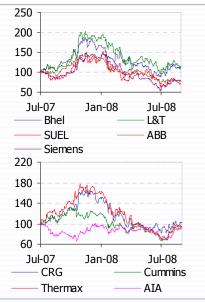


Relative Performance



Engineering Sector

How far are we from cyclical trough prices? Evaluating stress case values!

Source: ENAM Research, Bloomberg

Sector summary

Company	PIRE	Mikt Cap_	LPS (RS.)		F/ L (A)	IGL FIRE	(70)	VEI IO	
(%)	(Rs.)	(USD mn)	FY09E	FY10E	FY09E	(Rs.)	upside	to Sec	
BHEL	1,732	19,363	69	80	25	1,295	(25)	UP	
L&T	2,616	17,470	105	130	25	2,605	(0)	N	
Suzlon	225	7,715	9	16	24	-	-	UR	
Siemens	547	4,215	23	27	23	540	(1)	N	
ABB	874	4,147	30	39	29	-	-	UR	
Crompton	256	2,144	14	19	18	300	17	OP	
BEL	971	1,774	110	130	9	1,300	34	OP	
Cummins	315	1,426	19	23	16	340	8	OP	
Thermax	486	1,324	25	31	19	460	(5)	N	

Stress Case Valuation

P/E	P/B	EV/Backlog	Average	52w
			(Rs/share)	Low
1,242	801	1,203	1,082	1,325
1,924	1,746	1,468	1,712	2,100
167	225	N.A	196	175
431	391	385	402	359
546	425	505	492	711
187	160	180	176	195
1,097	883	840	940	798
272	240	N.A	256	225
357	260	385	334	331
1,452	1,254	N.A	1,353	1,044

Source: Company, ENAM Research, Note: Prices as on Sept 5, 2008; OP=Outperformer, N= Neutral, UP= Underperformer, UR = Under Review

122

AIA Engg

1,571

674

16

1,500

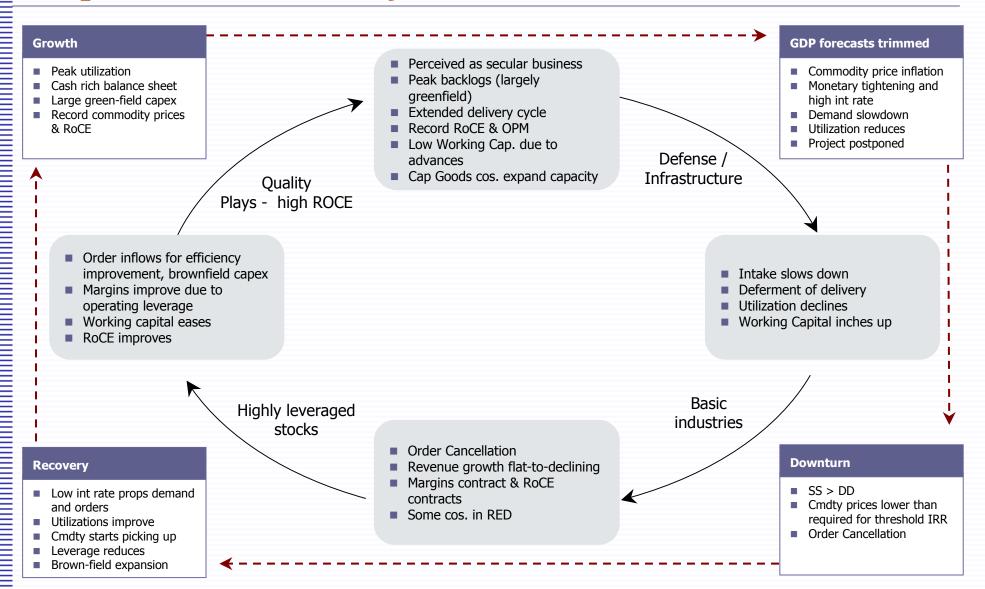


Executive Summary

- We have attempted an exercise, using a range of methodologies to arrive at high comfort zone entry points for stocks under coverage
- Engineering sector: cyclical slowdown in a secular growth phase
 - Monetary tightening & pre-electoral period may result in capex deferment and slowdown in order intake growth
 - Rising cost and challenges in execution (land acquisition, long lead time for supply of equipment, price control, etc.)
 - Current RoEs could contract, as engineering companies are in significant capex mode
 - We believe that this cycle is different and sustainable RoE's are likely to be higher than in the previous down-cycle due to low/negative leverage and strong operating cash flows of user industry as well as engineering
- ➡ While we continue to be in a growth phase, the cyclical slowdown is still not factored in the current valuations. The implied earnings growth for a 50-100% upside over next 3 years, is 30-60% p.a., which is unlikely.
- We believe P/E (based on a sustainable RoE), P/BV (based on a LT growth and cost of equity) and EV/ order backlog (based on historical mean) are most suited for valuing engineering companies
- Based on our stress value calculations:
 - Stocks far above stress value (>30%) − BHEL, L&T, ABB, Crompton and Thermax
 - Stocks above stress value (10 30%) Suzlon, Siemens, Cummins and AIA Engineering
 - Stocks near stress value (<10%) Bharat Electronics



Capital Goods: A cyclical business





Where are we in the cycle?

