

### **INDIA DAILY**

September 10, 2007

#### **EQUITY MARKETS**

	Change, %						
India	7-Sep	1-day	1-mo	3-mo			
Sensex	15,590	(0.2)	4.9	10.9			
Nifty	4,510	(0.2)	4.1	8.8			
Global/Regional in	Global/Regional indices						
Dow Jones	13,113	(1.9)	(1.0)	(2.3)			
Nasdaq Composite	2,566	(1.9)	0.8	(0.3)			
FTSE	6,191	(1.9)	2.5	(4.8)			
Nikkie	15,782	(2.1)	(5.9)	(11.2)			
Hang Seng	23,579	(1.7)	8.2	15.0			
KOSPI	1,824	(3.2)	(0.2)	5.6			
Value traded - India							
Moving avg, Rs bn							
	7-Sep		1-mo	3-mo			
Cash (NSE+BSE)	144.5		152.4	157.0			

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#### **Updates**

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**Telecom:** Party-poopers preparing to storm the party

#### **News Roundup**

#### Corporate

- Global private equity investors Blackstone, JC Flower and Fortress of the US, Temasek of Singapore and 3i of the UK are in talks with the Life Insurance Corporation of India (LIC) for buying a combined 15 per cent stake in the life insurer's proposed credit card venture with US-based GE Money. (BS)
- Soft drink maker Coca-Cola India today said it would undertake a project to provide drinking water to local communities and thousands of schools by 2010 as part of its corporate social responsibility. (BS)
- Public sector giants NTPC and BHEL have decided to float a new joint venture company for executing power sector projects in India and abroad.(FE)
- Europe's largest car maker Volkswagen is betting big on sourcing cost-effective automotive components from India. A source close to the company said Volkswagen was planning to use local components for its vehicles in India.(FE)
- Boeing is evaluating a captive centre and defence subassembly line in India. Boeing has tie-ups with several IT giants like Infosys and TCS as well as research bodies such as HAL and Indian Institute of Science. (ET)

#### Economic and political

- Pakistan stepped up airport security, banned rallies and continued rounding up hundreds of opposition activists on Sunday, a day before former prime Minister Nawaz Sharif's planned return to challenge the military ruler (Gen Pervez Musharaff) who sent him into exile seven years ago. (ET)
- India, seeking entry into the Asia-Pacific Economic Cooperation (APEC) forum, will have to wait for at least another three years as the group's leaders have decided to take up the issue of membership in 2010. (BS)
- The nuclear-deal-in-the-making with the US has forced the government into a firefighting mode not only domestically, but also internationally, where it is working overtime to avoid straining relations with the key long-time ally Russia. (BS)

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

#### Forex/money market

Derivatives (NSE)

Deri. open interest

	Change, basis points			
	7-Sep	1-day	1-mo	3-mo
Rs/US\$	40.7	-	6	(13)
6mo fwd prem, %	0.7	(25)	71	24
10yr govt bond, %	7.9	(5)	(2)	(29)

768.3

422.9

850.2 596.8

Change, %

#### Net investment (US\$mn)

	6-Sep	MTD	CYTD
Fils	153	540	8,914
MFs	11	87	833

#### Top movers -3mo basis

Best performers	7-Sep	1-day	1-mo	3-mo			
Reliance Energy	850	(1.2)	13.6	63.3			
Chambal Fert	49	-	47.8	45.4			
BHEL	1,882	(0.7)	11.1	43.5			
Acc	1,087	(1.4)	8.6	41.4			
Century Tex	804	(0.1)	14.3	37.7			
Worst performers	Worst performers						
Polaris	118	(1.3)	(2.3)	(29.7)			
Punjab Tractors	237	(1.0)	(9.2)	(26.5)			
Pfizer	686	0.4	(5.6)	(18.8)			
i-Flex	1,968	(2.3)	(5.0)	(16.9)			
Novartis India	298	0.2	(4.0)	(15.1)			

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# Energy RELI.BO, Rs1961 Rating U Sector coverage view Neutral Target Price (Rs) 1,650 52W High -Low (Rs) 1999 - 1075 Market Cap (Rs bn) 2,733

#### **Financials**

March y/e	2007	2008E	2009E
Sales (Rs bn)	1,052	934	1,115
Net Profit (Rs bn)	109.1	113.0	153.8
EPS (Rs)	78.3	81.1	105.8
EPS gth	24.1	3.5	30.5
P/E (x)	25.0	24.2	18.5
EV/EBITDA (x)	15.5	14.8	10.3
Div yield (%)	0.6	0.6	0.8

#### Shareholding, June 2007

		% of	Over/(under)
	Pattern	Portfolio	weight
Promoters	43.5	-	-
Flls	23.6	8.1	0.6
MFs	2.4	4.8	(2.7)
UTI	-	-	(7.5)
LIC	4.3	7.9	0.4

# Reliance Industries: KG-D6 gas pricing—Price formula may get approved but outcome of court cases more important

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- No major surprise likely on EGOM's decision on Reliance's gas pricing formula
- Outcome of Reliance's court cases with NTPC and RNRL more important
- Pricing formula may not matter much if Reliance loses ongoing court cases

The Empowered Group of Ministers (EGOM), which is deliberating on the pricing formula of Reliance's KG D-6 block, has decided to form a sub-committee to provide inputs on the issue. We expect the EGOM to eventually approve Reliance's proposed formula with minor modifications; newspaper articles have reported that a decision may be likely as early as this week. However, we would note that the approved pricing formula would not apply to the portion of gas to be supplied by Reliance to NTPC and RNRL, if Reliance loses the ongoing court cases. Also, we note the street, including, us has already assumed US\$4.5/ mn BTU for Reliance's D-6 gas. Thus, we see the outcome of the legal cases as more important for Reliance's stock price, particularly if Reliance loses one or both the cases. We retain our 12-month fair valuation of Rs1,650 for Reliance stock with key upside risk arising from higher-than-expected oil and gas reserves.

#### No major surprise likely as far as EGOM's decision on price formula is concerned.

We do not expect any major surprise in the EGOM's decision on Reliance's proposed gas pricing formula. As highlighted by us previously, the government does not have the right to fix the price of gas produced under NELP contracts as per the NELP and specific PSCs. The government's role is restricted to approving the basis or formula, taking into account the prevailing policy.

We do not rule out the EGOM suggesting minor modifications to the pricing formula. The user (fertilizer and power) and the petroleum ministers have suggested changes to the exchange rate component of the formula. In particular, the fertilizer ministry (as also the Committee of Secretaries earlier) has highlighted several discrepancies in the pricing formula and bidding process (limited number of bidders, bidders being asked to quote for a small component of the overall formula, no data on supply volumes). It has pressed for a lower price and creation of a gas pricing policy and a gas utilization policy before a decision on the gas pricing formula.

**Outcome of legal cases with NTPC and RNRL more important.** We would clarify that a gas price formula or basis approved by the government will not have any bearing on other legal contracts signed between Reliance and NTPC/RNRL. The price formula approved by the government will form the basis for computation of royalty, income tax and, most important, profit petroleum and the government's share of profit petroleum.

If the Mumbai High Court or the Supreme Court (if the matter ends up there as it most likely will) upholds the validity of the 'contracts' with NTPC and RNRL, then Reliance will have to supply the 'contracted' volumes at the 'contracted' price irrespective of the pricing formula approved by the government. We note that Reliance may not have any volumes to sell under the formula if it has to supply gas to NTPC (12 mcm/d) and to RNRL (43 mcm/d). Reliance will use about 20-25 mcm/d of gas for internal use out of the total 80 mcm/d of gas.

We continue to be surprised by the nonchalant attitude of the street regarding the NTPC and RNRL legal cases. There seems to be universal belief that Reliance will win the ongoing legal cases; Reliance's stock price also suggests so. We are no legal experts but our limited understanding of the disputes would suggest that Reliance would have to honor the contracts with NTPC and RNRL unless NTPC and RNRL have violated conditions in their respective contracts, which would make the contracts illegal. The judiciary (Mumbai High Court in this case) will decide on the legal aspects of the case and uphold or invalidate a contract depending on its legality.

Reliance versus NTPC—participation in a bidding process is good enough, in our view. Reliance participated in the international competitive bidding conducted by NTPC and quoted the lowest price. NTPC awarded the contract to Reliance (rightly so since Reliance was the lowest qualified bidder). However, the fact that Reliance and NTPC have not signed a final contract due to certain differences on the quantum of Reliance's liabilities does not mean that (in our view) the contract is illegal.

Reliance versus RNRL—contract was a part of the de-merger process approved by the Mumbai High Court. We note that the Gas Supply Master Agreement (GSMA) signed between Reliance and RNRL, which deals with the specifics of supply and price of gas to RNRL from Reliance, is part of the de-merger process of Reliance Industries. The demerger process has been approved by Reliance's shareholders and sanctioned by the Mumbai High Court. Assuming that RNRL has not violated any of the conditions of the GSMA and the contract, the contract is valid and legal.

