kotak® Institutional Equities

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News Roundup

Corporate

- Hit by sticky assets in the tractor & power tilling equipment segment, the country's largest bank, State Bank of India (SBI), has put a temporary ban on further credit to this segment. (FE)
- In what could have serious implications for cross-border deals into India, the Authority for Advance Ruling (AAR) a quasi-judicial body, has ruled against Foster's Australia, saying that the beer major's sale of brand and trademarks to SABMiller in India is taxable in the country. (ET)
- Mahindra & Mahindra is learnt to have set its sights on Italian motorcycle marque brands—Cagiva and MV Agusta—famed for designing high-end, high-performance superbikes that are a rage on the speed motorcycle circuit. (ET)

Economic and political

- The Rural Electrification Corporation has agreed to fund the entire debt of the 1,000-MW coal-based power project being put up jointly by NTPC and the Tamil Nadu Electricity Board, near Chennai. (BL)
- The Telecom Regulatory Authority of India has started monitoring changes in the contractual agreements of operators to ensure that they do not adversely impact the annual license fee earned by the government and follow license conditions. (BS)
- The Centre has turned down the Maharashtra government's proposal to provide labour law flexibility in special economic zones. (BS)

Source: ET = Economic Times, BS = Business Standard, FE = Financial Express, BL = Business Line.

EQUITY MARKETS

		Change, %		
India	**16-May**	**1-day**	**1-mo**	**3-mo**
Sensex	17,435	0.5	5.8	(3.5)
Nifty	5,158	0.8	4.0	(2.3)
Global/Regional indices				
Dow Jones	13,028	0.3	1.4	4.8
Nasdaq Composite	2,516	(0.5)	4.7	8.1
FTSE	6,377	1.1	5.3	8.2
Nikkie	14,224	(0.3)	5.5	6.9
Hang Seng	25,255	(1.9)	4.4	7.1
KOSPI	1,867	(1.0)	5.4	10.6
Value traded - India				
			Moving avg, Rs bn	
	16-May		**1-mo**	**3-mo**
Cash (NSE+BSE)	193.4		199.8	193.6
Derivatives (NSE)	378.8		396.5	427
Deri. open interest	787.9		651	743

Forex/money market

		Change, basis points		
	16-May	**1-day**	**1-mo**	**3-mo**
Rs/US$	42.6	0	268	235
6mo fwd prem, %	0.7	(25)	71	24
10yr govt bond, %	8.1	6	(9)	43

Net investment (US$mn)

	14-May		**MTD**	**CYTD**
FIIs	64		(78)	(2,792)
MFs	31		9	1,611

Top movers -3mo basis

		Change, %		
Best performers	**16-May**	**1-day**	**1-mo**	**3-mo**
Nestle India	1,841	(0.5)	20.5	40.9
Thomas Cook	102	0.2	3.4	39.3
NALCO	525	1.2	23.7	38.7
i-Flex	1,403	3.0	8.2	32.5
Shipping Corp	282	6.0	28.0	32.3
Worst performers				
Reliance Cap	1,385	1.6	2.2	(30.9)
Thermax	457	0.6	(11.9)	(28.6)
BoB	296	1.1	(1.2)	(26.6)
Siemens India	582	(1.5)	(9.7)	(26.2)
Essel Propack	35	1.0	(11.4)	(25.3)

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Technology

TEML.BO, Rs957	
Rating	ADD
Sector coverage view	Neutral
Target Price (Rs)	900
52W High -Low (Rs)	1590 - 575
Market Cap (Rs bn)	119.2

Financials

March y/e	2008	2009E	2010E
Sales (Rs bn)	37.7	50.2	63.2
Net Profit (Rs bn)	7.8	9.3	11.1
EPS (Rs)	59.1	71.0	84.4
EPS gth	*25.7*	*20.3*	*18.7*
P/E (x)	16	13.5	11.3
EV/EBITDA (x)	14.4	10.2	7.9
Div yield (%)	0.4	0.5	0.6

Tech Mahindra: The good news is priced in. Downgrading a notch to ADD

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- **Results below our higher-than-consensus expectations**
- **Aggressive accounting treatment for upfront payment for a large deal**
- **Moderate reduction in revenue estimates**
- **Downgrade to ADD; revise target price upwards to Rs900/share**

Tech Mahindra's (TM) Mar '08 quarter results were marginally below our higher-than-consensus estimates. Revenues grew 5.1% qoq to US$258 mn (versus our estimate of US$264 mn), EBITDA by 4.5% to Rs2.22 bn (versus our expectation of Rs2.37 bn) and net income by 9.8% Rs2.19 bn (our expectation was Rs2.1 bn). We believe that TM's earnings and revenues would be volatile on a quarterly basis noting the high client concentration, nature of engagements and single vertical focus. We moderately reduce our FY2009E and FY2010E US$ revenue estimates and have reasonable degree of confidence given the strong tailwinds, market share gains in the BT core business, strong ramp-up potential in BT GS and wins in the non-BT relationships. We increase our EPS estimates for FY2009E and FY2010E and our DCF based target price (Rs900 from Rs850 earlier) largely on the back of our economist's revised Re/US$ rate forecast (Rs40 versus Rs39.5 earlier for FY2009E). However, we downgrade our rating a notch to ADD after a steep increase in stock price to Rs957 since upgrade in our rating in March. We are unimpressed with aggressive accounting practices of TM, the latest being the charge-off pertaining to upfront payment of US$110 mn paid to BT as a part of the exclusivity agreement for a long-term strategic transformation contract negotiation; the stock may trade weak in the near term as a result.

Results below our higher-than-consensus expectations. TM reported revenues of US$258 mn, a sequential growth of 5.1%. Revenues were lower than our expectation of US$264 mn. BT revenues grew 12% to US$168 mn; BTGS revenues grew 64% qoq to US$20 mn, while BT core revenues grew 8% qoq to US$150 mn. Non-BT revenues declined 6% qoq to US$90 mn; excluding pass-through items (of US$6 mn in Dec '07 quarter), non-BT revenues were flat qoq and up 48% yoy. We note that TM would have qoq volatility in revenue streams and hence we are not unduly concerned with decline in non-BT revenues.

EBITDA margin declined 15 bps to 21.8% as compared to our expectation of 22.8%. Decline in OPM was led by an increase in transition and certain non-manpower costs at the direct-cost line. Net income grew 9.8% qoq to Rs2.19 bn, higher than our expectation. Higher-than-expected net income was led by forex gains of US$7 mn (we had not factored in any forex gains into our estimates).

The company had a decline in headcount by 271 employees to 22,884. The management indicated that it has made campus offers to 5,500 employees, slated to join the company in FY2009.

Aggressive accounting treatment for upfront payment for a large deal. TM has made a payment of US$110 mn for exclusivity of 90 days in negotiating a large contract with BT. TM is negotiating the contract in a consortium though it has taken responsibility of entire payment of the deal on its books. The management indicates that other consortium member/s would pay their proportionate share once the agreement is finalized. Meanwhile, TM has written off the entire amount paid as part of the contract as an exceptional charge in results even before the contract is finalized. We find the accounting treatment of this payment extremely aggressive and illogical; the management indicates that accounting treatment was consistent with the auditor's recommendations. The company indicates that it would write back the amount it would receive from other consortium members once the agreement is finalized.

We believe the payment pertains to a large opportunity (US$1 bn) from BT. We do not have details on the company-wise share of revenues in the consortium. TM management indicates that the deal margins after taking the upfront money paid to BT would be in line with corporate average of TM. We find it difficult to comprehend the rationale of the accounting treatment for the upfront payment and believe that it distorts the matching principle of revenues and costs in the accounts.

Moderate reduction in revenue estimates; growth to be led by BTGS, non-BT/ AT&T relationships; BT's core business remains a wildcard. We forecast 34% growth in revenues in FY2009E and 29% in FY2010E (US$ terms). We expect revenue growth to be driven by strong ramp-up in BTGS revenues and greater traction in some of the non-BT/AT&T accounts. We discuss each of the major revenue streams of TM in detail below:

a) **BT business (excluding BTGS)—revenue growth remains a wildcard—we factor in modest growth, anyway.** We forecast moderate revenue growth from BT core business for Tech Mahindra in FY2009E (17.4% over FY2008E, a CQGR of 4.2% from 1QFY09E-4QFY09E). We concede that forecasting revenue growth from BT core is challenging given spends on multiple programs and platforms, all of which may not go on simultaneously and may be prone to change or rationalization. We believe that forecasting may become even more difficult since BT may consolidate the number of vendors working on each relationship. This may lead to new end-to-end engagement wins in some case for TM and ramp down on platforms given to competitors of TM in other cases. However, TM's strong positioning in majority of BT's platforms (TM management indicates that it is among the top 2 outsourcing vendors in 14 of BT's 15 platforms) positions it well within the BT core account, in our view. However, we highlight the pricing/margin risks that could arise out of several existing players competing for end-to-end ownership of these platforms.

b) **BT GS—expect strong ramp up in FY2009E.** We have modeled revenues of US$125 mn for FY2009E from BT GS. The company had billing of US$18 mn in the Mar '08 quarter to BTGS. The management indicated robust progress in the discovery process and has made substantial investments in building capabilities to take over end-to-end platforms/processes within BTGS. In our view, revenues will accelerate hereon to a peak level by the 8th-10th quarters. This would be accompanied by improving margin profile from this account.

c) **Well rounded traction in non-BT business; pipeline remains strong.** TM has reported strong growth in non-BT accounts over the past few quarters (FY2008 non-BT revenues up 45.5% yoy). The company has done a good job in scaling up the AT&T relationship (now a US$100 mn+ per annum relationship) and certain large accounts in Europe. The company has also done reasonably well in scaling up non-BT, non-AT&T relationships won in recent times. We have confidence in TM's capabilities to expand the addressable market opportunity within telecom clients. TM management indicates good growth potential in some of its large non-BT, non-AT&T relationships. The pipeline of new deals (non-BT, non-AT&T) remains strong; stronger-than-expected growth can come if the company wins some of the large (US$30-70 mn) SI deals that it is pursuing. We forecast US$468 mn and US$638 mn revenues from non-BT relationships in FY2009E and FY2010E, respectively.

Key changes in FY2009-10 estimates, March fiscal year-ends

	New		Old		Change (%)	
	2009E	2010E	2009E	2010E	2009E	2010E
Revenues (Rs mn)	**50,208**	**63,193**	**49,820**	**62,652**	**0.8**	**0.9**
Revenues (US$ mn)	**1,254**	**1,621**	**1,278**	**1,650**	**(1.9)**	**(1.8)**
EBITDA (Rs mn)	11,025	13,241	10,738	12,953	2.7	2.2
Net Profit (Rs mn)	9,307	11,050	9,216	10,884	1.0	1.5
EPS (Rs/share)	**74.7**	**85.6**	**74.0**	**84.3**	**1.0**	**1.5**
Fully diluted EPS (Rs/share)	**71.0**	**84.4**	**70.7**	**83.5**	**0.5**	**1.1**
Re/$ rate	40.0	39.0	39.5	38.5	1.3	1.3
EBITDA margin (%)	22.0	21.0	21.6	20.7		

Source: Kotak Institutional Equities estimates.

Tech Mahindra interim results, March fiscal year-end (Rs mn)

	4QFY07	3QFY08	4QFY08	% change qoq	% change yoy	Kotak Estimates	% Deviation	Comments on QoQ performance
Revenues	**8,745**	**9,704**	**10,218**	**5.3**	**16.8**	**10,386**	**(1.6)**	Revenue growth of 5.1% qoq in US$ terms below our expectations. Adjusted for the pass-through SI revenues of US$6 mn in 3QFY08, revenue growth was a decent 7.8%. Almost the entire revenue growth came from the BT account. Non-BT accounts were flattish (adj
Cost of revenues	(5,135)	(6,144)	(6,560)	6.8	27.8	(6,445)	1.8	
Gross profit	**3,610**	**3,560**	**3,658**	**2.8**	**1.3**	**3,941**	**(7.2)**	Gross margin performance (decline of 90bps qoq) disappointing given (1) sharp increase in utilization (2) negative net hiring and (3) rupee depreciation during the quarter
SG&A expenses	(1,392)	(1,431)	(1,434)	0.2	3.0	(1,571)	(8.7)	
EBITDA	**2,218**	**2,129**	**2,224**	**4.5**	**0.3**	**2,370**	**(6.2)**	Decline in EBITDA margin arrested by SG&A efficiency gains of 70bps
Depreciation	(158)	(206)	(229)	11.2	44.9	(179)	28.2	
EBIT	**2,060**	**1,923**	**1,995**	**3.7**	**(3.2)**	**2,192**	**(9.0)**	
Interest	(49)	(16)	(5)			-		
Other income	154	300	364	21.3	136.4	50		Other income includes US$7 mn of forex gains
Profit before tax	**2,165**	**2,207**	**2,354**	**6.7**	**8.7**	**2,242**	**5.0**	
Tax	(204)	(213)	(165)	(22.5)	(19.1)	(154)		Tax rate of 7% qoq in line with expectations
Net profit	**1,961**	**1,994**	**2,189**	**9.8**	**11.6**	**2,088**	**4.8**	
Minority interest	2	1	(1)			-		
Net income	**1,963**	**1,995**	**2,188**	**9.7**	**11.5**	**2,088**	**4.8**	**Net income ahead of expectations led by forex gains**
Extraordinaries	(5,249)	-	(4,401)			-		US$110 mn payment to a large customer for exclusive rights to enter a long-term contract (as part of a consortium)
Net profit- reported	**(3,286)**	**1,995**	**(2,213)**			**2,088**	**(206.0)**	
EPS -Diluted (Rs)	**15.1**	**15.2**	**16.7**	**9.7**	**11.0**	**16.0**		
Shares outstanding (mn)	130.4	131.0	131.0	**-**	0.5	130.5		
Margins (%)								
Gross profit margin	41.3	36.7	35.8			37.9		
EBITDA margin	25.4	21.9	21.8			22.8		
EBIT margin	23.6	19.8	19.5			21.1		
NPM	22.4	20.6	21.4			20.1		
Employee Metrics								
Software Professionals	17,181	18,448	18,430					Negative net hiring in IT services business for the second consecutive quarter
Sales & Support	813	1,003	1,009					
BPO professionals	1,755	3,704	3,445					
Total Employees	19,749	23,155	22,884					
Other Metrics								
BT revenues (% of total)	67.0	61.0	65.0					
Revenues (%)								
BT	5,859	5,919	6,642	12.2	13.4			
Non-BT	2,886	3,785	3,576	(5.5)	23.9			Non-BT revenues, adjusted for the SI revenues in 3QFY08 flattish
Revenue Mix (%)								
Onsite	41.0	44.0	42.0					
Offshore	59.0	56.0	58.0					

Source: Kotak Institutional Equities estimates.

Tech Mahindra- consolidated Indian GAAP profit & loss statement. March fiscal year ends (Rs mn)

	2006	2007	2008	2009E	2010E
Revenues	**12,427**	**29,290**	**37,661**	**50,208**	**63,193**
Direct cost	(7,397)	(17,536)	(23,854)	(31,913)	(40,858)
Gross profit	**5,030**	**11,754**	**13,807**	**18,296**	**22,334**
SG&A expenses	(2,351)	(4,387)	(5,549)	(7,271)	(9,093)
EBITDA	**2,679**	**7,368**	**8,258**	**11,025**	**13,241**
Depreciation	(397)	(515)	(796)	(1,017)	(1,239)
EBIT	**2,282**	**6,852**	**7,462**	**10,007**	**12,001**
Other income	340	77	1,044	409	704
Interest		(61)	(62)	-	-
Profit before tax	**2,622**	**6,868**	**8,444**	**10,416**	**12,706**
Tax	(268)	(740)	(748)	(1,109)	(1,655)
Net profit	**2,354**	**6,128**	**7,696**	**9,307**	**11,050**
Minority interest	(0)	(1)			
Net income	**2,354**	**6,127**	**7,696**	**9,307**	**11,050**
Extraordinaries	-	(4,910)	(4,401)	-	-
Net profit- reported	**2,354**	**1,218**	**3,295**	**9,307**	**11,050**
Fully Diluted EPS (Rs/Share)		**47.0**	**59.0**	**71.0**	**84.4**
Margins (%)					
Gross profit margin	40.5	40.1	36.7	36.4	35.3
EBITDA margin	21.6	25.2	21.9	22.0	21.0
EBIT margin	18.4	23.4	19.8	19.9	19.0
NPM	18.9	20.9	20.4	18.5	17.5
Growth rates (%)					
Revenues	31.4	135.7	28.6	33.3	25.9
Gross profit	44.4	133.7	17.5	32.5	22.1
EBITDA	98.4	175.0	12.1	33.5	20.1
EBIT	121.8	200.3	8.9	34.1	19.9
Net profit	130.1	160.3	25.6	20.9	18.7

Source: Kotak Institutional Equities estimates.