Uncertainty over demand growth

- Monetary tightening & rising interest rates
- GDP growth now slowing dramatically ie ~200 bps to ~8% in 2009E from 9.6% in 2007

Economics of greenfield not as attractive

- Government intervention in pricing to control inflation i.e. Oil, Cement & Metals
- Inability to pass on rising feedstock prices crude oil, iron ore, coal, etc

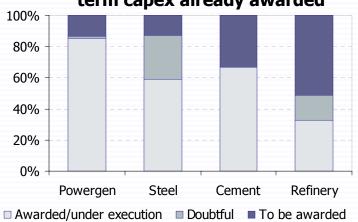
Difficulties in greenfield expansion

- Hurdles in acquiring land & feedstock linkages
- Rising delivery lead times due to tight capacity at equipment suppliers
- Rising equipment prices and interest rates

Delay in Infra capex

- Political uncertainties & regulatory hurdles
- Mounting fiscal deficit
- Developers facing cash crunch

Capex Spree: 60-80% of near term capex already awarded



Economics of a new cement plant

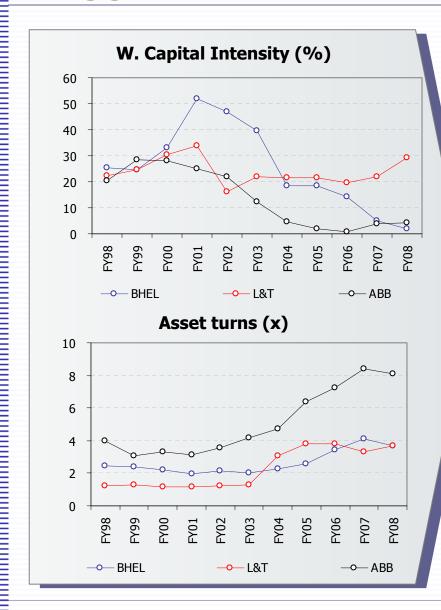
	Historical	Current
Rs/tonne	Capital cost	capital cost
Capital Cost	3,000	5,200
Net Realization	3,200	3,200
Total Cost	2,200	2,200
EBITDA	1,000	1,000
Depreciation	150	260
EBIT	850	740
Interest *	0	312
PAT	570	287
ROCE (%)	28	14
RoE (%)	38	11

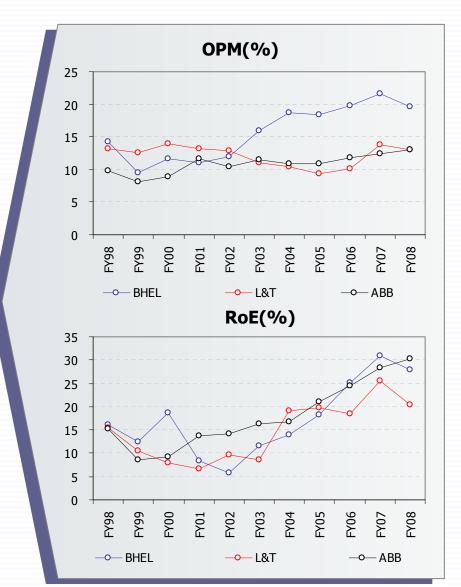
Source: ENAM Research, Industry, * 1:1 D:E & interest @ 12% p.a.

Macro signs are pointing towards slowdown in order inflows



Engg: Efficiency far better over the last cycle







Is it different vs. previous cycle?