Here's a question. What would be the NPV of KG D-6 block if Reliance loses both court cases and government approves the price formula? We sign off with a thought. Investors (extant and potential) may want to get a sense of the profits, cash flows and NPV of the KG D-6 block in case (1) Reliance loses the ongoing court cases with NTPC and RNRL and has to supply about 50-55 mcm/d of gas at US\$2.34/mn BTU and (2) the Indian government uses the price (US\$4, 4.33 or 4.5/mn BTU, whatever that may be) suggested by the approved formula to compute its share of profit petroleum, royalty and income tax. We do not believe something like this could happen but it may help being prepared for the unthinkable.

# Energy BPCL.BO, Rs304 Rating OP Sector coverage view Neutral Target Price (Rs) 400 52W High -Low (Rs) 448 - 255

109.9

#### **Financials**

Market Cap (Rs bn)

March y/e	2007	2008E	2009E
Sales (Rs bn)	966	984	1,001
Net Profit (Rs bn)	18.9	14.2	12.8
EPS (Rs)	52.3	39.3	35.4
EPS gth	577.3	(24.8)	(10.0)
P/E (x)	5.8	7.7	8.6
EV/EBITDA (x)	3.3	3.8	4.0
Div yield (%)	5.3	5.3	4.3

#### Shareholding, June 2007

		% of	Over/(under)
	Pattern	Portfolio	weight
Promoters	64.3	-	-
Flls	12.1	0.2	(0.2)
MFs	2.6	0.3	(0.1)
UTI	-	-	(0.4)
LIC	11.7	1.1	0.7

# Energy HPCL.BO, Rs233 Rating

Rating	OP
Sector coverage view	Neutral
Target Price (Rs)	325
52W High -Low (Rs)	337 - 223
Market Cap (Rs bn)	79

#### **Financials**

March y/e	2007	2008E	2009E
Sales (Rs bn)	890.0	882.4	898.5
Net Profit (Rs bn)	13.5	10.8	11.5
EPS (Rs)	40.0	31.8	34.0
EPS gth	503.8	(20.6)	6.9
P/E (x)	5.8	7.3	6.9
EV/EBITDA (x)	4.0	4.7	4.0
Div yield (%)	7.7	5.1	5.5

#### Shareholding, June 2007

		% of	Over/(under)
	Pattern	Portfolio	weight
Promoters	51.0	-	-
FIIs	13.5	0.2	(0.1)
MFs	7.8	0.6	0.3
UTI	-	-	(0.3)
LIC	15.5	1.1	0.8

## BPCL/HPCL: Price increase on auto fuels and octroi duty cut? Somebody pinch me

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- · Press reports over the weekend suggest increase in retail auto fuel prices
- Maharashtra government reiterates commitment to remove octroi but is not a given
- Trading opportunity based on potential catalysts and skepticism rife on the street

As per press reports over the weekend, the government may increase retail prices of diesel and gasoline after the ongoing Monsoon Session of the Indian Parliament gets over on September 14. The petroleum ministry has raised a cabinet note for a price increase of Rs1/liter and Rs2/liter in case of diesel and gasoline, respectively. In a separate development, the Maharashtra Chief Minister reiterated the government's commitment to remove octroi duty; if this does happen, refining margins and earnings of BPCL and HPCL would improve smartly. However, we do not see the developments as a given, given the several false alarms in the past. Nonetheless, downstream oil company valuations suggest the street expects the current high marketing losses will continue in perpetuity. Key risks to our 12-month target prices of Rs400 for BPCL and Rs325 for HPCL (both based on 40% discount to 5X normalized EBITDA plus value of investments) stem from higher-than-expected under-recovery due to inadequate compensation from the government of India.

**Potential trading opportunity in BPCL and HPCL.** We have 'treated' BPCL and HPCL stocks as trading stocks for the past 12 months and believe the current stock prices and potential positive developments may present another such trading opportunity. We see limited downside risk but opportunity to make 10-20% absolute returns from current levels given (1) potential increase in the retail selling prices of auto fuels and (2) likely government approval for issue of oil bonds of Rs190 bn to the downstream oil companies.

- 1. Limited downside risks on absolute basis. We believe current stock prices of the Indian downstream oil stocks reflect high street skepticism about any potential positive government action (perhaps rightly so). BPCL and HPCL stocks are trading at 7.8X and 7.3X FY2008E EPS, respectively, and our FY2008E estimates are about 50% of our estimated normalized EPS (assuming normal marketing margins). BPCL and HPCL stocks are also trading at 0.87X and 0.67X FY2008E book value, respectively, and at 0.53X and 0.5X our estimated replacement value, respectively.
- 2. Price increase would help reduce under-recoveries. An increase of Rs1/liter and Rs2/liter, respectively, in diesel and gasoline prices would reduce current large under-recoveries on the products. We compute marketing loss of Rs1.7/liter for both diesel and gasoline based on average August prices (US\$70.8/bbl average Dated Brent crude price). Crude prices have increased further since. As per the calculations of the downstream oil companies, the required price increase (to cover loss and generate normal marketing margins) is Rs4.4/liter for diesel and Rs2.2/liter for gasoline.

As per the computations of the government, the total under-recovery for FY2008E would be Rs525 bn at around US\$68/bbl crude price for India basket of crude oils; this compares with Rs494 bn in FY2007 on US\$62.5/bbl crude price. YTD India basket crude price has been US\$68.5/bbl but this has moved up to around US\$73/bbl based on September 7 prices.

3. Removal of octroi possible but may not be imminent. A removal of octroi duty on crude oil (3%) would improve refining margins of the Mumbai refineries of BPCL and HPCL by US\$2/bbl (at US\$66.7/bbl crude price) and recurring EPS by Rs12 and Rs9, respectively. However, we may have to wait for political consensus and fiscal solutions to emerge for resolution of this issue. The Maharashtra government has long deliberated on this issue but apparently not found appropriate fiscal solutions to compensate for the large revenue loss of municipal corporations arising from removal of octroi duty.

#### Normalized earnings forecasts are significantly higher versus actual forecasts

Comparison of normalized marketing margins with FY2009 estimates (Rs/ton)

		BPCL		IPCL
	2009E	Normalized	2009E	Normalized
LPG	(10,750)	1,500	(10,750)	1,500
Naphtha	2,000	500	2,000	500
Gasoline	(2,500)	1,700	(2,500)	1,700
Jet fuel	2,000	1,400	2,000	1,400
Kerosene	(16,250)	600	(16,250)	600
Diesel	(750)	1,500	(750)	1,500
Light diesel oil	1,000	500	1,000	500
Low sulphur heavy stock	1,600	500	1,600	500
Fuel oil	1,600	500	1,600	500
Bitumen	1,800	1,000	1,800	1,000
EPS (Rs)	35.4	69.3	34.0	65.4
EBITDA (Rs bn)	27.1	45.6	29.3	45.4
Enterprise value (5X normalised EBITDA) (Rs bn)		228		227
Value of investments (Rs bn)		92		48
Net debt (Rs bn)		75		91
Equity value (Rs/share)		676		544
Implied equity value at 40% discount (Rs/share	)	406		326

#### Note:

(a) Our normalized earnings estimates are based on normalized marketing margins and actual refining margin estimates for FY2009.

Source: Kotak Institutional Equities estimates.

### Indian downstream oil stocks are inexpensive on long-term valuations P/B and EV/GCI for BPCL and HPCL

	2007		200	2008E		9E
	BPCL	HPCL	BPCL	HPCL	BPCL	HPCL
Stock price (Rs)	304	233	304	233	304	233
Year-end book value (Rs)	322	325	351	347	374	371
P/B (X)	0.9	0.7	0.9	0.7	0.8	0.6
ROAE (%)	16.3	14.9	13.0	9.5	9.8	9.5
EV (Rs bn)	127	112	121	136	125	130
Gross cash invested (Rs bn)	218	211	232	251	253	262
EV/GCI (X)	0.6	0.5	0.5	0.5	0.5	0.5
Cash returns (Rs bn)	25	16	21	17	20	23
CROCI (%)	11.3	7.7	8.8	6.6	7.8	8.9

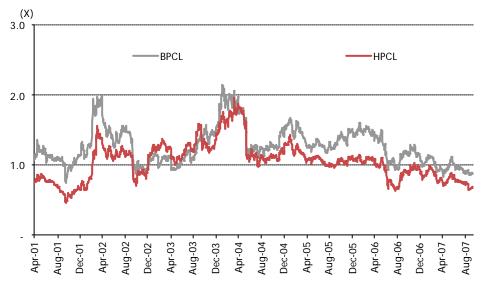
#### Note:

(a) 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 attractively valued

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



Source: Bloomberg, Company, Kotak Institutional Equities estimates.

