



**INDIA**

**BHEL IN** Neutral  
Price 3 Mar 10 Rs2,449.15

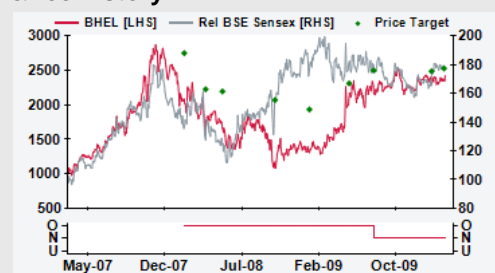
**12-month target** Rs 2,529.00  
**Upside/Downside** % 3.3  
**Valuation** Rs 2,529.00

- PER  
**GICS sector** Capital Goods  
**Market cap** Rsbn 1,199  
**30-day avg turnover** US\$m 3.5  
**Market cap** US\$m 25,851  
**Number shares on issue** m 489.5

**Investment fundamentals**

Year end 31 Mar		2009A	2010E	2011E	2012E
Total revenue	bn	267.3	333.7	413.2	498.1
EBITDA	bn	42.2	66.5	83.9	98.0
EBITDA growth	%	12.8	57.7	26.2	16.7
Adjusted profit	bn	31.4	47.3	59.7	68.8
EPS adj	Rs	64.11	96.54	121.89	140.51
EPS adj growth	%	9.8	50.6	26.3	15.3
PER adj	x	38.2	25.4	20.1	17.4
Total DPS	Rs	15.55	23.41	29.56	34.07
Total div yield	%	0.6	1.0	1.2	1.4
ROA	%	10.8	13.6	14.1	13.5
ROE	%	26.5	32.1	31.8	29.1
EV/EBITDA	x	25.8	16.4	13.0	11.1
Net debt/equity	%	-78.6	-67.0	-58.3	-54.1
P/BV	x	9.3	7.3	5.7	4.6

**BHEL IN rel BSE Sensex performance, & rec history**



Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, March 2010

(all figures in INR unless noted)

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3 March 2010

# Bharat Heavy Electricals

## Long-term concerns remain

### Event

- BHEL secured orders worth Rs57.8bn for 10 units each of 270 MW coal-fired power plants from Indiabulls Power (IBPOW IN, Rs30, Not rated). Though this is a large order (11% of FY10 order inflow), we see no upside risk to our estimates which build in no growth in FY10, in line with company guidance. We remain concerned about the long-term competitive environment and recommend switching to L&T.

### Impact

- **Order inflow has peaked out:** BHEL's order inflow is expected to stagnate at around 14,000MW a year, implying no growth. Half of the 12<sup>th</sup> plan (FY13-17) projects have already been awarded. Our scenario analysis (Figs 2-3) suggests that even with capacity 20% higher than planned, greater market share and faster-than-expected awards, order inflow is unlikely to grow.  
⇒ **Order backlog coverage to decline to 3x from current 4x:** With no order inflow growth and revenue growth at 20%+, order backlog coverage is likely to drop to 3.1x by FY12E. This would put pressure on BHEL's valuation as investors paid a premium for growth visibility.
- **Margin peaking out in FY11; competition to hurt margins:** Margins are expected to peak out in FY11 at 20% levels due to the benefits of low-cost raw material inventory and operating leverage. In future as lower margin, super-critical units start contributing to revenues, margins should decline.

### Earnings and target price revision

- No change.

### Price catalyst

- 12-month price target: Rs2,529.00 based on a PER methodology.
- Catalyst: Aggressive bidding in bulk tender expected in 1QFY11

### Action and recommendation

- **Earnings growth to significantly moderate beyond FY11:** Despite top-line growth of 20% beyond FY11 on order book and capacity additions, we see earnings growth at around 10-15% as margins drop from the peak of 20% to 16%. The stock is already trading at 20x FY11E (22x FY11E consensus).
- **Medium-term concerns on pricing and competition remain:** We expect severe price competition to emerge from newer entrants like L&T-MHI, Alstom-Bharat Forge and JSW-Toshiba. The L&T-MHI JV has already bagged 6,220MW of orders (including development projects) and should reach close to 12,000MW (25% of BHEL) with a bulk tender. Capacity addition plans indicate oversupply in the space over the next 3 years.
- **Recommend switching to L&T:** We think L&T (LT IN, Rs1,585, OP, TP: Rs1,825) is trading at an unjustified discount to BHEL. L&T is expected to benefit as the execution cycle revives and the corporate capex cycle rebounds in 2H CY10.