Media

HTML.BO, Rs142	
Rating	BUY
Sector coverage view	Neutral
Target Price (Rs)	190
52W High -Low (Rs)	266 - 126
Market Cap (Rs bn)	33.3

Financials

March y/e	2008	2009E	2010E
Sales (Rs bn)	12.1	14.7	17.2
Net Profit (Rs bn)	1.0	1.1	2.0
EPS (Rs)	4.4	4.7	8.3
EPS gth	*6.4*	*7.2*	*76.8*
P/E (x)	32.3	30	17.1
EV/EBITDA (x)	17.9	16.8	9.6
Div yield (%)	0.7	1.4	2.1

Shareholding, December 2007

	Pattern	% of Portfolio	Over/(under) weight
Promoters	68.7	-	-
FIIs	19.0	0.1	0.1
MFs	7.7	0.3	0.3
UTI	-	-	-
LIC	-	-	-

HT Media: Standalone 4QFY08 results in line with expectations; higher-than-expected losses in new media initiatives impact FY2008 consolidated numbers

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- **Robust growth in print ad revenues; Hindustan and Mint contribution significant**
- **Higher-than-expected SG&A expenses compensated by lower RM, employee costs**
- **Higher-than-expected losses in new media initiatives (radio, internet, tabloid)**
- **Retain BUY with revised 12-month DCF-based TP of Rs190 (Rs225 previously)**

HTML reported standalone 4QFY08 net income of Rs416 mn (+74% yoy), above our estimate of Rs387 mn; net income was pushed up by higher other income and low taxation rate (26.3%). HTML reported standalone EBITDA and revenues at Rs601 mn (+44% yoy) and Rs3.13bn (+14% yoy), respectively, marginally below our Rs626 mn and Rs3.17 bn estimate. The company did not provide breakup of FY2008 consolidated results but disclosed Rs300 mn losses in its radio venture, way above our Rs64 mn estimate. We believe the new media initiatives of the company will be value accretive though (1) they will continue to make losses for some more time and (2) the expected breakeven period will likely be longer than previously anticipated. We have fine-tuned our model and reduced FY2009E, FY2010E and FY2011E consolidated EPS to Rs4.7 (Rs7.6 previously), Rs8.3 (Rs10.4) and Rs13.2 (Rs14.6), respectively. We retain our BUY rating on the stock with 12-month DCF-based target price of Rs190 (Rs225 previously); the change reflects higher newsprint prices, higher-than-expected new media losses and other minor changes. Key downside risks stem from the pace of ad revenue growth and newsprint prices.

4QFY08 and FY2008 results analysis

Robust revenue growth continues. HTML standalone 4QFY08 revenues increased 14% yoy to Rs3.13 bn from Rs2.75 bn in 4QFY07. Ad revenues increased to Rs2.69 bn in 4QFY08 from Rs2.34 bn in 4QFY07, a robust growth of 15%. We note that the strong growth in ad revenues is despite a slowdown in the auto sector and 40% decrease in ad spending from the real estate sector. The Hindi segment (Hindustan) grew 30% yoy as a result of expansion into UP and the lucrative Delhi market. Mint contributed about Rs100 mn in 4QFY08 versus negligible revenues in 4QFY07, when it had just been launched. 4QFY08 circulation revenues were Rs370 mn (+12% yoy).

4QFY08 EBITDA impacted by higher SG&A expenses but supported by lower raw material, employee costs. HTML reported standalone 4QFY08 EBITDA of Rs601 mn (+44% yoy), marginally below our estimate of Rs626 mn. SG&A expenses at Rs914 mn were higher versus our expected Rs754 mn due to continued investment in marketing of HTML's various new media initiatives such as Mint business newspaper and expansion of Hindustan. The management attributed the lower-than-expected raw material (RM) costs (Rs1.12 bn; -9% qoq, -1% yoy) despite rising newsprint prices to (1) lower school copies and (2) increased inventory buildup of 4-5 months of newsprint in anticipation of rise in newsprint prices. Lower-than-expected employee costs at Rs497 mn (+27% yoy) and RM costs helped support 4QFY08 EBITDA.

Net income supported by other income, lower taxation. HTML reported standalone 4QFY08 net income at Rs416 mn (+74% yoy), above our Rs387 mn estimate. The other income for 4QFY08 at Rs123 mn (+41% yoy) included a one-off component of about Rs35 mn. HTML reported standalone FY2008 tax rate of 28%; we note that the dividend/interest income received by HTML is tax free; adjusted for the tax-free income component, effective tax rate for standalone parent comes to 33%.

HT Media Ltd. standalone interim results, March fiscal year-ends (Rs mn)

		qoq			yoy			yoy		
	2009E	4Q 2008	3Q 2008	% chg	4Q 2008	4Q 2007	% chg	2008	2007	% chg
Revenues	**14,178**	**3,134**	**3,194**	***(2)***	**3,134**	**2,750**	***14***	**11,862**	**10,393**	***14***
Advertisement revenues	12,009	2,686	2,748	*(2)*	2,686	2,344	*15*	10,137	8,731	*16*
Circulation revenues	1,890	370	390	*(5)*	370	330	*12*	1,449	1,362	*6*
Others	280	78	56	*38*	78	76	*2*	276	300	*(8)*
Total expenditure	**(11,762)**	**(2,532)**	**(2,602)**	***(3)***	**(2,532)**	**(2,332)**	***9***	**(9,633)**	**(8,488)**	***13***
Inc/(Dec) in inventories	—	(2)	1		(2)	4		(4)	3	
Raw material costs	(6,108)	(1,118)	(1,226)	*(9)*	(1,118)	(1,124)	*(1)*	(4,558)	(4,320)	*6*
Employee costs	(1,981)	(497)	(433)	*15*	(497)	(391)	*27*	(1,756)	(1,477)	*19*
Sales and marketing	(1,017)	(260)	(318)	*(18)*	(260)	(268)	*(3)*	(920)	(638)	*44*
Manufacturing and G&A costs	(2,657)	(654)	(626)	*5*	(654)	(552)	*19*	(2,395)	(2,056)	*16*
EBITDA	**2,416**	**601**	**592**	***2***	**601**	**418**	***44***	**2,229**	**1,905**	***17***
Other income	390	123	87	*41*	123	91	*36*	407	403	*1*
Interest & finance charges	(140)	(43)	(45)	*(3)*	(43)	(35)	*25*	(177)	(143)	*24*
Depreciation	(481)	(117)	(114)	*3*	(117)	(107)	*9*	(447)	(397)	*12*
Pretax profits	**2,184**	**564**	**521**	***8***	**564**	**367**	***54***	**2,012**	**1,768**	***14***
Extraordinary items	—	—	—		—	—		—	(3)	
Provision for tax	(649)	(139)	(145)	*(4)*	(139)	(115)	*21*	(534)	(533)	—
Deferred tax	48	—	—		—	—		—	(45)	
Fringe benefit tax	—	(10)	(8)	*23*	(10)	(13)	*(23)*	(33)	(37)	*(10)*
Net income	**1,583**	**416**	**369**	***13***	**416**	**240**	***74***	**1,446**	**1,151**	***26***
Tax rate (%)	*28*	*26*	*29*		*26*	*35*		*28*	*35*	
EBITDA margin (%)	**17.0**	**19.2**	**18.5**		**19.2**	**15.2**		**18.8**	**18.3**	

Note:
(a) Annual figures represent consolidated numbers with radio business while quarterly figures represent standalone numbers.

Source: Company, Kotak Institutional Equities estimates.

Our DCF-based target price for HTML is Rs190
Discounted cash flow analysis of HT Media (Rs mn)

	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E
EBITDA	**1,885**	**3,219**	**4,898**	**5,744**	**6,455**	**7,206**	**7,935**	**8,721**	**9,556**	**9,777**	**10,314**	**10,882**	**11,480**
Tax expense	(705)	(1,122)	(1,682)	(1,983)	(2,244)	(2,506)	(2,762)	(3,052)	(3,365)	(3,534)			
Changes in working capital	(317)	(335)	(362)	(281)	(264)	(282)	(303)	(328)	(357)	(238)			
Cash flow from operations	**863**	**1,762**	**2,854**	**3,479**	**3,947**	**4,418**	**4,870**	**5,341**	**5,834**	**6,006**			
Capital expenditure	(785)	(540)	(551)	(561)	(572)	(583)	(594)	(606)	(618)	(629)			
Cash flows for minority interest	142	72	(37)	(63)	(79)	(95)	(113)	(129)	(147)	(80—)			
Free cash flow to the firm	**221**	**1,294**	**2,267**	**2,855**	**3,295**	**3,740**	**4,164**	**4,606**	**5,069**	**5,296**	**5,588**	**5,895**	**6,219**
Dicounted cash flow-now	177	924	1,438	1,609	1,651	1,666	1,648	1,620	1,585	1,472			
Discounted cash flow-1 year forward		1,039	1,618	1,811	1,858	1,874	1,855	1,823	1,784	1,656	1,553		
Discounted cash flow-2 year forward			1,820	2,037	2,090	2,109	2,086	2,052	2,007	1,864	1,748	1,639	

Discount rate (%)	12.5											
Growth from 2017 to perpetuity (%)	5.5											
Fiscal year-end (March 31, XXXX)	31-Mar-09	31-Mar-10	31-Mar-11	31-Mar-12	31-Mar-13	31-Mar-14	31-Mar-15	31-Mar-16	31-Mar-17	31-Mar-18	31-Mar-19	31-Mar-20
Today	20-May-08	20-May-08	20-May-08	20-May-08	20-May-08	20-May-08	20-May-08	20-May-08	20-May-08	20-May-08	20-May-08	20-May-08
Years left	1	2	3	4	5	6	7	8	9	10	11	12
Discount factor at WACC	**0.9**	**0.8**	**0.7**	**0.6**	**0.6**	**0.5**	**0.4**	**0.4**	**0.4**	**0.3**	**0.3**	**0.2**

	+ 1-year		+ 2-years	
Total PV of free cash flow (a)	**16,871**	**39%**	**19,451**	**41%**
FCF in terminal year	5,895		6,219	
Exit FCF multiple (X)	14.3		14.3	
Terminal value	84,215		88,847	
PV of terminal value (b)	**26,339**	**61%**	**27,787**	**59%**
EV (a) + (b)	**43,209**		**47,238**	
EV (US$ mn)	**939**		**1,027**	
Net debt	(1,549)		(2,268)	
Equity value	**44,758**		**49,506**	
Implied share price (Rs)	**191**		**211**	
Exit EV/EBITDA multiple (X)	8.2		8.2	

Sensitivty of share price to different levels of WACC and growth rate (Rs)

		WACC (%)						
		11.0	**11.5**	**12.0**	**12.5**	**13.0**	**13.5**	**14.0**
Growth rate (%)	**1.0**	167	158	149	141	134	127	121
	1.0	167	158	149	141	134	127	121
	2.0	178	167	157	148	140	133	126
	3.0	192	179	168	157	148	140	132
	4.0	210	194	181	169	158	148	140
	5.0	234	214	197	183	170	159	149
	6.0	267	241	219	**201**	185	172	160
	7.0	316	280	250	226	206	189	174
	8.0	399	341	296	262	235	212	194

Source: Kotak Institutional Equities estimates.

Reducing our earnings estimates due to stronger-than-expected newsprint prices and losses in new media initiatives

Revised and previous earnings estimates for HT Media, March fiscal year-ends, 2009E-2011E (Rs mn)

	Revised estimates			Previous estimates			Change (%)		
	2009E	2010E	2011E	2009E	2010E	2011E	2009E	2010E	2011E
Advertisement revenues	12,407	14,248	16,006	12,598	14,433	16,208	(1.5)	(1.3)	(1.2)
Circulation revenues	1,890	2,285	2,636	1,925	2,330	2,673	(1.8)	(1.9)	(1.4)
Subsidiary and other revenues	838	1,238	1,776	685	813	934	22.3	52.2	90.2
Total sales	**14,737**	**17,207**	**19,731**	**14,742**	**17,011**	**19,157**	**(0.0)**	**1.1**	**3.0**
Production cost	7,691	8,223	8,429	6,904	7,551	7,889	11.4	8.9	6.8
Employee cost	2,263	2,575	2,880	2,232	2,526	2,818	1.4	2.0	2.2
SG&A expenses	2,897	3,190	3,524	2,568	2,847	3,068	12.8	12.0	14.9
Total expenditure	**12,851**	**13,988**	**14,833**	**11,704**	**12,924**	**13,774**	**9.8**	**8.2**	**7.7**
EBITDA	**1,885**	**3,219**	**4,898**	**3,039**	**4,088**	**5,383**	**(38)**	**(21)**	**(9)**
EPS (Rs)	**4.7**	**8.3**	**13.2**	**7.6**	**10.4**	**14.6**	**(38)**	**(20)**	**(10)**

Source: Kotak Institutional Equities estimates.

HT Media's CMP is discounting newsprint prices at US$800/ton in perpetuity

Sensitivity of HTML's valuation to long term newsprint prices (%)

	DCF value (Rs/share)	Change from base case (%)
Change in newsprint price (US$/ton)		
+200	127	(34)
+150	143	(25)
+100	159	(17)
+50	176	(8)
Base case (US$650/ton)	**191**	
-50	207	8
-100	224	17

Source: Kotak Institutional Equities estimates.

Derivation of revenues of HT Media, March fiscal year-ends, 2006-2012E (Rs mn)

	2006	2007	2008	2009E	2010E	2011E	2012E	2006	2007	2008	2009E	2010E	2011E	2012E
Advertisement revenues														
HT Delhi	4,612	6,102	6,645	7,396	8,154	8,904	9,723	56	59	55	50	47	45	45
HT Mumbai	449	711	984	1,361	1,627	1,840	2,043	5	7	8	9	9	9	9
HT Others	571	720	988	1,384	1,631	1,869	2,113	7	7	8	9	9	9	10
HH	926	1,215	1,519	1,869	2,272	2,706	3,017	11	12	13	13	13	14	14
Advertisement revenues	**6,557**	**8,748**	**10,137**	**12,009**	**13,684**	**15,319**	**16,896**	**80**	**84**	**84**	**81**	**80**	**78**	**78**
Circulation revenues														
HT Delhi	524	572	620	652	689	727	768	6	6	5	4	4	4	4
HT Mumbai	(10)	(91)	(86)	(4)	120	247	278	—	(1)	(1)	—	1	1	1
HT Others	181	184	196	252	305	362	382	2	2	2	2	2	2	2
HH	647	704	720	988	1,171	1,300	1,373	8	7	6	7	7	7	6
Circulation revenues	**1,342**	**1,369**	**1,449**	**1,890**	**2,285**	**2,636**	**2,800**	**16**	**13**	**12**	**13**	**13**	**13**	**13**
Subsidiary and other revenues														
Other revenues	295	233	276	280	308	336	338	4	2	2	2	2	2	2
Internet revenues	—	—	20	60	140	300	400	—	—	—	—	1	2	2
Metro Now revenues	—	—	10	100	225	453	517	—	—	—	1	1	2	2
Radio revenues	—	20	171	398	564	687	816	—	—	1	3	3	3	4
Total revenues	**8,195**	**10,370**	**12,063**	**14,737**	**17,207**	**19,731**	**21,768**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Kotak Institutional Equities estimates.

Profit model, balance sheet, cash model of HT Media, March fiscal year-ends, 2005-2012E (Rs mn)

	2005	2006	2007	2008E	2009E	2010E	2011E	2012E
Profit model								
Net sales	6,247	8,210	10,397	12,063	14,737	17,207	19,731	21,768
EBITDA	**753**	**1,184**	**1,680**	**1,769**	**1,885**	**3,219**	**4,898**	**5,744**
Other income	91	177	367	407	390	386	393	410
Interest	(72)	(135)	(143)	(177)	(140)	(113)	(85)	(85)
Depreciation	(227)	(385)	(436)	(538)	(573)	(616)	(466)	(501)
Pretax profits	**546**	**841**	**1,468**	**1,460**	**1,562**	**2,876**	**4,740**	**5,568**
Extraordinary items	(106)	(229)	2	—	—	—	—	—
Tax	(22)	(65)	(573)	(586)	(649)	(1,075)	(1,650)	(1,954)
Deferred taxation	(142)	(174)	27	20	48	77	39	61
Net income	**274**	**373**	**924**	**894**	**961**	**1,878**	**3,129**	**3,676**
Minority interest	—	—	(46)	(136)	(142)	(72)	37	63
Adjusted net income	**349**	**537**	**969**	**1,030**	**1,104**	**1,951**	**3,092**	**3,612**
Earnings per share (Rs)	**1.8**	**2.4**	**4.1**	**4.4**	**4.7**	**8.3**	**13.2**	**15.4**
Balance sheet								
Total equity	4,114	6,932	7,642	8,398	8,953	10,082	10,642	11,296
Minority interest	—	—	—	(136)	(278)	(351)	(314)	(251)
Deferred taxation liability	132	296	273	253	205	128	89	28
Total borrowings	1,716	1,696	1,658	1,650	1,650	1,000	1,000	1,000
Current liabilities	1,406	1,809	2,113	2,138	2,635	2,773	2,826	2,975
Total liabilities and equity	**7,367**	**10,733**	**11,685**	**12,302**	**13,165**	**13,632**	**14,244**	**15,049**
Cash	489	2,678	1,104	853	689	758	869	1,184
Other current assets	1,889	3,276	2,863	3,460	4,275	4,748	5,163	5,593
Total fixed assets	3,823	3,736	4,109	4,456	4,744	4,743	4,903	5,038
Intangible assets	158	182	1,098	1,023	948	873	797	722
Investments	1,009	861	2,510	2,510	2,510	2,510	2,510	2,510
Total assets	**7,367**	**10,733**	**11,685**	**12,302**	**13,165**	**13,632**	**14,244**	**15,049**
Free cash flow								
Operating cash flow, excl. working capital	540	757	1,194	1,005	1,096	2,031	3,163	3,705
Working capital changes	78	(232)	(226)	(572)	(317)	(335)	(362)	(281)
Capital expenditure	(1,085)	(327)	(867)	(810)	(785)	(540)	(551)	(561)
Investments	(566)	388	(319)	—	—	—	—	—
Other income	27	130	197	407	390	386	393	410
Free cash flow	**(1,006)**	**716**	**(21)**	**30**	**384**	**1,542**	**2,644**	**3,273**
Ratios (%)								
Debt/equity	40.4	23.5	20.9	19.1	18.0	9.8	9.3	8.8
Net debt/equity	28.9	(13.6)	7.0	9.2	10.5	2.4	1.2	(1.6)
ROAE (%)	9.8	9.4	12.8	12.4	12.4	20.1	29.5	32.8
ROACE (%)	**11.1**	**12.1**	**10.6**	**9.9**	**9.4**	**17.0**	**27.4**	**30.5**

Source: Kotak Institutional Equities estimates.