#### BPCL and HPCL are attractively valued versus replacement values

Enterprise value versus replacement cost of BPCL and HPCL (Rs mn)

		BPCL		HPCL	
			Repl.		Repl.
	Rs/unit	Details	cost	Details	cost
Replacement cost calculation					
Refining capacity (mtpa)	7,000	19.5	136,500	18.0	126,210
Product pipeline network (kms)	12.5	1,379	17,238	2,131	26,638
LOBS capacity (000 tpa)	12	180	2,160	335	4,020
Retail outlets (#)-land		7,537	7,021	7,909	7,370
Retail outlets (#)-fixed assets		7,537	15,074	7,909	15,818
Tanks, terminals etc. (mn kilo liters)	6,000	3.3	19,620	4.0	23,844
LPG cylinders (100% of gross block)			32,626		12,650
LPG bottling capacity (000 tpa)	10	2,082	20,820	2,154	21,540
LPG import capacity (000 tpa)	3			1,600	4,800
Capital WIP			8,523		15,059
Fixed assets total			259,582		257,948
Investments (@ market value)			110,118		79,929
Net working capital			14,931		12,584
Value of lubes business (@ 1X sales)			10,904		18,582
Replacement cost			395,535		369,043
Enterprise value calculation					
Outstanding shares (mn)		362		339	
Market price		304		233	
Market capitalization (Rs mn)			109,878		78,991
Net debt (Rs mn)			99,653		104,307
Enterprise value (Rs mn)			209,531		183,299
Current EV/RC (X)			0.53		0.50
Implied market price at EV/RC=60%			381		346
Implied market price at EV/RC=80%			600		564
Implied market price at EV/RC=100%			818		781

Source: Kotak Institutional Equities Estimates.

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

	2004	2005	2006	2007	2008E	2009E	2010E
Profit model (Rs mn)							
Net sales	479,840	578,774	755,333	965,569	984,342	1,001,055	1,028,067
EBITDA	38,686	26,231	9,407	35,362	27,779	27,069	32,757
Other income	4,348	4,015	4,653	7,332	8,276	7,709	7,280
Interest	(1,447)	(1,748)	(2,474)	(4,774)	(6,643)	(6,059)	(5,507)
Depreciation	(6,754)	(7,130)	(7,680)	(9,041)	(8,983)	(9,321)	(10,277)
Pretax profits	34,833	21,368	3,906	28,879	20,429	19,397	24,253
Extraordinary items	(420)	810	176	(68)	2,314		
Tax	(12,026)	(7,250)	(140)	(9,286)	(5,626)	(5,549)	(5,715)
Deferred taxation	(805)	(1,230)	(1,025)	(268)	(1,318)	(1,044)	(2,529)
Net profits	21,582	13,698	2,916	18,055	15,800	12,804	16,009
Net profits after minority interests	19,086	11,334	2,916	18,055	15,800	12,804	16,009
Earnings per share (Rs)	64.6	37.2	7.6	50.1	38.9	35.4	44.3
Balance sheet (Rs mn)	40.040	02.007	01.204	100 725	111 7/7	110.007	120 220
Total equity  Deformed toyation liability	69,960	82,887	91,394	102,735	111,767	119,087	128,238
Deferred taxation liability	11,304	12,533	13,558	13,826	15,144	16,188	18,717
Total borrowings	32,701	46,589	83,736	108,292	85,916	79,416	71,416
Current liabilities	95,495	104,462	94,070	112,767	91,296	92,976	95,761
Total liabilities and equity	209,459	246,472	282,758	337,620	304,124	307,668	314,133
Cash Current assets	9,319 97,729	6,644	4,921	8,640	4,111	4,096	3,672
	91,129	130,393	128,208	127,698	103,399	104,565	106,623
Goodwill Total fixed assets	 88,484	98,542	 110,855	110 224	126,012	138,405	152 227
	13,927		38,774	118,334 82,949	70,602	60,602	153,237 50,602
Investments Total assets	209,459	10,893 <b>246,472</b>	282,758	337,621	304,124	307,668	314,133
Total assets	207,437	240,472	202,730	337,021	304,124	307,000	314,133
Free cash flow (Rs mn)							
Operating cash flow, excl. working capital	30,727	21,118	9,275	29,920	17,442	15,461	21,535
Working capital	1,025	(18,393)	1,577	11,451	2,829	514	727
Capital expenditure	(17,001)	(17,120)	(19,945)	(17,908)	(16,279)	(21,714)	(25,109)
Investments	1,278	2,992	(28,146)	(45,481)	12,347	10,000	10,000
Other income	1,985	2,445	1,785	4,337	8,276	7,709	7,280
Free cash flow	18,015	(8,957)	(35,455)	(17,682)	24,615	11,970	14,433
- 4 50							
Ratios (%)	40.0	40.0	01./	105.4	7/ 0		
Debt/equity	40.2	48.8	91.6	105.4	76.9	66.7	55.7
Net debt/equity	28.8	41.9	86.2	97.0	73.2	63.2	52.8
RoAE	28.8	14.4	3.3	16.3	13.0	9.8	11.3
RoACE	21.2	12.0	4.1	11.0	9.3	8.5	10.5
Key assumptions (standalone until FY2005)							
Crude throughput (mn tons)	8.8	9.1	17.2	19.8	20.4	20.5	21.0
Effective tariff protection (%)	7.2	4.8	2.9	1.6	1.4	0.4	0.8
Net refining margin (US\$/bbl)	4.2	3.8	2.1	3.2	5.1	4.5	4.0
Sales volume (mn tons)	20.9	21.5	23.3	24.2	25.4	26.4	27.4
Marketing margin (Rs/ton)	1,893	1,732	(671)	(1,140)	(945)	(338)	1,531
Subsidy under-recoveries (Rs mn)	(13,518)	(25,821)	(31,847)	(20,159)	(37,068)	(28,259)	(16,527)
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Source: Kotak Institutional Equities estimates.							

	2004	2005	2006	2007	2008E	2009E	2010E
Profit model (Rs mn)							
Net sales	512,001	597,020	708,609	889,959	882,351	898,492	914,764
EBITDA	31,858	20,511	8,056	24,036	22,771	29,256	34,529
Other income	3,794	3,295	3,285	6,845	8,586	5,723	5,222
Interest	(557)	(816)	(1,587)	(4,230)	(6,974)	(7,635)	(6,132)
Depreciation	(6,054)	(6,584)	(6,902)	(7,040)	(8,060)	(9,898)	(9,817)
Pretax profits	29,042	16,406	2,851	19,611	16,323	17,447	23,801
Extraordinary items	_	1,471	2,201	3,030	_	_	
Tax	(10,225)	(5,897)	(898)	(6,625)	(4,291)	(4,109)	(6,590)
Deferred taxation	(540)	793	(97)	(365)	(1,257)	(1,822)	(1,500)
Prior period adjustment	762	_		61			
Net profits	19,039	12,773	4,056	15,712	10,775	11,516	15,711
Earnings per share (Rs)	56.2	34.8	6.6	40.0	31.8	34.0	46.4
30 100 000 000							
Balance sheet (Rs mn)							
Total equity	77,428	84,409	87,357	95,987	102,003	108,433	117,205
Deferred tax liability	14,541	13,748	13,844	14,209	15,466	17,287	18,787
Total borrowings	17,008	21,854	66,638	105,175	105,175	91,121	71,371
Currrent liabilities	76,551	69,887	79,549	101,195	85,934	91,029	94,040
Total liabilities and equity	185,528	189,896	247,389	316,566	308,578	307,870	301,403
Cash	1,971	2,016	426	868	452	331	394
Current assets	92,331	93,007	109,674	113,779	114,027	117,544	119,422
Total fixed assets	70,743	77,305	97,013	130,644	146,300	149,698	156,289
Investments	20,484	17,568	40,276	71,275	47,798	40,298	25,298
Total assets	185,528	189,896	247,389	316,566	308,578	307,871	301,403
Free cash flow (Rs mn)							
Operating cash flow, excl. working capital	29,062	15,977	10,126	23,966	10,200	17,512	21,806
Working capital changes	(13,410)	(3,614)	(5,351)	8,936	(13,902)	1,579	1,132
Capital expenditure	(8,895)	(12,849)	(25,298)	(38,510)	(22,410)	(13,296)	(16,409)
Investments	(342)	2,995	(22,884)	(31,704)	23,477	7,500	15,000
Other income	1,052	800	941	2,067	6,979	5,723	5,222
Free cash flow	7,466	3,310	(42,466)	(35,246)	4,343	19,020	26,751
Ratios (%)							
Debt/equity	18.5	22.3	65.8	95.4	89.5	72.5	52.5
Net debt/equity	16.4	20.2	65.4	94.7	89.1	72.2	52.2
RoAE	22.0	13.4	4.1	14.9	9.5	9.5	12.0
RoACE	18.9	10.1	2.5	8.8	7.8	8.7	10.2
v							
Key assumptions	12.7	12.0	14.0	1/ 7	14.7	10 F	10.2
Crude throughput (mn tons)	13.7	13.9	14.0	16.7	16.7	18.5	19.3
Effective tariff protection (%)	7.4	5.6	3.1	1.4	1.2	0.4	0.7
Net refining margin (US\$/bbl)	4.4	4.5	3.9	4.3	5.2	4.7	4.2
Sales volume (mn tons)	20.1	20.6	20.1	23.4	24.2	25.0	25.8
Marketing margin (Rs/ton)	1,861 (12,870)	1,688 (26,708)	(463) (29,671)	(710)	(572)	(92)	1,527 (18,736)
Subsidy under-recoveries (Rs mn)			(')() 471\	(18,899)	(34,743)	(27,116)	(10 704)

Source: Kotak Institutional Equities estimates.