Growth visibility of 15-25%

 Announced expansion plans of cement, metals, oil & gas are 50-100% of installed capacity

User industries (ex OMC) is less leveraged

- Leverage of large oil & gas (ex PSU Refiners), cement & metals cos. are at 0.5-1x vs. 1 - 3x in FY99
- Capex = ~4-6 yrs of operating cash flows
- However, PSU Oil Marketing Cos. (OMC) are unable to meet working capital requirement currently! (~1/3rd of planned oil capex)

Most Engg cos. are expanding capacity

- BHEL from 6,000MW to 20,000MW in FY12
- Areva & ABB from 10,000MVA to ~30,000 MVA

India now key mkt for all large MNCs

- India forms 10-20% of global operations of MNC such as ABB, Areva, Siemens, etc
- Chinese equipment mfrs are gaining ground

Execution challenges

■ Rising talent cost, while order book-to-sales at 3-4x in FY08 vs. ~1-2x in FY98

User industry is less leveraged

FY08	Net	Net	Cash	Capex
(Rs bn)	worth	Debt	Profit	FY08-12
Oil & Gas	2,386	906	707	4,118
Metals	1,267	449	348	1,187
Cement	344	119	114	433

A comparison with previous cycle

(Rs mn)	FY98	FY01	FY08
BHEL			
Sales	51,410	59,459	193,655
OPM (%)	14.3	11.0	19.6
PAT	4,156	3,044	27,386
Debt: Equity (x)	0.2x	0.3x	0.0x
Order book / Sales (x)	1.9x	1.7x	4.4x
RoCE (%)	29	13	47
L&T			
Sales	56,768	73,791	291,969
OPM (%)	12.3	13.2	12.9
PAT	4,213	2,621	21,878
Debt: Equity (x)	0.8x	1.1x	0.1x
Order book / Sales (x)	1.0x	1.3x	1.8x
RoCE (%)	14	10	19
ABB			
Sales	8,692	7,933	59,303
OPM (%)	8.3	11.8	13.1
PAT	384	535	4,917
Debt: Equity (x)	0.0x	0.0x	0.0x
Order book / Sales (x)	-	0.9x	0.8x
RoCE (%)	19	19	54

Source : Company, ENAM Research

Sustainable RoE's would be higher than previous cycle



Is the expected slowdown in the price?

	М.Сар	PE (x) 1 yr	Tgt PE (x)	Reqd EPS CAG 50%	R FY08-11E 100%	Likely/	
Company	(Rs bn)	fwd	FY11E	upside	upside	Unlikely	Comments
L&T *	682	22	16	43	57	Unlikely	Expect L&T to continue to grow @ 20% CAGR over FY08-12 with a
							sustainable RoE of 20% vs. avg of 18% over FY00-08
BHEL	848	25	18	37	51	Unlikely	Mgmt's guidance of Rs 450bn of revenues by FY12 and sustaining
							FY08 profitability, implies a 20% CAGR over FY08-12. Expect
							sustainable RoE of 22% vs. avg of 20% over FY99-08
Suzlon	340	24	18	35	49	Unlikely	Suzlon to outpace mkt growth of 25% till 2010; to grow in-line with
							mkt beyond 2010; However profitability and RoE's could improve
							from 17% to 20%+ as capex is close to completion
ABB	185	29	18	46	61	Unlikely	Mgmt.'s guidance of topline CAGR of 25% over CY08-10; we believe
							profitability to be marginally lower compared to CY07 levels.Expect
							sustainable RoE of 23% vs. avg of 21% over CY00-07
Siemens	185	23	16	48	63	Unlikely	Mgmt.'s guidance of topline CAGR of 25% over 3 years; profitability
							is likely to improve as proportion of trading & projects declines.
							Expect sustainable RoE of 23% vs. avg of 26% over CY00-07 due to
							declining contribution from high RoE I.T business
Crompton	94	18	13	41	55	Unlikely	Mgmt.'s guidance of 20-25% CAGR over next 3 years and
Greaves							improvement in EBIT margins from 12% to 14%. Expect sustainable
				0 0 0 00 0 0 00 0			RoE of 21% vs. avg of 20% over FY02-08
Bharat	75	9	10	11	22	50% L /	Mgmt.'s guidance of Rs 80bn of revenues by FY12, implies a 18%
Electronics						100% UL	CAGR over FY09-12; However we believe margins are likely to
							contract as pvt players enter defense sector. Expect sustainable RoE
							of 20% vs. avg of 30% over FY00-08
Thermax	58	19	14	29	42	Unlikely	Expect 25% topline CAGR over FY8-11; Profitability likely to decline
							as it enters highly competitive utility boilers businesses. Expect
							sustainable RoE of 21% vs. avg of 20% over FY02-08
Cummins	62	16	14	28	41	Unlikely	Mgmt's guidance of ~20% CAGR over medium term; we believe
							profitability would improve from FY08 levels. Expect sustainable RoE
0.70	20	1.0	4.5	27	F0	l balilan!	of 23% vs. avg of 20% over FY00-08
AIA	30	16	15	37	50	Unlikely	Mgmt's guidance of Rs 15bn of revenues by FY11 and sustainable
Engineering							NPM of 16% implies a 22% CAGR over FY08-11. Expect sustainable
							RoE of 22% vs. avg of 34% over FY04-08