Energy

ONGC.BO, Rs951	
Rating	BUY
Sector coverage view	Cautious
Target Price (Rs)	1,150
52W High -Low (Rs)	1387 - 768
Market Cap (Rs bn)	2,034

Financials

March y/e	2008	2009E	2010E
Sales (Rs bn)	1,105	1,281	1,298
Net Profit (Rs bn)	223.4	281.7	317.5
EPS (Rs)	104.4	131.7	148.4
EPS gth	*22.8*	*26.1*	*12.7*
P/E (x)	9.1	7	6.4
EV/EBITDA (x)	3.8	3.2	2.7
Div yield (%)	3.8	4.2	4.4

Shareholding, December 2007

	Pattern	% of Portfolio	Over/(under) weight
Promoters	74.1	-	-
FIIs	8.1	2.0	(3.2)
MFs	1.4	2.0	(3.2)
UTI	-	-	(5.2)
LIC	2.3	3.0	(2.2)

Oil & Natural Gas Corporation: Limited downside from current levels but government action is key to upside

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- **Limited downside (10%) to stock price versus potential upside (20%), in our view**
- **Establishment of a transparent subsidy-share system key to stock price**
- **Raised earnings estimates on higher crude prices but risks exist from higher-than-expected subsidy losses**

We have made several changes to our earnings model for ONGC to factor in (1) higher crude oil prices and (2) higher subsidy losses. The changes result in higher EPS for FY2008E, FY2009E and FY2010E at Rs105 (Rs103), Rs132 (Rs121) and Rs148 (Rs123) since ONGC has a modest upside to crude oil prices. However, risks exist from higher share of under-recoveries for ONGC compared to the current 84.8% of upstream companies or 28.3% of total (based on sharing for 9MFY08). We continue to use 9X normalized FCF to set a 12-month fair valuation of Rs1,150 for ONGC stock (Rs1,325 previously). We now use a normalized crude oil price of US$50/bbl equivalent to ONGC's net realization over the past few years versus our otherwise normalized crude price assumption of US$75/bbl (Dated Brent basis). Key downside risk stems from higher-than-expected subsidy losses.

ONGC's earnings have moderate leverage to higher crude prices but downside risk exists from change in subsidy-sharing formula. We note that ONGC has moderate leverage to higher crude prices under the extant subsidy-sharing formula with its share of subsidy burden practically nullifying the impact of higher crude prices, both measured in crude oil equivalent terms. We expect ONGC to sell 25 mn tons of crude oil on standalone basis plus 4 mn tons of products in FY2009E. Adjusted for blended royalty rate of about 12.5% on crude oil (10% on offshore crude, 20% on onshore crude), ONGC's net sales would work out to about 22 mn tons of crude oil plus 4 mn tons of products. Against this, ONGC's subsidy share of the total consumption of the four controlled products in crude equivalent terms works out to about 22.6 mn tons (80 mn tons of consumption of four controlled products in FY2009E X 33.33% share for upstream companies X 84.8% share of ONGC of upstream companies).

Nonetheless, ONGC's consolidated earnings would benefit from higher crude prices with crude produced by OVL (9 mn tons in FY2009E) benefiting from higher crude prices. Exhibit 3 gives sensitivity of ONGC's earnings to various variables but we note that the sensitivity to crude oil prices is largely theoretical as it does not consider the subsidy impact. Exhibit 4 shows sensitivity of ONGC's FY2009E EPS to various levels of crude price and subsidy loss.

Key assumptions behind and changes to earnings model. Exhibit 5 gives our key assumptions behind our earnings model. We discuss the same below in detail.

1. **Crude oil price.** We have realigned our crude oil (Dated Brent basis) assumptions for FY2009E, FY2010E and FY2011E to US$100/bbl, US$95/bbl and US$90/bbl in line with our assumptions for Cairn and Reliance Industries. However, we note that ONGC's earnings are not very sensitive to crude oil prices as discussed above. We expect that the government will allow a certain level of net crude oil price to ONGC (around US$50/bbl) and take away the upside from higher crude prices through higher subsidy payments to the downstream oil companies.
2. **Subsidy payment.** We model subsidy payment for FY2009E, FY2010E and FY2011E at Rs405 bn, Rs350 bn and Rs290 bn. We had previously modeled Rs180 bn for both FY2009E and FY2010E at significantly lower crude oil prices of US$80/bbl for both the years.

3. **Gas price.** We continue to assume APM gas price at Rs4.5/cu m in FY2009E and Rs4.75/cu m in FY2010E.

4. **Exchange rate.** We assume rupee-dollar exchange rate at Rs40/US$ for FY2009E versus Rs38.5/US$ previously and Rs39.5/US$ for FY2010E versus Rs37.5/US$ previously. ONGC's earnings benefit from a weaker rupee since it receives import parity price on the crude oil and products sold by it to the downstream R&M companies.

We value ONGC stock at Rs1,150 on US$50/bbl normalized crude price

Estimation of fair value of ONGC stock based on normalized free cash flow (Rs mn)

	2009E	2010E	2011E
A. Core business valuation			
Normalized crude price assumption (US$/bbl)	50.0	50.0	50.0
Recurring operating cash flow			
Operating cash flow = EBIT X (1-t) + D	20,308	66,576	113,859
Add: OCF after normalizing natural gas price	31,735	27,076	23,723
Add: OCF after removing subsidies	290,852	252,554	210,957
Recurring OCF	342,895	346,206	348,539
Recurring capex			
Production per annum (mn bbls)	397	390	392
Replacement or F&D costs (US$/bbl)	9.0	9.0	9.0
Recurring capex	142,934	138,606	137,688
Free cash flow	**199,961**	**207,601**	**210,851**
Free cash flow multiple (X)	9	9	9
Enterprise value	1,799,646	1,868,405	1,897,657
(Net debt)/cash	380,878	530,713	716,876
Investments	90,514	95,457	100,398
Equity value	2,271,037	2,494,575	2,714,931
Equity value of core business (Rs/share)	**1,062**	**1,166**	**1,269**
B. New discoveries valuation			
KG-DWN-98/2 block (Rs/share)	49	55	62
MN-DWN-98/3 block (Rs/share)	15	16	18
Equity value of new discoveries (Rs/share)	**64**	**71**	**80**
Total equity value per share (Rs/share)	**1,125**	**1,238**	**1,349**

Source: Kotak Institutional Equities estimates.

ONGC's valuation is highly leveraged to normalised crude prices

Valuation sensitivity of ONGC to normalised crude price (Rs/share)

	Equity value (Rs/share)	Change from base case (%)
Normalized crude prices		
US$90/bbl	2,208	96
US$80/bbl	1,948	73
US$70/bbl	1,685	50
US$60/bbl	1,416	26
US$50/bbl	**1,125**	
US$45/bbl	952	(15)
US$40/bbl	738	(34)

Source: Kotak Institutional Equities estimates.

ONGC's earnings are highly leveraged to crude prices
Earnings sensitivity of ONGC to key variables

	2009E			2010E			2011E		
	Downside	Base case	Upside	Downside	Base case	Upside	Downside	Base case	Upside
Exchange rate									
Rs/US$	39.0	40.0	41.0	38.5	39.5	40.5	38.0	39.0	40.0
Net profits (Rs mn)	265,903	281,682	297,451	301,406	317,501	333,586	330,898	347,060	363,215
Earnings per share (Rs)	124.3	131.7	139.1	140.9	148.4	156.0	154.7	162.3	169.8
% upside/(downside)	**(5.6)**		**5.6**	**(5.1)**		**5.1**	**(4.7)**		**4.7**
Average crude prices									
Crude price (US$/bbl)	98.0	100.0	102.0	93.0	95.0	97.0	88.0	90.0	92.0
Net profits (Rs mn)	269,436	281,682	293,919	304,513	317,501	330,480	333,464	347,060	360,649
Earnings per share (Rs)	126.0	131.7	137.4	142.4	148.4	154.5	155.9	162.3	168.6
% upside/(downside)	**(4.3)**		**4.3**	**(4.1)**		**4.1**	**(3.9)**		**3.9**
Cess									
Cess on domestic crude (Rs/ton)	3,090	2,575	2,060	3,090	2,575	2,060	3,090	2,575	2,060
Net profits (Rs mn)	273,297	281,682	290,067	308,914	317,501	326,087	338,360	347,060	355,760
Earnings per share (Rs)	127.8	131.7	135.6	144.4	148.4	152.5	158.2	162.3	166.3
% upside/(downside)	**(3.0)**		**3.0**	**(2.7)**		**2.7**	**(2.5)**		**2.5**
Natural gas prices									
Natural gas price ceiling (Rs/'000 cum)	4,000	4,500	5,000	4,250	4,750	5,250	4,500	5,000	5,500
Net profits (Rs mn)	276,078	281,682	287,280	312,171	317,501	322,825	341,836	347,060	352,279
Earnings per share (Rs)	129.1	131.7	134.3	146.0	148.4	150.9	159.8	162.3	164.7
% upside/(downside)	**(2.0)**		**2.0**	**(1.7)**		**1.7**	**(1.5)**		**1.5**

Source: Kotak Institutional Equities estimates.

Sensitivity of ONGC's EPS at various levels of crude price and subsidy loss
Sensitivity of ONGC's EPS at various levels of crude price and subsidy loss

	Crude price, Dated Brent (US$/bbl)							
Subsidy loss (Rs bn)	**75**	**85**	**95**	**100**	**110**	**120**	**130**	**140**
0	**175.3**	**203.6**	**231.9**	**246.1**	**274.4**	**302.6**	**330.9**	**359.2**
200	118.8	**147.3**	**175.7**	**189.9**	**218.2**	**246.6**	**274.9**	**303.2**
250	104.5	**133.1**	**161.5**	**175.8**	**204.2**	**232.5**	**260.9**	**289.2**
300	90.2	118.8	**147.4**	**161.6**	**190.0**	**218.4**	**246.8**	**275.2**
350	75.7	104.5	**133.1**	**147.4**	**175.9**	**204.3**	**232.7**	**261.1**
400	61.1	90.1	118.8	**133.1**	**161.7**	**190.2**	**218.6**	**247.0**
450	46.2	75.5	104.4	118.8	**147.4**	**176.0**	**204.5**	**232.9**
500	31.0	60.7	89.9	104.3	**133.1**	**161.7**	**190.3**	**218.8**

Source: Kotak Institutional Equities estimates.

Natural gas price increase and moderate volume growth are key earnings drivers

Key assumptions, March fiscal year-ends, 2004-2012E

	2004	2005	2006	2007	2008E	2009E	2010E	2011E	2012E
Rs/US$ rate	46.0	45.0	44.3	45.3	40.3	40.0	39.5	39.0	39.0
Subsidy share scheme loss (Rs bn)	26.9	41.0	119.6	170.2	200.0	405.0	350.0	290.0	290.0
Import tariff on crude oil (%)	10.0	9.7	5.1	5.1	5.2	5.2	5.2	5.2	5.2
Crude/natural gas prices									
Crude price									
Crude price, WTI (US$/bbl)					78.9	102.0	97.0	92.0	92.0
Crude price, Dated Brent (US$/bbl)	28.7	40.6	57.2	64.8	78.9	100.0	95.0	90.0	90.0
Net crude price, ONGC-India (Rs/ton)	6,255	9,196	10,390	10,692	11,107	9,377	9,720	10,247	10,204
Net crude price, ONGC-India (US$/bbl)	18.6	28.0	32.1	32.4	37.8	32.1	33.7	36.0	35.8
Natural gas price									
Ceiling natural gas price, India (Rs/cu m)	2.85	2.85	3.52	4.21	4.25	4.50	4.75	5.00	4.75
Ceiling natural gas price, India (US$/mn BTU)	1.66	1.69	2.12	2.49	2.82	3.01	3.21	3.43	3.25
Net natural gas price, ONGC-India (Rs/cu m)	2.18	2.18	3.11	3.76	3.79	4.02	4.24	4.47	4.23
Net natural gas price, ONGC-India (US$/mn BTU)	1.27	1.29	1.88	2.22	2.51	2.69	2.87	3.06	2.90
International operations									
Net natural gas price, OVL-Vietnam (Rs/cu m)	3.2	3.2	3.1	3.2	2.8	2.8	2.8	2.8	2.8
Net crude price, OVL-Sudan (Rs/ton)	4,285	5,893	8,118	9,384	10,142	12,745	11,961	11,193	11,193
Net crude price, OVL-Russia (Rs/ton)	—	—	8,320	9,633	10,434	13,140	12,327	11,530	11,530
Sales volumes—Domestic fields (a)									
Crude oil (mn tons)	23.9	24.1	22.5	24.4	24.2	25.0	25.0	24.9	24.8
Natural gas (bcm)	21.1	20.6	20.5	20.3	19.9	20.6	19.6	19.2	17.9
Sales volumes—Overseas fields									
Crude oil (mn tons)	3.3	3.7	4.6	5.8	7.8	8.8	8.6	8.6	8.6
Natural gas (bcm)	0.5	1.3	1.8	2.1	2.1	2.4	2.6	2.8	2.8
Total sales									
Crude oil (mn tons)	27.3	27.8	27.0	30.2	32.0	33.8	33.6	33.5	33.4
Natural gas (bcm)	21.6	22.0	22.3	22.5	22.0	23.0	22.2	22.0	20.7
Total sales (mn toe)	**46.6**	**47.4**	**46.9**	**50.3**	**51.7**	**54.4**	**53.4**	**53.2**	**51.9**
Total sales (mn boe)	**340**	**346**	**342**	**367**	**377**	**397**	**390**	**388**	**379**
Crude oil (%)	59	59	58	60	62	62	63	63	64
Natural gas (%)	41	41	42	40	38	38	37	37	36

(a) Includes ONGC's share of production from joint venture fields.

Source: Company data, Kotak Institutional Equities estimates.

Consolidated profit model, balance sheet, cash model of ONGC, March fiscal year-ends, 2004-2010E (Rs mn)

	2004	2005	2006	2007	2008E	2009E	2010E	2011E	2012E
Profit model (Rs mn)									
Net sales	467,124	707,083	807,603	968,227	1,105,143	1,281,396	1,297,858	1,352,281	1,385,450
EBITDA	**196,494**	**281,195**	**310,054**	**358,001**	**426,546**	**463,589**	**492,367**	**523,258**	**509,322**
Other income	23,752	17,595	27,350	45,377	38,683	46,897	57,772	57,772	58,272
Interest	(5,028)	(2,512)	(537)	394	(1,261)	(1,476)	(2,226)	(5,423)	(9,560)
Depreciation and depletion	(65,525)	(73,465)	(97,726)	(119,550)	(113,791)	(110,357)	(104,087)	(96,683)	(94,423)
Pretax profits	149,693	222,813	239,141	284,222	350,176	398,654	443,827	478,924	463,611
Tax	(46,101)	(74,690)	(71,196)	(88,987)	(114,560)	(124,319)	(133,689)	(132,566)	(129,017)
Deferred tax	(7,779)	(4,744)	(13,612)	(9,264)	(9,548)	11,960	10,120	2,030	3,795
Net profits	95,523	143,175	154,596	178,412	228,744	286,295	320,257	348,388	338,389
Net profits after minority interests	**94,219**	**140,670**	**153,542**	**176,921**	**225,134**	**281,682**	**317,501**	**347,060**	**338,203**
Earnings per share (Rs)	**44.1**	**65.8**	**71.8**	**82.7**	**105.3**	**131.7**	**148.4**	**162.3**	**158.1**
Balance sheet (Rs mn)									
Total equity	415,582	488,912	578,830	670,137	805,863	988,260	1,199,008	1,425,152	1,641,198
Deferred tax liability	54,250	57,911	71,557	80,976	90,524	78,564	68,445	66,415	62,620
Liability for abandonment cost	80,292	80,941	128,675	151,857	151,857	151,857	151,857	151,857	151,857
Total borrowings	60,961	39,028	28,767	21,826	34,254	41,427	77,054	117,454	157,854
Currrent liabilities	85,376	128,346	142,435	187,051	108,530	117,960	118,015	120,445	125,615
Total liabilities and equity	**696,461**	**795,138**	**950,264**	**1,111,847**	**1,191,028**	**1,378,068**	**1,614,378**	**1,881,323**	**2,139,145**
Cash	95,721	101,843	90,743	206,262	269,491	422,305	607,768	834,331	1,109,892
Current assets	133,039	178,421	240,210	192,652	210,647	223,147	224,083	234,502	241,253
Total fixed assets	419,213	471,543	565,722	643,219	641,177	662,902	707,874	732,897	708,406
Goodwill	11,661	10,753	14,172	27,686	27,686	27,686	27,686	27,686	27,686
Investments	30,811	26,961	35,753	36,888	36,888	36,888	41,828	46,769	46,770
Deferred expenditure	6,017	5,617	3,663	5,141	5,141	5,141	5,141	5,141	5,141
Total assets	**696,461**	**795,138**	**950,264**	**1,111,848**	**1,191,029**	**1,378,068**	**1,614,379**	**1,881,324**	**2,139,147**
Free cash flow (Rs mn)									
Operating cash flow, excl. working capital	133,261	187,001	216,736	252,772	252,988	285,076	309,133	347,656	336,455
Working capital changes	25,630	18,787	46,461	(4,990)	(91,516)	(48,739)	37,346	(4,547)	(1,580)
Capital expenditure	(56,301)	(103,418)	(113,738)	(135,049)	(52,874)	(81,491)	(104,098)	(87,288)	(38,938)
Investments	(10,608)	(9,887)	(28,912)	53,822	—	—	4,940—	—	—
Other income	9,767	13,049	14,537	20,422	39,338	47,272	57,772	57,772	58,272
Free cash flow	**101,749**	**105,532**	**135,083**	**186,976**	**147,937**	**202,119**	**295,213**	**313,593**	**354,208**
Ratios (%)									
Debt/equity	14.7	8.0	5.0	3.3	4.3	4.2	6.4	8.2	9.6
Net debt/equity	(8.4)	(12.8)	(10.7)	(27.5)	(29.2)	(38.5)	(44.3)	(50.3)	(58.0)
RoAE	21.6	28.0	25.9	25.5	27.6	29.1	27.6	25.5	21.4
RoACE	**20.6**	**24.6**	**22.0**	**22.1**	**23.3**	**25.4**	**24.4**	**23.0**	**19.7**
Key assumptions									
Rs/dollar rate	46.0	45.0	44.3	45.3	40.3	40.0	39.5	39.0	39.0
Crude fob price (US$/bbl)	28.7	40.6	57.2	64.8	78.9	100.0	95.0	90.0	90.0
Ceiling/actual natural gas price (Rs/'000 cm)	2,850	2,850	3,515	4,211	4,250	4,500	4,750	5,000	4,750
Subsidy loss (Rs bn)	26.9	41.0	119.6	170.2	200.0	405.0	350.0	290.0	290.0

Source: Kotak Institutional Equities estimates.