#### **Automobiles**

#### ASOK.BO, Rs38

#### Ashok Leyland: M&HCV sales volumes decline 25% yoy in August

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- M&HCV sales drop 25% yoy
- Bus volumes continue to do well

Ashok Leyland has reported a 7% yoy decline in total sales for the month of August. The decline is mainly due to a 25% yoy decline in M&HCV volumes. We note that the M&HCV volumes have been continuously decling since the beginging of FY2008 and have declined 16% yoy on a year-to-date-basis. The bus segment grew by 60% yoy in August. We note that bus volumes for Ashok Leyland have been witnessing a continuous growth since beginning FY2008. We expect CV volumes to improve from the second half of the year as we believe that interest rates have peaked out. The company has recently signed a 'Heads of Agreement:' with Nissan to support the LCV business.

#### 4-wheelers Aug 2007 sales performance

	Aug-07	Aug-06	yoy %	Jul-07	mom %	YTD, FY2008	YTD, FY2007	yoy %
Ashok Leyland								
M&HCV	3,794	5,080	-25.3%	3,569	6.3%	20,239	24,149	-16.2%
LCV	41	22	86.4%	22	86.4%	222	136	63.2%
Total CV	3,835	5,102	-24.8%	3,591	6.8%	20,461	24,285	-15.7%
Buses	2,220	1,381	60.8%	1,983	12.0%	9,331	4,469	108.8%
Total	6,055	6,483	-6.6%	5,574	8.6%	29,792	28,754	3.6%

Source: Company, Kotak Institutional Equities.

Telecom	
Sector coverage view	Cautious

	Price, Rs					
Company	Rating	7-Sep	Target			
Bharti	U	848	750			
Rcom	U	544	500			
Idea Cellular	U	122	110			

#### Party-poopers preparing to storm the party

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- 20-25 MHz of 2G spectrum may be released in a phased manner from January 2008
- Enough spectrum to accommodate 3-4 new players per circle as per our analysis
- Order of allocation of spectrum is not certain; however, more competition is certain

The Indian press has reported that the defense ministry may release 10-15 MHz 2G spectrum by December 2007 and another 10 MHz by March 2008. Newspaper reports cite a draft MOU between DOT and the defense ministry that lays a roadmap for vacation of 2G and release of 3G spectrum. We believe real competition in the wireless market may intensify within six-to-nine months of spectrum allocation. Based on revised TRAl-recommended subscriber base criteria for spectrum allocation, we believe that there is enough spectrum (after release of the same by the defense department) to meet the pan-Indian coverage aspirations of existing players including Aircel, Vodafone-Essar, Idea, Spice and RCL (GSM). However, we believe the long and growing list of applicants along with lack of clarity on prioritization of spectrum allocation (though chronological order will be logical) will likely lead to continued speculation and more applications for the much-desired spectrum. We believe our arguments of further competition and threat to current unsustainably high returns will likely play out over the next 15-18 months. We retain U rating on Bharti, RCL, and Idea with 12-month DCF-based target prices of Rs750, Rs500 and Rs110 respectively. Key upside risk is higher-than-expected profitability.

More players will likely enter the fray—that's more or less certain. We expect 3-4 new operators (by new, we mean new operators in a circle) to receive spectrum in each circle if (1) the defense department releases 20 MHz of spectrum and (2) the government accepts the revised spectrum allocation policy proposed by the TRAI (see Exhibit 1). A new operator is entitled to 4.4 MHz of spectrum initially. Under the 'revised' spectrum allocation policy, we do not expect extant operators to receive additional spectrum except in a few cases, unless they scale up their subscriber bases significantly. Even in the few cases, the amount of spectrum would be 1.2-5.7 MHz, which would leave sufficient spectrum for allocation to new entrants (see Exhibit 2). Exhibit 3 shows the list of extant operators and the number of circles in which they can get additional spectrum under the 'revised' allocation policy (based on end-March 2008 subscribers).

Order of entry not certain and will depend on allocation principle. We believe the entry of new players is certain although the order in which they will get license and spectrum is less so. We expect operators who have received a license but have not yet received spectrum to be first in the queue. This includes Aircel-Maxis (14 circles), Idea (2 circles) and Vodafone-Essar (7 circles). This would lead to the entry of one operator in all the circles and two operators in two circles (Madhya Pradesh, Mumbai).

The order of allocation of spectrum is less certain beyond cases where the government has already granted licenses. We think the government may follow a chronological order to allocate spectrum in subsequent cases although we do not rule out an auction process to select the candidates given the large and growing number of applicants. Press articles report that Idea (9 cricles), ByCell (5), Spice (20), RCL (GSM), Tata Tele (3), HFCL (21), Parvsnath (22), S.Tel (6), Datacom Solutions (22) and BPL Mobile (21) are in the queue for 2G spectrum. We note that TRAI has not recommended any ceiling on the number of players, which has led to the increasing queue of applicants. Exhibit 4 gives our tentative allocation order in the 23 circles.

Newspaper reports also indicate release of 3G spectrum. Newspaper reports also indicate that the defense ministry may vacate 10 MHz 3G spectrum by January 2008 (except in Delhi and Mumbai, were it will vacate 20 MHz) and between 5 MHz and 15 MHz by April 2008 (this varies from circle to circle). With this, between 15 MHz (enough for three 3G operators) to 30 MHz (enough for six 3G operators) will be vacated. We note that TRAI has recommended 2X32.5 MHz of spectrum for 3G service—2X25 MHz in 2.1 GHz band (5 blocks of 5 MHz each) for all operators, 2X2.5 MHz in 800 MHz band (2 blocks) for CDMA (EV-DO) and 2X5 MHz (1 block) in 450 MHz band for CDMA (EV-DO). We expect telecom service providers to take six months from the date of receipt of spectrum to launch 3G services.

#### Higher subscriber base required for same amount of spectrum

Changes recommended by TRAI to subscriber-based spectrum allocation criteria for GSM and CDMA operators

#### GSM spectrum allocation criteria (mn subs)

	Spectrum (MHz)									
Service area	2 2	X 6.2	2	X 8	2	X 10	2 X	12.4	2 2	X 15
	Earlier	Revised	Earlier	Revised	Earlier	Revised	Earlier	Revised	Earlier	Revised
Delhi/ Mumbai	0.3	0.5	0.6	1.5	1.0	2.0	1.6	3.0	2.1	5.0
Chennai/ Kolkata	0.2	0.5	0.4	1.5	0.6	2.0	1.0	3.0	1.3	5.0
A	0.4	0.8	0.8	3.0	1.4	5.0	2.0	8.0	2.6	10.0
В	0.3	0.8	0.6	3.0	1.0	5.0	1.6	8.0	2.1	10.0
С	0.2	0.6	0.4	2.0	0.6	4.0	0.9	6.0	1.2	8.0

#### CDMA spectrum allocation criteria (mn subs)

		Spectrum (MHz)							
	3rd carrier 4th carrier 5th carrier 6th carrie							carrier	
Service area	2 X	3.75	2	X 5	2 X	6.25	2 )	<b>(</b> 7.5	
	Earlier	Revised	Earlier	Revised	Earlier	Revised	Earlier	Revised	
Delhi/ Mumbai	0.3	0.5	1.0	2.0	1.6	3.0	2.1	5.0	
Chennai/ Kolkata	0.2	0.5	0.6	2.0	1.0	3.0	1.3	5.0	
Α	0.4	0.8	1.2	5.0	2.0	8.0	2.6	10.0	
В	0.3	0.8	1.0	5.0	1.6	8.0	2.1	10.0	
С	0.15	0.6	0.5	4.0	0.9	6.0	1.2	8.0	

Source: TRAI, compiled by Kotak Institutional Equities

# Extant operators unlikely to get additional spectrum under revised spectrum policy for some time Computation of additional spectrum required by extant operators on March-2008 subscribers

