 |
| NA | 85 sets of 25kW ACMU | | Railways | 1250 |
| NA | 5MW Photo Voltaic | | KPCL | 650 |
| Overall Data For | | | | 12,200 |
| Actual | | | | 24,710 |

Source: Company and Citi Investment Research and Analysis

Visibility for Rs260bn of orders in FY13E

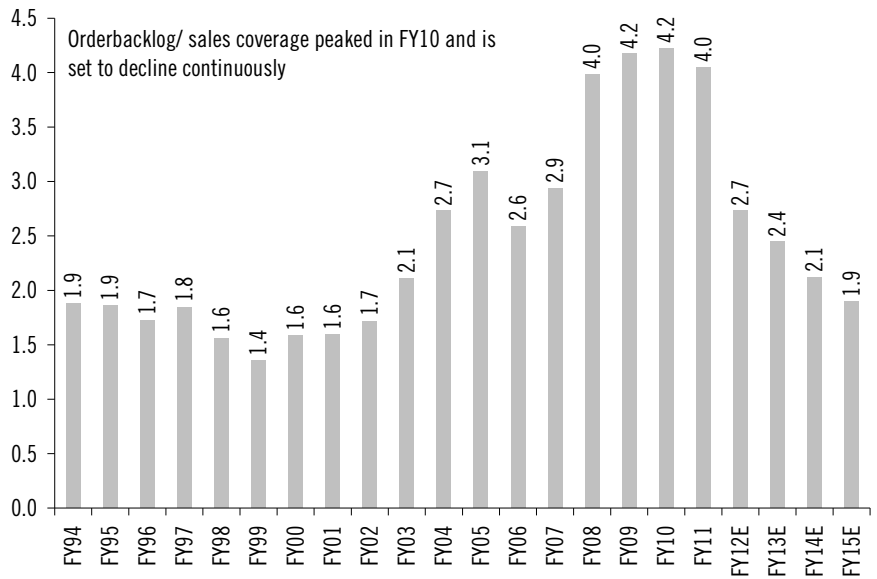
Figure 3. BHEL Order Inflow Visibility For FY13E

| Contract | MW | Client | Rsmn | Rsmn/MW |
|---|--------------|-----------------------|----------------|----------------|
| Signed contract for Rs15bn | | Iraq Government | 15,000 | |
| Karuma Hydel 700MW | 700 | Uganda | 15,000 | 21.4 |
| 4X250MW in Nigeria where BHEL has prepared feasibility report | 1,000 | Power Holding Nigeria | 25,000 | 25.0 |
| International | 1,700 | | 55,000 | |
| One of Surat and Chhabra | 1,320 | RRVUNL | 61,500 | 46.6 |
| 2X800 supercritical turbine generators | 1,600 | NTPC Bulk Tender | 14,400 | 9.0 |
| 4X800 supercritical boilers | 3,200 | NTPC Bulk Tender | 52,480 | 16.4 |
| 4X660 supercritical boilers | 2,640 | NTPC Bulk Tender | 36,960 | 14.0 |
| 3X150MW | 450 | IPCL | 24,000 | 53.3 |
| 2X270MW | 540 | DPSC | 15,000 | 27.8 |
| Domestic | 9,750 | | 204,340 | |

Source: Citi Investment Research and Analysis estimates

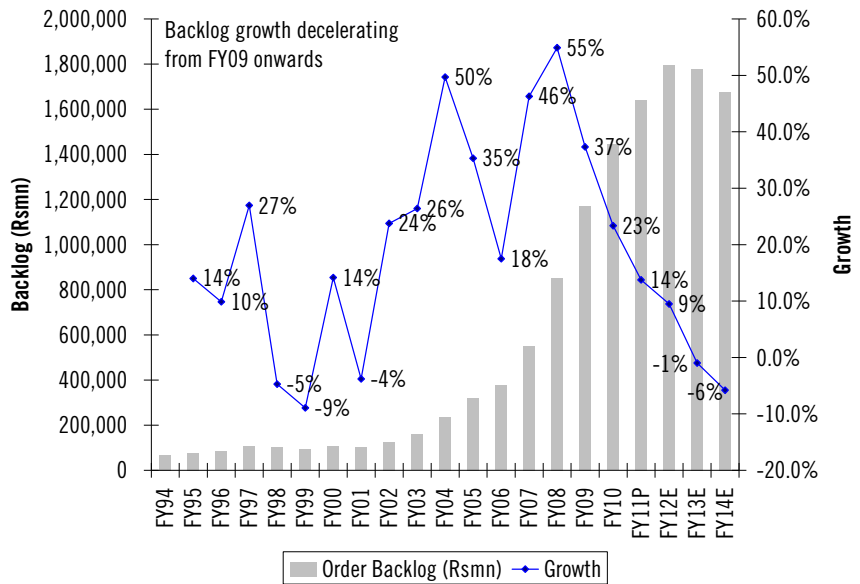
Downgrade to Sell – Target Price Rs250

Figure 4. BHEL – Order Backlog/ Sales Coverage



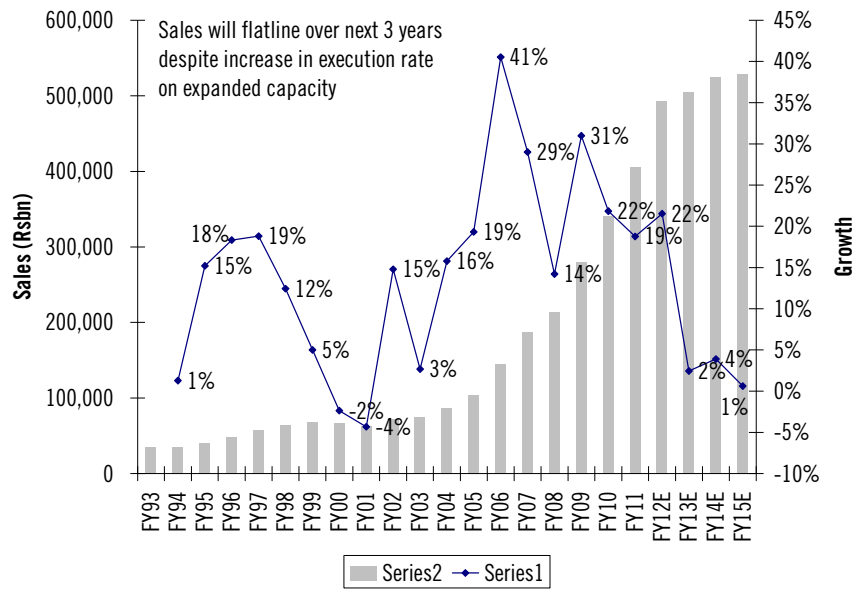
Source: Citi Investment Research and Analysis estimates