Energy

Sector coverage view			Cautious

		Price, Rs	
Company	**Rating**	**16-May**	**Target**
IOC	REDUCE	412	460
BPCL	REDUCE	359	350
HPCL	REDUCE	248	260

BPCL, HPCL, IOCL: Surgical cuts for only cosmetic changes

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- **Reduced earnings for FY2008-10E to factor in higher net subsidy losses**
- **We assume the government will ensure profits at a certain level through issue of adequate amount of oil bonds**
- **Earnings estimates and target prices continue to have limited meaning in the current environment**

We have cut our earnings estimates for BPCL, HPCL and IOCL to factor in (1) likely higher subsidy losses in FY2009E and FY2010E and (2) lower-than-expected amount of oil bonds in FY2008E. We assume the government will ensure profits of the downstream oil companies at a certain 'minimum' level over the next few years (until the situation improves); there is no other basis to forecast earnings of the downstream oil companies in the current environment. We have changed our valuation methodology to 8X FY2010E EPS plus value of treasury shares (instead of 1X book value previously) assuming (1) cost of equity of 12.5% and (2) stable but low earnings. Our revised 12-month fair valuations for BPCL, HPCL and IOCL stocks are Rs350 (Rs400 previously), Rs260 (Rs400 previously; rating changed to REDUCE from BUY) and Rs460 (Rs450).

Impossible to set target prices in the current environment. We believe ratings and earnings have lost meaning in the current environment of (1) likely high gross under-recoveries, (2) low possibility of favorable government action given fiscal and political compulsions and (3) uncertainty regarding the subsidy-sharing scheme. It is impossible to have a basis of earnings of the companies except the hope that the government will ensure the profits of the companies at a certain ‘minimum’ level. However, this is not a given. We suspect the stocks will trade at a discount to book value in the current environment and around book value if crude prices come down to manageable levels (US$80-100/bbl range). Exhibit 1 gives historical trading range of the stocks on P/B and Exhibit 2 gives P/B and EV/GCI at current stock prices.

Earnings will be what the government will allow—probably positive but low. We have made several changes to our earnings model of BPCL, HPCL and IOCL but the underlying philosophy is that the government will ensure a certain amount of profits for a period (which could well extend for a few years) until (1) the government is in a position to establish a free-market pricing mechanism and/or (2) crude prices come off to a level, which precludes government control. Exhibit 3 gives the changes to our EBITDA and EPS estimates for BPCL, HPCL and IOCL for FY2008E, FY2009E and FY2010E.

Key assumptions behind and changes to our earnings model. We list down the key assumptions behind and changes to our earnings model below.

1. **Subsidy losses.** We model gross under-recoveries for the industry at Rs1.43 tn in FY2009E and Rs1.23 tn in FY2010E versus Rs770 bn in FY2008. Our estimates for gross under-recoveries are based on crude price (Dated Brent) of US$100/bbl for FY2009E and US$95/bbl for FY2010E. Thus, we see high upside risks to our estimates of gross under-recoveries if crude prices turn out to be much higher versus our estimates.

2. **Subsidy-sharing mechanism.** We assume the government will issue oil bonds of Rs855 bn and Rs775 bn in FY2009E and FY2010E. The amount of oil bonds is equal to 60% and 63% of gross under-recoveries for FY2009E and FY2010E. Our assumed share for the government is higher versus FY2008—46% or 50% depending on the petroleum ministry's estimate of gross under-recoveries of Rs770 bn or the finance ministry's estimate of Rs706 bn. Our assumption of higher government share for FY2009E and FY2010E reflects our view that the government may have to bear a higher proportion of gross under-recoveries in order to contain the absolute losses of the downstream oil companies at a certain level. This would also translate into the downstream oil companies' profits being constant (at low levels) over the next few years until the macro-environment improves.

3. **Refining margins.** We model a decline in refining margins over the next two years (US$1.3-2/bbl over two years) due to our expected steep increase in (1) global refining capacity (3.2 mn b/d) and (2) supply of bio fuels and NGLs (1.9 mn b/d) over the next two years compared to increase in global demand of oil (2.2 mn b/d). Exhibits 4 and 5 give our estimate of additions to global refining capacity and global refining capacity utilization rate over the next few years. We also note that FY2008 refining margins include significant amounts of adventitious gains due to steep increase in crude oil prices during FY2008.

4. **Marketing losses.** We model marketing losses on diesel, gasoline, kerosene and LPG for FY2009E at Rs11.7/liter, Rs8.9/liter, Rs293/cylinder and Rs25/liter. This compares with loss of Rs3.6/liter, Rs4.6/liter, Rs16.9/liter and Rs217/cylinder for the aforementioned four products in FY2008. We assume a small decline in marketing losses for FY2010E based on (1) a moderate decline in crude oil price (US$95/bbl versus US$100/bbl in FY2009E) and (2) modest increase in retail prices of the products after formation of a new government in mid-2009.

Indian downstream oil stocks are inexpensive on long-term valuations

P/B and EV/GCI for BPCL, HPCL and IOCL, March fiscal year-ends, 2008-2010E

	2008E			2009E			2010E		
	BPCL	HPCL	IOCL	BPCL	HPCL	IOCL	BPCL	HPCL	IOCL
Stock price (Rs)	359	248	412	359	248	412	359	248	412
Year-end book value (Rs)	361	354	395	385	377	411	412	392	439
P/B (X)	**1.0**	**0.7**	**1.0**	**0.9**	**0.7**	**1.0**	**0.9**	**0.6**	**0.9**
ROAE (%)	19.7	14.1	22.0	10.5	8.7	10.7	9.7	8.5	13.3
EV (Rs bn)	153	152	628	169	172	692	174	174	677
Gross cash invested (Rs bn)	249	264	894	284	302	1,010	309	320	1,060
EV/GCI (X)	**0.6**	**0.6**	**0.7**	**0.6**	**0.6**	**0.7**	**0.6**	**0.5**	**0.6**
Cash returns (Rs bn)	27	21	101	21	26	72	25	25	74
CROCI (%)	11.0	8.0	11.3	7.5	8.7	7.2	8.1	7.7	7.0

Note:

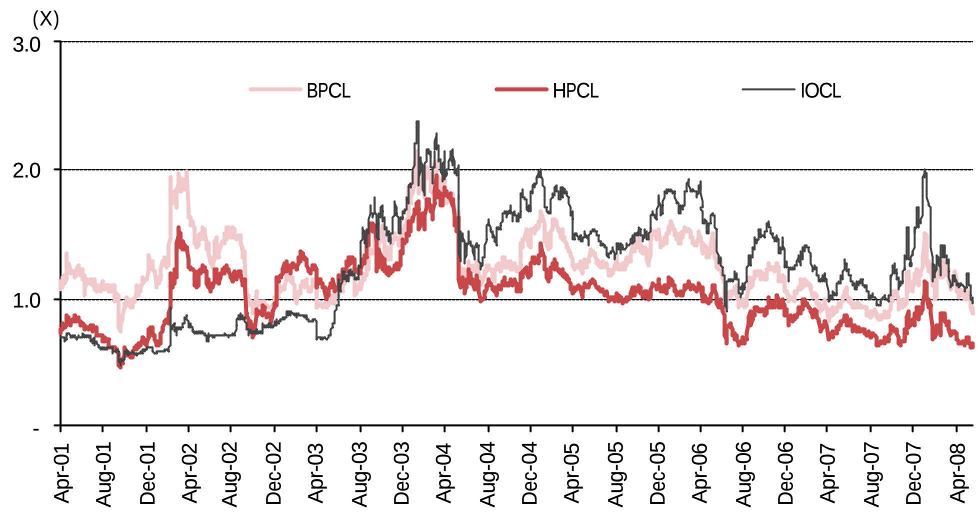
(a) IOCL's book value does not include unrealized gain from investments in ONGC, GAIL amounting to Rs95/share.

(b) Book value of Indian R&M stocks may be depressed due to full depreciation of certain assets (old refineries, LPG cylinders).

Source: Kotak Institutional Equities estimates.

Downstream stocks are trading at lower end of their historical trading range

Price/book (price to current year-end book) ratio for BPCL, HPCL and IOCL



Source: Bloomberg, Company, Kotak Institutional Equities estimates.

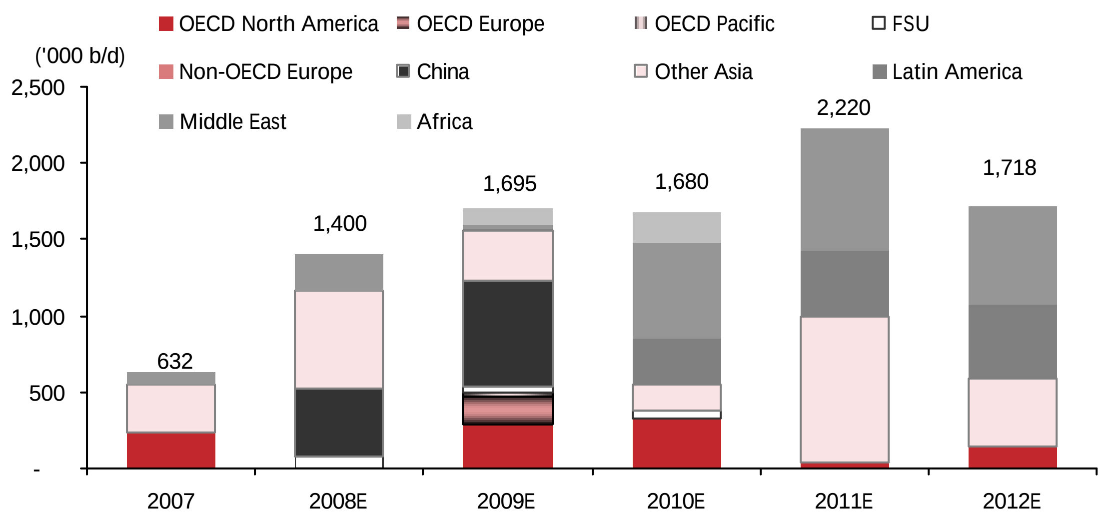
Revision in earnings estimates for BPCL, HPCL and IOCL, March fiscal year-ends, 2007-2009E

	BPCL			HPCL			IOCL		
	2008E	2009E	2010E	2008E	2009E	2010E	2008E	2009E	2010E
EBITDA (Rs mn)									
New	38,308	29,717	33,266	29,921	30,718	38,490	156,722	115,500	133,946
Old	41,556	32,008	35,673	32,507	31,729	34,815	169,548	126,917	134,007
Change (%)	**(7.8)**	**(7.2)**	**(6.7)**	**(8.0)**	**(3.2)**	**10.6**	**(7.6)**	**(9.0)**	**(0.0)**
EPS (Rs/share)									
New	64.9	39.1	38.8	47.8	31.9	32.6	82.6	43.0	56.5
Old	71.6	47.1	51.3	55.0	46.1	51.6	95.8	66.0	68.1
Change (%)	**(9.4)**	**(17.0)**	**(24.4)**	**(13.0)**	**(30.7)**	**(36.8)**	**(13.8)**	**(34.8)**	**(17.0)**

Source: Kotak Institutional Equities estimates.

Limited supply additions to global refining capacity

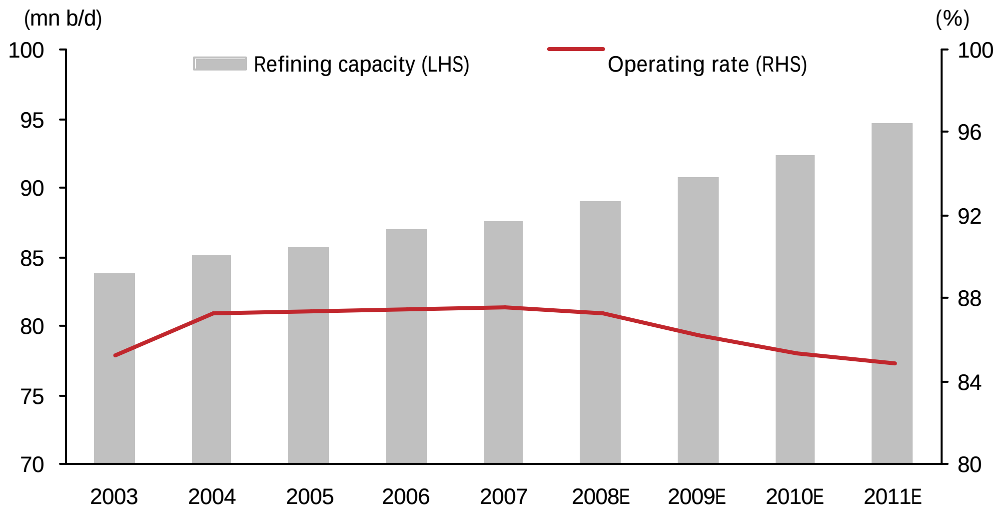
Global refinery capacity addition, calendar year ends, 2007-2012E ('000 b/d)



Source: IEA, Kotak Institutional Equities estimates.

Global refining operating rates will likely decline led by significant capacity addition

Global refining capacity versus operating rate, calendar year ends, 2003-2011E



Source: IEA, BP Statistical Review of World Energy, 2007, Kotak Instiutional Equities estimates.

Earnings sensitivity of BPCL to refining margins, import duties and marketing margins, March fiscal year-ends (Rs mn)

	2009E			2010E			2011E		
	Downside	Base case	Upside	Downside	Base case	Upside	Downside	Base case	Upside
Refining margins									
Refining margins (US$/bbl)	3.0	4.0	5.0	2.2	3.2	4.2	2.7	3.7	4.7
Net profits (Rs mn)	9,945	14,152	18,358	9,769	14,016	18,262	9,041	13,538	18,034
EPS (Rs)	27.5	39.1	50.8	27.0	38.8	50.5	25.0	37.4	49.9
% upside/(downside)	**(29.7)**		**29.7**	**(30.3)**		**30.3**	**(33.2)**		**33.2**
Import tariffs									
Tariff protection	0.9	1.4	1.9	0.9	1.4	1.9	0.8	1.3	1.8
Net profits (Rs mn)	12,776	14,152	15,528	12,615	14,016	15,417	12,025	13,538	15,050
EPS (Rs)	35.3	39.1	42.9	34.9	38.8	42.6	33.3	37.4	41.6
% upside/(downside)	**(9.7)**		**9.7**	**(10.0)**		**10.0**	**(11.2)**		**11.2**
Marketing margins									
Auto fuels marketing margin (Rs/ton)	(13,839)	(13,689)	(13,539)	(10,840)	(10,690)	(10,540)	(5,441)	(5,291)	(5,141)
Net profits (Rs mn)	13,152	14,152	15,152	12,964	14,016	15,068	12,431	13,538	14,645
EPS (Rs)	36.4	39.1	41.9	35.9	38.8	41.7	34.4	37.4	40.5
% upside/(downside)	**(7.1)**		**7.1**	**(7.5)**		**7.5**	**(8.2)**		**8.2**

Source: Kotak Institutional Equities estimates.