## BHEL's order inflow has stagnated

### Only 52,778MW left to be awarded in 12th plan

The 12th five-year plan (FY13-17) outlay for thermal capacity addition is around 100,000MW. The plan provides for a large outlay for hydro and nuclear power plants. Of the planned thermal capacity addition, 47,226MW has already been awarded and BHEL won 25,676MW (54% market share).

**Fig 1 Breakup of 12<sup>th</sup> plan capacities won by various players to date**

	Capacity (MW)	Market share (%)
BHEL	25,676	54
Chinese companies	12,930	27
L&T-MHI	6,220	13
Korean companies	2,400	5

Source: Macquarie Research, March 2010

### Scenario analysis – BHEL to do well to hold on current order inflow levels

We assess the possible order inflows for BHEL over next three years under the following different scenarios

- **Size of the plan:** Based on current indications, thermal capacity addition in the next 5-yr plan is likely to be 100,000MW. This 100,000MW actually assumes 19,200MW of UMPP (ultra mega power projects) capacity and a total private sector addition of 53,525MW. We have looked at the scenario, where the actual award is 20% and 40% above the current plan due to a greater number of UMPPs and private sector projects. To put this in context, 120,000MW of thermal capacity addition would be 2x the 11th 5-year plan.
- **Market share of 40-70%:** We have also looked at the possibility of BHEL maintaining its market share of around 50% and scenarios of market share moving between 40-70%.
- **Time to award projects:** Our base case assumption is that all of the expanded projects are likely to be awarded in the next three years, which is by end-FY13. Typically, the experience has been that project awards continue to happen until the third year of the plan.

### Key conclusion – stable order inflow not a cakewalk

- **Positives should play out to maintain order inflow:** BHEL would need 120,000MW of thermal capacity, 3 years to order out and 60% market share to maintain its annual order inflow of around 14,500MW.
- **Base case presents significant downside:** With 100,000MW of thermal capacity addition, 50% market share and 3 years of award time, annual project wins would fall to only 9,000MW. In the near term, while the company may be supported by the bulk tender expected in 1HFY11, order inflows would suffer in FY12. BHEL would then be dependent on a high level of exports and/or hydro orders (refer Fig 2).
- **Bull case:** If the total award reaches 140,000MW and BHEL secures 70% market share, it would result in an annual project win of 21,647MW for the company (refer Fig 3).

**Fig 2 Even with 50-60% market share, annual order inflow unlikely to exceed 16,000MW**

MW	BHEL's market share			
	40%	50%	60%	70%
Time taken to award remaining capacity				
2 years	10,555	13,194	15,832	18,471
3 years	7,037	8,796	10,555	12,314
4 years	5,277	6,597	7,916	9,235

Source: Company data, Macquarie Research, March 2010

**Fig 3 Even if 140,000MW is awarded, annual order inflow unlikely to exceed 16,000MW**

MW	BHEL's market share			
	40%	50%	60%	70%
Scenario 1 - 100,000MW (as per current plan)	7,037	8,796	10,555	12,314
Scenario 2 - 120,000MW (assuming additional 20,000 MW)	9,703	12,129	14,555	16,981
Scenario 2 - 140,000MW (assuming additional 40,000 MW)	12,370	15,462	18,555	21,647

Source: Company data, Macquarie Research, March 2010

**Increased competition as new players enter the market**

Given the aggressive plans of new entrants to the equipment market, competition is likely to intensify over the medium term.