Figure 5. BHEL – Order Backlog Growth



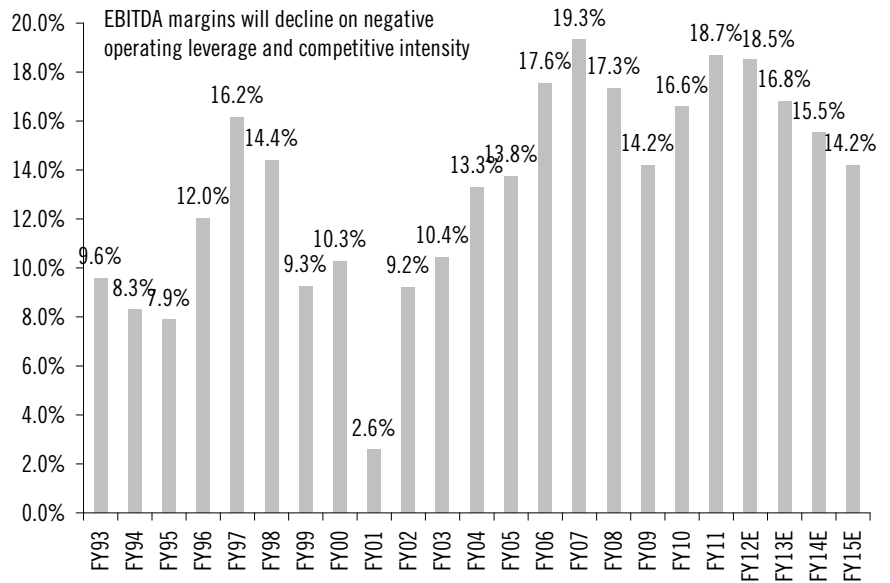
Source: Citi Investment Research and Analysis estimates

Figure 6. BHEL – Sales Growth



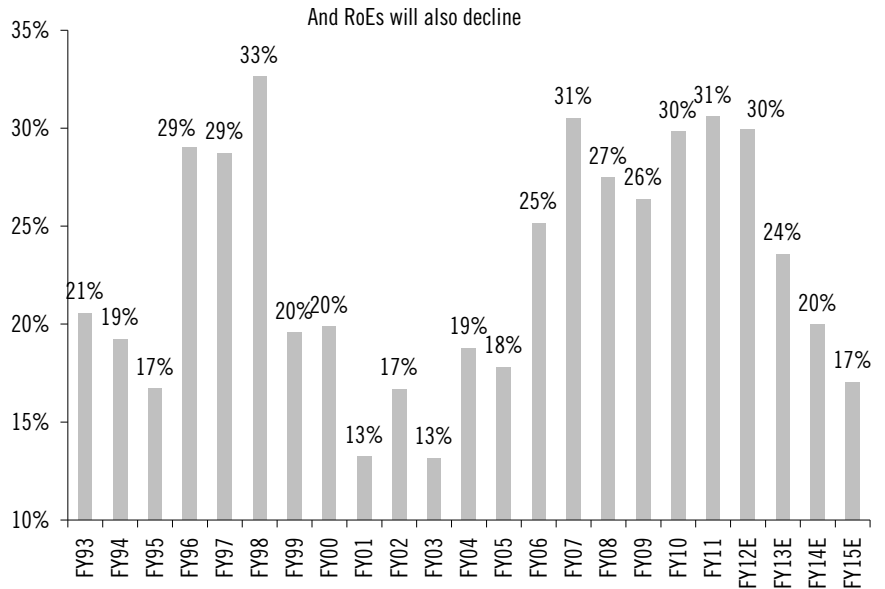
Source: Citi Investment Research and Analysis estimates

Figure 7. BHEL – EBITDA Margins



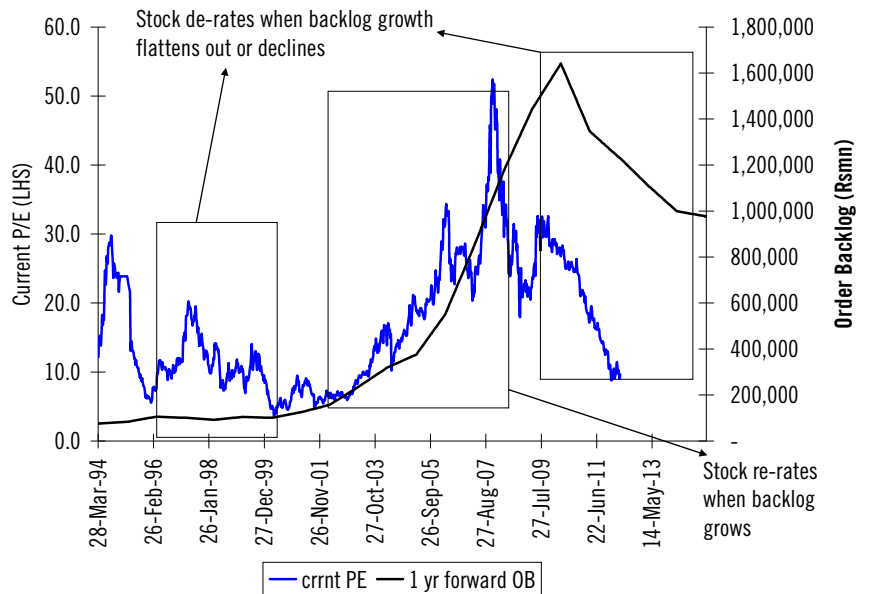
Source: Citi Investment Research and Analysis estimates

Figure 8. BHEL – RoEs



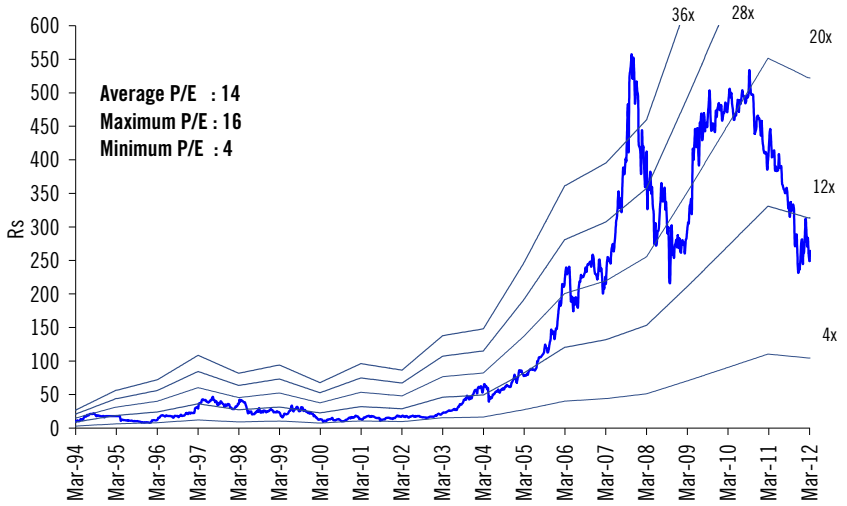
Source: Citi Investment Research and Analysis estimates

Figure 9. BHEL Current P/E Multiples v/s Rolling Order Backlog



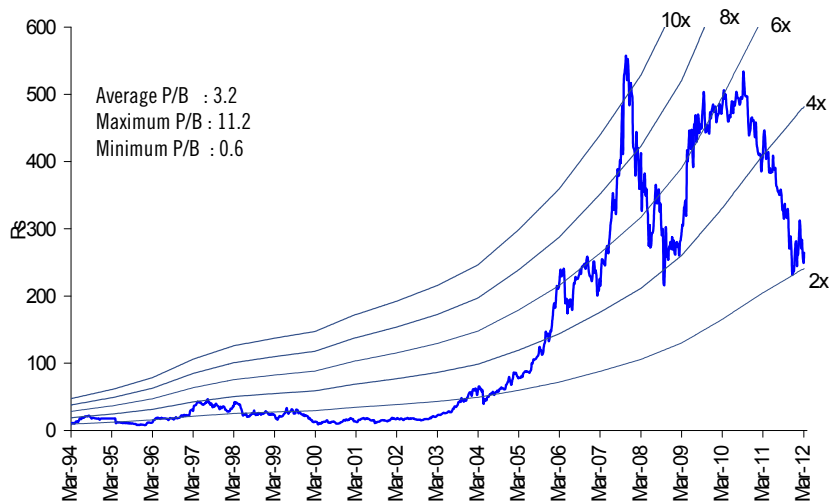
Source: DataCentral and Citi Investment Research and Analysis estimates