Earnings sensitivity of HPCL to refining margins, import duties and marketing margins (Rs mn)

	Fiscal 2009E			Fiscal 2010E			Fiscal 2011E		
	Downside	Base Case	Upside	Downside	Base Case	Upside	Downside	Base Case	Upside
Refining margins									
Refining margins (US$/bbl)	3.6	4.6	5.6	3.3	4.3	5.3	3.3	4.3	5.3
Net profits (Rs mn)	5,912	10,825	14,690	7,229	11,044	14,858	7,943	11,719	15,494
EPS (Rs)	17.4	31.9	43.3	21.3	32.6	43.8	23.4	34.6	45.7
% upside/(downside)	**(45.4)**		**35.7**	**(34.5)**		**34.5**	**(32.2)**		**32.2**
Import tariffs									
Tariff protection	0.7	1.2	1.7	0.7	1.2	1.7	0.7	1.2	1.7
Net profits (Rs mn)	9,174	10,825	12,261	9,733	11,044	12,354	10,412	11,719	13,025
EPS (Rs)	27.1	31.9	36.2	28.7	32.6	36.4	30.7	34.6	38.4
% upside/(downside)	**(15.2)**		**13.3**	**(11.9)**		**11.9**	**(11.1)**		**11.1**
Marketing margins									
Transportation fuels margins (Rs/ton)	(13,814)	(13,664)	(13,514)	(10,822)	(10,672)	(10,522)	(5,430)	(5,280)	(5,130)
Net profits (Rs mn)	9,731	10,825	11,847	10,187	11,044	11,900	10,817	11,719	12,620
EPS (Rs)	28.7	31.9	35.0	30.1	32.6	35.1	31.9	34.6	37.2
% upside/(downside)	**(10.1)**		**9.4**	**(7.8)**		**7.8**	**(7.7)**		**7.7**

Note:
(a) The asymmetric nature of sensitivities is due to tax impact.

Source: Kotak Institutional Equities estimates.

Earnings sensitivity of IOC (standalone) to refining margins, import duties and marketing margins (Rs mn)

	Fiscal 2009E			Fiscal 2010E		
	Downside	Base case	Upside	Downside	Base case	Upside
Refining margins						
Refining margins (US$/bbl)	5.9	6.9	7.9	5.2	6.2	7.2
Net profits (Rs mn)	40,655	50,372	60,088	57,777	67,638	77,500
EPS (Rs)	34.1	42.2	50.4	48.5	56.7	65.0
% upside/(downside)	**(19.3)**		**19.3**	**(14.6)**		**14.6**
Import tariffs						
Tariff differential	1.2	1.7	2.2	1.2	1.7	2.2
Net profits (Rs mn)	47,110	50,372	53,634	64,301	67,638	70,975
EPS (Rs)	39.5	42.2	45.0	53.9	56.7	59.5
% upside/(downside)	**(6.5)**		**6.5**	**(4.9)**		**4.9**
Marketing margins						
Transportation fuels margins (Rs/ton)	(13522)	(13372)	(13222)	(10420)	(10270)	(10120)
Net profits (Rs mn)	48,300	50,372	52,444	65,456	67,638	69,820
EPS (Rs)	40.5	42.2	44.0	54.9	56.7	58.6
% upside/(downside)	**(4.1)**		**4.1**	**(3.2)**		**3.2**

Source: Kotak Institutional Equities estimates.

Consolidated profit model, balance sheet, cash model of BPCL, March fiscal year-ends, 2004-2011E (Rs mn)

	2004	2005	2006	2007	2008E	2009E	2010E	2011E
Profit model (Rs mn)								
Net sales	479,840	578,774	755,333	965,569	1,194,887	1,540,611	1,572,209	1,623,795
EBITDA	**38,686**	**26,231**	**9,407**	**35,362**	**38,308**	**29,717**	**33,266**	**41,530**
Other income	4,348	4,015	4,653	7,332	11,775	10,582	16,656	20,576
Interest	(1,447)	(1,748)	(2,474)	(4,774)	(5,658)	(9,188)	(18,053)	(30,002)
Depreciation	(6,754)	(7,130)	(7,680)	(9,041)	(10,437)	(9,672)	(10,636)	(11,596)
Pretax profits	34,833	21,368	3,906	28,879	33,989	21,439	21,233	20,509
Extraordinary items	(420)	810	176	(68)	1,279	—	—	—
Tax	(12,026)	(7,250)	(140)	(9,286)	(9,402)	(5,996)	(4,533)	(5,583)
Deferred taxation	(805)	(1,230)	(1,025)	(268)	(1,471)	(1,291)	(2,684)	(1,388)
Net profits	21,582	13,698	2,916	18,055	24,395	14,152	14,016	13,538
Net profits after minority interests	**19,086**	**11,334**	**2,916**	**18,055**	**24,395**	**14,152**	**14,016**	**13,538**
Earnings per share (Rs)	**64.6**	**37.2**	**7.6**	**50.1**	**64.9**	**39.1**	**38.8**	**37.4**
Balance sheet (Rs mn)								
Total equity	69,960	82,887	91,394	102,735	115,286	122,568	129,779	136,744
Deferred taxation liability	11,304	12,533	13,558	13,826	15,297	16,588	19,273	20,661
Total borrowings	32,701	46,589	83,736	108,292	84,666	156,166	335,666	475,666
Currrent liabilities	95,495	104,462	94,070	112,767	100,667	118,408	121,234	127,202
Total liabilities and equity	**209,459**	**246,472**	**282,758**	**337,620**	**315,917**	**413,730**	**605,951**	**760,273**
Cash	9,319	6,644	4,921	8,640	1,299	876	933	1,279
Current assets	97,729	130,393	128,208	127,698	121,300	152,398	154,877	159,953
Goodwill	—	—	—	—	—	—	—	—
Total fixed assets	88,484	98,542	110,855	118,334	132,716	144,854	159,540	158,438
Investments	13,927	10,893	38,774	82,949	60,602	115,602	290,602	440,602
Total assets	**209,459**	**246,472**	**282,758**	**337,621**	**315,917**	**413,730**	**605,951**	**760,273**
Free cash flow (Rs mn)								
Operating cash flow, excl. working capital	30,727	21,118	9,275	29,920	22,537	14,533	10,680	5,945
Working capital	1,025	(18,393)	1,577	11,451	(2,719)	(13,356)	1,592	892
Capital expenditure	(17,001)	(17,120)	(19,945)	(17,908)	(22,828)	(21,810)	(25,322)	(10,494)
Investments	1,278	2,992	(28,146)	(45,481)	22,347	(55,000)	(175,000)	(150,000)
Other income	1,985	2,445	1,785	4,337	8,792	10,582	15,410	20,576
Free cash flow	**18,015**	**(8,957)**	**(35,455)**	**(17,682)**	**28,129**	**(65,052)**	**(172,639)**	**(133,081)**
Ratios (%)								
Debt/equity	40.2	48.8	91.6	105.4	73.4	127.4	258.6	347.9
Net debt/equity	28.8	41.9	86.2	97.0	72.3	126.7	257.9	346.9
RoAE	28.8	14.4	3.3	16.3	19.7	10.5	9.7	8.8
RoACE	**21.2**	**12.0**	**4.1**	**11.0**	**13.2**	**8.6**	**7.9**	**6.6**
Key assumptions (standalone until FY2005)								
Crude throughput (mn tons)	8.8	9.1	17.2	19.8	20.9	21.0	21.5	23.0
Effective tariff protection (%)	7.2	4.8	2.9	1.6	1.4	1.4	1.4	1.3
Net refining margin (US$/bbl)	4.2	3.8	2.1	3.2	5.2	4.0	3.2	3.7
Sales volume (mn tons)	20.9	21.5	23.3	24.2	26.4	27.4	28.5	29.6
Marketing margin (Rs/ton)	1,893	1,732	(671)	(1,140)	(2,983)	(9,659)	(7,607)	(3,691)
Subsidy under-recoveries (Rs mn)	(13,518)	(25,821)	(31,847)	(20,159)	(33,961)	(24,884)	(14,284)	(9,568)

Source: Kotak Institutional Equities estimates.

Profit model, balance sheet, cash model of HPCL, March fiscal year-ends, 2004-2011E (Rs mn)

	2005	2006	2007	2008E	2009E	2010E	2011E
Profit model (Rs mn)							
Net sales	597,020	708,609	889,959	1,063,843	1,367,200	1,388,843	1,411,647
EBITDA	**20,511**	**8,056**	**24,036**	**29,921**	**30,718**	**38,490**	**46,035**
Other income	3,295	3,285	6,845	13,365	20,049	26,415	28,973
Interest	(816)	(1,587)	(4,230)	(10,442)	(23,673)	(38,209)	(46,555)
Depreciation	(6,584)	(6,902)	(7,040)	(8,284)	(10,380)	(9,966)	(10,701)
Pretax profits	16,406	2,851	19,611	24,559	16,713	16,730	17,753
Extraordinary items	1,471	2,201	3,030	—	—	—	—
Tax	(5,897)	(898)	(6,625)	(6,094)	(1,894)	(4,187)	(4,401)
Deferred taxation	793	(97)	(365)	(2,254)	(3,995)	(1,499)	(1,633)
Prior period adjustment	—	—	61	—	—	—	—
Net profits	**12,773**	**4,056**	**15,712**	**16,211**	**10,825**	**11,044**	**11,719**
Earnings per share (Rs)	**34.8**	**6.6**	**40.0**	**47.8**	**31.9**	**32.6**	**34.6**
Balance sheet (Rs mn)							
Total equity	84,409	87,357	95,987	103,474	107,161	110,922	114,914
Deferred tax liability	13,748	13,844	14,209	16,463	20,458	21,957	23,590
Total borrowings	21,854	66,638	105,175	209,175	368,675	481,175	541,675
Currrent liabilities	69,887	79,549	101,195	92,812	111,666	115,979	116,211
Total liabilities and equity	**189,896**	**247,389**	**316,566**	**421,925**	**607,960**	**730,033**	**796,390**
Cash	2,016	426	868	834	808	665	926
Current assets	93,007	109,674	113,779	133,076	170,293	174,328	175,432
Total fixed assets	77,305	97,013	130,644	147,717	156,560	164,742	169,734
Investments	17,568	40,276	71,275	140,298	280,298	390,298	450,298
Total assets	**189,896**	**247,389**	**316,566**	**421,925**	**607,960**	**730,033**	**796,390**
Free cash flow (Rs mn)							
Operating cash flow, excl. working capital	15,977	10,126	23,966	10,959	3,388	(4,531)	(4,921)
Working capital changes	(3,614)	(5,351)	8,936	(25,004)	(18,364)	1,549	(871)
Capital expenditure	(12,849)	(25,298)	(38,510)	(22,932)	(17,461)	(17,523)	(15,693)
Investments	2,995	(22,884)	(31,704)	(69,023)	(140,000)	(110,000)	(60,000)
Other income	800	941	2,067	10,690	20,049	25,144	28,973
Free cash flow	**3,310**	**(42,466)**	**(35,246)**	**(95,310)**	**(152,388)**	**(105,361)**	**(52,512)**
Ratios (%)							
Debt/equity	22.3	65.8	95.4	174.4	288.9	362.1	391.1
Net debt/equity	20.2	65.4	94.7	173.7	288.3	361.6	390.4
RoAE	13.4	4.1	14.9	14.1	8.7	8.5	8.6
RoACE	**10.1**	**2.5**	**8.8**	**9.7**	**8.7**	**7.4**	**7.5**
Key assumptions							
Crude throughput (mn tons)	13.9	14.0	16.7	16.8	18.3	19.3	19.3
Effective tariff protection (%)	5.6	3.1	1.4	1.2	1.2	1.2	1.2
Net refining margin (US$/bbl)	4.5	3.9	4.3	5.6	4.6	4.3	4.3
Sales volume (mn tons)	20.6	20.1	23.4	24.8	25.6	26.5	27.4
Marketing margin (Rs/ton)	1,688	(463)	(710)	(2,476)	(8,415)	(6,663)	(3,206)
Subsidy under-recoveries (Rs mn)	(26,708)	(29,671)	(18,899)	(30,454)	(21,212)	(12,204)	(10,905)

Source: Kotak Institutional Equities estimates.

Consolidated profit model, balance sheet, cash model of IOCL, March fiscal year-ends, 2004-2010E (Rs mn)

	2004	2005	2006	2007	2008E	2009E	2010E
Profit model (Rs mn)							
Net sales	1,173,450	1,379,018	1,729,474	2,149,428	2,691,621	3,447,651	3,542,678
EBITDA	**114,303**	**86,765**	**82,044**	**110,451**	**156,722**	**115,500**	**133,946**
Other income	17,565	16,138	21,310	27,451	49,401	50,902	96,413
Interest	(5,043)	(7,433)	(12,101)	(17,058)	(24,469)	(56,350)	(95,610)
Depreciation	(20,626)	(23,140)	(24,711)	(28,686)	(30,828)	(32,340)	(34,141)
Pretax profits	106,199	72,330	66,542	92,157	150,827	77,712	100,609
Extraordinary items	3,553	4,283	5,590	24,757	5,588	5,504	5,428
Tax	(25,966)	(13,658)	(19,975)	(25,834)	(47,604)	(25,057)	(30,891)
Deferred taxation	(5,157)	(2,335)	(1,282)	(8,040)	(2,633)	(484)	(2,516)
Net profits	79,052	59,475	51,125	82,729	106,177	57,675	72,630
Net profits after minority interests	**73,298**	**52,666**	**45,362**	**62,469**	**98,461**	**51,281**	**67,369**
Earnings per share (Rs)	**62.8**	**45.1**	**38.8**	**52.4**	**82.6**	**43.0**	**56.5**
Balance sheet (Rs mn)							
Total equity	233,386	271,302	317,977	378,117	427,167	447,725	480,228
Deferred tax liability	47,934	50,367	50,602	59,859	62,492	62,976	65,492
Total borrowings	146,147	197,809	292,395	290,215	473,502	987,490	1,367,776
Currrent liabilities	219,522	266,430	286,716	330,791	387,742	456,834	468,383
Total liabilities and equity	**646,988**	**785,907**	**947,691**	**1,058,981**	**1,350,904**	**1,955,025**	**2,381,877**
Cash	13,777	13,356	8,080	9,385	9,010	9,953	9,137
Current assets	278,550	368,158	413,904	437,178	586,305	721,673	734,612
Total fixed assets	320,647	370,003	383,717	415,014	424,480	442,290	457,020
Investments	34,013	34,391	141,990	197,403	331,108	781,108	1,181,108
Total assets	**646,988**	**785,907**	**947,691**	**1,058,981**	**1,350,903**	**1,955,025**	**2,381,877**
Free cash flow (Rs mn)							
Operating cash flow, excl. working capital	93,713	71,765	(10,334)	(44,660)	82,280	34,053	15,565
Working capital changes	1,710	(33,421)	(8,136)	2,237	(73,598)	(65,584)	(3,573)
Capital expenditure	(47,179)	(73,626)	(49,042)	(50,969)	(41,972)	(51,148)	(44,373)
Investments	(509)	(1,172)	(17,778)	99,768	(133,705)	(449,885)	(400,000)
Other Income	5,826	7,814	10,317	13,582	26,038	50,700	88,558
Free cash flow	**53,560**	**(28,641)**	**(74,973)**	**19,958**	**(140,957)**	**(481,864)**	**(343,823)**
Ratios (%)							
Debt/equity	52.0	61.5	79.3	66.3	96.7	193.4	250.6
Net debt/equity	47.1	57.3	77.1	64.1	94.9	191.4	249.0
RoAE	30.0	18.3	13.7	16.1	22.0	10.7	13.3
RoACE	**20.4**	**13.7**	**9.3**	**11.3**	**14.2**	**7.4**	**8.0**
Key assumptions (IOC standalone)							
Crude throughput (mn tons)	37.7	36.6	38.5	44.0	47.4	48.4	49.9
Effective tariff protection (%)	7.9	5.8	3.3	1.9	1.7	1.7	1.7
Net refining margin (US$/bbl)	5.4	6.2	4.8	4.9	7.6	6.9	6.2
Sales volume (mn tons)	47.1	48.2	50.4	53.4	57.4	59.6	61.5
Marketing margin (Rs/ton)	2,092	1,982	26	(633)	(1,690)	(8,172)	(6,269)
Subsidy under-recoveries (Rs mn)	(28,078)	(64,309)	(95,361)	(34,041)	(50,459)	(51,149)	(15,937)

Source: Kotak Institutional Equities estimates.

Industrials

ABB.BO, Rs1072	
Rating	REDUCE
Sector coverage view	Attractive
Target Price (Rs)	1,125
52W High -Low (Rs)	1744 - 789
Market Cap (Rs bn)	227.1

Financials

December y/e	2007	2008E	2009E
Sales (Rs bn)	59.3	76.6	99.9
Net Profit (Rs bn)	4.9	6.4	8.6
EPS (Rs)	23.2	30.4	40.7
EPS gth	*44.5*	*31.1*	*33.6*
P/E (x)	46.2	35.2	26.4
EV/EBITDA (x)	27.7	20.7	15.0
Div yield (%)	0.2	0.3	0.3

Shareholding, December 2007

	Pattern	% of Portfolio	Over/(under) weight
Promoters	52.1	-	-
FIIs	17.3	0.5	(0.1)
MFs	3.7	0.7	0.0
UTI	-	-	(0.6)
LIC	8.1	1.3	0.7

ABB: Annual report highlights—strong capex, mix shift towards projects and broad-based order inflows across segments

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- **Capital expenditure towards range and capacity expansion at an all-time high in CY2007**
- **Execution mix clearly shifting to projects from products; more than 50% of revenues now from projects; we expect the shift to continue**
- **Broad-based order inflows across all segments highlight strength of capex momentum in the country**
- **Revise earnings estimates; cut DCF-based target price to Rs1,125 (from Rs1,250 earlier)**
- **Reiterate REDUCE rating; highlight potential inability to sustain margin expansion as well as lower-than-expected execution along with high valuations**

Key highlights from ABB's annual report include (a) strong capital expenditure towards capacity expansion, (b) shift of revenue mix to projects and (c) broad-based order inflows across segments. We highlight that capital expenditure towards range and capacity expansion has been increasing over the last few years, reaching an all-time high of Rs1.4 bn in CY2007 (versus Rs75 mn in CY2001). Capacity additions have taken place primarily in (1) motors and other machines and (2) switchgears. Contribution of project revenues is increasing compared to product revenues over the years, with project items constituting 50% of sales in CY2007 (from 32% in CY2002). ABB's order inflows across segments have remained strong over CY2005-07 with average order inflow growth across segments being 52% in CY2006 and 37% in CY2007. We revise our CY2008E and CY2009E EPS estimates to Rs 30.4 (from Rs30.5 earlier) and Rs40.7 (from Rs41.6 earlier) respectively based on slightly lower margins versus earlier expectation. We cut our CY2008E DCF-based target price to Rs1,125 (from Rs1,250 earlier) and reiterate our REDUCE rating because of potential negative earnings surprises because of execution as well as margins, and high valuations. Remain positive on sectoral outlook as well as execution capabilities, would look to review rating at lower levels.

