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India Ahead of the Pack

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India

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Indian capital goods

Positioning for the impending slowdown

- **Capex slowdown:** While corporates are not yet officially pulling the plug on ongoing capex, funding constraints (even for those theoretically 'funded') have made project delays more likely. Thus, we have cut our sector earnings growth for FY10 to 17% still high due to the comfort of an order book but lower than the 27% growth on our previous estimates. Key reductions: L&T (-12%), Punj Lloyd (-25%), ABB (-8%), Crompton Greaves (-17%), Siemens (-17%) and BHEL (-4%).
- Positioning our picks for the slowdown, downgrading Punj Lloyd and Siemens India: BHEL (OW, strong B/S and FCF, resilient OB, revenue visibility) and L&T (OW, diversified OB) remain our top picks: We expect recent outperformance to continue, as we believe the catalysts for this trend are still in place. We believe markets are already pricing in potential orderflow decline, project delays and margin decline, and any surprise on these factors would be a catalyst. We believe weak near-term revenue growth for ABB (N) could offer entry points. We downgrade Siemens to UW as it may face more severe growth challenges than what we believe markets are discounting, and we downgrade Punj Lloyd to Neutral as we think it is likely to see more project delays than what we previously assumed. We remain Neutral on Suzlon and Crompton Greaves.
- Past holds interest for the future: We use previous downcycles to assess potential earnings stresses for capex opportunities. Given strong OBs, capex names tend to see financial impact of a downturn with a lag. However, most of the market cap contraction tends to occur in the early phases of the downcycle, which we believe will be true for the present downturn. Unlike the previous downcycle, which lasted 3 years (between 1999 and 2002) and where our universe saw a steep 500bp margin compression and c. 40% PAT decline, we believe structural drivers for a capex super-cycle remain in place and are likely to cause only a temporary dent to the growth path.
- **Prolonged downturn and project abandonments still pose risks:** Our revised DCF-based PTs (see below) factor in a scenario of earnings recovery in the latter half of FY11. However, we are not pricing in steep margin erosions (less likely as commodity prices are declining) or major project cancellations. We believe this scenario is a greater risk for L&T and ABB and a lesser risk for BHEL, whose OB is more resilient to cancellations.

India Engineering

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Cap Goods: Absolute price performance

In %

	1 mth	3 mth	12 mth
L&T	(4.5)	(43.3)	(65.1)
BHEL	6.4	(25.1)	(54.5)
ABB	(33.4)	(51.1)	(74.5)
SIEM	1.0	(50.1)	(72.5)
CRG	(28.6)	(51.8)	(70.9)
PUNJ	(4.3)	(40.8)	(67.9)
SUEL	(41.3)	(78.3)	(87.7)

Source: Bloomberg.

Cap Goods: Price performance relative to Sensex

In	%	

	1 mth	3 mth	12 mth
L&T	5.9	(4.4)	(10.5)
BHEL	16.8	13.8	0.1
ABB	(23.0)	(12.2)	(19.9)
SIEM	11.4	(11.1)	(17.9)
CRG	(18.2)	(12.9)	(16.3)
PUNJ	6.1	(1.8)	(13.3)
SUEL	(30.9)	(39.4)	(33.1)

Source: Bloomberg.

Recent related research:

Warming up to cooling times (Nov 12) Identifying safe havens (Oct 5)

Company	Rating	ng CMP	PT	Mkt cap	P/E(x))	EV/EBIT	DA	Implied
	-	(Rs)	(Rs)	(US\$ bn)	FY09E	FY10E	FY09E	FY10E	FY10E P/E (x)
BHEL	OW	1,267	1,400	12.8	17.8	14.5	9.7	8.6	16.0
Suzlon	Ν	51	80	1.6	5.8	5.5	6.9	6.0	8.8
ABB	Ν	420	500	1.8	15.3	13.8	9.4	8.3	16.4
Siemens	UW	271	260	1.9	12.4	11.0	6.8	5.5	10.5
Crompton Greaves	Ν	123	130	1.3	8.9	8.5	7.1	6.4	8.9
Larsen & Toubro	OW	764	880	9.3	15.3	12.9	10.5	8.9	14.8
Punj Lloyd	Ν	161	160	1.0	11.7	10.1	5.3	4.4	10.1

Indian Capital Goods: Valuation comps and estimates summary vear-end March

Source: J.P. Morgan estimates, company data, Bloomberg. Note: P/E and EV/EBITDA estimates for Siemens and ABB have been fiscalized.

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Our change in view: if funds crunch continues, ongoing projects face risk of delays as well

Ongoing funds crunch may begin to impact Indian capex names

We have held the view that the unique feature of an extant OB provides revenue visibility to the Indian capital goods / E&C space. As ongoing projects are generally well funded, they are less prone to delays. To corroborate that, datapoints from companies and feedback from our analyst colleagues suggest that corporates are not pulling the plug on ongoing capex.

However, we now believe that if the current funds crunch continues longer, it could begin to impact ongoing projects as well. Even projects that are theoretically 'funded' are seeing funds constraints. The funds crunch impacts our space in two ways: 1) projects get shelved, impacting P/L, and 2) receivables problems start kicking in, impacting working capital and B/S.

Unlike the previous downcycle, which lasted three years (between 1999 and 2002) and where our universe saw a steep 500bp margin compression and c. 40% PAT decline, we believe structural drivers for a capex super-cycle remain in place and are likely to cause only a temporary (around 4-6 quarters) dent to the growth path.

Table 1: Summary of earnings & PT revision s

	PT		CMP	% Upside/	Ratir	ng	Implied target multipl	le (FY2010)	P/E	(x)	
	Ear	rlier	Now (Mar-10)	(Rs)	(Downside)	Earlier	Now	Earlier	Now	FY09E	FY10E
BHEL	1,400	Mar-10	1,400	1,267	11	OW	OW	15.4	16.0	17.8	14.5
L&T	1,200	Mar-09	880	764	15	OW	OW	17.6	14.8	15.3	12.9
ABB [a]	585	Dec-09	500	420	19	Ν	Ν	15.8	14.6	14.4	12.3
Siemens [a]	550	Sep-09	260	271	(4)	Ν	UW	16.3	9.9	11.8	10.3
Crompton	220	Mar-09	130	123	6	Ν	Ν	12.6	8.9	8.9	8.5
Puni Llovd	340	Mar-09	160	161	(1)	OW	N	16.0	10.1	11.7	10.1

Source: J.P. Morgan estimates. Note: [a] ABB Dec-09 PT and Siemens Sep-09 PT.

Slowdown in Middle-East could impact Siemens, Punj Lloyd and L&T

Punj Lloyd could see project delays in O&G capex if oil prices fall to US\$45- the threshold investment level

Housing slowdown would impact ABB, CG and Siemens' sales of low voltage electrical equipment and building automation products

Delay in Mumbai and Delhi airport modernization projects due to funding issues could be negative for L&T



A sector-wise analysis of potential pressure points

We find faint anecdotal evidence of a potential strain in OB quality, although the evidence is not overwhelming as yet.

Overseas projects: Indian contractors are mostly domestic-focused and still derive only a small percentage of their revenues from overseas. However, companies like CG, Punj Lloyd, Siemens and Suzlon have substantial overseas OBs. Moreover, the Middle East is a target geography for growth for large companies like L&T.

Recent data points pouring in from the Middle East warrant reduced optimism for this geography. At our India conference, Voltas (not covered) admitted to delays at one of its Qatar infrastructure projects, which was government supported but not sponsored. We also see deep signs of stress for the real estate sector at Dubai. In general, bank funding for new projects in the Middle East has declined, and banks like Calyon are reportedly considering pulling the plug on several project finance deals.

Singapore, which had planned several casino-resort projects, is facing a funds crunch for some of these projects. For instance, Marina Bay, where Punj Lloyd is involved in construction, has seen funding issues and the Singapore government has reportedly offered to bail out the project.

Our view remains that the overseas oil and gas sector is less vulnerable to project delays, as oil prices at US\$50 are still above the threshold investment level of US\$45. However, further weakness in oil prices might cause oil and gas majors to put future projects on hold or even shelve ongoing projects.

Real estate: Developers are going ahead with construction of ongoing projects but could halt new project development, where sales are weak, and prices as well as bank lending rates remain high. Most large and small developers are facing a liquidity crunch at the moment. The bigger issue is that sentiment for home-buying is weak and unless prices / borrowing costs come off sharply, it may be difficult to revive sentiment. Our Indian E&C company universe does not have substantial direct construction exposure to real estate. However, sales of low voltage electrical equipment and building automation products are also related to real estate. If developers abandon new projects, it would impact ABB, CG, Siemens, L&T and Punj Lloyd in our view, in different degrees (see table on real estate exposure).