Calcutta         Anjoeatem         Reqd-Mar '08         Addl reg,         Shortfall Calcutta           Calcutta Total CSM         30.20         30.20         —         —           Calcutta Total CDMA         11.25         11.25         —         —           Chennal Total CSM         33.20         33.20         —         —           Chennal Total CDMA         11.25         11.25         —         —           Delhi Total CSM         36.00         38.40         2.40         —           Delhi Total CSM         37.20         37.20         —         —           Mumbal Total CSM         31.00         32.20         1.20         —           Mumbal Total CSM         31.00         32.20         1.20         —           Andhra Pradesh Total CDMA         12.50         12.50         —         —           Andhra Pradesh Total CDMA         12.50         12.50         —         —           Gujarat Total GSM         30.00         10.00         —         —           Karnataka Total CDMA         11.25         11.25         —         —           Karnataka Total CDMA         11.25         11.25         —         —           Maharashtra Total CDMA			Spectrum	n (MHz)	
Calcutta Total CSM         30.20         —         —           Calcutta Total COMA         11.25         11.25         —         —           Chennai Total CSM         33.20         33.20         —         —           Chennai Total CDMA         11.25         11.25         —         —           Delhi Total CDMA         13.75         13.75         —         —           Mumbai Total CDMA         12.50         13.75         —         —           Mumbai Total CDMA         12.50         13.75         1.25         —           Andhra Pradesh Total CDMA         12.50         12.50         —         —           Andhra Pradesh Total CDMA         12.50         12.50         —         —           Gujarat Total CSM         31.00         32.20         —         —           Gujarat Total CSM         32.20         32.20         —         —           Karnataka Total CSM         30.00         10.00         —         —           Karnataka Total CSM         30.40         32.20         1.80         —           Maharashtra Total CSM         30.40         32.20         1.80         —           Maharashtra Total CSM         30.40         30.40		Allocated	Reqd-Mar '08	Addl req.	Shortfall
Calcutta Total CDMA         11.25         11.25         —         —           Chennal Total CSM         33.20         33.20         —         —           Chennal Total CDMA         11.25         —         —           Delhi Total CSM         36.00         38.40         2.40         —           Delhi Total CSM         37.20         37.20         —         —           Mumbai Total CSM         31.00         32.20         —         —           Mumbai Total CSM         31.00         32.20         1.25         —           Andhra Pradesh Total CSM         31.00         32.20         1.25         —           Andhra Pradesh Total CSM         29.60         29.60         —         —           Gujarat Total CSM         32.20         32.20         —         —           Karnataka Total CDMA         11.25         11.25         —         —           Karnataka Total CDMA         11.25         11.25         —         —           Maharashtra Total CDMA         12.50         12.50         —         —           Maharashtra Total CDMA         10.00         10.00         —         —           Tamil Nadu Total CSM         30.40         30.40	Calcutta	3.75	3.75	_	
Chennal Total CDMA         33.20         33.20         —         —           Chennal Total CDMA         11.25         11.25         —         —           Delhi Total CSM         36.00         38.40         2.40         —           Delhi Total CDMA         13.75         13.75         —         —           Mumbal Total CDMA         12.50         13.75         1.25         —           Mumbal Total CDMA         12.50         13.75         1.25         —           Andhra Pradesh Total CDMA         12.50         12.50         —         —           Andhra Pradesh Total CDMA         12.50         12.50         —         —           Gujarat Total CDMA         10.00         10.00         —         —           Gujarat Total CDMA         10.00         10.00         —         —           Karnataka Total CDMA         10.00         10.00         —         —           Karnataka Total CDMA         11.25         11.25         —         —           Maharashtra Total CSM         30.40         32.20         1.80         —           Maharashtra Total CSM         30.40         30.40         —         —           Tamil Nadu Total GSM         30.40 <td>Calcutta Total GSM</td> <td>30.20</td> <td>30.20</td> <td></td> <td>_</td>	Calcutta Total GSM	30.20	30.20		_
Chennal Total CDMA         11.25         11.25         —         —           Delhi Total CSM         36.00         38.40         2.40         —           Delhi Total CDMA         13.75         13.75         —         —           Mumbal Total CDMA         12.50         13.75         1.25         —           Andhra Pradesh Total CSM         31.00         32.20         1.25         —           Andhra Pradesh Total CDMA         12.50         12.50         —         —           Gujarat Total CSM         29.60         29.60         —         —           Gujarat Total CDMA         10.00         10.00         —         —           Karnataka Total CSM         30.40         32.20         —         —           Karnataka Total CSM         30.40         32.20         —         —           Maharashtra Total CSM         30.40         32.20         —         —           Maharashtra Total CSM         30.40         32.20         —         —           Tamil Nadu Total CSM         30.40         32.50         —         —           Tamil Nadu Total CSM         30.40         30.40         —         —           Haryana Total         10.00	Calcutta Total CDMA	11.25	11.25		
Delhi Total CSM         36.00         38.40         2.40         ─           Delhi Total CDMA         13.75         13.75         ─         ─           Mumbal Total CSM         37.20         37.20         ─         ─           Mumbal Total CDMA         12.50         13.75         1.25         ─           Andhra Pradesh Total GSM         31.00         32.20         1.20         ─           Andhra Pradesh Total CDMA         12.50         12.50         ─         ─           Gujarat Total CSM         29.60         29.60         ─         ─         ─           Karnataka Total CSMA         32.20         32.20         ─         ─           Karnataka Total CSMA         30.40         32.20         1.80         ─           Karnataka Total CSM         30.40         32.20         1.80         ─           Maharashtra Total CSM         30.40         32.20         1.80         ─           Maharashtra Total CSM         30.40         32.20         1.80         ─           Tamil Nadu Total CSM         30.40         30.40         ─         ─           Tamil Nadu Total CSM         30.40         30.40         ─         ─           Haryana Total <td>Chennai Total GSM</td> <td>33.20</td> <td>33.20</td> <td></td> <td></td>	Chennai Total GSM	33.20	33.20		
Delhi Total CDMA	Chennai Total CDMA	11.25	11.25		
Mumbal Total CSM         37.20         37.20         —         —           Mumbal Total CDMA         12.50         13.75         1.25         —           Andhra Pradesh Total CSM         31.00         32.20         1.20         —           Andhra Pradesh Total CDMA         12.50         12.50         —         —           Gujarat Total CSM         29.60         29.60         —         —           Karnataka Total CDMA         10.00         10.00         —         —           Karnataka Total CDMA         11.25         11.25         —         —           Karnataka Total CSM         30.40         32.20         1.80         —           Maharashtra Total CSM         30.40         30.40         —         —           Maharashtra Total CSM         30.40         30.40         —         —           Tamil Nadu Total CSM         30.40         30.40         —         —           Haryana Total CSM         24.80         24.80         —         —           Haryana Total CSM         24.80         24.80         —         —           Kerala Total CSM         28.40         28.40         —         —           Haryana Total CSM         26.60	Delhi Total GSM	36.00	38.40	2.40	_
Mumbai Total CDMA	Delhi Total CDMA	13.75	13.75		
Andhra Pradesh Total CSM         31.00         32.20         1.20         —           Andhra Pradesh Total CDMA         12.50         12.50         —         —           Gujarat Total CSM         29.60         29.60         —         —           Gujarat Total CDMA         10.00         10.00         —         —           Karnataka Total CSM         32.20         32.20         —         —           Karnataka Total CDMA         11.25         11.25         —         —           Maharashtra Total CDMA         12.50         12.50         —         —           Maharashtra Total CDMA         10.00         12.50         —         —           Tamil Nadu Total CDMA         10.00         11.25         1.25         —           Haryana Total         24.80         24.80         —         —           Haryana Total         10.00         10.00         —         —           Kerala Total GSM         28.40         28.40         —         —           Kerala Total CSM         28.40         28.40         —         —           Madhya Pradesh Total CSM         26.60         26.60         —         —           Punjab Total CDMA         12.50	Mumbai Total GSM	37.20	37.20		_
Andhra Pradesh Total CDMA	Mumbai Total CDMA	12.50	13.75	1.25	
Gujarat Total CSM         29.60         29.60         —         —           Gujarat Total CDMA         10.00         10.00         —         —           Karnataka Total CDMA         10.00         10.00         —         —           Karnataka Total CDMA         11.25         11.25         —         —           Maharashtra Total CSM         30.40         32.20         1.80         —           Maharashtra Total CDMA         12.50         12.50         —         —           Tamil Nadu Total CSM         30.40         30.40         —         —           Tamil Nadu Total CDMA         10.00         11.25         1.25         —           Haryana Total         24.80         24.80         —         —           Haryana Total         10.00         10.00         —         —           Haryana Total         10.00         10.00         —         —           Haryana Total         10.00         10.00         —         —           Kerala Total CDMA         11.25         11.25         —         —           Madhya Pradesh Total GSM         26.60         26.60         —         —           Madhya Pradesh Total CDMA         12.50         12.5	Andhra Pradesh Total GSM	31.00	32.20	1.20	
Gujarat Total CDMA         10.00         10.00         —         —           Karnataka Total CSM         32.20         32.20         —         —           Karnataka Total CDMA         11.25         11.25         —         —           Maharashtra Total CSM         30.40         32.20         1.80         —           Maharashtra Total CDMA         12.50         12.50         —         —           Tamil Nadu Total CDMA         10.00         10.25         1.25         —           Tamil Nadu Total CDMA         10.00         11.25         1.25         —           Haryana Total         24.80         24.80         —         —           Haryana Total         10.00         10.00         —         —           Haryana Total CSM         28.40         24.80         —         —           Haryana Total CSM         28.40         28.40         —         —           Kerala Total CSM         28.40         28.40         —         —           Madhya Pradesh Total GSM         26.60         26.60         —         —           Madhya Pradesh Total CDMA         12.50         12.50         —         —           Punjab Total CSM         28.40	Andhra Pradesh Total CDMA	12.50	12.50		
Karnataka Total CDMA         32.20         32.20         —         —           Karnataka Total CDMA         11.25         11.25         —         —           Maharashtra Total CSM         30.40         32.20         1.80         —           Maharashtra Total CDMA         12.50         12.50         —         —           Tamil Nadu Total CSM         30.40         30.40         —         —           Haryana Total         10.00         11.25         1.25         —           Haryana Total         10.00         10.00         —         —           Haryana Total         10.00         10.00         —         —           Haryana Total GSM         28.40         28.40         —         —           Kerala Total CDMA         11.25         11.25         —         —           Madhya Pradesh Total GSM         26.60         26.60         —         —         —           Madhya Pradesh Total CDMA         12.50         12.50         —         —         —           Madhya Pradesh Total CDMA         12.50         12.50         —         —         —           Punjab Total GSM         28.40         28.40         —         —         —	Gujarat Total GSM	29.60	29.60	_	_