Figure 10. BHEL 1 Year Forward Rolling P/E Bands



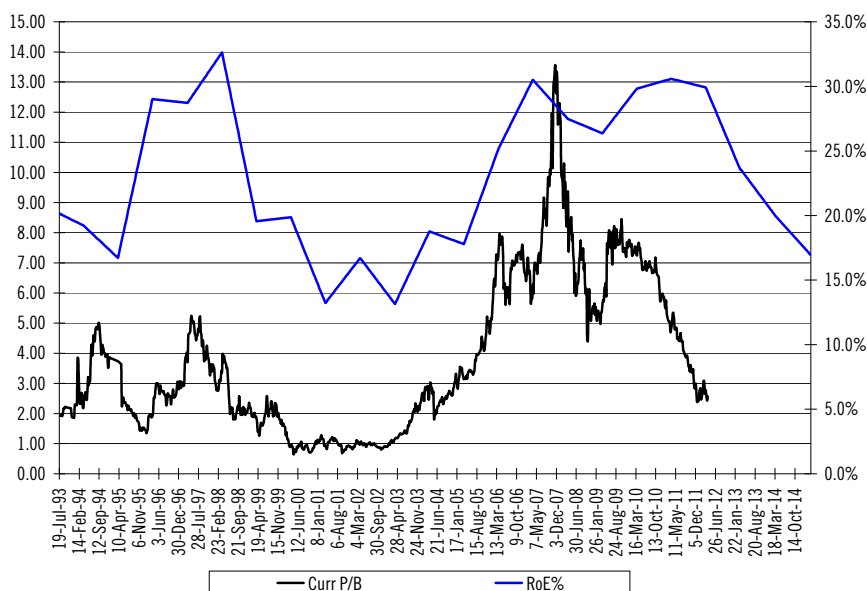
Source: DataCentral and Citi Investment Research and Analysis estimates

Figure 11. BHEL 1 Year Forward Rolling P/BV Bands



Source: DataCentral and Citi Investment Research and Analysis estimates

Figure 12. BHEL Rolling P/BV v/s RoE



Source: DataCentral and Citi Investment Research and Analysis estimates

Figure 13. Super Critical Pricing Collapse

| Date | Winner | Project | MW | Units | Client | Rsmn | Rsmn/MW | Remarks |
|-----------------|-------------|-----------|-------|-------|----------------|--------|---------|--|
| Turbine | | | | | | | | |
| Feb-12 | BGR Energy | NA | 3,200 | 800 | NTPC Bid 2 | 28,160 | 8.8 | - Market prices for turbines after 2nd bulk bid |
| Feb-12 | BHEL | NA | 1,600 | 800 | NTPC Bid 2 | 14,400 | 9.0 | - Market prices for turbines after 2nd bulk bid |
| Feb-12 | Toshiba JSW | Kudgi | 2,400 | 800 | NTPC Bid 2 | 23,150 | 9.6 | - Market prices for turbines after 2nd bulk bid |
| NA | BF-Alstom | NA | 3,300 | 660 | NTPC-DVC Bid 1 | 39,163 | 11.9 | - Market prices for turbines after first bulk bid |
| NA | Toshiba JSW | NA | 1,320 | 660 | NTPC-DVC Bid 1 | 15,665 | 11.9 | - Market prices for turbines after first bulk bid |
| Apr-11 | BHEL | Mouda | 1,320 | 660 | NTPC-DVC Bid 1 | 15,665 | 11.9 | - Market prices for turbines after first bulk bid |
| NA | BHEL | NA | 1,320 | 660 | NTPC-DVC Bid 1 | 15,665 | 11.9 | - Market prices for turbines after first bulk bid |
| Oct-08 | BHEL | Barh II | 1,320 | 660 | NTPC | 14,740 | 11.2 | - Market prices for turbines after first bulk bid |
| Jun-08 | L&T | K'patnam | 1,600 | 800 | APPDCL | 15,570 | 9.7 | - L&T's entry market price. Now this has become industry price |
| Boiler | | | | | | | | |
| Feb-12 | BGR Energy | NA | 4,620 | 660 | NTPC Bid 1 | 64,680 | 14.0 | - Latest market prices for boilers |
| Feb-12 | BHEL | NA | 2,640 | 660 | NTPC Bid 1 | 36,960 | 14.0 | - Latest market prices for boilers |
| Feb-12 | Doosan | Kudgi | 2,400 | 800 | NTPC Bid 2 | 39,360 | 16.4 | - Current market prices for boilers |
| Feb-12 | Doosan | Lara | 1,600 | 800 | NTPC Bid 2 | 26,240 | 16.4 | - Current market prices for boilers |
| Feb-12 | BHEL | NA | 3,200 | 800 | NTPC Bid 2 | 52,480 | 16.4 | - BHEL gets this order if it matches Doosan's price |
| Aug-08 | BHEL | K' patnam | 1,600 | 800 | APPDCL | 25,000 | 15.6 | - Lost turbine to L&T. So BHEL cuts prices to win here |
| Mar-08 | BHEL | Barh II | 1,320 | 660 | NTPC | 18,000 | 13.6 | - BHEL usually gives NTPC a discount v/s SEBs |
| BTG/ EPC | | | | | | | | |
| Mar-11 | BHEL | Lalitpur | 1,980 | 660 | Bajaj Group | 54,500 | 27.5 | - BHEL cuts prices as it already has > 10 BTG orders |
| Oct-12 | BHEL | Edlapur | 800 | 800 | KPCL | 36,010 | 45.0 | - BHEL SEB JV Projects (Pricing exorbitant) |
| Oct-12 | BHEL | Bellary | 700 | 700 | KPCL | 37,000 | 52.9 | - BHEL SEB JV Projects (Pricing exorbitant) |
| Apr-10 | BHEL | Raichur | 1,600 | 800 | KPCL | 63,000 | 39.4 | - BHEL SEB JV Projects (Pricing exorbitant) |
| Nov-09 | BHEL | Bara | 1,980 | 660 | JP Power | 55,640 | 28.1 | - BHEL cuts prices after losing Karchana, Nigrie and Koradi to L&T |
| Nov-09 | L&T | Koradi | 1,980 | 660 | MAHAGENCO | 69,630 | 35.2 | - Pricing reasonable (BHEL & L&T are the only 2 bidders) |
| Dec-09 | L&T | Nigrie | 1,320 | 660 | JP Power | 40,000 | 30.3 | - Pricing OK (JPVL Chinese aversion. Only BHEL/ L&T ramped up) |
| Aug-10 | L&T | Karchana | 1,980 | 660 | JP Power | 65,000 | 32.8 | - Pricing OK (JPVL Chinese aversion. Only BHEL/ L&T ramped up) |
| NA | L&T | Rajpura | 2,100 | 700 | L&T Power | 66,300 | 31.6 | - Pricing reasonable (Internal order from 100% subsidiary) |