Airports: The two big airport modernization projects of Mumbai and Delhi account for 15% of L&T's current OB. The Delhi airport project faces a funding gap of Rs25B, which the developers, GMR, are expecting to fund out of real estate sales. Given the weak sentiment for real estate at the moment, we believe GMR may have to battle all odds to get the transaction through. The Delhi airport is slated for the Commonwealth games of October 2010 and the new terminal project cannot be postponed. In a worst case scenario, we believe L&T could face delayed payments and working capital issues on this project. The Mumbai airport project, being developed by GVK, faces a similar problem of funding gap. Unlike Delhi, Mumbai is not critical for the Commonwealth Games. GVK was aiming to complete the project by 2012, but has now said that it would target a 2013 completion. ABB and Siemens also have electrification / automation orders at the airports but these do not account for a significant part of their OB. Shilpa Krishnan (91-22) 6639-3010 shilpa.x.krishnan@jpmorgan.com

Resilience of domestic power sector where capex targets are government mandated is positive for BHEL

State government funded irrigation projects are seeing increase in receivable days

Capex of state-owned domestic O&G companies is unlikely to slow. Falling crude prices may see cash flows of petrochemical and refining space improve, leading to future capex Asia Pacific Equity Research 20 November 2008

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Power: We believe power is the most resilient sector, with government-owned utilities funding most of the ongoing projects with own equity / government budgetary support and bank loans. These utilities have a guaranteed return of 14% on equity, and interest cost is a pass-through. Government utilities are unlikely to pull the plug on ongoing capacity expansion, as their targets are government mandated.

Private utilities currently form a very small portion of Indian capital goods' OBs (e.g., 10% of BHEL's OB). Most private utilities have placed their orders on Chinese and Korean equipment makers. Private IPPs generally do not have a guaranteed return model and are facing equity / debt funding constraints. Private IPPs have made announcements of close to 200GW of power projects over the next 9 years. However, in our view, we expect to see only 75GW of these getting commissioned.

Water / irrigation: This is not a significant portion of large E&C's OB, although construction companies derive a sizeable portion of revenues from water and irrigation. The state government of Andhra Pradesh has been the most proactive at giving out irrigation projects. A large irrigation project, Pallavaram (~60B) faced land acquisition issues and saw substantial prolongation. Our channel checks also indicate that receivables are increasing on irrigation orders, possibly because these orders are entirely funded out of government budget where there could be funding gaps.

Steel / metals: Capacity expansion projects of Tata Steel, Hindalco, SAIL, Jindals, Bhushan and others form a sizeable proportion of Indian E&Cs' OBs. J.P. Morgan metals analyst Pinakin Parekh believes that ongoing capex is fully funded, but new projects are unlikely to be taken up in the near future. However, if the current situation in commodity prices and funding continues for a few more quarters, there is a distinct possibility of ongoing projects getting delayed as well, in our view.

Oil and gas, petrochemicals: Most of the ongoing projects are in the upstream and downstream sector, with relatively fewer jobs in the refining and petrochemical space. With the decline in crude prices, cash flows of refining companies will likely improve and they will get into the capex mode again. We see slim probability of government-owned companies (ONGC, GAIL) abandoning their ongoing projects.

Table 2: Capital Goods: Business exposure to geographies In %

Company	India	Middle East	US & Europe	Rest of world
BHEL	90	10	0	0
L&T	80	17	2	1
Suzlon	25	2	42	31
Punj Lloyd	50	18	3	29
ABB	94	6	0	0
Siemens	55	25	20	0
CG	55	15	25	5

Source: J.P. Morgan estimates, Company data.

In %								
	Power	Process	Oil & Gas	Infrastructure	Housing & Construction	Others		
BHEL	74	26	-	-	-	-		
L&T	10	20	18	21	17	14		
Suzlon	100	-	-	-	-	-		
Punj Lloyd	-	40	36	24	-	-		
ABB	65	15	-	-	20	0		
Siemens	54	31	-	-	-	15		
CG	50	20	-	-	30	0		

Table 3: Capital Goods: Exposure to business segments

Source: J.P. Morgan estimates, Company data.

A sectoral analysis of recent orders won

Our analysis of order flows between March-September 2008 (when signs of strains began to crop up) for BHEL, L&T and Punj Lloyd (companies that report individual orders) yields the following takeaways:

- A significant 35% of L&T's new order flows booked in 1H09 were either in real estate, or in new areas (power gen. equipment or railways)
- A cursory look at the top customers for 1H does not suggest any red flags. However, some of these companies have reported funding problems for specific projects (e.g., GVK for its Goindwal Saheb project, already in BHEL's and Punj's OBs)

Table 4: 1HFY09 Order flows

Rs. in billions

	Power	Process/Industrial	0&G	Infrastructure	Others	Total
LT	64	49	32	77	25	247
BHEL	239	10				249
Punj	10		49	23		83

Source: J.P. Morgan estimates, Company data.

Table 5: 1HFY09 Order flows: % contribution of sectors

	Power	Process/Industrial	O&G	Infrastructure	Others	Total
LT	26	20	13	31	10	100
BHEL	96	4	0	0	0	100
Punj	12	0	60	28	0	100

Source: J.P. Morgan estimates, Company data.

Table 6: Leading customers of capital good cos. in 1HFY09

LT	BHEL	Punj Lloyd
Bombay Dyeing	Pragati Power Corp Ltd	Qatar Petroleum
CIDCO	Chattisgarh SEB	GVK
MMRDA	AP Genco	IOCL
APPDCL [c]	TNEB	Waha Oil Co, Libya
Indian Railways	DVC	FWP JV, Singapore
JSW	Syria	
PGCIL	GVK Power	
SAIL, Bhushan Steel	HMEL [a]	
	RRVUNL	
	ONGC	

Source: Company reports.

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Positioning our picks post estimate cuts

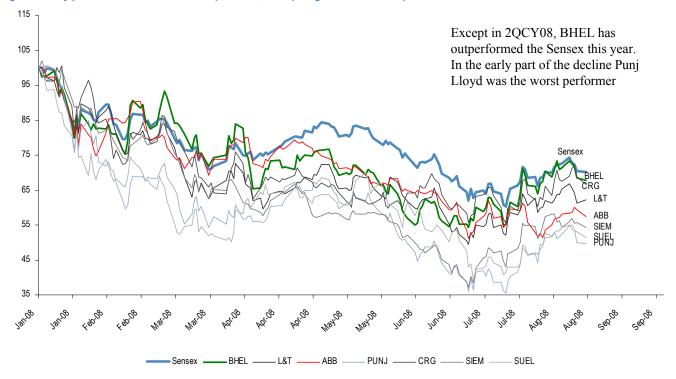
Indian capital goods underperformed the Sensex substantially in the early leg of the correction (January to September 2008) – Figure 1. The outperformance started in October for BHEL and more recently for L&T (Figure 2). In our view, factors that caused initial underperformance include: 1) perceived margin pressures due to rising commodity prices, 2) execution issues and revenue slippages and 3) high P/Es, making the sector more prone to correction.

In our view, the recent outperformance is a result of: 1) strong revenue growth in 1H, allaying execution concerns, 2) commodity price correction, allaying margin concerns and 3) strong order flows.

Our top picks BHEL and L&T are capable of sustaining their recent outperformance, in our view, on the back of 1) continued execution, 2) translation of commodity price weakness in margins, expected Mar-q, and 3) reasonable P/Es, factoring in pressures on revenues and margins already.

Risks to our ratings and price targets: We note that we are not currently pricing in steep margin erosions (less likely as commodity prices are declining) or major project cancellations. Either of these would pose risk to the downside to our current recommendations and price targets for these stocks.

Figure 1: Early part of the decline: BHEL best performer, all capital good stocks underperform the Sensex



Source: Bloomberg.

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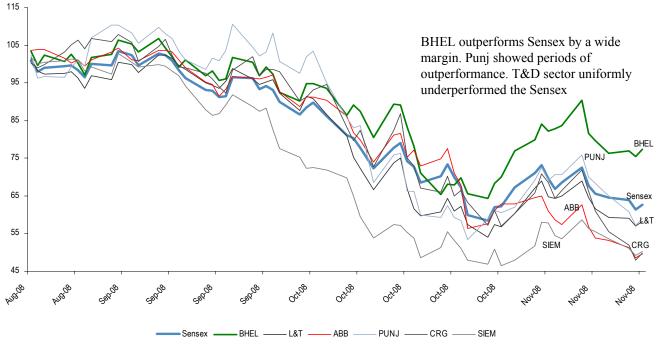


Figure 2: Last 3-month price performance: BHEL outperforms Sensex by a wide margin, other capital goods stocks underperform the Sensex

Source: Bloomberg, J.P. Morgan.

BHEL remains our top pick

The slowdown should not impact all companies uniformly. In our view, BHEL remains the best positioned to weather the slowdown, as its OB offers revenue visibility through FY12 and is less vulnerable to cancellations. The company also has a strong balance sheet (with US\$2B of cash) and strong cash flows. BHEL is seeing the least earnings cuts in our universe – just 4% to FY10 estimates, mainly to factor in possible prolongation of industry sector orders and select private sector orders (e.g., GVK's Goindwal Sahib, which is yet to tie up its funds). We believe the key risk to our PT is the likelihood of BHEL having to temporarily fund its customers, who may face delays in banks' disbursements. While we have revised our estimates, we maintain our OW rating and Mar-10 DCF-based Rs 1400 PT for BHEL.