**Fig 4 More than 35,000MW of capacity possible in the next 3 years**

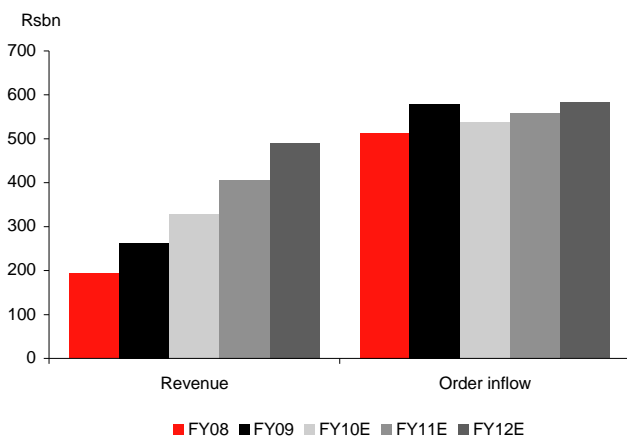
Equipment manufacturer	Capacity over next 3 years (MW)	Comment
BHEL	20,000	To be commissioned by Dec-11
L&T - Mitsubishi	6,000	Plans to raise capacity from 4,000MW currently being developed
Toshiba - JSW	3,000	
Alstom - Bharat Forge	5,000	Focus on turbine capacity
Ansaldo - GB Engineering	1,500	
<b>Total</b>	<b>35,500</b>	

Source: Company data, Macquarie Research, March 2010

**Order book coverage ratio to drop**

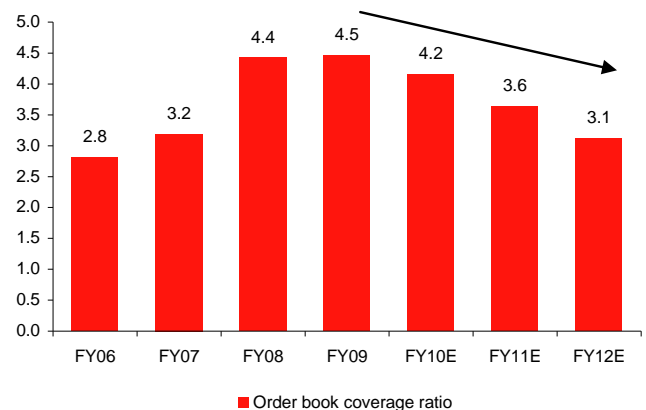
While revenue growth is expected to be robust in FY11 due to its historical order backlog, the order book coverage ratio is expected to drop on account of a slowdown in order inflow.

**Fig 5 Flat order inflow growth with a backdrop of strong revenue growth...**



Source: Company data, Macquarie Research, March 2010

**Fig 6 .. would lead to a decline in the order book coverage ratio**

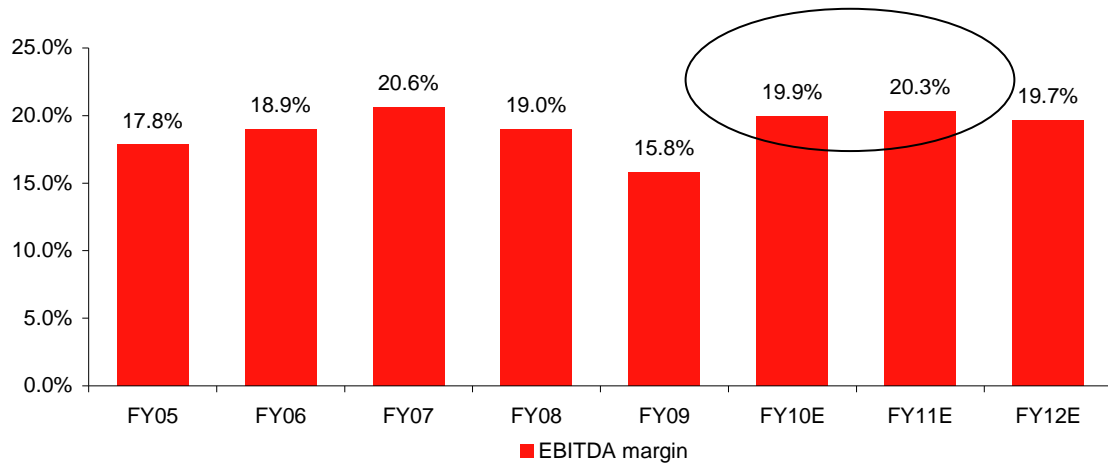


Source: Company data, Macquarie Research, March 2010

### EBITDA margin likely to peak out in FY11

We believe that margins are likely to peak out in FY11 amid a backdrop of low-cost inventory and rangebound staff costs. Hence, bottom line improvement must come primarily from revenue growth and not margin expansion. Increased competition from new players is also likely to bring pressure on the margins going forward.

