Macquarie Research
Equities

MACQUARIE

INDIA

Bharat Heavy Electricals

7 April 2008

BHEL IN **Outperform**

Stock price as of 04 Apr 08	Rs	1,634.10
12-month target	Rs	2,227.00
Upside/downside	%	+36.3
Valuation	Rs	2,227.00
- PER		

GICS sector		capital goods
Market cap	Rs m	799,925
30-day avg turnover	US$m	88.4
Market cap	US$m	20,028
Number shares on issue	m	489.5

Investment fundamentals

Year end 31 Mar		2007A	2008E	2009E	2010E
Total revenue	bn	176.1	202.7	265.0	351.4
EBITDA	bn	36.2	41.0	57.2	85.6
EBITDA growth	%	40.2	13.0	39.7	49.7
Recurring profit	bn	37.4	44.0	61.6	91.8
Reported profit	bn	24.1	28.2	40.7	60.6
Adjusted profit	bn	24.1	28.2	40.7	60.6
EPS rep	Rs	49.33	57.53	83.06	123.73
EPS rep growth	%	43.8	16.6	44.4	49.0
EPS adj	Rs	49.33	57.53	83.06	123.73
EPS adj growth	%	43.8	16.6	44.4	49.0
PE rep	x	33.1	28.4	19.7	13.2
PE adj	x	33.1	28.4	19.7	13.2
Total DPS	Rs	14.15	13.95	20.14	30.01
Total div yield	%	0.9	0.9	1.2	1.8
ROA	%	16.2	14.8	17.0	20.0
ROE	%	30.0	28.6	32.6	37.2
EV/EBITDA	x	20.1	17.7	12.7	8.5
Net debt/equity	%	-65.1	-66.9	-65.5	-63.2
Price/book	x	9.1	7.3	5.7	4.3

BHEL IN rel SENSEX performance, & rec history

Source: Datastream, Macquarie Research, April 2008 (all figures in INR unless noted)

Analysts

Inderjeetsingh Bhatia
91 22 6653 3166 inderjeet.bhatia@macquarie.com
Somesh Agarwal
91 22 6653 3064 somesh.agarwal@macquarie.com

Execution worries look overdone

Event

- Bharat Heavy Electricals' (BHEL) provisional numbers for FY3/08 disappointed on account of a delay in the execution of projects and one-time charges. We are cutting our target price to Rs2,227 from Rs2,751. We believe the price correction of 22% over the last week has overcompensated for the earnings cut. We reaffirm our Outperform recommendation on the stock.

Impact

- **Extreme pessimism on execution unwarranted:** In a complete turnaround, concerns on BHEL's order inflow/backlog have taken a back seat, and we believe execution ramp-up is the key concern for the stock. We expect execution to improve in FY3/10 for the following reasons.
  - ⇒ **Capacity expansion to boost growth:** We believe the company will begin to benefit from the capacity expansion to 10GW that was achieved in Dec-07 and the further expansion to 15GW expected by Dec-09.
  - ⇒ **Order book matures to deliver growth:** A bulk of the order book comprises orders received in FY3/08, which typically do not contribute to revenues for three quarters, as they are in initial stages of design and engineering.
- **Order backlog/inflow remains robust:** The company has reported FY3/08 order inflow and order backlog growth of 41% and 56%, respectively. Management has guided to Rs400–500bn of further order inflow for FY3/09. A further boost to the order book could come from negotiated orders for super-critical equipment that we believe could be placed by the government.
- **Stock building in the worst-case scenario for execution and growth:** We expect the execution rate will decline in FY3/09 to its lowest level in many years and then see a rebound in FY3/10. Even at a lower execution rate, we believe the company is set to deliver 47% earnings growth over FY3/08–10, and with visibility for growth up to FY3/12 based on the projected order backlog to end-FY3/10. The current price builds in 0% growth in order inflow beyond FY3/09.

Earnings revision

- We are lowering our FY3/09–10 earnings estimates by 8–10%, based on lower top-line expectations.

Price catalyst

- 12-month price target: Rs2,227.00 based on a PER methodology.
- Catalyst: Clarity emerging on execution would be the most critical trigger

Action and recommendation

- We have lowered our target price to Rs2,227, based on 18x FY3/10E earnings, to factor in the earnings revision and a lower PER. The multiple is supported by our DCF analysis and strong earnings growth beyond FY3/10. We reaffirm our Outperform rating on the stock.