	FY07	FY08	FY09E	FY10E		
Sales	172,375	193,046	249,173	306,813	52-week range (Rs)	984.1-2893
Net profit	23,945	25,892	34,834	42,824	Market cap (Rs B)	632.3
EPS (Rs)	97.8	52.9	71.2	87.5	Market cap (US\$ B)	12.7
DPS (Rs)	18.0	15.3	20.5	25.2	Shares o/s (MM)	489.5
Net sales growth (%)	28.9	12.0	29.1	23.1	Free float (%)	32.3
Net profit growth (%)	45.0	8.1	34.5	22.9	Average daily value (Rs MM)	3818.2
EPS growth (%)	45.0	(45.9)	34.5	22.9	Average daily value (US\$ MM)	76.9
ROE (%)	29.8	26.5	29.2	29.5	Average daily volume (MM)	2.62
ROCE (%)	44.9	45.2	44.2	44.7	Exchange rate (Rs/US\$)	49.7
BVPS (Rs)	359.1	220.1	267.5	325.7		
P/E (x)	13.2	24.4	18.2	14.8		
P/BV (x)	3.6	5.9	4.8	4.0		
EV/EBITDA (x)	14.2	11.0	8.1	7.2		

Table 7: BHEL: Key Financials

Rs. in millions, year-end March

Source: J.P. Morgan estimates, Datastream, Company data.

	2009E	2010E	2011E
Revenues old	249,173	311,588	394,404
Revenues new	249,173	306,813	379,054
Revision (%)	0.0	(1.5)	(3.9)
YOY growth (%)	29.1	23.1	23.5
EBITDA old	40,641	55,999	77,088
EBITDA new [a]	40,641	54,167	71,453
Revision (%)	0.0	(3.3)	(7.3)
YOY growth (%)	(0.9)	33.3	31.9
EBITDA margin(%) old	16.3	18.0	19.5
EBITDA margin(%) new	16.3	17.7	18.9
Revision (bps)	0.0	(31.7)	(69.5)
Adjusted PAT old	34,834	44,609	58,216
Adjusted PAT new	34,834	42,824	53,332
Revision (%)	0.0	(4.0)	(8.4)
YOY growth (%)	34.5	22.9	24.5
Diluted EPS old (Rs)	71.2	91.1	118.9
Diluted EPS (Rs) new	71.2	87.5	108.9
Revision (%)	0.0	(4.0)	(8.4)

Table 8: BHEL: Key Model Revisions Year-end March

Source: J.P. Morgan estimates.

Table 9: BHEL - Summary of key financials with revised medium-term and long-term estimates

Year-end March, In %

	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E
Revenue growth	29.1	23.1	23.5	(12.4)	11.6	3.4	10.9	15.3	15.2
EBIT margin	20.3	17.3	17.0	14.2	15.2	15.8	16.7	16.7	16.7
PAT growth	34.5	22.9	24.5	(21.1)	←	NO EXF	LICIT FORECAS	TS	<i>></i>

Source: Company data, J.P. Morgan estimates.

L&T a little lower on our pecking order

We believe L&T faces greater risk of its projects getting delayed, and have therefore cut our FY10 earnings estimate by 12%. Given its dominant position within the E&C space, we believe L&T is in the best position to manage working capital issues that may accompany project delays. L&T has a conservative net debt to equity ratio of 17%. In addition to our estimate revisions, we cut our Mar-10 SOTP-based PT to Rs880.

In our view, the important issue with L&T is, what are markets already pricing in? We think a scenario of potential orderflow decline, project/execution delays and margin decline is already being priced in. Any surprises in these areas should act as important stock catalysts.

Table 10 summarizes our revised forecasts which we have used to arrive at our DCFbased PT. For example, for L&T, we have factored in 20% revenue growth, 50bp margin erosion and 14% PAT growth for 2010. For 2011, we have factored in 12% sales growth, further 30bp margin erosion and 9% PAT growth, considering the possibility of some projects witnessing further delays. Assuming Rs50/share value for L&TIDPL (which is the only subsidiary that we have not consolidated into our estimates), the current market price implies a multiple of 12x FY10E consolidated earnings, which is fair in our view considering the likelihood that our earnings estimates may be conservative.

Table 10: L&T - Summary of key financials with revised medium-term and long-term estimates

Year-end March, In %

	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E
Revenue growth	34.0	20.3	11.7	18.8	15.0	15.0	15.0	15.0	15.0
EBIT margin	10.6 🤇	10.1	9.8) 10.3	10.5	10.8	11.0	11.0	11.0
PAT growth	22.4	14.1	8.7	22.9	←	NO EX	PLICIT FORECA	STS	(

Source: Company data, J.P. Morgan estimates.

Table 11: L&T: Key Financials

Rs. in millions, year-end March

	FY07	FY08E	FY09E	FY10E		
Net sales	205,129	293,504	384,410	461,311	52-week range (Rs)	680-2234.85
Net profit	22,673	22,581	29,691	35,268	Market cap (Rs B)	447.0
Consolidated EPS (Rs)	20.0	19.3	25.0	29.7	Market cap (US\$ B)	9.0
Net sales growth (%)	23.9	43.1	31.0	20.0	Shares o/s (MM)	585.3
Net profit growth (%)	117.9	(0.4)	31.5	18.8	Free float (%)	86.2
ROE (%)	35.7	24.2	21.9	20.1	Average daily value (Rs MM)	4505.7
ROCE (%)	39.2	26.7	30.5	35.1	Average daily value (US\$ MM)	90.7
P/E consolidated (x)	19.1	19.8	15.3	12.9	Average daily volume (MM)	4.24
P/BV (x)	2.9	1.9	1.5	1.2	Exchange rate (Rs/US\$)	49.7
EV/EBITDA (x)	21.1	17.1	11.5	9.8		

Source: J.P. Morgan estimates, Datastream, Company data.

Table 12: L&T: Key Model Revisions

Rs in millions, year-end March

	2009E	2010E	2011E
Revenues old	384,410	507,942	642,671
Revenues new	384,410	461,311	523,631
Revision (%)	0.0	(9.2)	(18.5)
YOY growth (%)	31.0	20.0	13.5
EBITDA old	49,286	64,964	81,240
EBITDA new	49,286	57,883	64,310
Revision (%)	0.0	(10.9)	(20.8)
YOY growth (%)	37.4	17.4	` 11.1
EBITDA margin(%) old	12.8	12.8	12.6
EBITDA margin(%) new	12.8	12.5	12.3
Revision (bps)	0.0	(24.2)	(36.0)
Adjusted PAT old	29,691	39,901	50,037
Adjusted PAT new	29,691	35,268	38,996
Revision (%)	0.0	(11.6)	(22.1)
YOY growth (%)	31.5	18.8	10.6
Diluted EPS old (Rs)	50.0	67.2	84.3
Diluted EPS (Rs) new	50.0	59.4	65.7
Revision (%)	0.0	(11.6)	(22.1)

Source: J.P. Morgan estimates.

ABB- continued revenue growth slowdown may offer entry opportunities

ABB is an early indicator of slowdown, as its projects are of short-gestation nature. Exposure to industrial automation and real estate segments may cause growth to weaken further in CY09. We have cut our CY09 estimates further by 8%. Proactive cutting down of loss-making businesses would enable the company to more or less maintain its margin for CY09, in our view. We believe this weakness would offer

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entry points into a company which stands out as the only one to report positive FCF during each of the last 12 years. In addition to our downward estimate revisions, we lower our Mar-10 DCF-based PT on ABB to Rs500.

Table 13: ABB - Summary of key financials with revised medium-term and long-term estimates

March fiscal Y/E, In %

	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E
Revenue growth	15.2	11.1	15.4	21.9	15.0	15.0	15.0	12.0	12.0
EBIT margin	11.3	10.8	10.8	11.0	11.0	11.0	11.0	11.0	11.0
PAT growth	15.9	8.8	16.8	22.8	(NO EXF	LICIT FORECAS	STS	(

Source: J.P. Morgan estimates. Note: All companies except ABB (YE-Dec) and Siemens (YE-Sep) are YE-March. 2011 above is CY10 for ABB and so on.