Capital expenditure towards range and capacity expansion at an all-time high in CY2007.

ABB's capex has been increasing over the last few years, reaching an all-time high of Rs1.4 bn in CY2007 (versus Rs75 mn in CY2001, Exhibit 1). Revenues during the same period have increased to Rs59.3 bn in CY2007 from Rs10.4 bn in CY2001. Capacity additions have taken place primarily for (1) motors and other machines (24% growth with installed capacity increase to 3,124,484 HP from 2,527,433 HP a year ago) and (2) switchgears (50% growth with installed capacity increase to 15.3 mn nos. from 10.2 mn a year ago). ABB had recently committed an investment program of US$100 mn for capacity and range expansion over the next 2-3 years to support the growth momentum in the Indian business. Expansion plans on the anvil include (1) new greenfield facilities for manufacturing low voltage products, power electronics, small power transformers and distribution automation products, (2) doubling production capacity for high voltage (HV) breakers, instrument transformers and HT (high tension) machines, (3) expand the capacity of large power transformers to 17000 MVA (from 12,000 MVA currently) and (4) manufacturing 765 kV equipment in India, to support the country's power infrastructure needs.

Execution mix clearly shifting to projects from products; we expect the shift to continue

Contribution of project revenues is increasing compared to product revenues over the years. Projects now contribute 50% of revenues versus 32% in CY2002 while the product revenues have gone down to 44% versus 61% during CY2002 (Exhibit 2). We assume that going forward the contribution of project items to overall revenue mix will continue to increase and potentially stabilize at a level of about 55-60% of sales. We highlight that project items likely provide bulky revenues (and hence provide strong revenue growth visibility) but are comparatively lower-margin (versus products, as they possibly contain a larger proportion of bought-out items). Projects also have skewed revenue recognition towards the end, one of the potential explanations for lower execution growth for ABB in 1QCY08.

Broad-based order inflows across all segments highlight strength of capex momentum in the country

ABB's order inflows across segments have remained strong over CY2005-07 with average order inflow growth across segments being 52% in CY2006 and 37% in CY2007 (Exhibits 3-4). Power products and power systems segments led the order inflow growth in CY2006 (with 65% and 50% growth respectively), the growth in CY2007 was led by automation products and power systems (with 55% and 36% growth respectively). ABB has won large orders from major players across the power and industrial sectors in CY2007 (Exhibit 5). ABB's foray in electrical Balance-of-Plant (BoP) has been successful with four project wins—two from Tata Projects at Kota and Jewar, JSW Energy and Suratgarh. Process automation orders have originated from key industrial sectors - oil and gas (ONGC) and metals (JSW, Tata Steel, Vedanta Aluminium), highlighting ABB's ability to leverage industrial capex also in addition to the power sector.

Revise earnings estimates; cut DCF-based target price to Rs1,125 (from Rs1,250 earlier)

We have moderately revised our CY2008E and CY2009E EPS estimates to Rs30.4 (from Rs30.5 earlier) and Rs40.7 (from Rs41.6 earlier), respectively, based on slightly lower margins versus earlier expectations. We now estimate EBITDA margins of 12.4% (from 12.6% earlier) and 12.8% (from 13.1% earlier) in CY2008E and CY2009E, respectively. We cut our CY2008E DCF-based target price to Rs1,125 (from Rs1,250 earlier) based on our revised lower margin assumptions resulting in lower earnings (Exhibit 6).

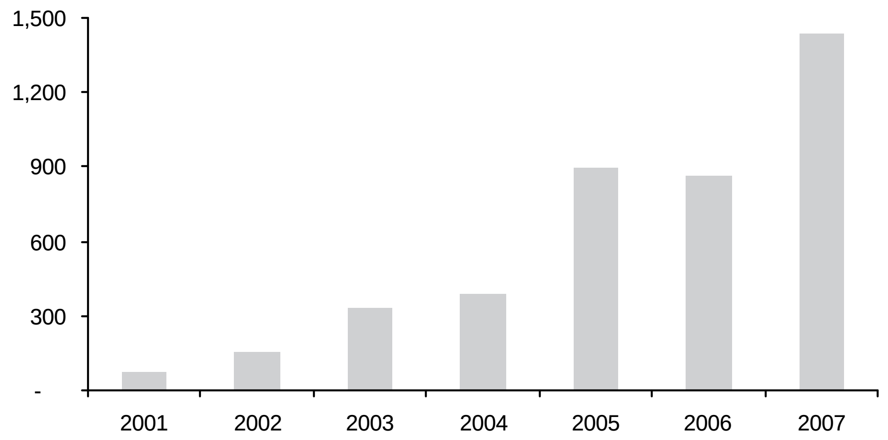
Reiterate REDUCE rating; highlight potential inability to sustain margin expansion as well as lower-than-expected execution along with high valuations

We reiterate our REDUCE rating led by potential of negative surprises in earnings led by both execution as well as margins (commodity prices pressures potentially visible from 2QCY08). We believe that sharp margin expansion achieved in 1QCY08 quarter (that has helped ABB meet our PAT estimates), may not be sustainable due to commodity price increases and limited scope for operating leverage-related gains (due to increase in employee costs etc). ABB may also face execution-related challenges (we expect a revenue growth of about 28-30% for the next two years (against the 17% achieved during 1QCY2008)). We highlight that valuations remain steep at about 26X our CY2009E EPS estimates and 21X our CY2010E EPS estimates, perhaps not factoring in potential risks from commodity price pressure and any slowdown in execution. We also highlight that ABB has underperformed the SENSEX by 10.3% since we revised our rating to REDUCE on April 28, 2008.

We remain positive on our sectoral outlook as well as execution capabilities, would look to review rating at lower levels

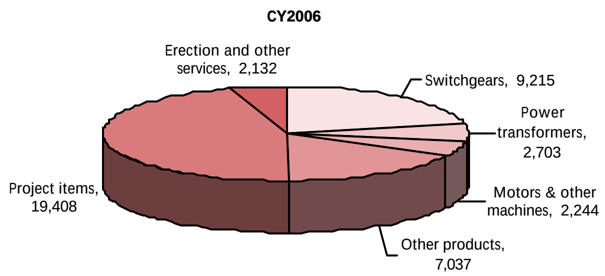
We remain positive on sectoral outlook in terms of likely resumption of ordering activity by Power Grid as well as companies capabilities in terms of delivering strong profitable execution. Thus, we would look to review our rating at potentially lower levels. We highlight that upside risks arise from (1) sustenance of EBITDA margin expansion of 150 bps achieved in 1QCY08 (we are assuming about 20 bps margin expansion for CY2008 and another 40 bps for CY2009), (2) higher execution than the 30% growth over the next two years that our estimates build in, (3) resumption of ordering activity by Power Grid, resulting in strong order inflows (L&T and KEC have recently won large orders from Power Grid) and (4) robust ordering activity from the industrial (automation solutions etc) and private sectors (both on the power generation and T&D sides).

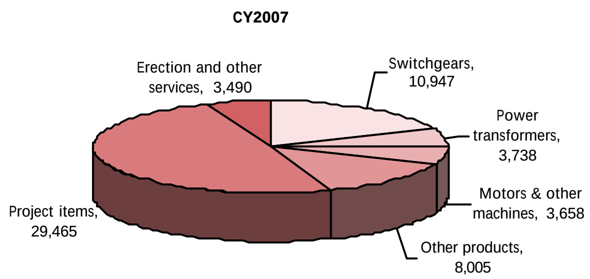
Exhibit 1. ABB's capex was at an all-time high in CY2007 for the past few years
Capital expenditure of ABB, CY2001-07 (Rs mn)



Source: Company data, Kotak Institutional Equities estimates.

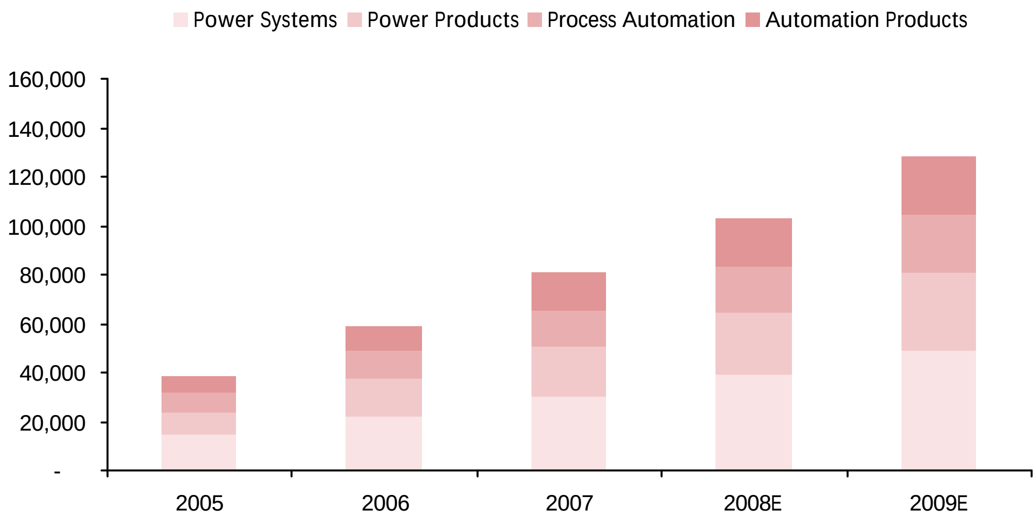
Exhibit 2. Execution mix shifting towards projects from products over the years
Revenue-mix of ABB's various products and services, CY2006-07 (Rs mn)





Source: Company data, Kotak Institutional Equities Estimates.

Exhibit 3. Borad-based order inflows across all segments
Order inflows across segments, CY2005-09E (Rs mn)



Source: Company data, Kotak Institutional Equities Estimates.

Exhibit 4. We expect strong order inflows and execution growth across segments
Segmental order inflows, backlog and revenues, CY2005-10E, (Rs mn)

	2005	2006	2007	2008E	2009E	2010E
ABB						
Orders received	38,572	58,686	80,457	102,803	128,503	160,629
% growth		*52.1*	*37.1*	*27.8*	*25.0*	*25.0*
Revenues	31,284	45,545	62,838	76,566	99,907	125,459
% growth		*45.6*	*38.0*	*21.8*	*30.5*	*25.6*
Order backlog - year end	21,716	34,558	52,177	78,414	107,011	142,181
% growth	-	*59.1*	*51.0*	*50.3*	*36.5*	*32.9*
SUB-SEGMENTS:						
Power Systems						
Orders received	14,698	22,057	30,029	39,038	48,797	60,996
% growth		*50.1*	*36.1*	*30.0*	*25.0*	*25.0*
Revenues	10,633	16,919	22,514	24,659	34,179	41,431
% growth		*59.1*	*33.1*	*9.5*	*38.6*	*21.2*
Order backlog - year end	9,752	15,851	23,366	37,745	52,363	71,929
% growth		*62.5*	*47.4*	*61.5*	*38.7*	*37.4*
Power Products						
Orders received	9,300	15,295	20,433	25,541	31,927	39,908
% growth		*64.5*	*33.6*	*25.0*	*25.0*	*25.0*
Revenues	8,748	12,130	16,326	20,502	25,147	31,819
% growth		*38.7*	*34.6*	*25.6*	*22.7*	*26.5*
Order backlog - year end	6,412	9,577	13,684	18,723	25,502	33,591
% growth		*49.4*	*42.9*	*36.8*	*36.2*	*31.7*
Process Automation						
Orders received	7,729	11,401	14,600	18,980	23,725	29,656
% growth		*47.5*	*28.1*	*30.0*	*25.0*	*25.0*
Revenues	5,549	7,317	10,666	14,778	18,870	24,345
% growth		*31.9*	*45.8*	*38.5*	*27.7*	*29.0*
Order backlog - year end	4,135	6,959	10,893	15,095	19,950	25,262
% growth		*68.3*	*56.5*	*38.6*	*32.2*	*26.6*
Automation Products						
Orders received	6,845	9,933	15,395	19,244	24,055	30,068
% growth		*45.1*	*55.0*	*25.0*	*25.0*	*25.0*
Revenues	6,354	9,179	13,332	16,627	21,710	27,864
% growth		*44.5*	*45.2*	*24.7*	*30.6*	*28.3*
Order backlog - year end	1,417	2,171	4,234	6,851	9,196	11,400
% growth		*53.2*	*95.0*	*61.8*	*34.2*	*24.0*
Order booking mix (%)						
Power Systems	38.1	37.6	37.3	38.0	38.0	38.0
Power Products	24.1	26.1	25.4	24.8	24.8	24.8
Process Automation	20.0	19.4	18.1	18.5	18.5	18.5
Automation Products	17.7	16.9	19.1	18.7	18.7	18.7
Order backlog mix (%)						
Power Systems	44.9	45.9	44.8	48.1	48.9	50.6
Power Products	29.5	27.7	26.2	23.9	23.8	23.6
Process Automation	19.0	20.1	20.9	19.3	18.6	17.8
Automation Products	6.5	6.3	8.1	8.7	8.6	8.0
Sales mix (%)						
Power Systems	34.0	37.1	35.8	32.2	34.2	33.0
Power Products	28.0	26.6	26.0	26.8	25.2	25.4
Process Automation	17.7	16.1	17.0	19.3	18.9	19.4
Automation Products	20.3	20.2	21.2	21.7	21.7	22.2

Source: Company data, Kotak Institutional Equities estimates.

Exhibit 5. Key orders suggest ABB's ability to leverage capex momentum across industrial sectors also in addition to power
Key orders won by the various segments of ABB in CY2007

Customer	Scope of order
Power Systems	
PGCIL	400KV GIS substations in Chamera and Bihar
KPTCL, GETCO, Adani Power etc	220KV substations
Delhi Metro Rail Corporation	Electrification order
Supply utilities such as BESCOM, HESCOM, GESCOM	Power distribution solutions
Tata Projects (Kota and Zawar), JSW Energy (8 X 135 MW), Endure (Suratgarh)	Electricals for Balance of Plant
KPTCL	SCADA systems
Power Products	
JSW Energy	Generator, auto and station transformers
Mumbai Rail Vikas Corporation	218 units of EMUs
PGCIL	Auto transformers
NALCO	HV capacitors
NTPC - Dadri, Korba and Farakka projects	498 MV panels
Delhi Metro Rail Corporation	353 MV panels
KSEB	1,474 outdoor RMUs
Process Automation	
Electricals and automation solutions	
JSW	Commissioning of cold roll mill
Durgapur Steel Plant	Upgrade of NET90 system
Tata Steel	AC drive solution
ONGC	First phase of SCADA system
Essar	800XA installation and safety system
Automation Products	
Tata Steel	Kalinganagar project
JSW Steel	Capacity expansion at Bellary
Bhushan Steel	Blast furnace
Vedanta Aluminium	High current rectifiers

Source: Company data.

Exhibit 6: Our DCF-based target price is Rs1,125/share

DCF valuation for ABB, December calendar year-ends, 2008E-2019E, (Rs mn)

Year to Dec	2008E	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E
Revenues	**76,566**	**99,907**	**125,459**	**158,534**	**190,241**	**228,289**	**268,239**	**315,181**	**362,459**	**416,827**	**468,931**	**527,547**
Growth (%)	29.1	30.5	25.6	26.4	20.0	20.0	17.5	17.5	15.0	15.0	12.5	12.5
EBIT margin	11.9	12.2	12.4	12.7	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.5
EBIT*(1-tax rate)	**5,872**	**7,863**	**10,057**	**12,991**	**15,031**	**18,038**	**21,194**	**24,903**	**28,639**	**32,935**	**37,051**	**42,533**
Growth (%)	32	34	28	29	16	20	18	18	15	15	13	15
Depreciation	387	592	692	808	912	1,032	1,193	1,392	1,624	1,885	2,173	2,484
Change in working capital	46	(1,490)	(1,290)	(1,948)	(2,172)	(2,606)	(2,736)	(3,215)	(3,238)	(3,724)	(3,569)	(4,015)
Capital expenditure	(1,191)	(1,500)	(1,750)	(1,750)	(2,000)	(2,500)	(3,000)	(3,500)	(4,000)	(4,500)	(5,000)	(5,500)
Free Cash Flows	**5,115**	**5,465**	**7,709**	**10,102**	**11,772**	**13,963**	**16,651**	**19,580**	**23,024**	**26,596**	**30,655**	**35,502**
Growth (%)	309	7	41	31	17	19	19	18	18	16	15	16
Years discounted	-	1	2	3	4	5	6	7	8	9	10	11
Discount factor	1.00	0.89	0.79	0.70	0.62	0.55	0.49	0.44	0.39	0.35	0.31	0.27
Discounted cash flow	**5,115**	**4,858**	**6,091**	**7,095**	**7,349**	**7,749**	**8,213**	**8,585**	**8,974**	**9,214**	**9,440**	**9,718**

Target price calculation	**Rs Mn**	**WACC calculation**		**Terminal value Calculation**	
Sum of free cash flow	92,400	Risk-free rate (Rf)	7.5%	Cash flow in terminal year	35,502
Discounted terminal value	136,053	Beta (B)	1.00	**Growth to perpetuity (g)**	**5.0%**
Enterprise value	228,453	Equity risk premium	5.0%	Capitalisation rate (WACC-g)	7.5%
Add Investments	774	Expected market Return (Rm	12.5%	Terminal value	497,034
Net debt	(11,266)	Cost of Equity (Ke)	12.5%	Discount period (years)	11.0
Net present value-equity	240,492	Cost of Debt (Kd) (Post-tax)	8.0%	Discount factor	0.27
Shares o/s	212	**WACC**	**12.5%**	**Discounted terminal value**	**136,053**
Target price /share(Rs)	**1,135**				

Terminal multiples	
Terminal FCF multiple	14.0
Terminal EV/EBIDT multiple	8.3

Source: Company data, Kotak Institutional Equities Estimates.