Karnataka Total CDMA         11.25         11.25         —         —           Maharashtra Total GSM         30.40         32.20         1.80         —           Maharashtra Total CDMA         12.50         12.50         —         —           Tamil Nadu Total CDMA         10.00         30.40         30.40         —         —           Tamil Nadu Total CDMA         10.00         11.25         1.25         —           Haryana Total         24.80         24.80         —         —           Haryana Total         10.00         10.00         —         —           Kerala Total CSM         28.40         28.40         —         —           Kerala Total CSM         28.40         28.40         —         —           Madhya Pradesh Total GSM         26.60         26.60         —         —           Madhya Pradesh Total GSM         28.40         28.40         —         —           Punjab Total CDMA         12.50         12.50         —         —           Punjab Total CSM         28.40         28.40         —         —           Rajasthan Total CSM         26.60         26.60         —         —           Rajasthan Total CSM	Gujarat Total CDMA	10.00	10.00	_	
Maharashtra Total GSM         30.40         32.20         1.80         —           Maharashtra Total CDMA         12.50         12.50         —         —           Tamil Nadu Total CDMA         10.00         11.25         1.25         —           Haryana Total         24.80         24.80         —         —           Haryana Total         10.00         10.00         —         —           Kerala Total GSM         28.40         —         —         —           Kerala Total CDMA         11.25         11.25         —         —           Madhya Pradesh Total GSM         26.60         26.60         —         —           Madhya Pradesh Total CDMA         12.50         12.50         —         —           Madhya Pradesh Total CDMA         12.50         12.50         —         —           Madhya Pradesh Total CDMA         12.50         12.50         —         —           Punjab Total CSM         28.40         28.40         —         —           Punjab Total GSM         26.60         26.60         —         —           Rajasthan Total GSM         26.60         26.60         —         —           Rajasthan Total CDMA         12.50	Karnataka Total GSM	32.20	32.20	_	_
Maharashtra Total CDMA         12.50         12.50         —         —           Tamil Nadu Total CSM         30.40         30.40         —         —           Tamil Nadu Total CDMA         10.00         11.25         1.25         —           Haryana Total         10.00         10.00         —         —           Haryana Total         10.00         10.00         —         —           Kerala Total GSM         28.40         28.40         —         —           Kerala Total CDMA         11.25         11.25         —         —           Madhya Pradesh Total GSM         26.60         26.60         —         —           Madhya Pradesh Total GSM         28.40         28.40         —         —           Madhya Pradesh Total GSM         28.40         28.40         —         —           Punjab Total CDMA         12.50         12.50         —         —           Punjab Total CSM         28.40         28.40         —         —           Rajasthan Total CDMA         12.50         12.50         —         —           Rajasthan Total CDMA         30.00         30.00         —         —           Uttar Pradesh (east) Total GSM         30.00	Karnataka Total CDMA	11.25	11.25	_	
Tamil Nadu Total GSM         30.40         30.40         —         —           Tamil Nadu Total CDMA         10.00         11.25         1.25         —           Haryana Total         24.80         24.80         —         —           Haryana Total         10.00         10.00         —         —           Kerala Total GSM         28.40         28.40         —         —           Kerala Total CDMA         11.25         11.25         —         —           Madhya Pradesh Total GSM         26.60         26.60         —         —           Madhya Pradesh Total CDMA         12.50         12.50         —         —           Madhya Pradesh Total CDMA         12.50         12.50         —         —           Punjab Total CSM         28.40         28.40         —         —           Punjab Total CDMA         12.50         12.50         —         —           Rajasthan Total GSM         26.60         26.60         —         —           Rajasthan Total GSM         30.00         30.00         —         —           Uttar Pradesh (east) Total GSM         30.00         30.00         —         —           Uttar Pradesh (west) Total GSM         28	Maharashtra Total GSM	30.40	32.20	1.80	_
Tamil Nadu Total CDMA	Maharashtra Total CDMA	12.50	12.50	_	
Haryana Total	Tamil Nadu Total GSM	30.40	30.40	_	_
Haryana Total   10.00   10.00   — — —	Tamil Nadu Total CDMA	10.00	11.25	1.25	
Kerala Total GSM         28.40         28.40         —         —           Kerala Total CDMA         11.25         11.25         —         —           Madhya Pradesh Total GSM         26.60         26.60         —         —           Madhya Pradesh Total CDMA         12.50         12.50         —         —           Punjab Total GSM         28.40         28.40         —         —           Punjab Total GSM         26.60         26.60         —         —           Rajasthan Total GSM         26.60         26.60         —         —           Rajasthan Total CDMA         12.50         12.50         —         —           Uttar Pradesh (east) Total GSM         30.00         30.00         —         —           Uttar Pradesh (east) Total GSM         28.40         28.40         —         —           Uttar Pradesh (west) Total GSM         28.40         28.40         —         —           Uttar Pradesh (west) Total GSM         28.40         28.40         —         —           Uttar Pradesh (west) Total GSM         28.40         28.40         —         —           West Bengal Total GSM         25.60         31.00         5.40         —           We	Haryana Total	24.80	24.80	_	_
Kerala Total CDMA         11.25         11.25         —         —           Madhya Pradesh Total GSM         26.60         26.60         —         —           Madhya Pradesh Total CDMA         12.50         12.50         —         —           Punjab Total GSM         28.40         28.40         —         —           Punjab Total CDMA         12.50         12.50         —         —           Rajasthan Total CSM         26.60         26.60         —         —           Rajasthan Total CDMA         12.50         12.50         —         —           Uttar Pradesh (east) Total CDMA         30.00         30.00         —         —           Uttar Pradesh (east) Total CDMA         11.25         11.25         —         —           Uttar Pradesh (west) Total CDMA         11.25         11.25         —         —           Uttar Pradesh (west) Total CDMA         11.25         11.25         —         —           West Bengal Total CDMA         11.25         11.25         —         —           West Bengal Total CDMA         8.75         10.00         5.40         —           West Bengal Total CDMA         2.50         2.50         —         —           A	Haryana Total	10.00	10.00	_	_
Madhya Pradesh Total GSM         26.60         26.60         —         —           Madhya Pradesh Total CDMA         12.50         12.50         —         —           Punjab Total GSM         28.40         28.40         —         —           Punjab Total CDMA         12.50         12.50         —         —           Rajasthan Total GSM         26.60         26.60         —         —           Rajasthan Total CDMA         12.50         12.50         —         —           Uttar Pradesh (east) Total GSM         30.00         30.00         —         —           Uttar Pradesh (east) Total CDMA         11.25         11.25         —         —           Uttar Pradesh (west) Total CDMA         11.25         11.25         —         —           Uttar Pradesh (west) Total CDMA         11.25         11.25         —         —           Uttar Pradesh (west) Total CDMA         11.25         11.25         —         —           West Bengal Total GSM         25.60         31.00         5.40         —           West Bengal Total CDMA         8.75         10.00         1.25         —           Assam Total CDMA         2.50         2.50         —         —	Kerala Total GSM	28.40	28.40	_	_
Madhya Pradesh Total CDMA         12.50         12.50         —         —           Punjab Total GSM         28.40         28.40         —         —           Punjab Total CDMA         12.50         12.50         —         —           Rajasthan Total GSM         26.60         26.60         —         —           Rajasthan Total CDMA         12.50         12.50         —         —           Uttar Pradesh (east) Total GSM         30.00         30.00         —         —           Uttar Pradesh (east) Total CDMA         11.25         11.25         —         —           Uttar Pradesh (west) Total GSM         28.40         28.40         —         —           Uttar Pradesh (west) Total GSM         28.40         28.40         —         —           Uttar Pradesh (west) Total GSM         28.40         28.40         —         —           West Bengal Total GSM         25.60         31.00         5.40         —           West Bengal Total CDMA         8.75         10.00         1.25         —           Assam Total GSM         23.00         24.80         1.80         —           Assam Total GSM         24.80         24.80         —         —	Kerala Total CDMA	11.25	11.25	_	
Punjab Total GSM         28.40         28.40         —         —           Punjab Total CDMA         12.50         12.50         —         —           Rajasthan Total GSM         26.60         26.60         —         —           Rajasthan Total CDMA         12.50         12.50         —         —           Uttar Pradesh (east) Total GSM         30.00         30.00         —         —           Uttar Pradesh (east) Total GSM         28.40         28.40         —         —           Uttar Pradesh (west) Total GSM         28.40         28.40         —         —           Uttar Pradesh (west) Total CDMA         11.25         11.25         —         —           Usest Bengal Total CDMA         11.25         11.25         —         —           West Bengal Total CDMA         8.75         10.00         1.25         —           Assam Total GSM         23.00         24.80         1.80         —           Assam Total GSM         24.80         24.80         —         —           Bihar Total GSM         24.80         24.80         —         —           Bihar Total CDMA         11.25         11.25         —         —           Himachal Pradesh Total GS	Madhya Pradesh Total GSM	26.60	26.60	_	_
Punjab Total CDMA         12.50         12.50         —         —           Rajasthan Total GSM         26.60         26.60         —         —           Rajasthan Total CDMA         12.50         12.50         —         —           Uttar Pradesh (east) Total GSM         30.00         30.00         —         —           Uttar Pradesh (east) Total CDMA         11.25         11.25         —         —           Uttar Pradesh (west) Total CDMA         11.25         11.25         —         —           Uttar Pradesh (west) Total CDMA         11.25         11.25         —         —           West Bengal Total CDMA         11.25         11.25         —         —           West Bengal Total CDMA         8.75         10.00         1.25         —           Assam Total CDMA         23.00         24.80         1.80         —           Assam Total CDMA         2.50         2.50         —         —           Bihar Total CDMA         11.25         11.25         —         —           Himachal Pradesh Total GSM         24.80         24.80         —         —           Himachal Pradesh Total CDMA         7.50         —         —         —           North E	Madhya Pradesh Total CDMA	12.50	12.50		
Rajasthan Total GSM         26.60         26.60         —         —           Rajasthan Total CDMA         12.50         12.50         —         —           Uttar Pradesh (east) Total GSM         30.00         30.00         —         —           Uttar Pradesh (east) Total CDMA         11.25         11.25         —         —           Uttar Pradesh (west) Total GSM         28.40         28.40         —         —           Uttar Pradesh (west) Total CDMA         11.25         11.25         —         —           West Bengal Total GSM         25.60         31.00         5.40         —           West Bengal Total CDMA         8.75         10.00         1.25         —           Assam Total GSM         23.00         24.80         1.80         —           Assam Total CDMA         2.50         2.50         —         —           Bihar Total GSM         24.80         24.80         —         —           Himachal Pradesh Total GSM         27.40         27.40         —         —           Himachal Pradesh Total CDMA         7.50         7.50         —         —           North East Total GSM         19.40         —         —         —           Orissa	Punjab Total GSM	28.40	28.40		_