Finding cyclical trough prices: Methodology

P/E and sustainable RoE

- Historically, engineering stocks have traded in a 1yr fwd PER band of 0.6-1x RoE given the strong growth and free cash generation in the past four years
- Valued engineering companies at FY09E PE of 0.5 0.9x LT sustainable RoE based on resilience of their business models

P/B and cost of Equity

- P/B is a stable metric as it rewards companies that use capital effectively
- Engineering being asset light business generates high RoE in an up-cycle. Hence, we have considered LT sustainable growth, cost of equity and sustainable RoE and valued companies at 2-4x FY09E book
 - Target P/B = (ROE-LT growth) / (Cost of Equity LT growth)

EV/Backlog

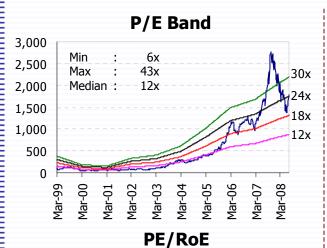
- Captures visibility for near-to-medium term revenue growth
- Valued engineering companies at 0.5 1.5x FY08 backlog depending on the average age of execution and proportion of variable contracts

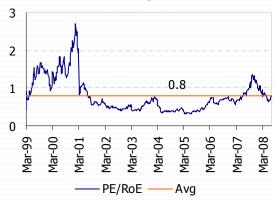


CMP : Rs 1,732 **Target Price** : Rs. 1,295

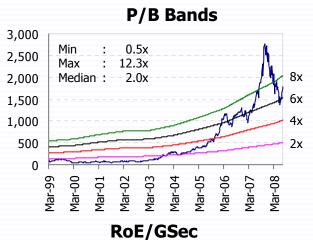
52-wk Low : 1,325

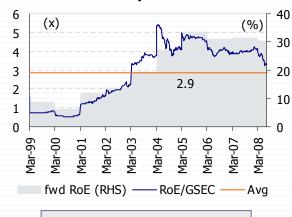




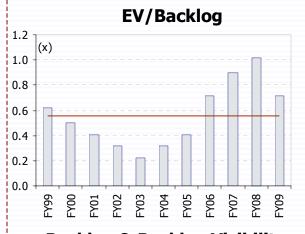


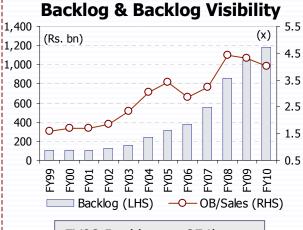
Sustainable RoE = 22%
Target PE = 18X
Target = 1,242





Average: Rs 1,082





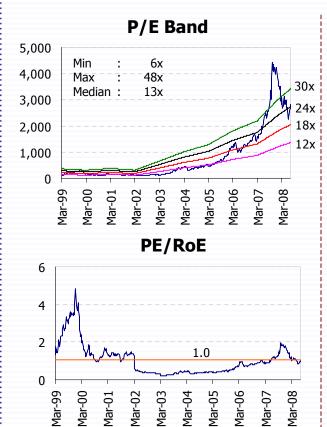
FY08 Backlog = 854bnTarget EV/OB = 0.6xTarget = 1,203