**Fig 7 EBITDA margin to peak out in FY11**



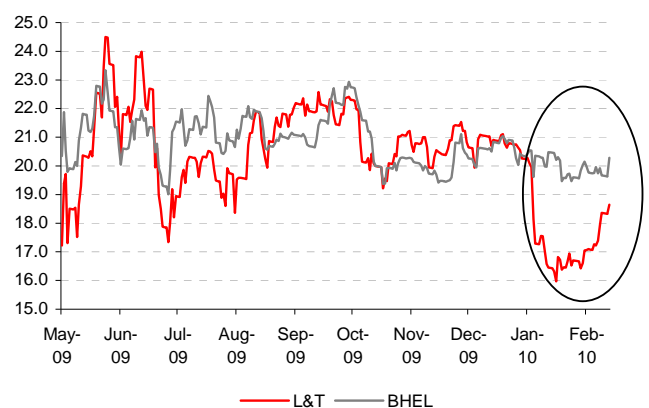
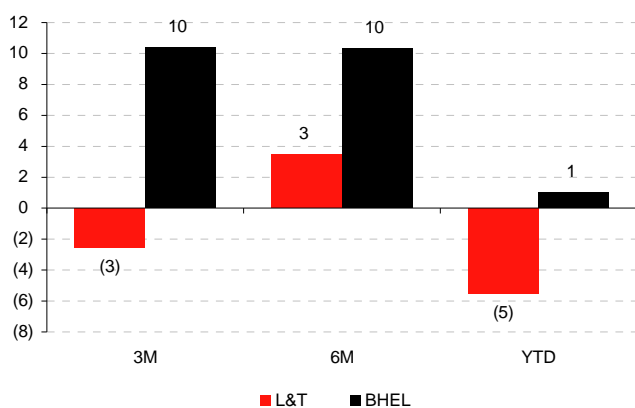
Source: Company data, Macquarie Research, March 2010

### Valuation gap between L&T and BHEL should narrow down

L&T has significantly underperformed BHEL in the past year on execution concerns. However, a revival in corporate capex and an increased focus on infrastructure by the government in its union budget in 2010 should lead to a narrowing of the valuation gap.