Rajasthan Total CDMA         12.50         12.50         —         —           Uttar Pradesh (east) Total GSM         30.00         30.00         —         —           Uttar Pradesh (east) Total CDMA         11.25         11.25         —         —           Uttar Pradesh (west) Total GSM         28.40         28.40         —         —           Uttar Pradesh (west) Total CDMA         11.25         11.25         —         —           West Bengal Total GSM         25.60         31.00         5.40         —           West Bengal Total CDMA         8.75         10.00         1.25         —           Assam Total GSM         23.00         24.80         1.80         —           Assam Total CDMA         2.50         2.50         —         —           Bihar Total GSM         24.80         24.80         —         —           Bihar Total CDMA         11.25         11.25         —         —           Himachal Pradesh Total GSM         27.40         27.40         —         —           Himachal Pradesh Total CDMA         7.50         7.50         —         —           North East Total GSM         19.40         —         —           North East Total CDMA	Punjab Total CDMA	12.50	12.50		
Uttar Pradesh (east) Total GSM         30.00         30.00         —         —           Uttar Pradesh (east) Total CDMA         11.25         11.25         —         —           Uttar Pradesh (west) Total GSM         28.40         28.40         —         —           Uttar Pradesh (west) Total CDMA         11.25         11.25         —         —           West Bengal Total CDMA         25.60         31.00         5.40         —           West Bengal Total CDMA         8.75         10.00         1.25         —           Assam Total GSM         23.00         24.80         1.80         —           Assam Total CDMA         2.50         2.50         —         —           Bihar Total GSM         24.80         24.80         —         —           Bihar Total CDMA         11.25         11.25         —         —           Himachal Pradesh Total GSM         27.40         27.40         —         —           North East Total GSM         19.40         19.40         —         —           North East Total GSM         24.80         24.80         —         —           Orissa Total CDMA         8.75         8.75         —         —           BKK Total GSM<	Rajasthan Total GSM	26.60	26.60		
Uttar Pradesh (east) Total CDMA       11.25       11.25       —       —         Uttar Pradesh (west) Total GSM       28.40       —       —         Uttar Pradesh (west) Total CDMA       11.25       11.25       —       —         West Bengal Total GSM       25.60       31.00       5.40       —         West Bengal Total CDMA       8.75       10.00       1.25       —         Assam Total GSM       23.00       24.80       1.80       —         Assam Total CDMA       2.50       2.50       —       —         Bihar Total GSM       24.80       24.80       —       —         Bihar Total CDMA       11.25       11.25       —       —         Himachal Pradesh Total GSM       27.40       27.40       —       —         North East Total CDMA       7.50       7.50       —       —         North East Total GSM       19.40       19.40       —       —         Orissa Total GSM       24.80       24.80       —       —         Orissa Total GSM       24.80       24.80       —       —         Bak Total GSM       18.60       18.60       —       —	Rajasthan Total CDMA	12.50	12.50		
Uttar Pradesh (west) Total GSM         28.40         28.40         —         —           Uttar Pradesh (west) Total CDMA         11.25         11.25         —         —           West Bengal Total GSM         25.60         31.00         5.40         —           West Bengal Total CDMA         8.75         10.00         1.25         —           Assam Total GSM         23.00         24.80         1.80         —           Assam Total CDMA         2.50         2.50         —         —           Bihar Total GSM         24.80         24.80         —         —           Bihar Total CDMA         11.25         11.25         —         —           Himachal Pradesh Total GSM         27.40         27.40         —         —           Himachal Pradesh Total CDMA         7.50         7.50         —         —           North East Total GSM         19.40         19.40         —         —           North East Total CDMA         2.50         2.50         —         —           Orissa Total GSM         24.80         24.80         —         —           Assam Total CDMA         8.75         8.75         —         —           Assam Total CDMA         8.7	Uttar Pradesh (east) Total GSM	30.00	30.00		_
Uttar Pradesh (west) Total CDMA         11.25         11.25         —         —           West Bengal Total GSM         25.60         31.00         5.40         —           West Bengal Total CDMA         8.75         10.00         1.25         —           Assam Total GSM         23.00         24.80         1.80         —           Assam Total CDMA         2.50         2.50         —         —           Bihar Total GSM         24.80         24.80         —         —           Bihar Total CDMA         11.25         11.25         —         —           Himachal Pradesh Total GSM         27.40         27.40         —         —           Himachal Pradesh Total CDMA         7.50         7.50         —         —           North East Total GSM         19.40         19.40         —         —           North East Total CDMA         2.50         2.50         —         —           Orissa Total GSM         24.80         24.80         —         —           Bik Total GSM         18.60         18.60         —         —	Uttar Pradesh (east) Total CDMA	11.25	11.25		
West Bengal Total GSM         25.60         31.00         5.40         —           West Bengal Total CDMA         8.75         10.00         1.25         —           Assam Total GSM         23.00         24.80         1.80         —           Assam Total CDMA         2.50         2.50         —         —           Bihar Total GSM         24.80         24.80         —         —           Bihar Total CDMA         11.25         11.25         —         —           Himachal Pradesh Total GSM         27.40         27.40         —         —           Himachal Pradesh Total CDMA         7.50         7.50         —         —           North East Total GSM         19.40         19.40         —         —           North East Total CDMA         2.50         2.50         —         —           Orissa Total GSM         24.80         24.80         —         —           Orissa Total CDMA         8.75         8.75         —         —           J&K Total GSM         18.60         18.60         —         —	Uttar Pradesh (west) Total GSM	28.40	28.40		
West Bengal Total CDMA         8.75         10.00         1.25         —           Assam Total GSM         23.00         24.80         1.80         —           Assam Total CDMA         2.50         2.50         —         —           Bihar Total GSM         24.80         24.80         —         —           Bihar Total CDMA         11.25         11.25         —         —           Himachal Pradesh Total GSM         27.40         27.40         —         —           Himachal Pradesh Total CDMA         7.50         7.50         —         —           North East Total GSM         19.40         19.40         —         —           North East Total CDMA         2.50         2.50         —         —           Orissa Total GSM         24.80         24.80         —         —           BK Total GSM         18.60         18.60         —         —	Uttar Pradesh (west) Total CDMA	11.25	11.25	_	
Assam Total GSM         23.00         24.80         1.80         —           Assam Total CDMA         2.50         2.50         —         —           Bihar Total GSM         24.80         24.80         —         —           Bihar Total CDMA         11.25         11.25         —         —           Himachal Pradesh Total GSM         27.40         27.40         —         —           Himachal Pradesh Total CDMA         7.50         7.50         —         —           North East Total GSM         19.40         19.40         —         —           North East Total CDMA         2.50         2.50         —         —           Orissa Total GSM         24.80         24.80         —         —           Orissa Total CDMA         8.75         8.75         —         —           J&K Total GSM         18.60         18.60         —         —	West Bengal Total GSM	25.60	31.00	5.40	_
Assam Total CDMA       2.50       2.50       —       —         Bihar Total GSM       24.80       24.80       —       —         Bihar Total CDMA       11.25       11.25       —       —         Himachal Pradesh Total GSM       27.40       —       —         Himachal Pradesh Total CDMA       7.50       7.50       —       —         North East Total GSM       19.40       19.40       —       —         North East Total CDMA       2.50       2.50       —       —         Orissa Total GSM       24.80       24.80       —       —         Orissa Total CDMA       8.75       8.75       —       —         J&K Total GSM       18.60       18.60       —       —	West Bengal Total CDMA	8.75	10.00	1.25	
Bihar Total GSM         24.80         24.80         —         —           Bihar Total CDMA         11.25         11.25         —         —           Himachal Pradesh Total GSM         27.40         27.40         —         —           Himachal Pradesh Total CDMA         7.50         7.50         —         —           North East Total GSM         19.40         19.40         —         —           North East Total CDMA         2.50         2.50         —         —           Orissa Total GSM         24.80         24.80         —         —           Orissa Total CDMA         8.75         8.75         —         —           J&K Total GSM         18.60         18.60         —         —	Assam Total GSM	23.00	24.80	1.80	_
Bihar Total CDMA         11.25         11.25         —         —           Himachal Pradesh Total GSM         27.40         27.40         —         —           Himachal Pradesh Total CDMA         7.50         7.50         —         —           North East Total GSM         19.40         19.40         —         —           North East Total CDMA         2.50         2.50         —         —           Orissa Total GSM         24.80         24.80         —         —           Orissa Total CDMA         8.75         8.75         —         —           J&K Total GSM         18.60         18.60         —         —	Assam Total CDMA	2.50	2.50		
Himachal Pradesh Total GSM         27.40         27.40         —         —           Himachal Pradesh Total CDMA         7.50         7.50         —         —           North East Total GSM         19.40         19.40         —         —           North East Total CDMA         2.50         2.50         —         —           Orissa Total GSM         24.80         24.80         —         —           Orissa Total CDMA         8.75         8.75         —         —           J&K Total GSM         18.60         18.60         —         —	Bihar Total GSM	24.80	24.80		
Himachal Pradesh Total CDMA       7.50       7.50       —       —         North East Total GSM       19.40       19.40       —       —         North East Total CDMA       2.50       2.50       —       —         Orissa Total GSM       24.80       24.80       —       —         Orissa Total CDMA       8.75       8.75       —       —         J&K Total GSM       18.60       18.60       —       —	Bihar Total CDMA	11.25	11.25		
North East Total GSM         19.40         19.40         —         —           North East Total CDMA         2.50         2.50         —         —           Orissa Total GSM         24.80         24.80         —         —           Orissa Total CDMA         8.75         8.75         —         —           J&K Total GSM         18.60         18.60         —         —	Himachal Pradesh Total GSM	27.40	27.40		_
North East Total CDMA         2.50         2.50         —         —           Orissa Total GSM         24.80         24.80         —         —           Orissa Total CDMA         8.75         8.75         —         —           J&K Total GSM         18.60         18.60         —         —	Himachal Pradesh Total CDMA	7.50	7.50		
Orissa Total GSM         24.80         24.80         —         —           Orissa Total CDMA         8.75         8.75         —         —           J&K Total GSM         18.60         18.60         —         —	North East Total GSM	19.40	19.40	_	_
Orissa Total CDMA         8.75         8.75         —         —           J&K Total GSM         18.60         18.60         —         —	North East Total CDMA	2.50	2.50	_	
J&K Total GSM 18.60 18.60 — —	Orissa Total GSM	24.80	24.80	_	_
	Orissa Total CDMA	8.75	8.75		
J&K Total CDMA         5.00         5.00         —         —	J&K Total GSM	18.60	18.60	_	_
	J&K Total CDMA	5.00	5.00		