Table 14: ABB: Key Financials

Rs in millions, year-end Dec

	CY06	CY07	CY08E	CY09E		
Sales	42,740	59,303	68,307	75,883	52-week range (Rs)	379.15-1670
Net profit	3,403	4,917	5,697	6,200	Market cap (Rs B)	89.0
EPS (Rs)	16.1	23.2	26.9	29.3	Market cap (US\$ B)	1.8
DPS (Rs)	2.2	2.2	3.1	3.3	Shares o/s (MM)	211.9
Net sales growth (%)	38.8	38.8	15.2	11.1	Free float (%)	47.9
Net profit growth (%)	55.6	44.5	15.9	8.8	Average daily value (Rs MM)	333.2
EPS growth (%)	55.6	44.5	15.9	8.8	Average daily value (US\$ MM)	6.7
ROE (%)	32.9	32.9	35.2	30.6	Average daily volume (MM)	0.48
BVPS (Rs)	55.7	76.0	99.5	125.0		
P/E (x)	26.1	18.1	15.6	14.4		
P/BV (x)	7.5	5.5	4.2	3.4		
EV/EBITDA (x)	26.1	17.1	14.7	13.5		

Source: J.P. Morgan estimates, Datastream, Company data.

Table 15: ABB: Key Model Revisions

Year-end Dec

	2008E	2009E	2010E
Revenues old	69,203	79,742	92,451
Revenues new	68,307	75,883	87,575
Revision (%)	(1.3)	(4.8)	(5.3)
YOY growth (%)	15.2	11.1	15.4
EBITDA old	8,388	9,668	11,116
EBITDA new	8,298	8,865	10,195
Revision (%)	(1.1)	(8.3)	(8.3)
YOY growth (%)	14.5	6.8	15.0
EBITDA margin(%) old	12.1	12.1	12.0
EBITDA margin(%) new	12.1	11.7	11.6
Revision (bps)	2.8	(44.1)	(38.2)
Adjusted PAT old	5,756	6,726	7,844
Adjusted PAT new	5,697	6,200	7,241
Revision (%)	(1.0)	(7.8)	(7.7)
YOY growth (%)	15.9	8.8	16.8
Diluted EPS old (Rs)	27.16	31.74	37.02
Diluted EPS (Rs) new	26.89	29.26	34.17
Revision (%)	(1.0)	(7.8)	(7.7)

Source: J.P. Morgan estimates.

Asia Pacific Equity Research 20 November 2008

Punj Lloyd: Project delays may be more severe than estimated; downgrading to Neutral

Punj Lloyd has reported strong all-round performance YTD, with strong order growth, revenue growth and margin improvement. This has contributed to the stock outperformance over the last month. However, recent data points, especially on select overseas projects, suggest the possibility of delays and write-offs. We downgrade Punj Lloyd to Neutral from Overweight and reduce our Mar-10 DCF-based PT to Rs160 from Rs340.

Haircut on onerous contract now assumed

Punj Lloyd has not provided for Rs2.11B overruns on a legacy contract for SABIC, considering these to be recoverable as the overrun was due to the change in project scope and timelines. Under business-as-usual circumstances, we believe Punj Lloyd could have recovered the amount. However, as the petrochemical industry is going through severe pricing crisis, we believe the risk of delay in recovery or write-offs are high. We assume Punj Lloyd will write off 50% of its dues, 25% in FY09 and 25% in FY10.

Project delays assumed as well

Additionally, we cut FY10 revenue and PAT estimates to factor in potential prolongations in overseas contracts. We believe Marina Bay, one of Singapore's famous casino-resort projects, is facing delays due to paucity of funding. This order accounts for just under 5% of Punj Lloyd's OB. However, other projects in Punj Lloyd's OB could also face delays in the current market environment going forward.

We have also made significant cuts to our estimates for FY11 and FY12 in our DCF model, factoring in 1) weak order flows in the oil and gas segment, and 2) margin pressures.

	FY07	FY08	FY09E	FY10E		
Net sales	51,265	77,529	108,488	127,331	52-week range (Rs)	140.5-589.1
Net profit	1,972	3,213	4,315	4,990	Market cap (Rs B)	50.2
EPS (Rs)	7.5	10.6	13.8	15.9	Market cap (US\$ B)	1.0
DPS (Rs)	0.4	0.5	0.6	0.7	Shares o/s (MM)	311.0
Net sales growth (%)	204.3	51.2	39.9	17.4	Free float (%)	54.2
Net profit growth (%)	255.5	62.9	34.3	15.7	Average daily value (Rs MM)	1664.8
EPS growth (%)	255.3	40.3	30.0	15.7	Average daily value (US\$ MM)	33.5
ROE (%)	15.4	17.8	13.8	12.2	Average daily volume (MM)	7.00
ROCE (%)	13.2	14.3	12.8	11.8	Exchange rate (Rs/US\$)	49.7
BVPS (Rs)	49.0	90.4	136.5	151.7		
P/E (x)	21.4	15.2	11.7	10.1		
P/BV (x)	3.3	1.8	1.2	1.1		
EV/EBITDA (x)	28.0	15.6	11.6	10.0		

Table 16: Punj Lloyd: Key Financials Rs in millions, year-end March

Source: J.P. Morgan estimates, Datastream, Company data.

	FY09E	FY10E
Revenues		
Old	108,488	131,624
New	108,488	125,874
% Change	0.0	(4.4)
EBITDA		()
Old	9,803	12,752
New	9,803	11,551
% Change	0.0	(9.4)
PAT		()
Old	4,842	6,671
New	4,315	5,170
% Change	(10.9)	(22.5)
EPS		· · · ·
Old	15.4	21.3
New	13.8	16.5
% Change	(10.9)	(22.5)

Table 17: Punj Lloyd: Key FY09, 10 estimate revisions Rs in millions, year-end March

Source: J.P. Morgan estimates.

Table 18: Summary of key financials with revised medium-term and long-term estimates

March fiscal Y/E, In %

	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E
Punj Lloyd									
Revenue growth	39.9	17.4	8.7	15.4	16.0	16.0	16.0	14.0	8.0
EBIT margin	6.7 (6.6	6.0	6.3	6.5	7.0	7.0	7.0	7.0
PAT growth	34.3	15.7	3.4	25.5	(NO EXF	LICIT FORECAS	STS	(

Source: J.P. Morgan estimates.

Crompton Greaves: retain Neutral rating as severe strains on overseas revenues may be factored in already

We have retained our FY09 estimates and are building in 20% growth for the domestic standalone business for Crompton Greaves, in line with management guidance. Overseas growth has benefited from rupee depreciation in FY09, something which may reverse topline growth in the coming quarters. Concerns on order booking (FY10E onwards) and US-European housing slowdown leading to fall in demand for standard low-voltage electrical equipment has led to steep cuts in our revenue and EPS estimates (see table below). We believe current market price (Rs123) already reflects our concerns, hence we remain Neutral. We do, however, reduce our Mar-10 DCF-based PT from Rs220 to Rs130.

Table 19: Crompton Greaves: Key Financials

Rs in millions, year-end March

	FY07	FY08	FY09E	FY10E		
Sales	56,395	68,323	84,729	93,527	52-week range (Rs)	120.5-454
Net profit	2,818	4,067	5,073	5,333	Market cap (Rs B)	45.1
EPS (Rs)	7.7	11.1	13.8	14.5	Market cap (US\$ B)	0.9
DPS (Rs)	1.3	1.9	2.1	2.2	Shares o/s (MM)	366.6
Net sales growth (%)	36.7	21.2	24.0	10.4	Free float (%)	59.4
Net profit growth (%)	(7.1)	44.3	24.7	5.1	Average daily value (Rs MM)	144.1
EPS growth (%)	(7.1)	44.3	24.7	5.1	Average daily value (US\$ MM)	2.9
ROE (%)	32.1	35.8	33.4	27.2	Average daily volume (MM)	0.67
ROCÈ (%)	21.7	23.5	24.4	22.0	Exchange rate (Rs/US\$)	49.7
BVPS (Rs)	26.4	35.5	47.3	59.6	C	
P/E (x)	16.0	11.1	8.9	8.5		
P/BV (x)	4.7	3.5	2.6	2.1		
EV/EBITDA (x)	14.0	8.9	7.1	6.4		

Source: J.P. Morgan estimates, Datastream, Company data.

Table 20: Crompton Greaves: Key Model Revisions

Rs in millions, year-end March

	2009E	2010E
Revenues old	84,729	103,296
Revenues new	84,729	93,527
Revision (%)	0.0	(9.5)
YOY growth (%)	24.0	10.4
EBITDA old	9,331	11,507
EBITDA new	9,331	9,816
Revision (%)	0.0	(14.7)
YOY growth (%)	25.4	5.2
EBITDA margin(%) old	11.0%	11.1%
EBITDA margin(%) new	11.0%	10.5%
Revision (bps)	0	(64)
Adjusted PAT old	5,073	6,407
Adjusted PAT new	5,073	5,333
Revision (%)	0.0	(16.8)
YOY growth (%)	24.7	5.1
Diluted EPS old (Rs)	13.84	17.48
Diluted EPS (Rs) new	13.84	14.55
Revision (%)	0.0	(16.8)

Source: J.P. Morgan estimates.

Table 21: Crompton Greaves: Summary of key financials with revised medium-term and long-term estimates

March fiscal Y/E, In %

	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E
Revenue growth	24.0	10.4	2.1	13.7	12.0	12.0	12.0	12.0	12.0
EBIT margin	9.4	8.9	9.3	9.7	9.4	9.5	9.5	9.5	9.5
PAT growth	24.7	5.1	8.3	19.6	(NO EXF	LICIT FORECAS	STS	(

Source: J.P. Morgan estimates.