Source: Industry and Citi Investment Research and Analysis

Figure 14. India Boiler Capacity Ramp Up

| Capacity (MW) | Technology | FY10 | FY11 | FY12E | FY13E | FY14E | FY15E |
|--------------------------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| BHEL | Alstom | 10,000 | 15,000 | 15,000 | 20,000 | 20,000 | 20,000 |
| L&T-MHI | MHI | | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 |
| Thermax | B&W | 1,500 | 1,500 | 4,500 | 4,500 | 4,500 | 4,500 |
| BGR-Energy | Hitachi | - | - | - | 4,000 | 4,000 | 4,000 |
| Cethar - Vessels | Ansaldo Engg | - | 8,000 | 8,000 | 8,000 | 12,000 | 12,000 |
| Doosan | Doosan - Babcock | - | - | - | - | 3,000 | 3,000 |
| GB Engg - Ansaldo | Riley Power | 1,000 | 1,000 | 1,000 | 1,000 | 2,000 | 2,000 |
| Industry capacity | | 12,500 | 29,500 | 32,500 | 41,500 | 49,500 | 49,500 |
| Capacity ex - Cethar/GB | | 11,500 | 20,500 | 23,500 | 32,500 | 35,500 | 35,500 |

Source: Industry and Citi Investment Research and Analysis estimates

Figure 15. India Turbine Generator Capacity Ramp Up

| Capacity (MW) | Technology | FY10 | FY11 | FY12E | FY13E | FY14E | FY15E |
|--------------------------|------------|---------------|---------------|---------------|---------------|---------------|---------------|
| BHEL | Siemens | 10,000 | 10,000 | 15,000 | 20,000 | 20,000 | 20,000 |
| L&T MHI | MHI | - | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 |
| Toshiba - JSW | Toshiba | - | - | - | 3,600 | 3,600 | 3,600 |
| Bharat Forge - Alstom | Alstom | - | - | - | 5,000 | 5,000 | 5,000 |
| BGR - Hitachi | Hitachi | - | - | - | 4,000 | 4,000 | 4,000 |
| Industry capacity | | 10,000 | 14,000 | 19,000 | 36,600 | 36,600 | 36,600 |

Source: Industry and Citi Investment Research and Analysis estimates

Paul Chanin
+65-6432-1153
paul.chanin@citi.com

Data as of: 23-Mar-12

Radar Screen Quadrant Definitions

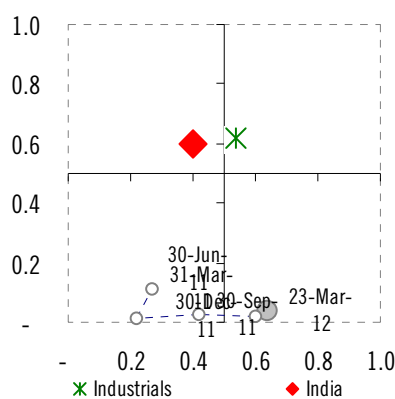
| | |
|---|---|
| Glamour Poor relative value but superior relative momentum | Attractive Superior relative value and superior relative momentum |
| Unattractive Poor relative value and poor relative momentum | Contrarian Superior relative value but poor relative momentum |

Quants View – Contrarian

Bharat Heavy Electricals lies in the Contrarian quadrant of our Value-Momentum map with relatively weak momentum but strong value scores. It has been a resident there for the past three months. Compared with its peers in the Industrials sector, Bharat Heavy Electricals fares better on the valuation metric but worse on the momentum metric. Similarly, compared with its peers in its home market of India, Bharat Heavy Electricals fares better on the valuation metric but worse on the momentum metric.

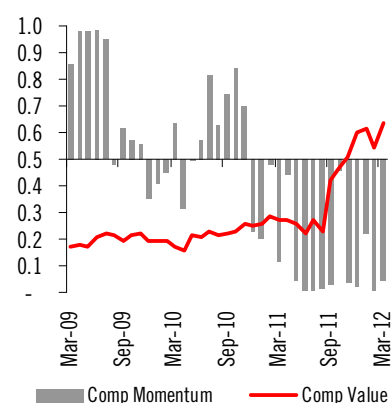
From a macro perspective, Bharat Heavy Electricals is likely to benefit from growth underperformance, value underperformance, and a weaker US dollar.

Figure 16. Radar Quadrant Chart History



Source: CIRA

Figure 17. Radar Valuation and Momentum Scores



Source: CIRA

Figure 18. Radar Model Inputs

| IBES EPS (Actual and Estimates) | | | |
|---------------------------------|-------|--------------------------|-------|
| FY(-2) | 12.73 | Implied Trend Growth (%) | 17.32 |
| FY(-1) | 17.68 | Trailing PE (x) | 10.79 |
| FY0 | 24.73 | Implied Cost of Debt (%) | 8.82 |
| FY1 | 26.56 | Standardised MCap | 0.31 |
| FY2 | 27.13 | | |

Note: Standardised MCap calculated as a Z score – (mkt cap - mean)/std dev – capped at 3

Source: Citi Investment Research and Analysis, Worldscope, I/B/E/S

Figure 19. Stock Performance Sensitivity to Key Macro Factors

| | | | |
|----------------------------------|--------|-----------------------|--------|
| Region | 1.20 | Commodity ex Oil | 0.05 |
| Widening APACxJ CDS | (0.00) | Rising Oil Prices | (0.02) |
| Growth | (1.04) | Rising Asian IR's | (0.11) |
| Value | (3.20) | Rising EM Yields | 0.08 |
| Small Caps Outperform Large Caps | 0.65 | Weaker US\$ (vs Asia) | 2.05 |
| Widening US Credit Spreads | (0.04) | Weaker ¥ (vs US\$) | 0.24 |

Source: Citi Investment Research and Analysis

Bharat Heavy

Company description

BHEL is the largest engineering company in India, manufacturing equipment for the power and industrial segments. It is the largest manufacturer of power plant equipment in India. The industrial equipment division primarily caters to process industries, transportation (including leasing of locomotives to Indian Railways), transmission, defense and diesel generating sets (DG).

Investment strategy

We rate BHEL shares Sell with a 12-month target price of Rs250.

Severe coal/ gas shortages, high international coal prices, poor SEB financials and land acquisition/ environmental delays have shrunk the opportunity pie for BHEL. Over the last 5-6 years BHEL has faced competition from Chinese suppliers.

The problem has been compounded by the rise of domestic equipment suppliers like L&T-MHI, Toshiba-JSW, Bharat Forge-Alstom, BGR-Hitachi, Doosan, Thermax-Babcock Wilcox, Cethar Vessels and GB Engineering-Ansaldo. Indian power BTG market is just like any other industry, where the incumbent making super normal profits attracts a host of new competitors leading to overcapacity.

Once BHEL gets the last of reserved bulk orders in FY13E, every incremental order should be a hard-fought battle. Import duties can perhaps provide a sentiment positive, but we wonder if it will make any difference as: (1) XIIth Plan (FY13E-17E) ordering is over and (2) lack of fuel visibility implies XIIIth Plan (FY18E-22E) ordering will not start in a hurry. BGR-Hitachi's winning bids in the recently concluded bulk tender are not too far off vis-à-vis Chinese pricing.

Valuation

Our target price of Rs250 is based on a P/E of 10x Sep13E which is set at ~ 30% discount to historical average ~14x given BHEL's (1) declining backlog, (2) EPS CAGR of -4% over FY12E-14E and (3) RoEs falling from FY11 - 31% to FY15E - 17%. Investors tend to focus on P/E while valuing Indian industrial stocks. Our valuation methodology is similar to those used for peers like L&T, Havells and Cummins.