Economy

Sector coverage view N/A

Current inflation is not transitory—prepare for 8% and leave the rest to the Rain Gods

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- **Headline inflation at 7.8%, highest since mid-September 2004**
- **Energy prices contribute 45% (naphtha 27%) to the price increase over the week**
- **Price pressures turn more general and are expected to stay with inflation at about 8%**
- **Further monetary tightening can lead to a bigger problem—stagflation**

Inflation has climbed to 7.8%—the highest since mid-September 2004. However, in our opinion it does not require desperate measures such as further monetary compression. The current inflation is from the supply side (see Exhibit) and is expected to stay high. While some further tax cuts could help, the options are limited in the face of a deteriorating fiscal position and slowing real activity. In this backdrop, it is best to prepare for an 8% inflation by improving safety nets and food supplies to the poor and leave the rest to the Rain Gods.

Energy, food prices still driving up inflation but with second round cost-push impact and rise in inflation expectations, prices of other commodities have also started rising. So, supply-side inflation is becoming more general in nature. Small but steady rise in prices are seen in items such as textiles, chemical and chemical products and beverages.

Over the week prices increased mainly in cigarettes (7.8%), naphtha (7.1%), fruits (5.4%), manufactured food products (3%), bitumen (2.3%), flour (2.2%), textiles (1%), wood and wood products (1%) and chemical and chemical products (0.9%).

Inflation still artificially suppressed through administered prices, poor statistics

We believe inflation is still artificially suppressed through administered price mechanisms. Global crude oil prices have risen fast in April and May, but domestic prices of petrol and diesel has been kept unchanged. Similarly, while naphtha prices were raised by about 7% last week fertilizer prices have been kept under control. In our opinion, poor statistics reflected in several prices left unchanged in the WPI for weeks together and frequent lagged revisions are also distorting inflation trends.

High, higher and highest—but no cause for panic yet

Headline inflation for the week ended May 3, 2008 increased to 7.83% from 7.61%. It is not only higher than the last week, but is also at a 188-week high. However, there is no cause for panic yet. While increase in inflation is bad news, it is on track of our forecast of an 8% average inflation in FY2009E. It is likely to hit 8% in June 2008. In this case, we can do very little and it is best to let inflation run its course with minimal interventions.

Our projections show there has been permanent upwards shift in inflation this year, which would only come down significantly in the last quarter of FY2009E.

In our opinion, the rise in inflation this week is unlikely to trigger tighter monetary policy over the compression which has already been effected. Milton Friedman taught us that inflation is a monetary problem caused by too much money chasing too few goods. But this does not appear to be the reason behind the resurgence of inflation in India.

Need to ensure liquidity even in the face of high inflation

RBI has already tightened liquidity through three CRR hikes of 25 bps each. The third of its hike kicks in only on May 24 and would be followed by advance tax outflows in June. Liquidity surpluses have already vanished from the money markets. RBI is also facing the heat in the foreign exchange markets with the rupee having depreciated 5% against the US dollar over the past 10 trading days. If RBI defends the rupee, liquidity is bound to tighten excessively. Capital inflows have dried up. IIP growth has dropped to 8.1% in FY2008 (3% in March 2008) from 11% in FY2007. There are also signs that investments in new projects may slow down.

Stagflation could be a bigger problem than current inflation

RBI needs to inject significant liquidity in the near term through open market operations (including buyback of MSS securities) while fearlessly defending the rupee. Recent rupee depreciation could show up in inflation numbers with a lag of about three months. If liquidity is not maintained and if the currency's slide is not arrested, the economy could head towards stagflation. This could be a much bigger problem than a year of unavoidable high inflation that the Indian economy now faces.

While people know of inflation, not many know or acknowledge that there is very little that can be done to contain inflation. The current inflation is a supply side one and the best way it can be fought is by short-run supply side management by focusing on internal and external trade, tariff and tax incentives and safety nets for the poor. The rest should be left to the Rain Gods.

Energy (fuel, power, light and lubricants), food prices drive inflation up

Increase in WPI and its major components; the weighted contribution of major components to this increase (%)

		Price rise since		Weighted contribution to WPI since	
	Weight	26-Apr-08	13-Oct-08	26-Apr-08	13-Oct-08
All commodities	100.0	0.4	6.3	100.0	100.0
Primary articles	**22.0**	**0.3**	**7.0**	**17.1**	**25.3**
Food articles	15.4	0.5	3.8	18.8	9.5
Non-food articles	6.1	(0.1)	8.9	(2.1)	8.4
Minerals	0.5	0.0	48.4	0.0	7.3
Fuel, power, light & lubricant	**14.2**	**0.8**	**6.7**	**45.8**	**22.7**
Coal mining	1.8	3.5	9.5	3.5	2.9
Minerals oils	7.0	1.3	9.2	42.7	18.3
Electricity	5.5	0.0	1.4	0.0	1.5
Manufactured products	**63.7**	**0.3**	**5.9**	**42.5**	**52.0**
Food products	11.5	0.7	7.9	19.2	12.6
Beverages tobacco & tobacco products	1.3	3.0	7.5	12.4	2.0
Textiles	9.8	1.1	(3.2)	15.2	(3.0)
Wood & wood product`s	0.2	1.0	1.0	0.4	0.0
Paper & paper products	2.0	0.0	0.2	0.0	0.1
Leather & leather products	1.0	0.0	(1.7)	0.0	(0.2)
Rubber & plastic products	2.4	0.0	2.2	0.0	0.6
Chemicals & chemical products	11.9	0.9	3.6	25.2	6.5
Non-metallic mineral products	2.5	(0.3)	1.8	(1.7)	0.7
Basic metals alloys & metals products	8.3	(1.0)	19.0	(26.9)	28.8
Machinery & machine tools	8.4	0.1	2.2	1.9	2.2
Transport equipment & parts	4.3	(1.0)	1.7	(1.0)	1.7

Note:
(1) Total weighted contribution may not exactly add up to 100 due to rounding off

Source: Kotak Institutional Equities.

Technology

Sector coverage view			Neutral

		Price, Rs	
Company	**Rating**	**16-May**	**Target**
TCS	REDUCE	981	950
Wipro	ADD	506	490
Infosys	BUY	1,871	1,800
Satyam Comp	BUY	487	500
HCL Tech	REDUCE	296	260
i-flex solutions	SELL	1,403	1,100
Patni	SELL	281	270
Hexaware	SELL	67	70
Polaris Softwa	SELL	110	85
Tech Mahindra	ADD	957	900
Mphasis BFL	SELL	246	200
MindTree	BUY	455	480

EPS at Re/US$ rate of 42.5 for Indian IT companies

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- **FY2009E EPS estimates go up by 2-10% at Re/US$ rate of 42.5**
- **Rupee depreciation could help mitigate some of the likely pricing pressure**
- **Forex losses on account of hedging would depend on the extent and nature of hedges**
- **Stocks trading close to fair values; rupee remains the wild card**

With the US$ strengthening against the Rupee over the past few weeks (1.8% and 5.1% depreciation in the Re over the past two and four weeks, respectively), we take a look at the potential EPS of the tier-I Indian IT companies at various levels of Re/US$ rate. We note that our current EPS estimates are based on an average Re/US$ rate of 39.5 for FY2009E and 38.5 for FY2010E. At 42.5, the EPS estimates for the tier-I names go up by 2-10%. Impact on individual companies will depend on the extent of hedging relative to net cash inflows (the lower the better, Wipro and HCLT hurt the most), instruments used for hedging (options may lessen the impact on TCS, despite large hedging position) and accounting policy employed (cash-flow hedging versus mark-to-market (MTM)). We believe that a depreciating rupee can provide substantial cushion to the tier-I players to mitigate some of the potential pricing pressure from the 'troubled' clients in the BFSI space. The tier-I names are trading close to their fair values at Re/US$ rate of 39.5. Stock movements from here will likely remain hinged on the direction of the Rupee. Infosys and Satyam are our top picks in the sector.

Our FY2009E EPS estimates for tier-I companies go up by 2-10% at a Re/US$ rate of 42.5. Exhibit 1 gives our EPS estimates for the tier-I IT companies at various Re/ US$ rate assumptions. We note that our current EPS estimates are based on an average Re/US$ rate of 39.5 for FY2009E and 38.5 for FY2010E. Some of the key aspects that could influence the impact on individual companies include—(a) extent of hedging; Exhibit 2 gives the hedging position of various tier-I companies over the past five quarters. We highlight that Infosys is the only company among the tier-I names, that has reduced its hedging over the past two quarters; Wipro increased its exposure 3.2X over the same timeframe, (b) nature of derivative instruments used for hedging currency risk—options versus forwards; we highlight that higher forward covers would mean higher MTM forex losses. TCS has the lowest proportion of forwards among the tier-I names, (c) hedge accounting policy—cash-flow versus MTM, and (d) proportion of invoicing in different currencies and corresponding proportion of hedging.

1. **Infosys.** Infosys had forward hedges of US$760 mn at end-FY2008 largely in line with debtors and unbilled receivables of US$688 mn. In our view, Infosys would not have any meaningful forex losses for the Jun '08 quarter and FY2009. Our EPS estimates for FY2009 at Re/US$ rate of 42.5 would be 10% higher at Rs104.4 than our base case EPS of Rs94.7
2. **Satyam.** Satyam had forward hedges of US$1.13 bn at end-FY2008, higher than end-FY2008 debtors of US$591 mn. Satyam has stated that it has reduced its hedges to US$750 mn. We forecast forex loss of US$20 mn, if the rupee was to stay at 42.5. We believe that the company may miss its Jun '08 quarter guidance if the Rupee stays at the current levels. Our FY2009E EPS, however, would be 7.7% higher to Rs32.9 as compared to our base case EPS of Rs30.5 at Re/US$ rate of 42.5.

3. **Wipro.** Wipro had increased its hedging from less than US$1.1 bn at end Sep '07 to US$3.5 bn by end-FY2008. We believe that most of the hedges are taken at a rate in the range of 39.5 and 40.5. The company had Rs1.1 bn of unrealized losses in the other comprehensive income line as on March 31, 2008. We believe that the impact of the hedges would reflect in lower Re/US$ rate realization (since it follows cash flow hedge method of accounting). We believe that average realized rate for Wipro would be 41 for FY2009E, assuming that the average spot rate is 42.5. Accordingly, our EPS would increase by a moderate 2.8% to Rs28.2 for FY2009E.
4. **TCS.** TCS had hedges of US$4.5 bn as at end-March 2008 (reduced to under US$3 bn recently) with a majority of hedges in the form of options (~80%). Our conversations with TCS indicate that it has taken a mix of plain vanilla and range barrier options. As a result, the company would be able to participate in the benefits from rupee depreciation. However, TCS may route the cost of the options through the P&L. Our scenario EPS at an average Re/US$ rate of 42.5 stands at Rs60.9, 5.2% higher than our base case of Rs57.9
5. **HCL Technologies.** HCLT has hedges through forward contracts of US$2.7 bn, maturing over a period of 10 quarters. Of the hedges, 18% are unassigned hedges, which are marked-to-market. For FY2009E, we forecast EPS of Rs22.1, a moderate change over our base case of 21.7 assuming Re/US$ rate of 42.5.

Rupee could mitigate some of the possible pricing pressure. We believe that Rupee depreciation (an average of 42.5 for FY2009E would mean a 6% depreciation versus FY2008 average) could help mitigate some of the potential pricing pressure being witnessed by the Indian IT companies on account of the challenging external environment and the troubles being faced by some key BFSI clients. 6% rupee depreciation could enable mitigate the 3-4% decline in pricing, in our view.

Rupee remains the wild-card; stocks trading close to fair-value otherwise. We believe that the stocks are trading close to their fair values at our current FY2009E average Re/US$ assumption. There is an upside risk to our target prices if the rupee sustains at the current levels.

EPS of tier-I Indian IT names at various Re/US$ rates

	EPS		% change from base case	
Base case	**2009E**	**2010E**	**2009E**	**2010E**
Re/ US$ rate	**39.5**	**38.5**		
Infosys	94.7	108.1		
Wipro	27.4	31.5		
Satyam	30.5	35.0		
TCS	57.9	65.4		
HCLT	21.7	24.4		
Re/ US$ rate	**40.5**	**39.5**		
Infosys	97.9	112.0	3.4	3.7
Wipro	27.9	33.0	1.8	4.8
Satyam	31.3	36.2	2.7	3.5
TCS	58.9	67.6	1.8	3.3
HCLT	21.8	25.4	0.8	3.8
Re/ US$ rate	**41.5**	**40.5**		
Infosys	101.2	116.0	6.8	7.4
Wipro	28.1	33.6	2.5	6.7
Satyam	32.1	37.5	5.2	7.0
TCS	59.9	69.8	3.5	6.7
HCLT	21.9	26.2	1.3	7.0
Re/ US$ rate	**42.5**	**41.5**		
Infosys	104.4	120.0	10.2	11.0
Wipro	28.2	34.4	2.8	9.3
Satyam	32.9	38.7	7.7	10.6
TCS	60.9	72.0	5.2	10.0
HCLT	22.1	26.9	1.8	10.2

Note:
(a) HCLT is June year-ending.

Source: Kotak Institutional Equities estimates.

Currency hedges of the top Indian IT companies over the past few quarters (US$ mn)

	Mar-07	Jun-07	Sep-07	Dec-07	Mar-08
TCS	1,431	2,500	2,800	3,100	4,500
HCL Tech	900	1,160	1,860	2,300	2,700
Wipro (a)	600	708	1,100	2,450	3,500
Infosys	471	939	1,401	1,150	759
Satyam	453	744	783	908	1,133

Note:
(a) Gross outstanding hedges. Net hedges (after assigining to assets on the balance sheet) at end-March 2008 were US$2,950 mn

Source: Companies, Kotak Institutional Equities.

Energy

Sector coverage view	Cautious

Company	Rating	Price, Rs 16-May	Target
Reliance Inds	RS	2,636	-
RPL	REDUCE	187	185

Refining margins: Turning less positive on refining cycle; estimates unchanged for now

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- **Refining margins may deteriorate from 2HCY08**
- **Large capacity additions from 2HCY08 plus demand weakness**
- **Earnings of RIL, RPET, standalone refiners at risk from weaker-than-expected margins**

We have turned less positive on the refining cycle given (1) rising evidence of further demand weakness in CY2008E and CY2009E and (2) increased confidence about new refining capacity being completed on or ahead of time from 2HCY08. We see high risks to earnings of refining companies such as RIL, RPET and other standalone refiners from potentially weaker-than-expected refining margins. We would focus less on short-term volatility in refining margins and more on the likely deterioration in supply-demand balance of refined products from 2HCY08. We are not changing our earnings estimates as we wait for fundamentals to reassert themselves in the crude market; this will determine the amount of adventitious gains for FY2009E. Our 12-month target price for RPET is Rs185 based on 9X FY2010E EPS.

Downside risks to earnings of standalone refineries. We see downside risks to our earnings estimates of RIL, RPET and standalone refiners such as CPCL and MRPL (both not covered although consolidated with their parents—IOC and ONGC, respectively). We note that earnings of standalone companies have high leverage to refining margins and weaker-than-expected margins could significantly impact their earnings negatively.

Exhibit 1 and 2 show the sensitivity of RIL's (standalone) and RPET's EPS to changes in refining margins, respectively. A US$1/bbl lower refining margin versus our expectation will impact RIL's FY2009E (standalone) EPS by 6% and RPET's FY2010E EPS by 9%. We currently model very strong margins for RIL's refinery at US$12.4/bbl for FY2009E and US$13.1/bbl for FY2010E and for RPET's refinery at US$15.8/bbl for FY2010E and US$14.8/bbl for FY2011E. We note that RIL's FY2008 reported margin was US$15/bbl, which included US$3/bbl of adventitious gains as per our computations; the sharp yoy decline reflects our assumption of moderate adventitious gains in FY2009E and nil beyond.

Large global capacity addition from 2HCY08 is a given. We see significant refining capacity coming addition from 2HCY08, which includes capacity addition of 1.1 mb/d in China and RPET's 580,000 b/d refinery (Exhibit 3). We expect refining capacity addition of 1.4 mb/d, 1.7 mb/d and 1.7 mb/d in CY2008E, CY2009E and CY2010E, respectively (see Exhibit 4). In addition, we note supply of natural gas liquids (NGLs) would increase by 0.4 mb/d, 0.8 mb/d and 0.6 mb/d in CY2008E, CY2009E and CY2010E as would supply of bio-fuels (0.43 mn b/d in CY2008E).