FY3/08 numbers disappoint due to lower top line

- **FY3/08 top line below expectations, raising concerns on execution:** BHEL reported provisional FY3/08 revenue numbers of Rs216bn, 9% below our expectations. Part of the disappointment was on account of a delay in the commissioning of several power projects to Q1 FY3/09 from Q4 FY3/08. The bigger issue, in our view, remains the short supplies of spares, such as forgings, and the balance of plant equipment. The shortage of spares should continue to pressure growth in FY3/09/10 despite a huge order backlog.
- **Bottom-line disappointment partly explained by provisions:** Provisional net profit for FY3/08 came in at Rs28.2bn, 15% below our expectation. Apart from a shortfall in the top line, two provisions added to the shortfall (when these provisions are removed, FY3/08 earnings were only 7% below our expectation).
  - ⇒ **Provisioning of Rs2bn for wage revision:** Based on the pay commission report, the company took a provision in 4Q FY3/08 of Rs2bn for wage escalation. This new provisioning takes into account a possible 40% salary hike vs company's initial 25% hike assumption. Following this provision, we do not believe the company will be required to increase staff costs significantly in FY3/09.
  - ⇒ **Write-back of provisions pushed to FY3/09:** BHEL has provided for projects under execution. However, on account of the delayed commissioning of several of these projects, which are recurring in nature, Rs2bn of the provision has been delayed to FY3/09.

We reduce earning estimates because of the execution delays

- **Guidance for FY3/09 revenue growth is in the range of 16–25%:** BHEL has guided for FY3/09 revenues in the range of Rs250–Rs270bn. Historically, the company has beaten the top end of the guidance; even in FY3/08 the company delivered revenue 3% ahead of the top end of guidance.
- **Cutting FY3/09 and FY3/10 revenue numbers by 8%:** We are lowering our FY3/09 and FY3/10 top-line estimates by 7% and 8%, respectively. Our numbers are coming down despite the fact that the order backlog of Rs855bn for end-FY3/08 is higher than our estimate.
- **Earnings cut by 8–10%:** We are lowering our FY3/09 and FY3/10 earnings estimates by 8–10% to factor in the lower top-line growth by 8%.

Fig 1 Earnings lowered by 8–10%

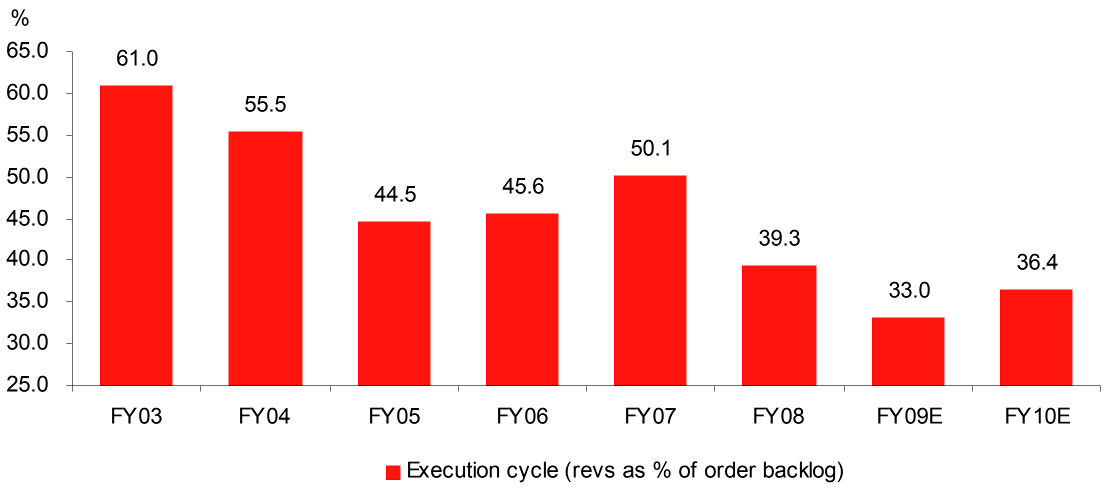
	FY3/09E		FY3/10E		Revision	
	old	new	old	new	09E	10E
Net Revenues	281,757	259,852	374,282	344,489	-8%	-8%
EBITDA	62,123	57,196	94,126	85,601	-8%	-9%
Net Income	44,246	40,661	67,342	60,569	-8%	-10%
EPS	90.4	83.1	137.6	123.7	-8%	-10%