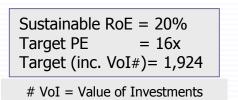
L&T

CMP: Rs 2,616 Target Price: Rs 2,605

52-wk Low: Rs 2,100

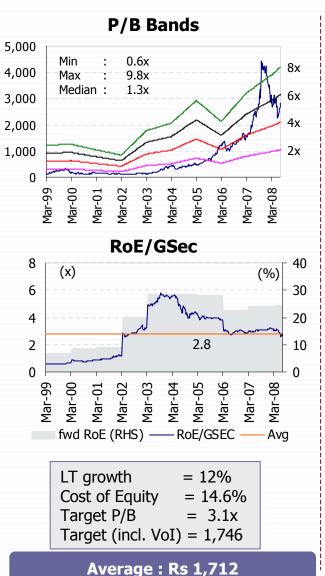


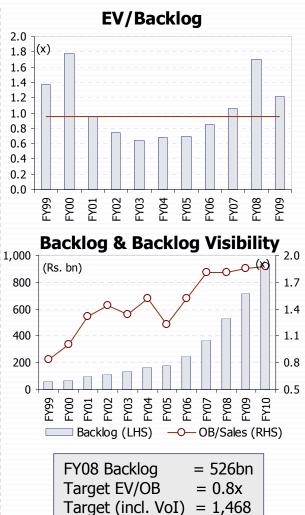




Rs 248

—— PE/RoE —— Avg



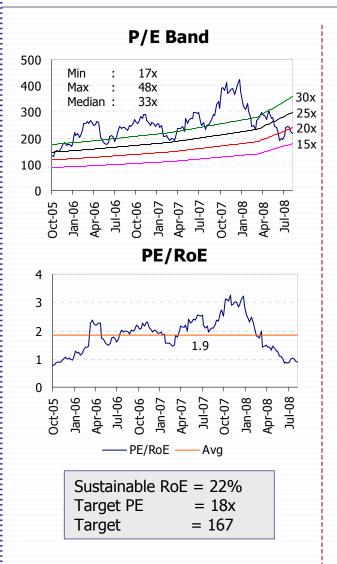


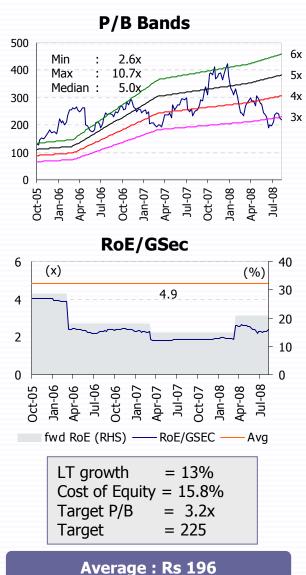
Suzlon

CMP : Rs 225 **Target Price: N.A.**

52-wk Low: Rs 175







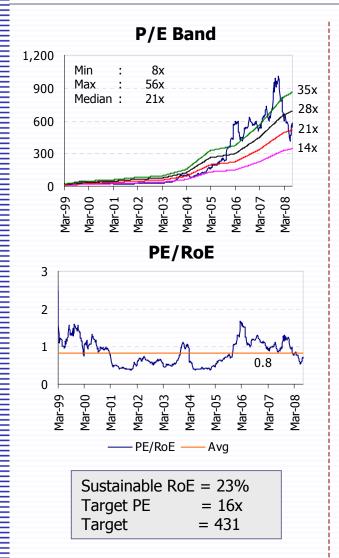
Int. Peer Comparison*

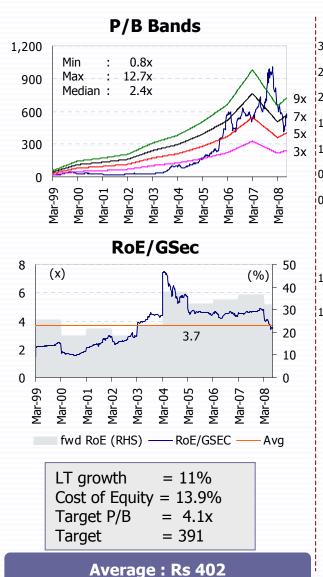
	Nordex	Gamesa	Vestas	Suzlon
M. Cap (\$ bn)	2.2	10.3	21.5	7.7
CAGR (%)				
Sales	51	18	26	34
PAT	25	31	54	45
RoE (%)				
CY08E	18	21	27	15
CY09E	20	21	28	21
PER (x)				
CY08E	31	26	32	24
CY09E	21	20	23	14
EV/EBITDA (x)			
CY08E	15	13	17	18
CY09E	10	11	13	12

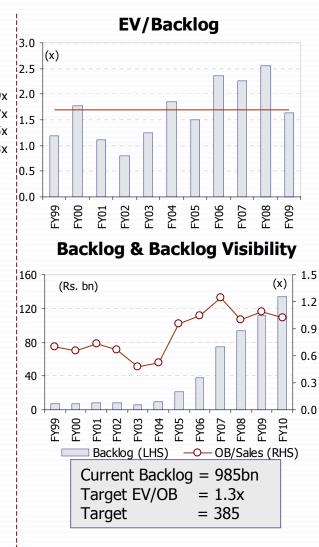
Siemens

CMP : Rs 547 Target Price : Rs 540 52-wk Low : Rs 359





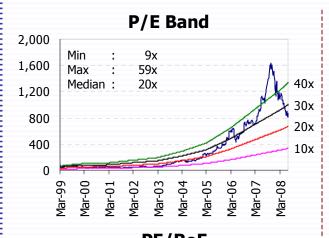


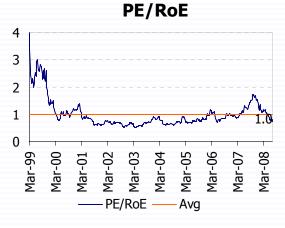


ABB

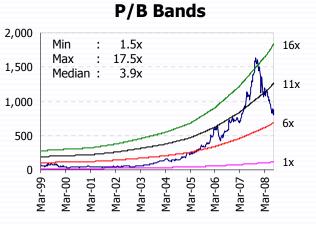
CMP : Rs 874 Target Price : N.A. 52-wk Low : Rs 711