**Fig 8 Sharp share price underperformance of L&T vis-a-vis BHEL YTD**

**Fig 9 PER valuation gap between L&T and BHEL still exists & should narrow**



Source: Bloomberg, Macquarie Research, March 2010

Source: Bloomberg, Macquarie Research, March 2010

**Bharat Heavy Electricals (BHEL IN, Neutral, Target Price: Rs2,529.00)**

Quarterly Results					Profit & Loss						
	2Q/10A	3Q/10E	4Q/10E	1Q/11E		2009A	2010E	2011E	2012E		
<b>Revenue</b>	m	66,738	86,759	123,465	70,238	<b>Revenue</b>	m	267,268	333,689	413,164	498,088
<b>Gross Profit</b>	m	17,528	22,786	32,426	18,936	<b>Gross Profit</b>	m	60,548	87,638	111,391	132,291
Cost of Goods Sold	m	49,210	63,973	91,039	51,301	Cost of Goods Sold	m	206,720	246,051	301,773	365,797
<b>EBITDA</b>	m	13,305	17,297	24,615	14,271	<b>EBITDA</b>	m	42,191	66,527	83,946	97,985
Depreciation	m	865	1,124	1,599	984	Depreciation	m	3,343	4,323	5,785	7,905
Amortisation of Goodwill	m	0	0	0	0	Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0	Other Amortisation	m	0	0	0	0
<b>EBIT</b>	m	12,441	16,173	23,015	13,287	<b>EBIT</b>	m	38,848	62,204	78,161	90,080
Net Interest Income	m	1,367	1,777	2,529	1,379	Net Interest Income	m	7,388	6,835	8,112	9,210
Associates	m	0	0	0	0	Associates	m	0	0	0	0
Exceptionals	m	0	0	0	0	Exceptionals	m	0	0	0	0
Forex Gains / Losses	m	0	0	0	0	Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	492	639	910	518	Other Pre-Tax Income	m	2,253	2,458	3,050	3,677
<b>Pre-Tax Profit</b>	m	14,300	18,589	26,454	15,185	<b>Pre-Tax Profit</b>	m	48,489	71,498	89,322	102,966
Tax Expense	m	-4,848	-6,302	-8,968	-5,041	Tax Expense	m	-17,106	-24,238	-29,655	-34,185
<b>Net Profit</b>	m	9,452	12,288	17,486	10,143	<b>Net Profit</b>	m	31,382	47,260	59,667	68,781
Minority Interests	m	0	0	0	0	Minority Interests	m	0	0	0	0
<b>Reported Earnings</b>	m	9,452	12,288	17,486	10,143	<b>Reported Earnings</b>	m	31,382	47,260	59,667	68,781
<b>Adjusted Earnings</b>	m	9,452	12,288	17,486	10,143	<b>Adjusted Earnings</b>	m	31,382	47,260	59,667	68,781
EPS (rep)		19.31	25.10	35.72	20.72	EPS (rep)		64.11	96.54	121.89	140.51
EPS (adj)		19.31	25.10	35.72	20.72	EPS (adj)		64.11	96.54	121.89	140.51
EPS Growth yoy (adj)	%	50.6	50.6	50.6	26.3	EPS Growth (adj)	%	9.8	50.6	26.3	15.3
						PE (rep)	x	38.2	25.4	20.1	17.4
						PE (adj)	x	38.2	25.4	20.1	17.4
EBITDA Margin	%	19.9	19.9	19.9	20.3	Total DPS		15.55	23.41	29.56	34.07
EBIT Margin	%	18.6	18.6	18.6	18.9	Total Div Yield	%	0.6	1.0	1.2	1.4
Earnings Split	%	20.0	26.0	37.0	17.0	Weighted Average Shares	m	490	490	490	490
Revenue Growth	%	24.9	24.9	24.9	23.8	Period End Shares	m	490	490	490	490
EBIT Growth	%	60.1	60.1	60.1	25.7						

Profit and Loss Ratios					Cashflow Analysis						
	2009A	2010E	2011E	2012E		2009A	2010E	2011E	2012E		
Revenue Growth	%	35.5	24.9	23.8	20.6	<b>EBITDA</b>	m	42,191	66,527	83,946	97,985
EBITDA Growth	%	12.8	57.7	26.2	16.7	Tax Paid	m	-17,106	-24,238	-29,655	-34,185
EBIT Growth	%	12.8	60.1	25.7	15.2	Chgs in Working Cap	m	7,420	-10,631	-18,981	36,979
Gross Profit Margin	%	22.7	26.3	27.0	26.6	Net Interest Paid	m	7,388	6,835	8,112	9,210
EBITDA Margin	%	15.8	19.9	20.3	19.7	Other	m	0	0	0	0
EBIT Margin	%	14.5	18.6	18.9	18.1	<b>Operating Cashflow</b>	m	39,892	38,493	43,422	109,989
Net Profit Margin	%	11.7	14.2	14.4	13.8	Acquisitions	m	-441	0	0	0
Payout Ratio	%	24.3	24.3	24.3	24.3	Capex	m	-12,983	-20,412	-20,000	-20,000
EV/EBITDA	x	25.8	16.4	13.0	11.1	Asset Sales	m	0	0	0	0
EV/EBIT	x	28.0	17.5	13.9	12.1	Other	m	2,253	2,458	3,050	3,677
<b>Balance Sheet Ratios</b>					<b>Investing Cashflow</b>	m	-11,170	-17,954	-16,950	-16,323	
ROE	%	26.5	32.1	31.8	29.1	Dividend (Ordinary)	m	-7,610	-11,461	-14,470	-16,680
ROA	%	10.8	13.6	14.1	13.5	Equity Raised	m	0	0	0	0
ROIC	%	101.2	148.2	95.9	68.7	Debt Movements	m	542	0	0	0
Net Debt/Equity	%	-78.6	-67.0	-58.3	-54.1	Other	m	-2,126	0	0	0
Interest Cover	x	nmf	nmf	nmf	nmf	<b>Financing Cashflow</b>	m	-9,194	-11,461	-14,470	-16,680
Price/Book	x	9.3	7.3	5.7	4.6	<b>Net Chg in Cash/Debt</b>	m	19,528	9,078	12,002	76,986
Book Value per Share		264.3	337.4	429.8	536.2	<b>Free Cashflow</b>	m	26,910	18,081	23,422	89,989