Risks

Key upside risks that could cause the shares to trade above our target price include: (1) significant improvement in domestic coal/ gas scenario, (2) implementation of import duties, (3) some domestic suppliers going out of business, (4) better-than-expected order booking, (5) lower raw material costs and (6) increase in India's 12th Plan capacity addition targets.

Larsen & Toubro

Valuation

Our Rs1,642 target price is based on sum-of-the-parts (SOTP). We use 16x Jun13E earnings for the parent (Rs1295), well supported by EPS growth of 13% and average RoEs of 17.9%. We also believe that the parent's numbers do not capture the value inherent in subsidiaries, which we value at Rs347, with L&T Infotech at Rs79 (10x Mar13E EPS, in line with second-tier peers), L&T IDPL at Rs86 and L&T Finance Holdings at Rs115.

Risks

Downside risks include: 1) attracting and retaining talent; 2) the E&C and electrical equipment businesses are sensitive to economic variables; 3) competitive pressures; and 4) L&T needs to keep abreast with technology trends to sustain valuations and earnings. These risks could impede the stock from reaching our target price.

Cummins India

Valuation

Our target price of Rs486 on CIL is based on a target P/E multiple of 20x Jun13E, set closer to the higher end of the P/E band of 7x to 26x. We believe our target P/E multiple is well supported by EPS CAGR of 19% over FY12-14E with average RoEs of ~30%+.

Risks

Key downside risks to our target price include: (1) Price competition from unorganized segments; (2) Low-cost imports from China; (3) High diesel prices; (4) Alternative backup power sources like UPS and inverters; and (5) INR appreciation.

Havells India

Valuation

Our target price of Rs554 is based on a sum-of-the-parts approach. We value the India business at Rs520 and Sylvania at Rs34. The parent business is valued at 18x March13 P/E, at a premium to its historical average of 14x to reflect buoyant demand and strong business traction in India. The 18x P/E is supported by a ~21% EPS CAGR over FY11-14E and ~21% average RoE. P/E is generally used to value branded consumer and capital goods companies, segments in which Havells operates. We value Sylvania on 5x March 13E EV/EBITDA. Despite recovery in operations and profitability, PAT is expected to remain depressed due to high depreciation and interest costs and thus we prefer to use EV/EBITDA. We conservatively use 5x, derived from a comps analysis and taking the European risks into consideration.

At our TP of Rs554, Havells will trade at consolidated P/E of ~16x on FY13 EPS with FY11-14 EPS CAGR of 19%.

Risks

Downside risks to our target price include poorer performance from Sylvania, higher commodity prices, unsuccessful new-product launches, increase in competitive intensity and demand slowdown in India.

Appendix A-1

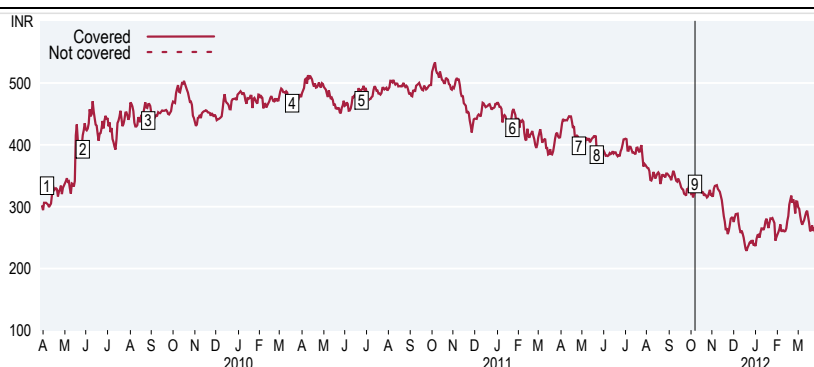
Analyst Certification

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

Bharat Heavy (BHEL.BO) Ratings and Target Price History Fundamental Research

Analyst: Venkatesh Balasubramaniam



| | Date | Rating | Target Price | Closing Price |
|---|-----------|--------|--------------|---------------|
| 1 | 7-Apr-09 | *2L | *335.00 | 306.38 |
| 2 | 27-May-09 | 2L | *438.60 | 415.64 |
| 3 | 27-Aug-09 | *1L | *526.80 | 465.80 |

* Indicates change

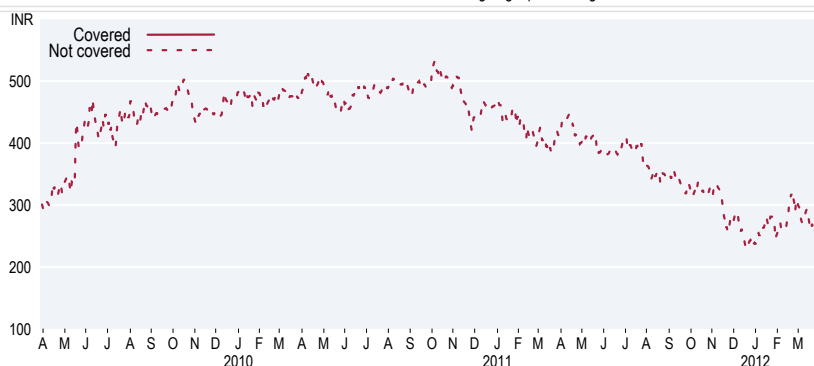
| | Date | Rating | Target Price | Closing Price |
|---|-----------|--------|--------------|---------------|
| 4 | 18-Mar-10 | *2L | *534.60 | 475.81 |
| 5 | 24-Jun-10 | *1L | *554.00 | 489.44 |
| 6 | 23-Jan-11 | 1L | *557.00 | 443.50 |

| | Date | Rating | Target Price | Closing Price |
|---|-----------|-----------------------------|--------------|---------------|
| 7 | 27-Apr-11 | *2L | *440.40 | 403.99 |
| 8 | 23-May-11 | 2L | *417.20 | 387.12 |
| 9 | 7-Oct-11 | Stock rating system changed | | |

Rating/target price changes above reflect Eastern Standard Time

Bharat Heavy (BHEL.BO) Ratings and Target Price History Best Ideas Research Relative Call (3 Month)

Analyst: Venkatesh Balasubramaniam



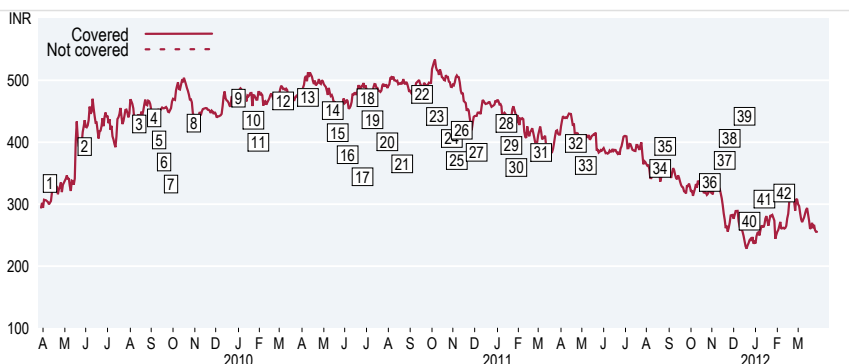
* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Bharat Heavy Electricals Ltd (BHEL.NS)