Siemens: growth challenges not factored in, downgrading to Underweight

We have cut our FY09 and FY10 estimates by 17% and 22%, respectively, a reflection of slowdown in order booking and revenue growth especially in the power, automation and industrial solutions segments of the standalone business (which accounts for ~80% of consolidated revenues). We also see revenue and margin pressures for the IT subsidiary. We have cut our long-term sustainable EBIT margin by 70bp to 10.3%. Siemens' ~45% exposure to overseas business (20% to US and Europe) makes it susceptible to a global slowdown, especially housing-related, which fuels the demand for standard low-voltage electrical devices and equipment. Our implied Sep-09 target multiple at 11.3x. In addition to our downward estimate revisions, we downgrade Siemens India to Underweight from Neutral, and we cut our Mar-10 DCF-based PT to Rs260 from Rs550.

Table 22: Siemens: Key Financials

Rs. in millions, year-end Sep

	FY06	FY07	FY08E	FY09E		
Sales	60,586	94,175	98,951	97,329	52-week range (Rs)	210-1125
Net profit	3,828	6,064	6,933	7,764	Market cap (Rs B)	91.3
EPS (Rs)	11.4	18.2	20.6	23.0	Market cap (US\$ B)	1.8
DPS (Rs)	1.9	2.4	3.8	3.8	Shares o/s (MM)	337.2
Net sales growth (%)	65.2	55.4	5.1	(1.6)	Free float (%)	100.0
Net profit growth (%)	28.3	60.3	13.1	12.0	Average daily value (Rs MM)	292.7
EPS growth (%)	28.3	60.1	13.1	12.0	Average daily value (US\$ MM)	5.9
ROE (%)	35.5	39.9	32.5	28.4	Average daily volume (MM)	0.77
BVPS (Ŕs)	36.8	54.3	72.1	89.8	Exchange rate (Rs/US\$)	49.7
P/E (x)	23.9	14.9	13.2	11.8		
P/BV (x)	7.4	5.0	3.8	3.0		
EV/EBITDA (x)	25.8	17.2	15.6	13.5		

Source: J.P. Morgan estimates, Datastream, Company data.

Table 23: Siemens: Key Model Revisions

Year-end September

_

	2008E	2009E	2010E
Revenues old	98,951	113,621	137,176
Revenues new	98,951	97,329	108,937
Revision (%)	0.0	(14.3)	(20.6)
YOY growth (%)	5.1	(1.6)	11.9
EBITDA old	10,471	14,059	16,861
EBITDA new	10,471	11,595	13,056
Revision (%)	0.0	(17.5)	(22.6)
YOY growth (%)	6.4	10.7	12.6
EBITDA margin(%) old	10.6	12.4	12.3
EBITDA margin(%) new	10.6	11.9	12.0
Revision (bps)	0.0	(46.0)	(30.7)
Adjusted PAT old	6,933	9,326	11,376
Adjusted PAT new	6,933	7,764	8,855
Revision (%)	0.0	(16.7)	(22.2)
YOY growth (%)	13.1	12.0	14.0
Diluted EPS old (Rs)	20.56	27.66	33.74
Diluted EPS (Rs) new	20.56	23.03	26.26
Revision (%)	0.0	(16.7)	(22.2)

Source: J.P. Morgan estimates.

Table 24: Summary of key financials with revised medium-term and long-term estimates

March fiscal Y/E, In %

	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E
Siemens	0								
Revenue growth	(1.6)	11.9	19.5	23.2	10.0	11.0	12.0	11.0	10.0
EBIT margin	(10.5	10.7) 11.0	11.0	9.0	9.3	10.0	10.0	10.3
PAT growth	12.0	14.0	21.2	21.2	(NO EXF	LICIT FORECAS	STS	(

Source: J.P. Morgan estimates.

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Compared to previous

globally enmeshed

downcycles, the Indian economy

is structurally stronger but more

Asia Pacific Equity Research 20 November 2008

J.P.Morgan

Twelve years of ups and downs

Compared to the previous downcycle, the Indian economy is structurally on a stronger wicket, with a stronger country balance sheet and foreign currency reserves, established coalition governments, a slew of reforms in power and infrastructure that have already taken place, and a more active private sector. Our strategy team of Bharat Iyer and Bijay Kumar views the ongoing correction as a blip in the midst of a capex supercycle. We are therefore confident that the capital goods and E&C companies should have sufficient business to recover from the impending downturn.

However, Indian capex plays are more enmeshed in global developments than in the past. Companies like Punj Lloyd, Crompton Greaves and Suzlon have substantial overseas exposures, and large companies like L&T are looking overseas to reduce their growth dependence on India. Additionally, overseas capital markets are playing a greater role in capital spending, directly or indirectly. Thus, we believe the growth trajectory will see a temporary impact.

The previous downcycle lasted four years, with IIP growth dipping sharply in 1997 and remaining below 5% for a significant part of 1999-2002. IIP growth has once again slipped below 5% in Aug-08 (See Appendix 2 for how individual companies' sales growth compared to IIP numbers).

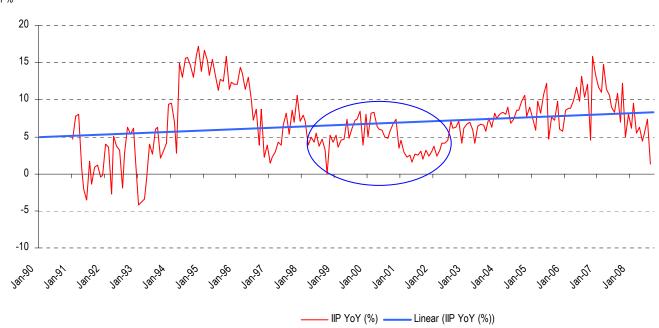


Figure 3: Historical IIP Growth Trend In %

Source: J.P. Morgan.

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Previous downturn revisited: revenues intact, margins drop

In the previous downcycle (1999-2002), capital good companies maintained revenues at the expense of margins and free cash flows The previous downcycle lasted four years: roughly between 1999 and 2002, roughly a year after the global slowdown and commodity crisis. Most Indian capex names managed to keep revenues intact but sacrificed quality and thereby margins and free cash flows. Our universe, comprising BHEL, L&T, ABB, Siemens and Crompton Greaves, reported flat revenue, 500bp margin compression and 39% PAT decline. Punj Lloyd and Suzlon were not listed entities then.

Table 25: Historical growth and margin performance

In %, year-end March

	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
Sales Growth												
L&T	19.5	4.3	26.0	(2.3)	3.5	2.9	28.0	31.0	36.6	11.9	19.3	41.3
BHEL	18.8	12.3	4.8	(2.8)	(5.1)	15.4	2.4	18.7	18.8	40.4	28.9	12.0
ABB		(13.6)	(20.9)	0.1	11.8	26.7	15.9	32.1	48.2	34.4	42.9	33.2
Crompton Greaves		4.6	6.5	(2.2)	(16.9)	18.0	7.8	7.8	14.4	107.5	36.7	21.2
Siemens		(4.9)	(10.7)	(2.8)	5.0	18.7	23.1	21.5	46.0	63.3	60.3	30.3
Margin Performance												
L&T	(13.5)	14.1	11.0	12.8	10.1	8.6	5.7	5.6	6.2	7.6	10.1	11.3
BHEL	18.8	19.2	14.3	14.1	(6.8)	10.2	11.4	12.9	14.5	19.2	19.6	21.2
ABB		10.7	9.2	7.3	7.9	8.1	8.6	8.0	7.2	8.1	8.5	9.5
Crompton Greaves	9.4	7.9	8.8	0.6	(5.6)	20.1	18.8	17.5	8.3	7.9	8.6	10.9
Siemens		2.6	3.6	2.4	2.0	5.7	10.1	11.5	12.5	11.6	10.5	10.5
Order flow growth (%)												
L&T	22.5	18.5	(16.9)	8.8	28.8	3.6	35.1	21.5	13.1	49.0	37.1	37.3
BHEL	83.0	(18.2)	(3.1)	16.7	(26.4)	88.6	7.9	66.0	11.1	5.1	78.2	45.0
ABB		21.0	(46.4)	14.2	38.3	2.5	22.3	35.9	50.2	46.4	46.1	37.1
Crompton Greaves	48.7	(62.3)	<u>1.6</u>	52.2	(3.2)	19.5	30.7	51.7	45.5	49.4	36.4	39.3
Siemens		(11.0)	15.0	22.8	(0.7)	(1.4)	18.7	62.5	58.4	33.4	27.5	22.5
PAT growth												
L&T		(166.3)	33.8	(6.0)	(21.6)	(17.0)	11.5	38.0	16.7	38.9	62.5	54.9
BHEL	13.1	102.9	(42.1)	16.2	(24.4)	26.0	(10.4)	49.6	19.3	71.3	45.0	8.1
ABB			(1.2)	10.4	39.1	21.7	24.4	30.3	48.2	47.9	52.8	37.6
Crompton Greaves		(30.8)	5.8	(773.9)	19.8	(190.8)	(0.9)	26.9	(42.0)	94.3	21.0	44.3
Siemens		(27.9)	(116.8)	`(19.3)́	54.5	. 6.3	46.Ź	39.2	` 52.8́	55.7	46.0	36.4

Source: J.P. Morgan, Company data.