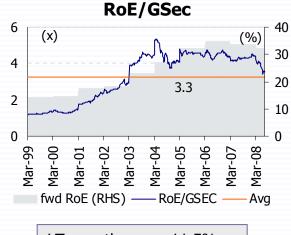




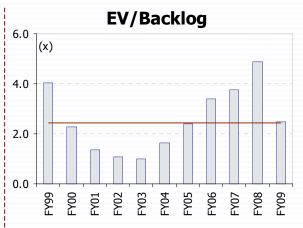


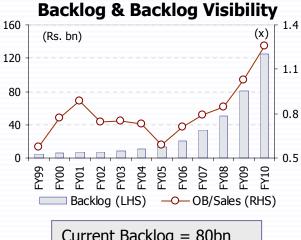
Sustainable RoE = 23%
Target PE = 18x
Target = 546





Average: Rs 492





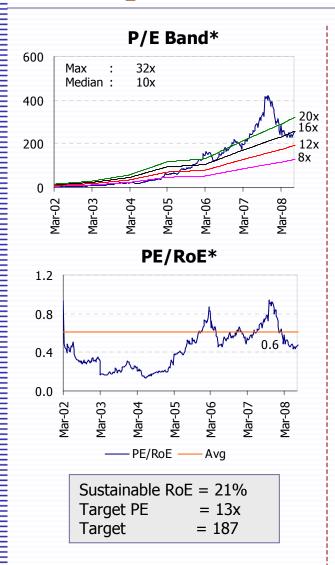
Current Backlog = 80bn Target EV/OB = 1.5x Target = 505

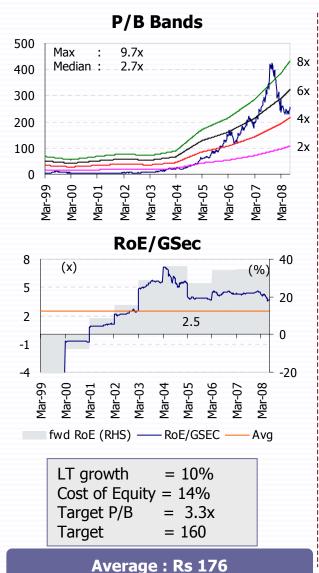
Crompton Greaves

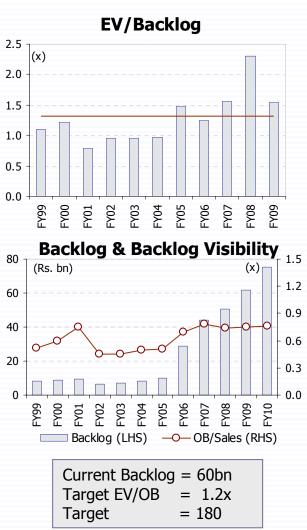
CMP : Rs 256 Target Price : Rs 300

52-wk Low: Rs 195









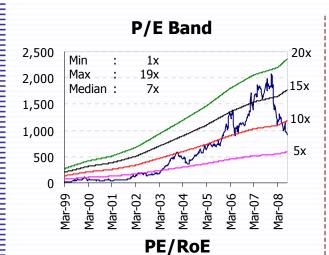
¹⁴

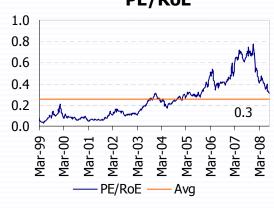


CMP : Rs 971

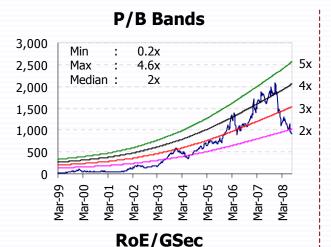
Target Price: Rs 1,300 52-wk Low: Rs 798

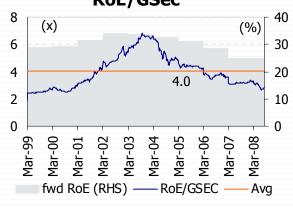






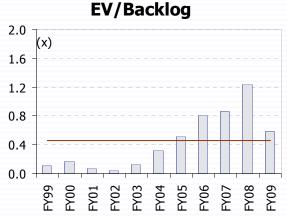
Sustainable RoE = 20%Target PE = 10xTarget = 1,097