Rating History
Global Quantitative Research
Asia Radar Screen

Analyst: Paul R Chanin



| Date | Rating | Target Price | Closing Price |
|------|-----------|--------------|---------------|
| 1 | 10-Apr-09 | *4 | - 299.73 |
| 2 | 29-May-09 | *2 | - 435.63 |
| 3 | 14-Aug-09 | *5 | - 440.12 |
| 4 | 4-Sep-09 | *4 | - 442.41 |
| 5 | 11-Sep-09 | *3 | - 451.29 |
| 6 | 18-Sep-09 | *4 | - 454.81 |
| 7 | 29-Sep-09 | *2 | - 454.98 |
| 8 | 30-Oct-09 | *4 | - 443.56 |
| 9 | 1-Jan-10 | *5 | - 480.66 |
| 10 | 22-Jan-10 | *4 | - 476.03 |
| 11 | 29-Jan-10 | *5 | - 481.04 |
| 12 | 5-Mar-10 | *4 | - 485.81 |
| 13 | 9-Apr-10 | *5 | - 512.74 |
| 14 | 14-May-10 | *4 | - 471.86 |

* Indicates change

| Date | Rating | Target Price | Closing Price |
|------|-----------|--------------|---------------|
| 15 | 21-May-10 | *5 | - 457.83 |
| 16 | 4-Jun-10 | *4 | - 466.36 |
| 17 | 25-Jun-10 | *3 | - 490.38 |
| 18 | 2-Jul-10 | *2 | - 478.38 |
| 19 | 9-Jul-10 | *4 | - 478.71 |
| 20 | 30-Jul-10 | *3 | - 487.58 |
| 21 | 20-Aug-10 | *4 | - 493.90 |
| 22 | 17-Sep-10 | *3 | - 488.72 |
| 23 | 8-Oct-10 | *4 | - 516.25 |
| 24 | 29-Oct-10 | *3 | - 489.11 |
| 25 | 5-Nov-10 | *2 | - 507.80 |
| 26 | 12-Nov-10 | *3 | - 477.80 |
| 27 | 3-Dec-10 | *5 | - 442.51 |
| 28 | 14-Jan-11 | *4 | - 438.97 |

| Date | Rating | Target Price | Closing Price |
|------|-----------|--------------|---------------|
| 29 | 21-Jan-11 | *5 | - 441.45 |
| 30 | 28-Jan-11 | *4 | - 430.43 |
| 31 | 4-Mar-11 | *5 | - 417.08 |
| 32 | 22-Apr-11 | *4 | - 411.93 |
| 33 | 6-May-11 | *5 | - 412.23 |
| 34 | 19-Aug-11 | *3 | - 336.39 |
| 35 | 26-Aug-11 | *5 | - 347.10 |
| 36 | 28-Oct-11 | *4 | - 327.45 |
| 37 | 18-Nov-11 | *5 | - 274.85 |
| 38 | 25-Nov-11 | *3 | - 270.05 |
| 39 | 16-Dec-11 | *4 | - 240.40 |
| 40 | 23-Dec-11 | *5 | - 241.90 |
| 41 | 13-Jan-12 | *4 | - 266.80 |
| 42 | 10-Feb-12 | *5 | - 260.60 |

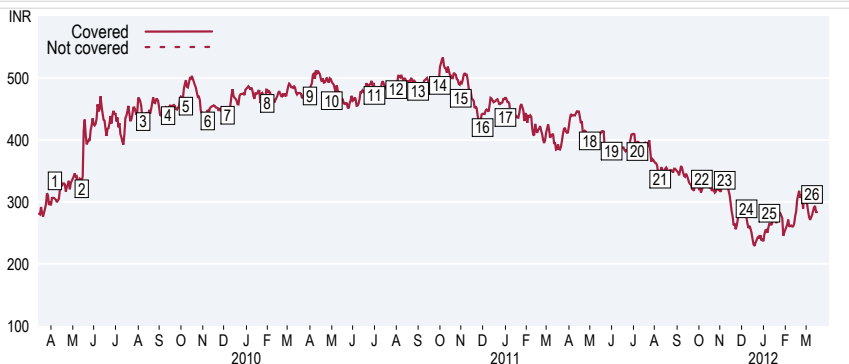
Rating/target price changes above reflect Eastern Standard Time

Bharat Heavy Electricals Ltd (BHEL.BO)

Rating History
Global Quantitative Research
World Radar Screen

Analyst: Chris Montagu

Covered since May 23 2009



| Date | Rating | Target Price | Closing Price |
|------|-----------|--------------|---------------|
| 1 | 7-Apr-09 | *6 | - 306.38 |
| 2 | 14-May-09 | *5 | - 332.60 |
| 3 | 10-Aug-09 | *7 | - 429.76 |
| 4 | 14-Sep-09 | *8 | - 451.22 |
| 5 | 8-Oct-09 | *7 | - 496.55 |
| 6 | 9-Nov-09 | *5 | - 448.51 |
| 7 | 7-Dec-09 | *7 | - 442.90 |
| 8 | 1-Feb-10 | *9 | - 480.87 |
| 9 | 1-Apr-10 | *7 | - 483.82 |

* Indicates change

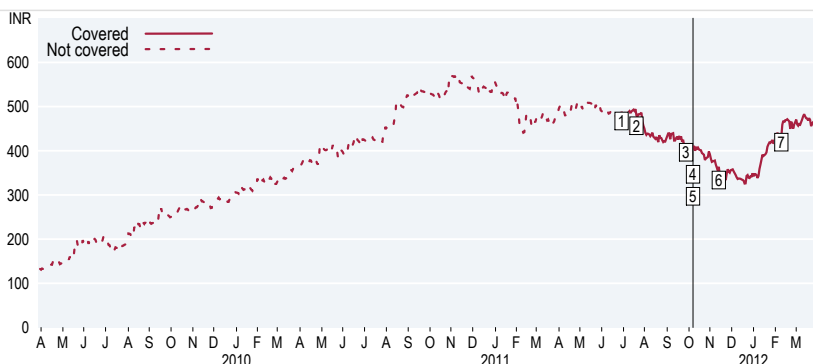
| Date | Rating | Target Price | Closing Price |
|------|----------|--------------|---------------|
| 10 | 1-May-10 | *10 | - 498.42 |
| 11 | 1-Jul-10 | *9 | - 486.09 |
| 12 | 1-Aug-10 | *5 | - 487.78 |
| 13 | 1-Sep-10 | *8 | - 484.62 |
| 14 | 1-Oct-10 | *9 | - 518.02 |
| 15 | 1-Nov-10 | *4 | - 493.25 |
| 16 | 1-Dec-10 | *9 | - 442.30 |
| 17 | 1-Jan-11 | *10 | - 464.95 |
| 18 | 1-May-11 | *7 | - 400.15 |

| Date | Rating | Target Price | Closing Price |
|------|-----------|--------------|---------------|
| 19 | 1-Jun-11 | *10 | - 390.31 |
| 20 | 7-Jul-11 | *9 | - 396.96 |
| 21 | 9-Aug-11 | *10 | - 346.30 |
| 22 | 6-Oct-11 | *NR | - 315.10 |
| 23 | 8-Nov-11 | *6 | - 334.85 |
| 24 | 8-Dec-11 | *4 | - 273.55 |
| 25 | 10-Jan-12 | *8 | - 264.90 |
| 26 | 9-Mar-12 | *9 | - 278.50 |