Table 26: Key financial & operating metrics

Year-end March

	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
<u>RoE (%)</u>												
L&T		16	13	9	9	10	15	20	20	22	27	28
BHEL	26	41	19	19	13	15	12	16	17	25	30	26
ABB				10	15	16	18	20	24	29	33	34
Crompton Greaves				(37)	(20)	52	37	52	30	36	32	36
Siemens				()	()		23	24	30	35	38	36
<u>OCF (Rs B)</u>												
L&T			0.1	(0.3)	3.9	2.6	(7.9)	4.8	0.5	13.1	20.9	20.9
BHEL	7.9	16.4	15.8	`8.Ź	(2.3)	13.2	16.6	21.4	16.3	27.0	41.2	59.9
ABB					`0.Ś	1.6	1.7	1.6	1.7	1.4	2.7	3.3
Crompton Greaves					3.6	3.3	3.5	3.6	1.4	1.4	2.2	3.0
Siemens							0.8	2.9	3.9	7.2	5.4	3.5
FCF (Rs B)												
L&T			(5.1)	(5.1)	(0.6)	43.5	(11.0)	7.4	(0.6)	8.6	5.3	(4.2)
BHEL			Ì3.Ś	6.Ź	(4.2)	4.9	7.1	11.9	` 3.7	10.2	17.5	25.3
ABB			0.3	0.3	`0.Ś	1.5	1.3	0.9	0.9	0.7	1.8	1.9
Crompton Greaves					3.3	3.1	3.2	3.3	0.8	0.7	1.1	0.5
Siemens							0.9	2.2	1.8	3.3	1.5	1.2
WC/Sales (%)												
L&T			36.3	45.1	46.3	41.8	28.2	22.6	24.6	17.8	14.5	10.6
BHEL	37.1	33.6	30.5	39.0	46.7	38.8	32.9	21.4	21.8	18.7	14.9	11.0
ABB			33.5	33.6	31.9	29.5	30.0	25.3	19.3	19.0	18.8	19.6
Crompton Greaves				40.2	25.4	20.1	16.1	11.8	12.8	11.1	12.0	14.4
Siemens							(3.1)	(7.5)	(9.5)	(10.6)	(7.7)	(0.7)
OB/TTM revenues												
L&T	0.46	0.63	1.07	1.25	1.60	1.50	1.49	1.29	1.21	1.40	1.48	1.62
BHEL	1.98	1.78	1.63	1.70	1.23	1.57	1.37	1.92	1.90	1.78	2.35	3.15
ABB			0.58	0.56	0.67	0.64	0.57	0.47	0.46	0.51	0.61	0.82
Crompton Greaves								0.42	0.24	0.51	0.64	0.60
Siemens		0.57	0.22	0.41	0.35	0.37	0.39	0.58	0.29	0.81	1.10	0.84

Source: J.P. Morgan, Company data

Chasing revenues was perhaps the correct strategy for most companies then ABB and Siemens, which have shorter lead times for the completion of their projects, were the early indicators of the past slowdown. ABB was the only company in our universe to report a sharp revenue drop, mainly due to the global sale of the power generation business. Other companies managed to keep revenues intact, but at the expense of margins. Given that most Indian companies then operated at very substantial fixed base (e.g., BHEL had 68,000 employees then), it is likely that margin drops would have been even sharper had they not chased revenues. Anecdotally, we had heard (then) of large companies chasing jobs as meager as Rs250mn, competing with small contractors in the process.

L&T kept revenue slowdown at bay but took a sharp haircut on margins, RoE, FCF

Companies adopted interesting strategies to chase away the slowdown. L&T managed revenue growth for all but one year, and an order flow growth for all but one year. As order flows drastically slowed in the process and oil and gas segments, L&T adopted a radical thrust on the roads / infrastructure segment, which was seeing very substantial growth. Most of the jobs then faced severe competition from smaller civil contractors as well as overseas players and carried very low margins in the range of 6%. As a result, L&T witnessed severe margin pressures through FY2004.

In this historical context, L&T's present guidance of an order flow growth of 50% for the remainder of the year does not surprise us. L&T has tended to have back-up plans to keep its activity levels high.

BHEL's sufferings were mostly wage-hike-related

BHEL managed to keep its revenues and contribution margins stable for most of the last downturn. However, the company did not make adequate provision for wage hikes, which were effected in 2001 with retrospective effect from 1997, and this caused a steep dent to BHEL's profitability in 2001.

Flashback on stock performance: sharp correction even in stocks which did relatively well financially

BHEL and L&T P/E's declined ~76% and 92% from their peak valuations in the last downcycle (1999-2002). Maximum decline happened in the early part of the cycle. In the current bear run, BHEL and L&T's P/Es have already been hit ~62% and 71%, respectively.

Table 27: Capital Goods Sector: P/E peak and trough valuations in previous and current bear run

	<u>1999-2</u>	002	<u>2007-cu</u>	rrent
	Peak I	Trough I	Peak II	Trough II
P/E (x)				
BHEL	19.3	4.7	42.6	16.2
LT	12.7	1.0	47.8	13.9
Siemens	NM	3.7	45.9	10.6
Crompton	32.8	NM	32.8	9.0
ABB	63.5	10.2	54.5	13.3
Suzlon			52.7	4.9
Punj Lloyd			33.9	11.9
P/E Growth/ (Decline) [in %]				
BHEL		(75.5)	803.1	(62.1)
LT		(92.1)	4,680.0	(70.9)
Siemens		. ,	1,149.9	(76.9)
Crompton				(72.6)
ABB		(83.9)	434.3	(75.6)
Suzlon		. ,		(90.8)
Punj Lloyd				(64.9)

Source: J.P. Morgan estimates, Company data.

BHEL's finances relatively held up, stock price tumbled

- BHEL managed positive FCF for most of the downturn.
- The heavy losses posted in FY2001 were due to underprovision for wage hikes, which were clustered in that year. Barring that, the company managed to hold its head well above water
- BHEL however saw the largest market cap contraction, mainly on the back of weak sentiment for the power sector, which saw rampant cancellation of private projects as well as NTPC projects like Kawas and Gandhar that were supposed to be run on gas.

L&T: finances declined, but stock outperformed sector

- L&T saw sharp margin decline of ~600bp and negative FCF for most of the downturn. Although the company managed to sustain order flows and revenue for most of the downturn, this occurred with a steep dip in E&C margins.
- The stock however outperformed the sector sharply, declining only ~9% in absolute terms (from Mar-99 to Dec-02). Market expectations of the demerger and sale of the cement business, which had caused volatility in L&T's earnings, caused sentiment to remain strong.

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• The decision to sell the business was however postponed, which caused the stock to correct sharply. Despite this decision, the stock still managed to outperform the sector

ABB: most resilient, yet stock languished

- ABB was the only company to show positive FCF for the entire downcycle
- The market cap however saw a significant contraction, owing to 1) asbestosrelated troubles for the parent, and 2) parent's financial problems prompting it to sell the power generation business in 1998 and other businesses in 2000-2003.

The downcycle saw near-demise of prominent names

In 1998, L&T and BHEL accounted for two-thirds of the sector market cap. T&D names were small and other companies (Cummins, Ingersoll-Rand, Alstom) accounted for a significant part of the sector market-cap.

The downcycle saw many well-regarded multinational engineering companies either fading or being bought back by parents or victims of unfair treatment to minority shareholders. Consequently, sector leaders BHEL and L&T continued to occupy 60-70% of the sector market cap through the recovery and bull market phase. T&D names ABB, CG and Siemens became important companies to reckon with, given the government's thrust on improving T&D infrastructure.

100 ¹⁸ 19 ₂₁ 20 19 19 18 17 16 14 ¹³ 14 14 13 11 10 ⁸ 10 ¹⁷ 18 18 ₂₁ 18 19 19 18 18 20 19 20 19 19 ¹⁸ 21 22 23 22 ^{17 15} 20 19 21 ₂₇ 24 24 ²³ 27 26 ²⁴ 90 20 ¹⁸ 20 _{26 25} 21 ²⁰ 23 ¹⁹ ¹⁷ 17 18 17 19 ¹⁹ 23 23 23 25 26 ^{25 26} 28 27 27 ^{25 24 23} 23 ²¹ 80 16¹⁵ 17 14 18 19 18 20 18 14 16 ¹⁵ 16 19 17 27 ²⁶ 24 ²⁸ ²⁹ 30 30 31 ³⁰ 30 ²⁶ 21 18 ¹⁹ 16 ¹⁶ 23 23 70 17 16 15 19 26 60 50 40 30 20 40 41 3939 34 34 ₃₂ ³⁴ 33 32 34 32 ^{35 36 38} 36 33 32 ₂9 35 34 37 35 36 17 ¹⁸ 16 14 ¹⁸ ^{22 24} ²⁹ 20 21 ^{23 24} ²⁹ 28 20 16 14 12 19 20 23 10 0 Wargs Mar.99 Maros Marios Marol Marce Mar.97 Mar.98 Waroo Ward Marico March Narol Ś

BHEL LT T&D Others

Source: J.P. Morgan, Bloomberg.