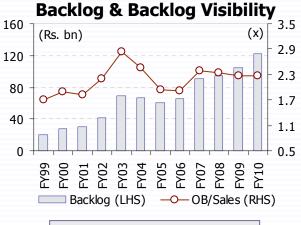




 $\begin{array}{ll} \text{LT growth} &= 7\% \\ \text{Cost of Equity} &= 14\% \\ \text{Target P/B} &= 2x \\ \text{Target} &= 883 \end{array}$

Average: Rs 940





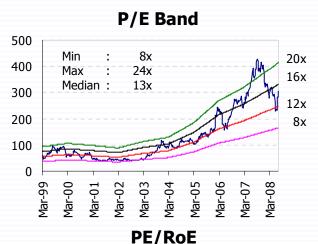
FY08 Backlog = 95bn Target EV/OB = 0.5x Target = 840

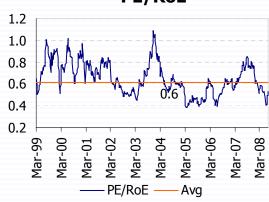
Cummins India

CMP: Rs 315 Target Price: Rs 340

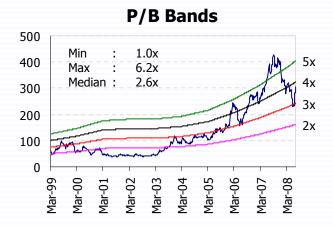
52-wk Low: Rs 225

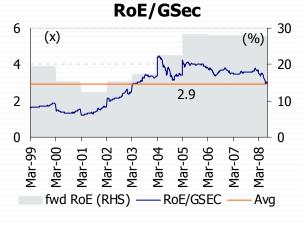






Sustainable RoE = 23%
Target PE = 14x
Target = 272





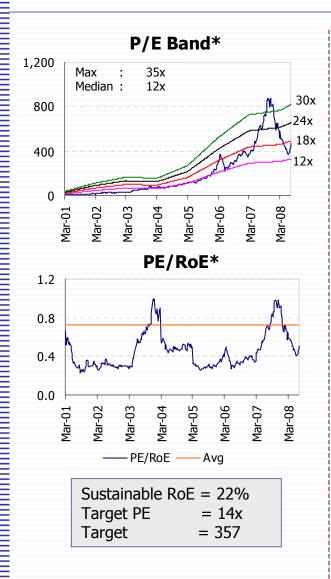
 $\begin{array}{lll} \text{LT growth} &= 9\% \\ \text{Cost of Equity} &= 13.4\% \\ \text{Target P/B} &= 3.2x \\ \text{Target} &= 240 \\ \end{array}$