Demand continues to weaken particularly in 'free' markets. We expect incremental global demand (see Exhibit 5) to be meaningfully lower than incremental global supply of refined products, NGLs and bio-fuels. IEA's May publication has cut CY2008E global oil demand to 1.03 mn b/d from 1.42 mn b/d in April 2008 and 2 mn b/d in January 2008. The IEA now projects OECD demand to decline 0.3 mn b/d in CY2008E versus +0.5 mn b/d in January 2008. 1QCY08 OECD demand has fallen by 0.7 mn b/d (-2% yoy) due to the impact of high gasoline and other product prices (see Exhibit 6). However, non-OECD demand is relatively unchanged at 1.4 mn b/d against 1.5 mn b/d in January 2008 given that users in countries such as China, India and the Middle East are relatively insulated from high crude prices.

Refining margins bounce back but off recent peaks. Exhibit 7 shows that refining margins have bounced back in the most recent week from very low levels before that. However, margins are still off recent peaks. Given the confusion about movements in the recent weeks (with the street unable to decide whether margins had declined or were stable), we present weekly refining margins for various regions as computed by the IEA in Exhibit 8.

Reliance has high leverage to refining margins

Sensitivity of RIL's standalone (without RPL) earnings to key variables

	Fiscal 2009E			Fiscal 2010E			Fiscal 2011E		
	Downside	Base case	Upside	Downside	Base case	Upside	Downside	Base case	Upside
Rupee-dollar exchange rate									
Rupee-dollar exchange rate	38.5	39.5	40.5	37.5	38.5	39.5	37.0	38.0	39.0
Net profits (Rs mn)	137,041	143,020	148,999	198,853	206,139	213,425	194,212	201,331	208,451
EPS (Rs)	90.6	94.5	98.5	126.4	131.0	135.6	123.4	128.0	132.5
% upside/(downside)	**(4.2)**		**4.2**	**(3.5)**		**3.5**	**(3.5)**		**3.5**
Chemical prices									
Change in prices (%)	(5.0)		5.0	(5.0)		5.0	(5.0)		5.0
Net profits (Rs mn)	138,876	143,020	147,165	202,273	206,139	210,005	197,944	201,331	204,719
EPS (Rs)	91.8	94.5	97.2	128.6	131.0	133.5	125.8	128.0	130.1
% upside/(downside)	**(2.9)**		**2.9**	**(1.9)**		**1.9**	**(1.7)**		**1.7**
Refining margins (US$/bbl)									
Margins (US$/bbl)	11.4	12.4	13.4	12.1	13.1	14.1	11.1	12.1	13.1
Net profits (Rs mn)	134,411	143,020	151,629	200,024	206,139	212,254	195,316	201,331	207,347
EPS (Rs)	88.8	94.5	100.2	127.1	131.0	134.9	124.1	128.0	131.8
% upside/(downside)	**(6.0)**		**6.0**	**(3.0)**		**3.0**	**(3.0)**		**3.0**

Source: Kotak Institutional Equities estimates.

Reliance Petroleum has high leverage to refining margins

Sensitivity of RPL's earnings to key variables

	Fiscal 2009E			Fiscal 2010E			Fiscal 2011E		
	Downside	Base case	Upside	Downside	Base case	Upside	Downside	Base case	Upside
Rupee-dollar exchange rate									
Rupee-dollar exchange rate	38.5	39.5	40.5	37.5	38.5	39.5	37.0	38.0	39.0
Net profits (Rs mn)	21,098	22,015	22,932	89,232	92,813	96,393	81,896	85,181	88,466
EPS (Rs)	4.7	4.9	5.1	19.8	20.6	21.4	18.2	18.9	19.7
% upside/(downside)	**(4.2)**		**4.2**	**(3.9)**		**3.9**	**(3.9)**		**3.9**
Refining margins (US$/bbl)									
Margins (US$/bbl)	14.8	15.8	16.8	14.8	15.8	16.8	13.8	14.8	15.8
Net profits (Rs mn)	19,848	22,015	24,183	84,645	92,813	100,980	77,128	85,181	93,234
EPS (Rs)	4.4	4.9	5.4	18.8	20.6	22.4	17.1	18.9	20.7
% upside/(downside)	**(9.8)**		**9.8**	**(8.8)**		**8.8**	**(9.5)**		**9.5**

Source: Kotak Institutional Equities estimates.

Significant refining capacity to come onstream in China and India from 2HCY08

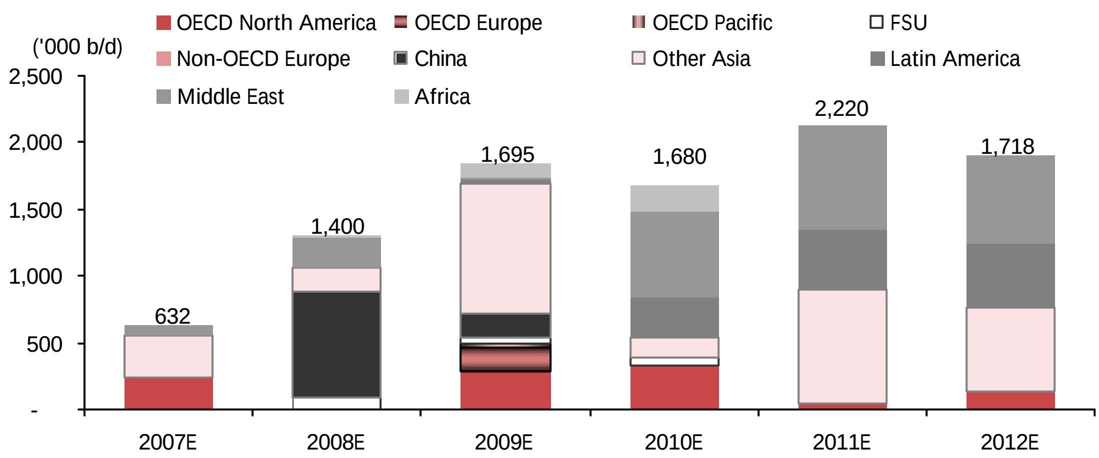
Upcoming refining capacity addition (b/d)

Company	Location	Capacity addition (b/d)	Expected completion
Reliance Petroleum	Jamnagar, India	580,000	3QCY08
CNOOC	Daya Bay, Huizhou, Guangdong, China	240,000	3QCY08
Sinopec	Qingdao, China	200,000	4QCY08
Sinopec	Maoming, China	130,000	4QCY08
Fujian Petrochemical	Quangang, Quanzhou City, China	160,000	1QCY09
Sinopec	Tianjin, China	150,000	1QCY09
Petrochina	Dagang, Quinzhou, China	200,000	1QCY09
Petrovietnam	Dung Quat, Vietnam	121,000	1QCY09
Total capacity addition		**1,781,000**	

Source: Oil & Gas journal, Kotak Institutional Equities estimates.

We expect supply significant additions to global refining capacity

Global refinery capacity addition, calendar year ends, 2007-2012E ('000 b/d)



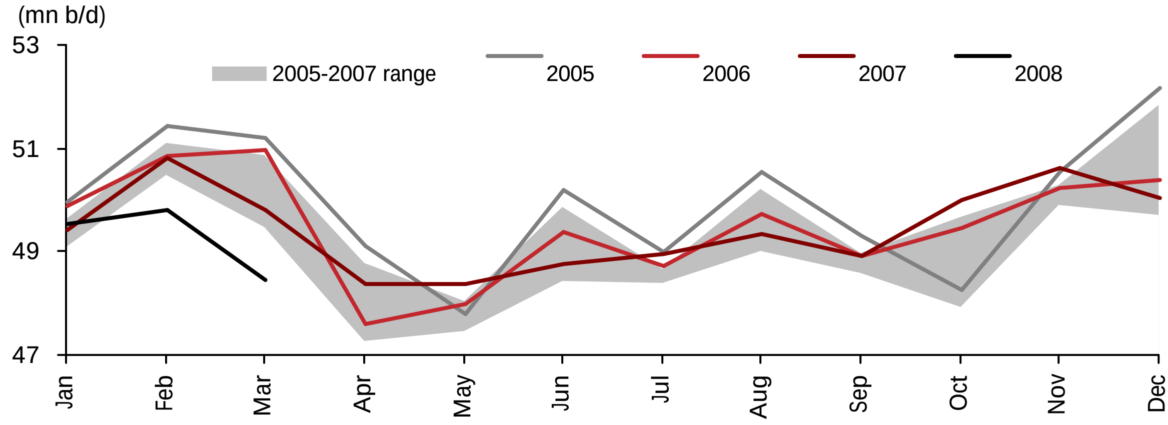
Source: IEA, Kotak Institutional Equities estimates.

Expect incremental global demand to be meaningfully lower than incremental global supply
Estimated global crude demand, supply and prices, Calendar year-ends

	2004	2005	2006	2007	2008E	2009E	2010E	2011E	2012E
Demand (mb/d)									
Total demand	82.5	83.8	84.7	85.8	86.8	88.0	89.3	90.6	92.0
Yoy growth	3.3	1.3	0.9	1.1	1.0	1.2	1.3	1.3	1.4
Supply (mb/d)									
Non-OPEC	48.8	48.6	49.1	49.7	50.4	51.5	51.8	52.1	52.5
Yoy growth	0.6	(0.2)	0.5	0.6	0.7	1.1	0.3	0.3	0.4
OPEC									
Crude	29.5	30.7	30.9	31.3	31.2	30.5	30.9	31.8	32.4
NGLs	4.2	4.5	4.6	4.8	5.2	6.0	6.6	6.7	7.1
Total OPEC	**33.7**	**35.2**	**35.5**	**36.1**	**36.4**	**36.5**	**37.5**	**38.5**	**39.5**
Total supply	**83.4**	**84.6**	**85.4**	**85.8**	**86.8**	**88.0**	**89.3**	**90.6**	**92.0**
Total stock change	1.0	0.7	0.8						
OPEC crude capacity				**34.4**	**35.5**	**36.1**	**37.1**	**37.9**	**38.4**
Implied OPEC spare capacity				**3.1**	**4.3**	**5.6**	**6.2**	**6.1**	**5.9**
Demand growth (yoy, %)	**4.2**	**1.6**	**1.1**	**1.3**	**1.2**	**1.4**	**1.5**	**1.5**	**1.5**
Supply growth (yoy, %)									
Non-OPEC	**1.2**	**(0.4)**	**1.0**	**1.2**	**1.4**	**2.2**	**0.6**	**0.6**	**0.8**
OPEC	**8.4**	**4.5**	**0.9**	**1.7**	**0.8**	**0.3**	**2.7**	**2.7**	**2.6**
Total	**4.4**	**1.4**	**0.9**	**0.5**	**1.1**	**1.4**	**1.5**	**1.5**	**1.5**
Dated Brent (US$/bbl)	**38.3**	**54.4**	**65.8**	**72.7**	**100.0**	**95.0**	**90.0**	**90.0**	**90.0**

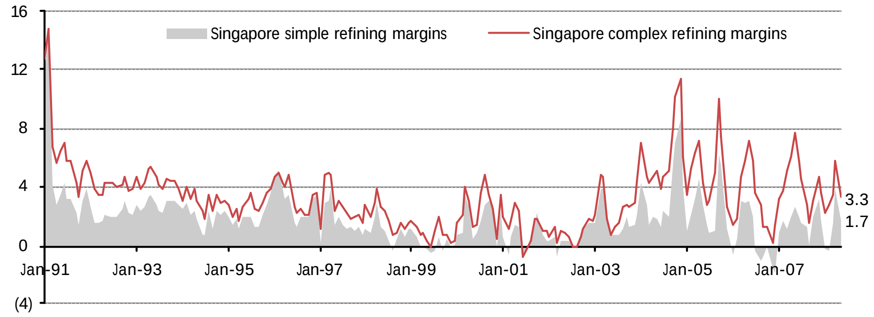
Source: IEA, BP Statistical Review of World Energy, and various government and industry sources.

OECD demand has fallen in the recent month due to the impact of high gasoline and other product prices
OECD demand (mn b/d)



Source: IEA, Kotak Institutional Equities.

Singapore refining margins (US$/bbl)



Simple refining margins, March fiscal year-ends (US$/bbl)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 YTD
1Q	(0.32)	1.29	0.51	0.30	1.05	1.69	3.02	2.52	2.25	2.95
2Q	(0.08)	2.47	0.45	0.07	1.20	3.13	2.78	(0.70)	0.99	
3Q	0.14	1.74	1.06	1.44	1.57	6.46	2.22	(1.25)	2.32	
4Q	1.86	0.21	(0.03)	2.98	2.88	2.08	1.09	1.25	0.25	
Average	**0.40**	**1.43**	**0.50**	**1.20**	**1.67**	**3.34**	**2.28**	**0.45**	**1.45**	**2.95**

Complex refining margins, March fiscal year-ends (US$/bbl)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 YTD
1Q	0.43	1.86	1.34	0.79	1.24	4.57	4.93	6.24	6.58	4.78
2Q	1.19	3.96	0.58	0.14	2.35	5.80	6.11	2.46	2.91	
3Q	0.41	2.25	1.22	1.56	3.23	9.04	3.94	0.98	3.91	
4Q	2.64	1.60	0.65	3.70	5.44	5.02	2.77	4.11	2.78	
Average	**1.17**	**2.42**	**0.95**	**1.55**	**3.06**	**6.10**	**4.44**	**3.45**	**4.05**	**4.78**

Weekly margins (Simple)

Current	-1 Wk	-2 Wk	-3 Wk	-4 Wk
1.96	(0.17)	3.34	2.31	3.80

Weekly margins (Complex)

Current	-1 Wk	-2 Wk	-3 Wk	-4 Wk
3.52	1.53	4.80	4.36	5.66

Singapore refining margins, March fiscal year-ends (US$/bbl)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 YTD
Simple	0.40	1.43	0.50	1.20	1.67	3.34	2.28	0.45	1.45	2.95
Complex	0.43	1.86	1.34	0.79	1.24	4.57	4.93	3.45	4.05	4.78

Source: Bloomberg.

Refining margins declined sharply in the current month

Weekly refining margins for various regions (US$/bbl)

						Change (US$/bbl)	
Week ended	**9-Apr-08**	**16-Apr-08**	**23-Apr-08**	**30-Apr-08**	**7-May-08**	**Weekly**	**Monthly**
Singapore hydrocracking margins over Dubai	7.55	6.03	5.88	6.44	4.26	(2.18)	(3.29)
Mediterranean cracking margins over Es Sider	7.84	5.38	5.26	7.32	4.96	(2.36)	(2.88)
US Gulf Coast cracking margins over Brent	2.21	2.21	1.05	(1.12)	0.15	1.27	(2.06)
US West Coast cracking margins over Oman	5.61	3.59	1.21	(0.86)	(2.65)	(1.79)	(8.26)
China hydrocracking margins over Dubai	8.55	8.28	6.53	5.36	2.81	**(2.55)**	**(5.74)**

Source: IEA.

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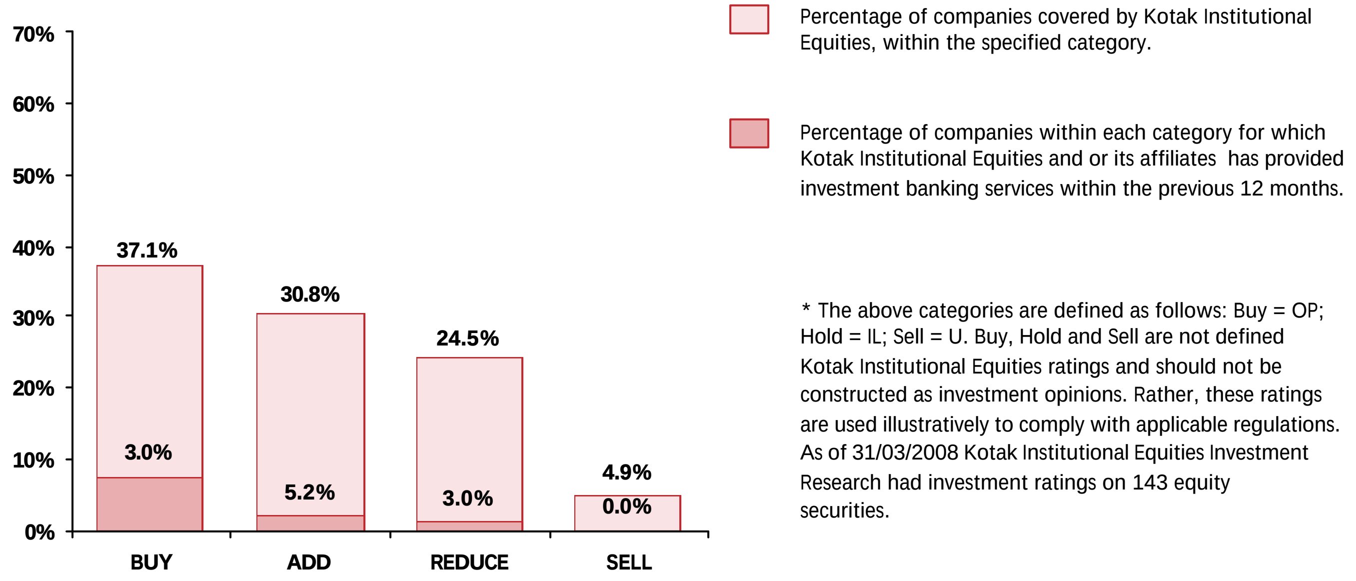

* The above categories are defined as follows: Buy = OP; Hold = IL; Sell = U. Buy, Hold and Sell are not defined Kotak Institutional Equities ratings and should not be constructed as investment opinions. Rather, these ratings are used illustratively to comply with applicable regulations. As of 31/03/2008 Kotak Institutional Equities Investment Research had investment ratings on 143 equity securities.

Source: Kotak Institutional Equities. As of March 31, 2008

Ratings and other definitions/identifiers

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Old rating system

Definitions of ratings

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