Figure 4: Changes in capital goods sector market cap $\ln\,\%$



Source: J.P. Morgan, Bloomberg.

Current trading multiples still higher than those in the previous downcycle due to structural reasons

During the downcycle period of 1999-2002, BHEL traded at an average multiple of 7.5x, $\sim 50\%$ discount to the Sensex (dot-com bubble contributed to the high Sensex multiple). During that period, L&T traded at an average multiple of 5x.

BHEL traded at premium to L&T because (1) L&T derived significant part of its earnings from cement, a commodity business and (2) during down cycles, BHEL's earnings (mainly from state-owned power utilities) seem to be perceived as more resilient than L&T's. After L&T's cement disposal, L&T traded at an average multiple of 15x while BHEL traded at 18x – thus the premium contracted. During the end of the bull phase, L&T started trading at a premium to BHEL.

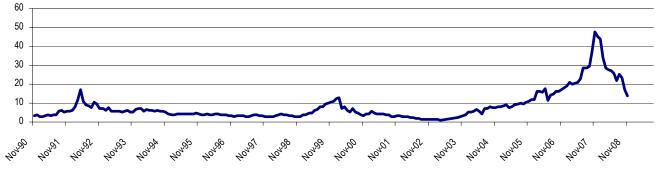
ABB is already trading close to its all-time low P/E (assuming no further cuts in estimates necessary). ABB's trough multiple is 10x. The company's cash flow resilience to cycles explains the consistent premium to the sector, in our opinion.

Both Siemens and CG saw a phase of financial losses. The trough multiple is close to 5x, but we believe that can be deceiving given markets could likely not have accurately projected the extent of turnaround.





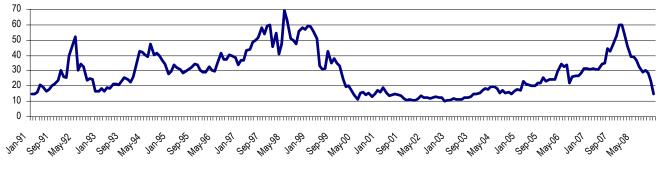
Source: J.P. Morgan.





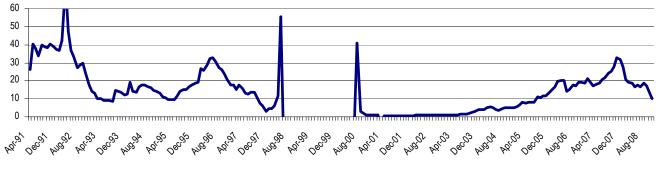
Source: J.P. Morgan.





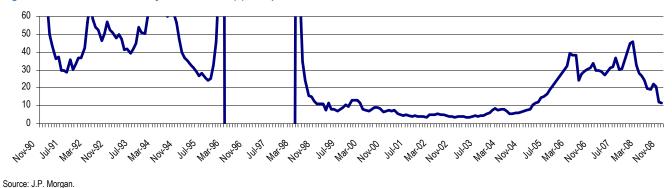
Source: J.P. Morgan.

Figure 9: Crompton Greaves: Historical 1-year forward P/E(x) multiples



Source: J.P. Morgan.

Figure 10: Siemens: Historical 1-year forward P/E(x) multiples



Appendix I: companies' sales growth vs. IIP

In %, year-end March 20 50 40 15 30 20 10 10 5 0 0 (10) FY93 FY94 FY95 FY96 FY97 FY98 FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 BHEL (LHS) — IIP (RHS)

Source: J.P. Morgan.

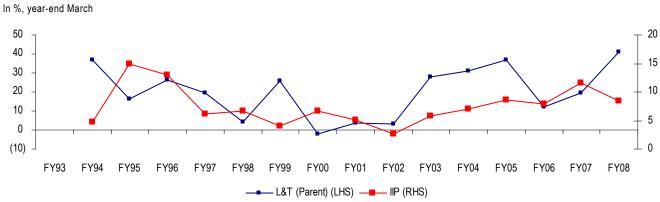


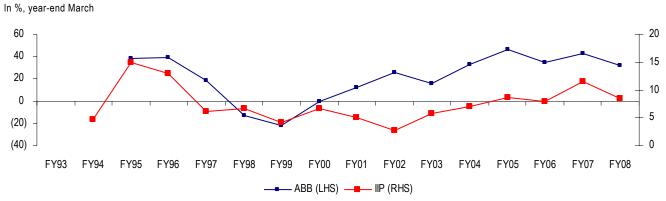
Figure 12: L&T (Parent): Sales Growth (%) vs. IIP Growth (%)

Figure 11: BHEL: Sales Growth (%) vs. IIP Growth (%)

Source: J.P. Morgan.

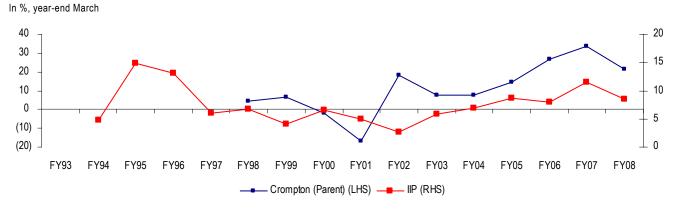
J.P.Morgan





Source: J.P. Morgan. Note: ABB (Dec-YE) sales has been fiscalized (Mar-YE)

Figure 14: Crompton Greaves: Sales Growth (%) vs. IIP Growth (%)



Source: J.P. Morgan.

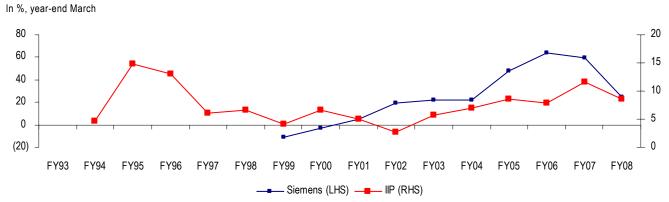


Figure 15: Siemens: Sales Growth (%) vs. IIP Growth (%)

Source: J.P. Morgan. Note: Siemens (Sep-YE) sales has been fiscalized (Mar-YE)

Appendix 2: Capital Goods estimates vs. consensus

Table 28: Capital Goods: J.P. Morgan vs. Consensus estimates

YE-March	FY09E	FY10E	FY11E
BHEL			
Revenue (Rs bn)			
Consensus	256.01	325.78	401.30
J.P. Morgan	249.17	306.81	379.05
Difference	(2.67)	(5.82)	(5.54)
EBITDA (Rs bn)			
Consensus	46.36	64.34	79.68
J.P. Morgan [a]	40.64	54.17	71.45
Difference	(12.34)	(15.81)	(10.33)
Fully diluted EPS (Rs)			
Consensus	70.91	95.17	116.68
J.P. Morgan	71.16	87.48	108.95
Difference	0.36	(8.08)	(6.63)
YE-Dec	CY08E	CY09E	CY10E
ABB			
Revenue (Rs bn)			
Consensus	71.7	88.7	111.5
J.P. Morgan	68.3	75.9	87.6
Difference	(4.8)	(14.4)	(21.4)
EBITDA (Rs bn)			
Consensus	8.9	10.8	13.0
J.P. Morgan	8.3	8.9	10.2
Difference	(7.0)	(18.3)	(21.8)
Fully diluted EPS (Rs)			
Consensus	29.3	37.3	48.1
J.P. Morgan	26.9	29.3	34.2
Difference	(8.2)	(21.5)	(28.9)
YE-Sep	FY08E	FY09E	FY10E
Siemens			
Revenue (Rs bn)	00 F	440.4	140.0
Consensus	98.5	119.1	142.6
J.P. Morgan	99.0	97.3	108.9
Difference	0.5	(4.6)	(15.2)
EBITDA (Rs bn)			
Consensus	8.8	11.2	13.6
J.P. Morgan	10.5	11.6	13.1
Difference	18.4	17.1	4.3

Fully diluted EPS (Rs)

Our estimates are significantly tracking below consensus, especially for L&T (31%), ABB (29%), Punj Lloyd (41%) and Crompton Greaves (24%)