Source: Kotak Institutional Equities estimates

#### Fewer circles with spectrum deficiency for most players

Assessment of spectrum 'position' of operators

	Number of circles (#)						
	Current	Spectrum deficit (new criteria)	Spectrum deficit (old criteria)				
Bharti Airtel	23	4	23				
Hutch	16	1	16				
Idea	11	0	9				
Aircel	9	0	6				
BSNL	21	0	21				
MTNL	2	0	2				
Spice	2	0	2				
Reliance GSM	8	0	5				
Reliance CDMA	21	0	15				
TTSL	20	2	10				

Note:

(a) Assuming spectrum allocation based on estimated March-2008 subscribers.

Source: Kotak Institutional Equities estimates.

#### The more, the messier

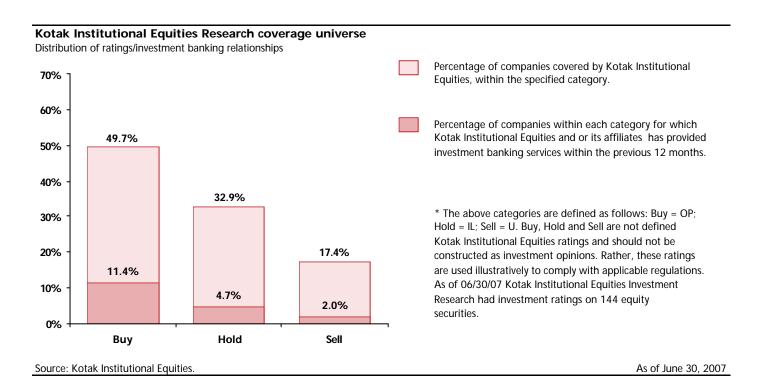
New entrants and likely order of receipt of spectrum based on chronological order

	Bharti	Reliance	BSNL/MTNL	VOD/Essar	Idea	TTSL	Aircel	Spice	Others
Metro									
Calcutta					2		1	3	
Chennai		3			1			2	
Delhi		3					1	2	
Mumbai		4			2		1	3	
Circle A									
Andhra Pradesh		3					1	2	
Gujarat		3					1	2	
Karnataka		3			2		1		
Maharashtra		3					1	2	
Tamil Nadu		3			1			2	
Circle B									
Haryana		3					1	2	
Kerala		3					1	2	
Madhya Pradesh				2			1	3	
Punjab		3			2		1		
Rajasthan		3					1	2	
Uttar Pradesh (east)		3					1	2	
Uttar Pradesh (west)		3					1	2	
West Bengal and A&N islands					2			3	1
Circle C									
Assam				1	3			4	2
Bihar				1	2			4	3
Himachal Pradesh				1				2	
North East				1	2			4	3
Orissa				1	2			4	3
J&K				1	2			3	

Existing operations				
License acquired but spectrum not available				
License applied for				
Existing CDMA operations, GSM spectrum applied for				

Source: COAI, AUSPI, DOT, compiled by Kotak Institutional Equities.

"Each of the analysts named below hereby certifies that, with respect to each subject company and its securities for which the analyst is responsible in this report, (1) all of the views expressed in this report accurately reflect his or her personal views about the subject companies and securities, and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this report: Sanjeev Prasad, Amit Agarwal, Kawaljeet Saluja."



#### Ratings and other definitions/identifiers

#### Current rating system

#### Definitions of ratings

**OP = Outperform**. We expect this stock to outperform the BSE Sensex over the next 12 months.

**IL = In-Line.** We expect this stock to perform in line with the BSE Sensex over the next 12 months.

U = Underperform. We expect this stock to underperform the BSE Sensex over the next 12 months.

Our target price are also on 12-month horizon basis.

#### Other definitions

Coverage view. The coverage view represents each analyst's overall fundamental outlook on the Sector. The coverage view will consist of one of the following designations: Attractive (A), Neutral (N), Cautious (C).

#### Other ratings/identifiers

NR = Not Rated. The investment rating and target price, if any, have been suspended temporarily. Such suspension is in compliance with applicable regulation(s) and/or Kotak Securities policies in circumstances when Kotak Securities or its affiliates is acting in an advisory capacity in a merger or strategic transaction involving this company and in certain other circumstances.

**CS = Coverage Suspended.** Kotak Securities has suspended coverage of this company.

NC = Not Covered. Kotak Securities does not cover this company.

RS = Rating Suspended. Kotak Securities Research has suspended the investment rating and price target, if any, for this stock, because there is not a sufficient fundamental basis for determining an investment rating or target. The previous investment rating and price target, if any, are no longer in effect for this stock and should not be relied upon.

NA = Not Available or Not Applicable. The information is not available for display or is not applicable.

NM = Not Meaningful. The information is not meaningful and is therefore excluded.

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