Rating/target price changes above reflect Eastern Standard Time

Cummins India (CUMM.BO)
Ratings and Target Price History
Fundamental Research

Analyst: Venkatesh Balasubramaniam
Covered since June 29 2011



| | Date | Rating | Target Price | Closing Price |
|---|-----------|--------|--------------|---------------|
| 1 | 29-Jun-11 | *3L | *486.43 | 488.11 |
| 2 | 20-Jul-11 | 3L | *488.57 | 479.82 |
| 3 | 28-Sep-11 | 3L | *387.00 | 412.95 |

| | Date | Rating | Target Price | Closing Price |
|---|-----------|-----------------------------|--------------|---------------|
| 4 | 7-Oct-11 | Stock rating system changed | | |
| 5 | 7-Oct-11 | *3 | 387.00 | 406.25 |
| 6 | 13-Nov-11 | 3 | *334.00 | 355.05 |

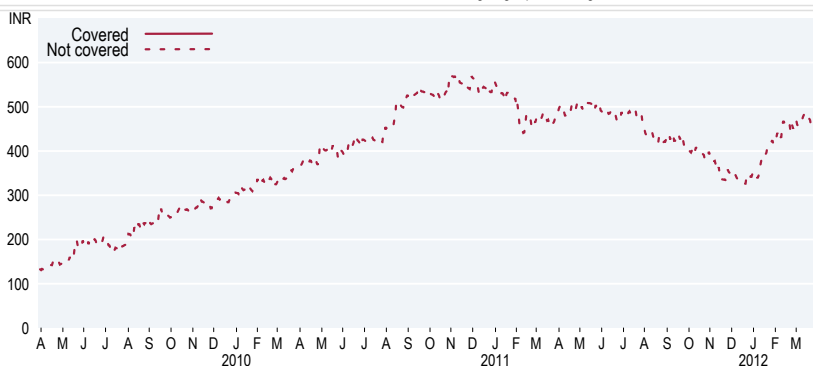
| | Date | Rating | Target Price | Closing Price |
|---|----------|--------|--------------|---------------|
| 7 | 9-Feb-12 | *1 | *486.00 | 431.65 |

* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Cummins India (CUMM.BO)
Ratings and Target Price History
Best Ideas Research
Relative Call (3 Month)

Analyst: Venkatesh Balasubramaniam
Covered since June 29 2011

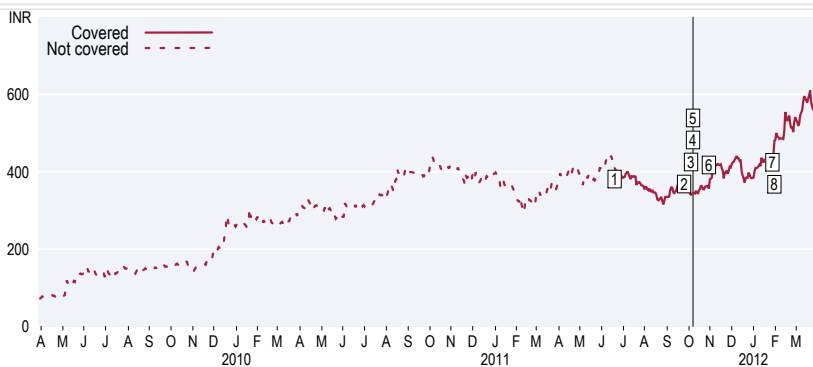


* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Havells India (HVEL.BO)
Ratings and Target Price History
Fundamental Research

Analyst: Atul Tiwari, CFA
Covered since June 20 2011



| | Date | Rating | Target Price | Closing Price |
|---|-----------|--------|--------------|---------------|
| 1 | 20-Jun-11 | *3L | *425.00 | 409.35 |
| 2 | 26-Sep-11 | 3L | *347.00 | 357.65 |
| 3 | 5-Oct-11 | 3L | *335.00 | 340.70 |

| | Date | Rating | Target Price | Closing Price |
|---|-----------|-----------------------------|--------------|---------------|
| 4 | 7-Oct-11 | Stock rating system changed | | |
| 5 | 7-Oct-11 | *3 | 335.00 | 344.85 |
| 6 | 31-Oct-11 | *1 | *425.00 | 356.35 |

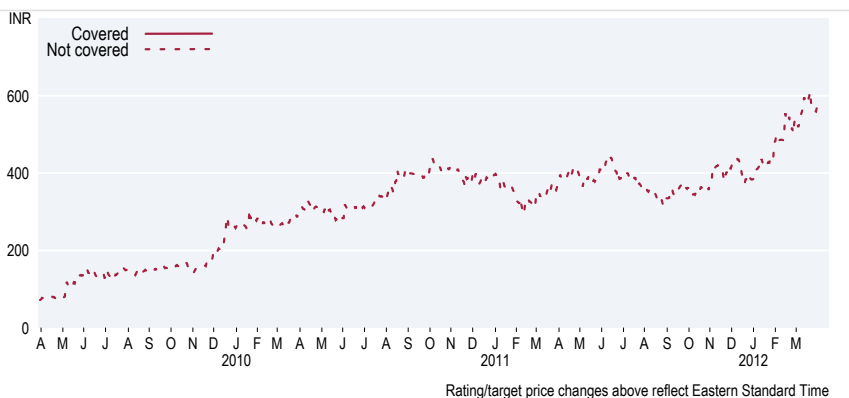
| | Date | Rating | Target Price | Closing Price |
|---|-----------|--------|--------------|---------------|
| 7 | 27-Jan-12 | 1 | *502.00 | 428.85 |
| 8 | 31-Jan-12 | 1 | *554.00 | 480.00 |

* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Havells India (HVEL.BO)
Ratings and Target Price History
Best Ideas Research
Relative Call (3 Month)

Analyst: Atul Tiwari, CFA
Covered since June 20 2011



Larsen & Toubro (LART.BO)
Ratings and Target Price History
Fundamental Research

Analyst: Venkatesh Balasubramaniam



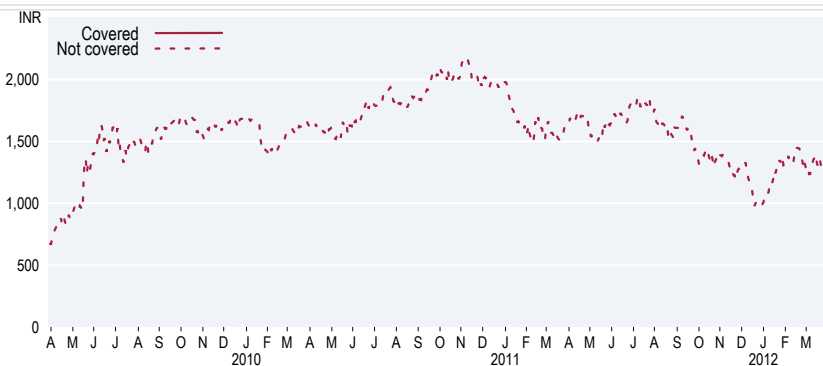
| Date | Rating | Target Price | Closing Price |
|-------------|--------|--------------|---------------|
| 1 13-Apr-09 | 3L | *810.00 | 824.00 |
| 2 17-Apr-09 | *1L | *955.00 | 866.50 |
| 3 29-May-09 | *2L | *1,437.00 | 1,405.60 |
| 4 9-Jul-09 | 2L | *1,466.00 | 1,389.40 |
| 5 28-Aug-09 | 2L | *1,784.00 | 1,614.60 |
| 6 22-Oct-09 | *1L | *1,828.00 | 1,608.50 |
| 7 21-Jan-10 | 1L | *1,748.00 | 1,524.35 |