Source: Macquarie Research, April 2008

Revised numbers build in a pessimistic execution rate

- **Execution slips:** The execution cycle, defined as sales as a percent of the order backlog at the beginning of the year, has come off significantly, falling from 61% in FY3/03 to an all-time low of 39% in FY3/08. Our projected top-line number for FY3/09 builds in a further decline in the execution rate to 33% (which we see improving to 36% in FY3/10).
- **Execution to improve beyond FY3/10:** We believe the execution rate will fall in FY3/09 to its lowest rate in many years, although we expect it to improve in FY3/10. Our key arguments are as follows.
  - ⇒ Revenue growth in FY3/09 should not match the FY3/08 order backlog, as the bulk of the orders have been received through FY3/08. Typically, new order revenues will not be booked for the first two to three quarters as the project undergoes the initial design and engineering phase. Moreover, we note that revenue booked in the initial phase is of low margin.
  - ⇒ In FY3/10, we expect the initial mobilisation period for the current order backlog will be completed and significant revenues from the projects will be booked, leading to a rebound in the execution rate.

Fig 2 We expect the execution rate to slip further in FY3/09 before rebounding in FY3/10

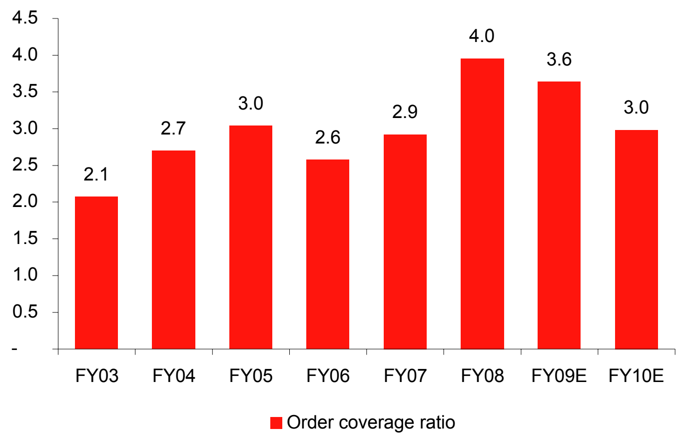


Source: Macquarie Research, April 2008

Valuation: Reducing 12-month price target to Rs2,227

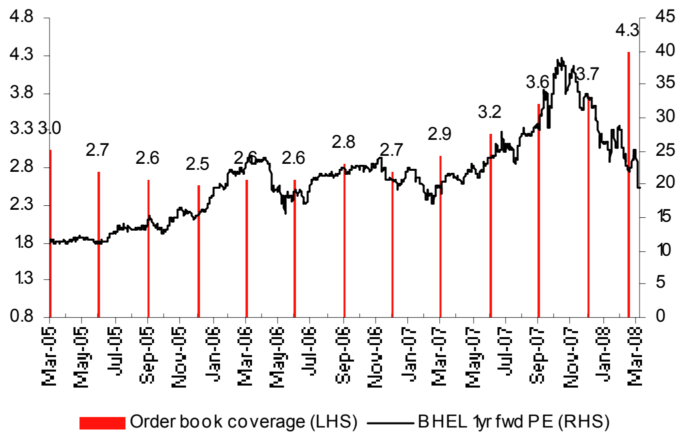
- We are lowering our 12-month target price to Rs2,227, based on 18x FY3/10E earnings, from Rs2,751, or a 19% cut. We have also lowered our target one-year forward multiple by 10% to factor in the risk of execution ramp-up.
- **Earnings visibility beyond FY3/10 and balance sheet strength support the target multiple:** We project an order coverage ratio (order backlog/trailing 12-months revenues) for FY3/10 of 3.0x despite our assumption of a decline in order inflow in FY3/09 and meagre 2% growth in FY3/10. We expect order backlog coverage of 3.0x in FY3/10 provides visibility for top-line growth of around 25% for another two to three years. Moreover, we believe the strength of the company's balance sheet is underappreciated. BHEL has net cash of Rs150ps on its books, with net debt to equity of -0.7. The company generates free cashflow and ROE of 30%.