Balance Sheet					
	2009A	2010E	2011E	2012E	
Cash	m	103,147	112,225	124,227	143,599
Receivables	m	159,755	199,776	247,844	298,787
Inventories	m	78,370	98,003	121,583	146,574
Investments	m	523	523	523	523
Fixed Assets	m	26,274	42,363	56,578	68,672
Intangibles	m	0	0	0	0
Other Assets	m	46,142	49,835	57,398	65,413
<b>Total Assets</b>	m	414,211	502,725	608,153	723,569
Payables	m	58,529	71,844	89,130	107,451
Short Term Debt	m	0	0	0	0
Long Term Debt	m	1,494	1,494	1,494	1,494
Provisions	m	49,756	62,220	77,191	93,057
Other Liabilities	m	175,045	201,980	229,953	259,081
<b>Total Liabilities</b>	m	284,823	337,538	397,768	461,083
Shareholders' Funds	m	129,388	165,187	210,384	262,486
Minority Interests	m	0	0	0	0
Other	m	0	0	0	0
<b>Total S/H Equity</b>	m	129,388	165,187	210,384	262,486
<b>Total Liab &amp; S/H Funds</b>	m	414,211	502,725	608,153	723,569

All figures in INR unless noted.

Source: Company data, Macquarie Research, March 2010

## Important disclosures:

**Recommendation definitions****Macquarie - Australia/New Zealand**

Outperform – return >5% in excess of benchmark return  
Neutral – return within 5% of benchmark return  
Underperform – return >5% below benchmark return

**Macquarie – Asia/Europe**

Outperform – expected return >+10%  
Neutral – expected return from -10% to +10%  
Underperform – expected return <-10%

**Macquarie First South - South Africa**

Outperform – expected return >+10%  
Neutral – expected return from -10% to +10%  
Underperform – expected return <-10%

**Macquarie - Canada**

Outperform – return >5% in excess of benchmark return  
Neutral – return within 5% of benchmark return  
Underperform – return >5% below benchmark return

**Macquarie - USA**

Outperform (Buy) – return >5% in excess of Russell 3000 index return  
Neutral (Hold) – return within 5% of Russell 3000 index return  
Underperform (Sell) – return >5% below Russell 3000 index return

**Recommendations** – 12 months

**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

**Volatility index definition\***

This is calculated from the volatility of historical price movements.

**Very high-highest risk** – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

**High** – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

**Medium** – stock should be expected to move up or down at least 30–40% in a year.

**Low-medium** – stock should be expected to move up or down at least 25–30% in a year.

**Low** – stock should be expected to move up or down at least 15–25% in a year.

\* Applicable to Australian/NZ/Canada stocks only

**Financial definitions**

All "Adjusted" data items have had the following adjustments made:

Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense  
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

**EPS** = adjusted net profit / epowa\*

**ROA** = adjusted ebit / average total assets

**ROA Banks/Insurance** = adjusted net profit / average total assets

**ROE** = adjusted net profit / average shareholders funds

**Gross cashflow** = adjusted net profit + depreciation

\*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

**Recommendation proportions – For quarter ending 31 December 2009**

	AU/NZ	Asia	RSA	USA	CA	EUR	
Outperform	47.94%	60.52%	37.50%	43.42%	65.26%	41.60%	(for US coverage by MCUSA, 3.76% of stocks covered are investment banking clients)
Neutral	35.58%	18.70%	53.13%	49.06%	29.11%	36.80%	(for US coverage by MCUSA, 4.51% of stocks covered are investment banking clients)
Underperform	16.48%	20.79%	9.38%	7.52%	5.63%	21.60%	(for US coverage by MCUSA, 0.00% of stocks covered are investment banking clients)

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Important disclosure information regarding the subject companies covered in this report is available at [www.macquarie.com/research/disclosures](http://www.macquarie.com/research/disclosures).

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