| Date | Rating | Target Price | Closing Price |
|--------------|--------|--------------|---------------|
| 8 23-Apr-10 | 1L | *1,875.00 | 1,617.85 |
| 9 27-Jul-10 | 1L | *2,110.00 | 1,863.25 |
| 10 18-Oct-10 | 1L | *2,210.00 | 2,013.15 |
| 11 17-Jan-11 | *2L | *1,824.00 | 1,681.15 |
| 12 19-May-11 | 2L | *1,745.00 | 1,594.90 |
| 13 8-Aug-11 | 2L | *1,767.00 | 1,629.85 |
| 14 29-Sep-11 | *1L | *1,576.00 | 1,369.55 |

| Date | Rating | Target Price | Closing Price |
|--------------|-----------------------------|--------------|---------------|
| 15 7-Oct-11 | Stock rating system changed | | |
| 16 7-Oct-11 | * | 1,576.00 | 1,393.45 |
| 17 23-Oct-11 | 1 | *1,511.00 | 1,336.00 |
| 18 6-Jan-12 | 1 | *1,328.00 | 1,078.60 |
| 19 16-Feb-12 | 1 | *1,647.00 | 1,447.05 |
| 20 21-Mar-12 | 1 | *1,642.00 | 1,348.00 |

Larsen & Toubro (LART.BO)
Ratings and Target Price History
Best Ideas Research
Relative Call (3 Month)

Analyst: Venkatesh Balasubramaniam



Citigroup Global Markets Inc. or its affiliates beneficially owns 1% or more of any class of common equity securities of Cummins India, Havells India, Larsen & Toubro. 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 Bharat Heavy, Larsen & Toubro.

Citigroup Global Markets Inc. or its affiliates has received compensation for investment banking services provided within the past 12 months from Bharat Heavy, Larsen & Toubro.

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 Bharat Heavy.

Citigroup Global Markets Inc. or an affiliate received compensation for products and services other than investment banking services from Bharat Heavy, Cummins India, Havells India, Larsen & Toubro 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): Bharat Heavy, Larsen & Toubro.

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: Bharat Heavy, Cummins India, Havells India, Larsen & Toubro.

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: Bharat Heavy, Cummins India, Havells India, Larsen & Toubro.

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.

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

| <i>Data current as of 31 Mar 2012</i> | 12 Month Rating | | | Relative Rating | | |
|--|------------------------|-------------|-------------|------------------------|-------------|-------------|
| | Buy | Hold | Sell | Buy | Hold | Sell |
| Citi Investment Research & Analysis Global Fundamental Coverage | 52% | 37% | 11% | 10% | 79% | 10% |
| <i>% of companies in each rating category that are investment banking clients</i> | 44% | 42% | 40% | 47% | 42% | 43% |
| Citi Investment Research & Analysis Quantitative World Radar Screen Model Coverage | 30% | 40% | 30% | | | |
| <i>% of companies in each rating category that are investment banking clients</i> | 23% | 23% | 19% | | | |
| Citi Investment Research & Analysis Quantitative Decision Tree Model Coverage | 47% | 0% | 53% | | | |
| <i>% of companies in each rating category that are investment banking clients</i> | 48% | 0% | 47% | | | |
| Citi Investment Research & Analysis Asia Quantitative Radar Screen Model Coverage | 20% | 60% | 20% | | | |
| <i>% of companies in each rating category that are investment banking clients</i> | 24% | 22% | 21% | | | |
| Citi Investment Research & Analysis Australia Radar Model Coverage | 51% | 0% | 49% | | | |
| <i>% of companies in each rating category that are investment banking clients</i> | 37% | 0% | 13% | | | |

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.

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

CIRA Quantitative Research World Radar Screen recommendations are based on a globally consistent framework to measure relative value and momentum for a large number of stocks across global developed and emerging markets. Relative value and momentum rankings are equally weighted to produce a global attractiveness score for each stock. The scores are then ranked and put into deciles. A stock with a decile rating of 1 denotes an attractiveness score in the top 10% of the universe (most attractive). A stock with a decile rating of 10 denotes an attractiveness score in the bottom 10% of the universe (least attractive).

CIRA Asia Quantitative Radar Screen model recommendations are based on a regionally consistent framework to measure relative value and momentum for a large number of stocks across regional developed and emerging markets. Relative value and momentum rankings are equally weighted to produce a global attractiveness score for each stock. The scores are then ranked and put into quintiles. A stock with a quintile rating of 1 denotes an attractiveness score in the top 20% of the universe (most attractive). A stock with a quintile rating of 5 denotes an attractiveness score in the bottom 20% of the universe (least attractive).

CIRA Australia Quantitative Radar Screen model recommendations are based on a robust framework to measure relative value and momentum for a large number of stocks across the Australian market. Stocks with a ranking of 1 denotes a stock that is above average in terms of both value and momentum relative to the stocks in the Australian market. A ranking of 10 denotes a stock that is below average in terms of both value and momentum relative to the stocks in the Australian market.

CIRA Quantitative Decision Tree model recommendations are based on a predetermined set of factors to rate the relative attractiveness of stocks. These factors are detailed in the text of the report. The Decision Tree model forecasts whether stocks are attractive or unattractive relative to other stocks in the same sector (based on the Russell 1000 sector classifications).

For purposes of NASD/NYSE ratings-distribution-disclosure rules, a Citi Investment Research & Analysis (CIRA) Quantitative World Radar Screen recommendation of (1), (2) or (3) most closely corresponds to a buy recommendation; a recommendation from this product group of (4), (5), (6) or (7) most closely corresponds to a hold recommendation; and a recommendation of (8), (9) or (10) most closely corresponds to a sell recommendation. An (NR) recommendation indicates that the stock is no longer in the screen.

For purposes of NASD/NYSE ratings distribution disclosure rules, a CIRA Asia Quantitative Radar Screen recommendation of (1) most closely corresponds to a buy recommendation; a CIRA Asia Quantitative Radar Screen recommendation of (2), (3), (4) most closely corresponds to a hold recommendation; and a recommendation of (5) most closely corresponds to a sell recommendation. An (NR) recommendation indicates that the stock is no longer in the screen.

For purposes of NASD/NYSE ratings-distribution-disclosure rules, a CIRA Quantitative Research Decision Tree model or Quantitative Research Australia Radar Screen recommendation of "attractive" (1) most closely corresponds to a buy recommendation. All other stocks in the sector are considered to be "unattractive" (10) which most closely corresponds to a sell recommendation. An (NR)/(0) recommendation indicates that the stock is no longer in the screen.

Recommendations are based on the relative attractiveness of a stock, thus can not be directly equated to buy, hold and sell categories. Accordingly, your decision to buy or sell a security should be based on your personal investment objectives and only after evaluating the stock's expected relative performance.

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

Venkatesh Balasubramaniam; Deepal Delivala; Atul Tiwari, CFA

Citigroup Global Markets Singapore PTE LIMITED

Paul R Chanin

OTHER DISCLOSURES

The subject company's share price set out on the front page of this Product is quoted as at 03 April 2012 03:56 PM on the issuer's primary market.

Citigroup Global Markets Inc. and/or its affiliates has a significant financial interest in relation to Bharat Heavy, Larsen & Toubro. (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> or www.citiVelocity.com.)

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

Citigroup Global Markets Inc. or its affiliates beneficially owns 10% or more of any class of common equity securities of Havells India.

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. Baktawar, 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 8 Marina View, 21st Floor Asia Square Tower 1, Singapore 018960, 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, redisseminated 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