Fig 3 Growth visibility sustained beyond FY3/10



Source: Macquarie Research, April 2008

Fig 4 1-yr forward P/E multiple below 20x



Source: Macquarie Research, April 2008

- **Multiple justified by DCF:** Our target price multiple is also based on the implied multiple from our DCF analysis for BHEL. Our implied value for DCF is Rs2,231. Our key assumptions for the DCF follow.
  - ⇒ **Order inflow growth to remain muted in FY3/09 and FY3/10:** We have built in a decline in order inflow of 9% in FY3/09 and growth of 2% in FY3/10. We are assuming a pickup in order inflow in FY3/11 on the back of the government's Twelfth Five-Year Plan (FY3/12–17).
  - ⇒ **Execution rates to improve gradually:** We are assuming an execution rate in the terminal year (FY3/14) of 44%. We expect execution rates will improve as order backlog coverage declines over interim period (FY3/10-14) to a more manageable 2.5 and further capacity expansion taken up by the company beyond FY3/10.
  - ⇒ **Terminal margins of 18%:** We expect margins to settle at 18%, much below peak margins achieved in FY3/10. Assuming a terminal margin of 16%, the DCF target would fall by 5%.
  - ⇒ **Terminal year of FY3/14 and growth rate of 5%:** We have assumed the top line will decelerate significantly from 33% in FY3/10 to 5% in FY3/14. This assumption builds in a market-share loss to competition. Moreover, 5% terminal growth builds in a further loss of market share, as the government projects power demand growth of around 7% beyond FY3/14.
  - ⇒ **ROE to decline to 17% in terminal year:** Our assumptions build ROE to decline from peak of 33% in FY3/10 to 17% in terminal year.

Fig 5 BHEL – Discounted cashflow

Rs m	FY07	FY08E	FY09E	FY10E	FY11E	FY12E	FY13E	FY14E	Perpetuity
Order Inflow	356,430	501,274	455,324	463,710	535,924	588,113	639,425	678,896	
Growth	88%	41%	-9%	2%	16%	10%	9%	6%	
Order Book	550,000	855,000	1,027,838	1,117,053	1,220,029	1,293,862	1,357,844	1,432,525	
Order Book Coverage Rate	3.2	4.3	4.0	3.2	3.5	3.0	2.6	2.5	
Revenues	172,375	198,693	259,852	344,489	432,948	514,280	575,443	604,215	
Growth	29%	15%	31%	33%	26%	19%	12%	5%	
Execution Rate	46%	36%	30%	34%	39%	42%	44%	44%	
EBITDA	36,248	40,953	57,196	85,601	98,923	107,220	108,463	102,717	
EBITDA Margin	21.0%	20.6%	22.0%	24.8%	22.8%	20.8%	18.8%	17.0%	
NOPAT	26,872	31,254	44,118	64,555	73,346	84,265	89,929	90,321	
FCF-Equity	**18,202**	**23,955**	**28,554**	**40,365**	**68,214**	**63,510**	**79,507**	**112,676**	**1,671,125**
Sum of PV of FCF (Equity Value)			1,074,304						
Shares			490						
Equity Value per Share (Ps) - bop			**2,195**						
Implied FY10 multiple			17.7						
Growth Rate in Perpetuity			5.0%						
Discount Rate (Cost of Equity)			13.0%						

Source: Macquarie Research, April 2008

- **Price builds in worst-case scenario for growth**: The stock has corrected 22% in the last week on concerns on execution. We believe the price correction has more than compensated for the earnings downgrades. The current price builds in 0% growth in order inflow beyond FY3/10 until the terminal year and a terminal growth rate of 0%. Despite no order inflow growth, BHEL should deliver growth in the interim period, as execution improves on back of increasing capacity. The company has stated that it wants to increase capacity to 20GW by FY3/12.