Consensus	18.2	23.6	28.0
J.P. Morgan	20.6	23.0	26.3
Difference	13.2	8.7	0.3
YE-March	FY09E	FY10E	FY11E
Crompton Greaves			
Revenue (Rs bn)			
Consensus	85.03	99.46	107.80
J.P. Morgan	84.73	93.53	95.50
Difference	(0.35)	(3.17)	(15.12)
EBITDA (Rs bn)			
Consensus	9.27	10.89	12.41
J.P. Morgan	9.33	9.82	10.25
Difference	0.69	(7.37)	(23.33)
Fully diluted EPS (Rs)			
Consensus	14.05	17.02	19.28
J.P. Morgan	13.84	14.55	15.76
Difference	(1.50)	(11.73)	(23.62)
YE-March	FY09E	FY10E	FY11E
L&T			=
Revenue (Rs bn)			
Consensus	355.6	462.9	561.9
J.P. Morgan	384.4	461.3	523.6
Difference	8.09	3.96	(8.30)
EBITDA (Rs bn)			
Consensus	45.4	59.0	73.5
J.P. Morgan	49.3	57.9	64.3
Difference	8.59	0.69	(25.32)
Fully diluted EPS (Rs)			
Consensus	50.5	64.0	79.4
J.P. Morgan	50.0	59.4	65.7
Difference	(1.06)	(4.62)	(31.00)
YE-March	FY09E	FY10E	FY11E
Punj Lloyd			=
Revenue (Rs bn)			
Consensus	109.6	135.2	158.9
J.P. Morgan	108.5	127.3	138.4
Difference	(1.0)	(6.9)	(32.7)
EBITDA (Rs bn)			
Consensus	10.1	12.8	15.1
J.P. Morgan	9.8	11.4	12.0
Difference	(2.5)	(9.9)	(39.3)
Fully diluted EPS (Rs)			
Consensus	15.3	19.9	27.3
J.P. Morgan	13.8	15.9	16.5
Difference	(10.1)	(17.3)	(41.2)

Source: J.P. Morgan estimates, Bloomberg. [a] FY09 and FY10 adjusted for Rs13.13B and Rs4B employee wage arrear provisions

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Indian R&M companies

Bracing for fuel price cuts

- Auto fuels margins now positive: Marketing margins for diesel and petrol are now US\$8-26/bbl (Rs3-10.8/ltr). This is based on average crude prices of US\$61 in the last fortnightly pricing cycle and very low refining margins (Singapore GRMs of US\$1.4/bbl). Based on current fuel prices, Indian auto fuel marketing margins will be US\$10-31/bbl.
- Breakeven in LPG; kerosene losses pared: A sharp fall in LPG prices to US\$325/MT (down 40% m/m) in the last fortnight has led to breakeven levels on LPG, by our calculations. Losses on kerosene sales are Rs18/ltr (down from Rs24.3/ltr in Oct-08).
- No subsidy losses at these levels: We estimate breakeven for R&M companies on sales of controlled products based on prices of the last fortnight. Based on current fuel prices, R&M companies would gain Rs6B/month vs. an average subsidy loss of Rs152B/month in 1H FY09.
- Too early to uncork the bubbly: Apart from the likely cut in prices, we advise caution on the R&M names as 1) demand destruction which has led to lower crude prices is also impacting refining margins (Singapore GRMs printed US\$1.4/bbl in the last fortnight); 2) industry-wide inventory losses during 3Q FY09 will likely match 2Q FY09 levels of Rs52B; and 3) higher marketing margins will draw back private sector competition.
- When will prices be cut... In our assessment, the government will clearly be tempted to cut prices at the earliest. However, likely impediments for a speedy price cut could be 1) state elections which end on 24 December populist measures could be seen as a violation of the code of conduct; and 2) the OPEC meeting at the end of November if crude spikes up again, it would be very difficult for the government to justify domestic price increases, in our view.
- ...and by how much? Allowing regulated margins on products (US\$3/bbl on petrol/diesel), the government can effect steep cuts in diesel and petrol (based on spot prices). However, we believe the government may take a more graded cut of Rs2-5/ltr on diesel and petrol to cushion against any spike in crude and allow oil companies to recoup some of the losses incurred in Oct-08 (subsidy of Rs63B in that month) so as to insulate itself from further bond issues.

Profit/loss in various fuels

	Petrol (Rs/ltr)	Diesel (Rs/ltr)	LPG (Rs/cyl)	Kerosene (Rs/ltr)
Jul-08	-13.05	-23.00	-326	-40.5
Oct-08	-1.40	-4.40	-152	-24.3
Last Fortnight	10.80	3.00	0	-18

Source: Bloomberg, J.P. Morgan estimates. Note: Negative numbers indicate loss and positive numbers indicate marketing gain.

See page 30 for analyst certification and important disclosures, including non-US analyst disclosures.

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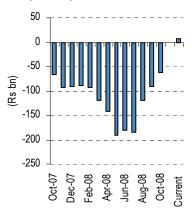
India Independent Refiners

Pradeep Mirchandani, CFA^{AC} (91-22) 6639 3041 pradeep.a.mirchandani@jpmorgan.com

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J.P. Morgan India Private Limited

Industry subsidy loss



Source: Bloomberg, J.P. Morgan estimates.

At current crude and product prices we estimate R&M

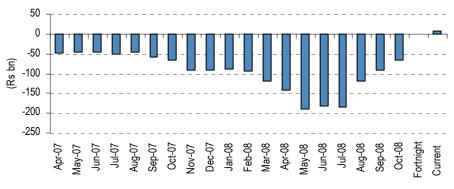
companies do not incur subsidy

losses with profit on petrol and diesel sales, breakeven on LPG

and lower loss on kerosene

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Figure 1: No marketing losses at current product prices (monthly Industry subsidy loss)



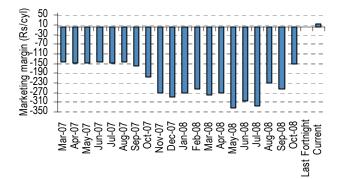
Source: Bloomberg, J.P. Morgan estimates.

Figure 2: Large gains on marketing on transport fuels

15.00 10.00 Marketing margin (Rs/ltr) Petrol 5.00 0.00 -5.00 -10.00 -15.00 -20.00 -25.00 -30.00 Oct-08 Jan-08 Feb-08 Mar-08 Apr-08 Jun-08 Jul-08 -ast Fortnight Jul-07 Oct-07 Dec-07 **Jay-08** Aug-08 Sep-08 Sep-07 Vov-07 Current Aug-07

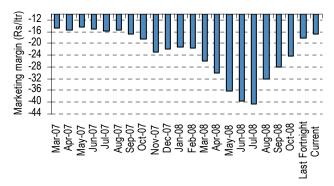
Source: Bloomberg, J.P. Morgan estimates.

Figure 3: LPG near breakeven

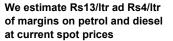


Source: Bloomberg, J.P. Morgan estimates.

Figure 4: SKO loses continue

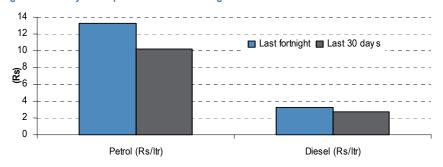


Source: Bloomberg, J.P. Morgan estimates.



With a severe correction in international LPG prices we estimate R&M companies will break even on LPG sales at current levels and incur a Rs17/ltr loss on marketing of SKO Pradeep Mirchandani, CFA (91-22) 6639 3041 pradeep.a.mirchandani@jpmorgan.com Asia Pacific Equity Research 19 November 2008

Figure 5: Leeway to cut prices for no marketing loss



Source: Bloomberg, J.P. Morgan estimates.

Table 1: Quarterly marketing loss and oil bonds issue

1Q FY09 2Q FY09 Oct-08E Nov-08E Total Industry subsidy loss 489,060 441,733 63,000 0.00 244,530 205,140 Total oil bonds BPCL 57,660 47,824 HPCL 42,212 51,150 IOC 135,720 115,104 Oil bonds (% of subsidy loss) 50% 46%

Source: Company reports, J.P. Morgan estimates.

Figure 6: Regional refining cracks (US\$/bbl) 40.0 30.0 20.0 10.0 0.0 -10.0 -20.0 -30.0 -40.0 Sep-02 May-02 Jan-02 May-04 Jan-04 sep-06 May-06 Jan-06 Sep-05 Sep-03 èep-04 /ay-05 lan-05 /ay-07 Diesel-Crude — Fuel Oil-Crude —— Gasoline-Crude _

Table 2: 3Q FY09 inventory losses could be very high

	Crude (US\$/bbl)	Change (US\$/bbl)
June-08 end	140.0	
Sep-08 end	100.6	-39.4
Current price	54.95	-45.7
	Inventory Loss (Rs	bn)
IOC	39.2	
BPCL	6.0	
HPCL	7.0	
Total	52.2	
% of 2Q09 loss	41%	

Source: Bloomberg, J.P. Morgan estimates.

Source: Bloomberg, J.P. Morgan estimates.

Government has significant leeway to cut prices

Government oil bond grant was

the government would prefer not

Rs450B in 1H FY09 (~48% of total subsidy). We believe that

to issue any more oil bonds

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IB clients*	76%	70%	59%

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