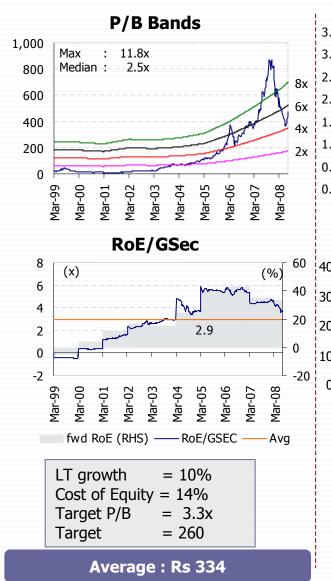
Thermax

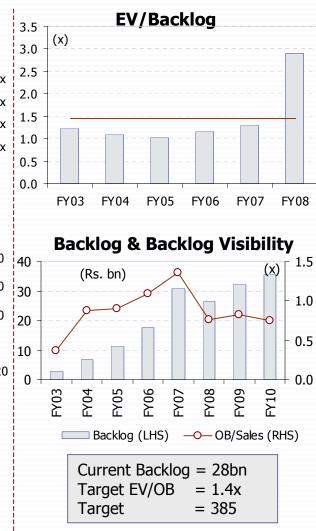
CMP : Rs 486 Target Price : Rs 460

52-wk Low: Rs 331









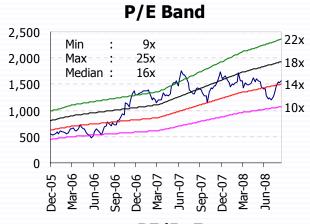
¹⁷

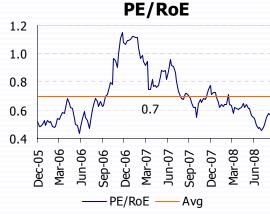
AIA Engineering



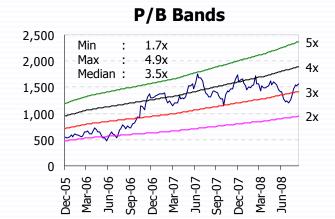
52-wk Low: Rs 1,044

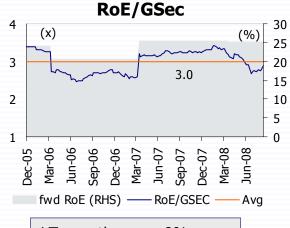






Sustainable RoE = 22%Target PE = 15x**Target** = 1,452





LT growth = 9% Cost of Equity = 13.4%Target P/B = 3xTarget = 1,254



Global peer group valuations

		Ratio Analysis (%)		Gwth -	2yrs		Valuations (x)					
	М Сар	OPM	PAT	RoE	Sales	PAT	P/E		EV/EB	ITDA	MCAP/	Sales
	USD bn		Margin				CY08E/	CY09E /	CY08E/	CY09E /	CY08E/	CY09E /
							FY09E	FY10E	FY09E	FY10E	FY09E	FY10E
Developed Markets												
General Electric	277	21.1	13.1	20	9	1	12.6	11.9	19.2	18.0	1.5	1.4
Siemens AG	91	11.6	5.3	14	9	28	15.7	10.6	8.2	6.6	0.8	0.8
ABB Ltd	52	15.8	12.9	44	16	8	12.9	11.6	7.3	6.6	1.5	1.3
Schneider Electric	23	17.8	9.1	17	7	8	8.9	8.9	0.0	0.0	0.9	0.9
Average					11	11	12.5	10.3	5.2	4.4	1.1	1.0
Emerging Mkts												
Shanghai Electric	5	8.8	5.0	15	20	10	11.6	11.3	5.3	5.1	0.5	0.5
Dongfang Electric	3	12.5	9.2	62	15	-1	19.9	8.5	6.6	4.4	0.8	0.7
Harbin Power Equip.	1	9.4	5.5	25	12	-1	6.8	6.9	2.8	2.8	0.3	0.3
Doosan Heavy	8	9.3	7.3	13	16	26	25.5	15.5	20.1	15.7	1.7	1.4
Toshiba Corp	16	8.1	1.7	12	6	5	15.5	13.2	5.5	4.7	0.2	0.2
Average					11	8	15.9	11.1	8.1	6.6	0.7	0.6
Indian Companies												
BHEL	19	19.6	14.1	31	24	20	25.1	21.5	16.4	13.7	3.5	2.9
L&T	17	12.9	7.5	23	30	33	25.0	20.1	16.3	13.3	2.0	1.5
ABB India	4	13.1	8.3	35	30	29	28.8	22.5	17.5	13.4	2.4	1.9
Siemens India	4	9.2	5.7	35	18	30	23.5	20.3	14.0	11.4	1.8	1.4
Crompton Greaves	2	11.5	5.7	34	20	33	17.8	13.5	10.3	8.0	1.1	0.9
Areva T&D India	2	18.3	10.8	47	31	26	29.9	22.8	17.5	13.6	3.0	2.3
Cummins	1	16.8	11.9	28	20	20	16.2	13.7	11.1	9.2	1.9	1.6
Thermax	1	12.7	8.4	43	18	12	19.1	15.9	11.5	9.5	1.5	1.2
Average					24	26	23.2	18.8	14.3	11.5	2.2	1.7

Source: Bloomberg, Company, ENAM Research

Indian stocks trade at a premium to global peers due to superior growth and return ratios

ENAM Securities Pvt. Ltd.

7, Tulsiani Chambers, Free Press Journal Marg, Nariman Point, Mumbai – 400 021, India..

Tel:- Board +91-22 6754 7600; **Dealing** +91-22 2280 0167; **Fax:- Research** +91-22 6754 7679; **Dealing** +91-22 6754 7575

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Disclosure of interest statement										
(As of September 5, 2008)	BHEL	L&T	Suzlon	ABB	Siemens	Cormpton	Cummins	Thermax	AIA Engg.	BEL
1. Analyst ownership of the stock	No	Yes	No	No	No	No	No	No	Yes	No
2. Firm ownership of the stock	No	No	No	No	No	No	No	No	No	No
Directors ownership of the stock	No	Yes	Yes	No	No	No	No	No	No	No
 Investment Banking mandate 	No	No	No	No	No	No	No	No	No	No
5. Broking relationship	No	No	No	No	No	No	No	No	No	No

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