Bharat Heavy Electricals (BHEL IN, Outperform, Target price: Rs2,227.00)

Quarterly Results		3Q/08A	4Q/08E	1Q/09E	2Q/09E
Revenue	**m**	**50,667**	**50,667**	**66,262**	**66,262**
Gross Profit	**m**	**14,113**	**14,113**	**18,755**	**18,755**
Cost of Goods Sold	m	36,554	36,554	47,508	47,508
EBITDA	**m**	**10,238**	**10,238**	**14,299**	**14,299**
Depreciation	m	774	774	864	864
Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0
EBIT	**m**	**9,465**	**9,465**	**13,435**	**13,435**
Net Interest Income	m	1,126	1,126	1,317	1,317
Associates	m	0	0	0	0
Exceptionals	m	0	0	0	0
Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	397	397	650	650
Pre-Tax Profit	**m**	**10,988**	**10,988**	**15,402**	**15,402**
Tax Expense	m	-3,948	-3,948	-5,237	-5,237
Net Profit	**m**	**7,040**	**7,040**	**10,165**	**10,165**
Minority Interests	m	0	0	0	0
Reported Earnings	**m**	**7,040**	**7,040**	**10,165**	**10,165**
Adjusted Earnings	**m**	**7,040**	**7,040**	**10,165**	**10,165**
EPS (rep)		14.38	14.38	20.77	20.77
EPS (adj)		14.38	14.38	20.77	20.77
EPS Growth yoy (adj)	%	16.6	16.6	44.4	44.4
EBITDA Margin	%	20.2	20.2	21.6	21.6
EBIT Margin	%	18.7	18.7	20.3	20.3
Earnings Split	%	25.0	25.0	25.0	25.0
Revenue Growth	%	15.1	15.1	30.8	30.8
EBIT Growth	%	12.9	12.9	41.9	41.9

Profit & Loss		2007A	2008E	2009E	2010E
Revenue	**m**	**176,143**	**202,667**	**265,049**	**351,379**
Gross Profit	**m**	**51,012**	**56,451**	**75,019**	**106,097**
Cost of Goods Sold	m	125,131	146,217	190,030	245,282
EBITDA	**m**	**36,248**	**40,953**	**57,196**	**85,601**
Depreciation	m	2,730	3,094	3,457	3,986
Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0
EBIT	**m**	**33,518**	**37,858**	**53,740**	**81,615**
Net Interest Income	m	2,748	4,502	5,269	6,711
Associates	m	0	0	0	0
Exceptionals	m	0	0	0	0
Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	1,094	1,590	2,599	3,445
Pre-Tax Profit	**m**	**37,361**	**43,950**	**61,607**	**91,771**
Tax Expense	m	-13,214	-15,790	-20,947	-31,202
Net Profit	**m**	**24,147**	**28,160**	**40,661**	**60,569**
Minority Interests	m	0	0	0	0
Reported Earnings	**m**	**24,147**	**28,160**	**40,661**	**60,569**
Adjusted Earnings	**m**	**24,147**	**28,160**	**40,661**	**60,569**
EPS (rep)		49.33	57.53	83.06	123.73
EPS (adj)		49.33	57.53	83.06	123.73
EPS Growth (adj)	%	43.8	16.6	44.4	49.0
PE (rep)	x	33.1	28.4	19.7	13.2
PE (adj)	x	33.1	28.4	19.7	13.2
Total DPS		14.15	13.95	20.14	30.01
Total Div Yield	%	0.9	0.9	1.2	1.8
Weighted Average Shares	m	490	490	490	490
Period End Shares	m	490	490	490	490

Profit and Loss Ratios		2007A	2008E	2009E	2010E
Revenue Growth	%	29.0	15.1	30.8	32.6
EBITDA Growth	%	40.2	13.0	39.7	49.7
EBIT Growth	%	43.2	12.9	41.9	51.9
Gross Profit Margin	%	29.0	27.9	28.3	30.2
EBITDA Margin	%	20.6	20.2	21.6	24.4
EBIT Margin	%	19.0	18.7	20.3	23.2
Net Profit Margin	%	13.7	13.9	15.3	17.2
Payout Ratio	%	28.7	24.3	24.3	24.3
EV/EBITDA	x	20.1	17.7	12.7	8.5
EV/EBIT	x	21.7	19.2	13.5	8.9
Balance Sheet Ratios					
ROE	%	30.0	28.6	32.6	37.2
ROA	%	16.2	14.8	17.0	20.0
ROIC	%	58.1	79.0	98.0	111.5
Net Debt/Equity	%	-65.1	-66.9	-65.5	-63.2
Interest Cover	x	nmf	nmf	nmf	nmf
Price/Book	x	9.1	7.3	5.7	4.3
Book Value per Share		179.5	223.1	286.0	379.7

Cashflow Analysis		2007A	2008E	2009E	2010E
EBITDA	**m**	**36,248**	**40,953**	**57,196**	**85,601**
Tax Paid	m	-13,214	-15,790	-20,947	-31,202
Chgs in Working Cap	m	7,814	-799	-6,563	-15,190
Net Interest Paid	m	2,748	4,502	5,269	6,711
Other	m	-82	0	0	0
Operating Cashflow	**m**	**33,514**	**28,865**	**34,956**	**45,920**
Acquisitions	m	0	0	0	0
Capex	m	-3,887	-7,793	-9,000	-9,000
Asset Sales	m	0	0	0	0
Other	m	1,094	1,590	2,599	3,445
Investing Cashflow	**m**	**-2,793**	**-6,203**	**-6,401**	**-5,555**
Dividend (Ordinary)	m	-6,925	-6,829	-9,861	-14,689
Equity Raised	m	0	0	0	0
Debt Movements	m	-4,689	1,000	0	0
Other	m	-2,353	-0	0	0
Financing Cashflow	**m**	**-13,967**	**-5,829**	**-9,861**	**-14,689**
Net Chg in Cash/Debt	**m**	**16,749**	**16,833**	**18,694**	**25,676**

Balance Sheet		2007A	2008E	2009E	2010E
Cash	m	58,089	74,922	93,616	119,292
Receivables	m	96,958	111,762	146,162	193,769
Inventories	m	42,177	48,616	63,580	84,289
Investments	m	83	83	83	83
Fixed Assets	m	12,913	17,611	23,154	28,169
Intangibles	m	0	0	0	0
Other Assets	m	22,757	24,804	29,560	36,143
Total Assets	**m**	**232,977**	**277,798**	**356,157**	**461,745**
Payables	m	35,390	57,880	105,438	165,146
Short Term Debt	m	0	0	0	0
Long Term Debt	m	893	1,893	1,893	1,893
Provisions	m	25,222	25,222	25,222	25,222
Other Liabilities	m	83,589	83,589	83,589	83,589
Total Liabilities	**m**	**145,094**	**168,585**	**216,143**	**275,851**
Shareholders' Funds	m	87,883	109,214	140,014	185,894
Minority Interests	m	0	0	0	0
Other	m	0	0	0	0
Total S/H Equity	**m**	**87,883**	**109,214**	**140,014**	**185,894**
Total Liab & S/H Funds	**m**	**232,977**	**277,798**	**356,157**	**461,745**

All figures in INR unless noted.
Source: Macquarie Research, April 2008

Important disclosures:

Recommendation definitions

Macquarie - Australia/New Zealand
Outperform – return >5% in excess of benchmark return (>2.5% in excess for listed property trusts)
Neutral – return within 5% of benchmark return (within 2.5% for listed property trusts)
Underperform – return >5% below benchmark return (>2.5% below for listed property trusts)

Macquarie - Asia
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 benchmark return
Neutral (Hold) – return within 5% of benchmark return
Underperform (Sell)– return >5% below benchmark return

Recommendations – 12 months

Note: Quant recommendations may differ from Fundamental Analyst recommendations

Volatility index definition*

This is calculated from the volatility of historic 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 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 / efpowa*
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 March 2008

	AU/NZ	Asia	RSA	USA	CA
Outperform	38.95%	70.56%	64.52%	50.00%	69.72%
Neutral	47.37%	16.32%	27.42%	39.47%	26.06%
Underperform	13.68%	13.12%	8.06%	10.53%	4.22%

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Tel: (649) 377 6433	Tel: (662) 694 7999	Tel: (1 403) 218 6650	Tel: (852) 2823 3588	Tel: (62 21) 515 1818	Tel: (27 11) 343 2258	Tel: (60 3) 2059 8833
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