kotak® Institutional Equities

INDIA DAILY

August 30, 2007

EQUITY MARKETS

India	29-Aug	Change, % 1-day	1-mo	3-mo
Sensex	14,993	0.5	(1.8)	4.0
Nifty	4,359	0.9	(1.8)	2.6
Global/Regional indices				
Dow Jones	13,289	1.9	(0.5)	(2.5)
Nasdaq Composite	2,563	2.5	(0.8)	(1.1)
FTSE	6,132	0.5	(1.2)	(7.1)
Nikkie	16,219	1.3	(6.2)	(7.8)
Hang Seng	23,502	2.1	3.4	15.8
KOSPI	1,843	0.9	(3.4)	10.8

Value traded - India

	29-Aug	Moving avg, Rs bn 1-mo	3-mo
Cash (NSE+BSE)	154.4	157.4	154.5
Derivatives (NSE)	765.1	657.8	432.9
Deri. open interest	905.9	726.0	693.3

Forex/money market

	29-Aug	Change, basis points 1-day	1-mo	3-mo
Rs/US$	41.1	0	58	27
6mo fwd prem, %	0.7	(25)	71	24
10yr govt bond, %	8.0	1	7	(18)

Net investment (US$mn)

	28-Aug	MTD	CYTD
FIIs	91	(1,817)	8,418
MFs	11	735	471

Top movers -3mo basis

Best performers	29-Aug	Change, % 1-day	1-mo	3-mo
Reliance Energy	782	2.0	0.2	46.3
Chambal Fert	48	2.2	38.8	40.8
BHEL	1,851	2.4	12.6	33.8
Century Tex	790	2.3	14.7	30.6
Exide Indus	59	(2.2)	10.2	29.9
Worst performers				
Escorts	85	4.5	(15.7)	(31.7)
Polaris	112	0.0	(9.5)	(30.5)
Punjab Tractors	227	(1.3)	(14.7)	(27.8)
Novartis India	285	1.7	(16.2)	(22.2)
Raymond	256	(0.4)	(8.6)	(21.0)

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Updates

GAIL (India): Updating for FY2007 annual report; no change in neutral view but watch for impending regulations

Telecom: TRAI presses for more competition through recommendations on spectrum allocation, M&A

News Roundup

Corporate

- Ashok Leyland has agreed to form three JVs with Japan's Nissan Motor to develop, manufacture and market light commercial vehicles (LCV). The JV will produce 100,000 vehicles annually in the medium term (BS)
- Firstsource Solutions has acquired US based MedAssist for US$330 mn. MedAssist is among the largest firms providing revenue cycle management services to the healthcare sector in the US. (ET)
- Infosys plans to raise its billing rates for new contracts by 3-4% and by 2-3% for the existing contracts in order to counter the rising rupee and wage rates (BL)

Economic and political

- TRAI has suggested steep increase in the spectrum charges beyond 10 Mhz. It has suggested that operators should fork out Rs160 mn for every additional Mhz of spectrum that they require beyond this cut-off bar. It also suggested removal of the number of mobile operators in a circle(BS)
- The UP government may allow organized retailers to sell food and grocery in the state. However it will not amend the APMC Act currently, thus preventing the retailers from sourcing the produce directly from farmers. (ET)

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

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Energy

GAIL.BO, Rs321	
Rating	IL
Sector coverage view	Neutral
Target Price (Rs)	350
52W High -Low (Rs)	348 - 243
Market Cap (Rs bn)	271.4

Financials

March y/e	2007	2008E	2009E
Sales (Rs bn)	160.5	229.7	244.9
Net Profit (Rs bn)	21.4	26.2	27.3
EPS (Rs)	25.3	31.0	32.3
EPS gth	*(9.5)*	*22.4*	*4.3*
P/E (x)	12.7	10.4	9.9
EV/EBITDA (x)	7.3	6.2	5.3
Div yield (%)	3.1	3.1	3.4

Shareholding, June 2007

	Pattern	% of Portfolio	Over/(under) weight
Promoters	57.3	-	-
FIIs	22.0	0.8	0.0
MFs	1.4	0.3	(0.5)
UTI	-	-	(0.8)
LIC	6.4	1.3	0.5

GAIL (India): Updating for FY2007 annual report; no change in neutral view but watch for impending regulations

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- **Not much incremental information in annual report but watch for impending regulations**
- **GAIL's ROCE for the gas pipeline transportation business is too high for comfort**
- **Retain 12-month SOTP-based target price of Rs350**

We have fine-tuned our earnings model for GAIL's FY2007 annual report. Given the steady nature of the company's business, there is relatively little incremental information in the annual report or in terms of new recent developments. Forthcoming key events to watch for in GAIL would be (1) subsidy-sharing for FY2008 but the formula should not be too different versus street expectations (1/3 for upstream companies of total under-recoveries) and (2) nature of regulations for the gas pipeline transportation business. However, the latter may turn up potential negative surprises if the Petroleum and Natural Gas Regulatory Board follows the draft regulations for natural gas pipelines prepared by the petroleum ministry. We retain our 12-month SOTP-based target price of Rs350 with key downside risks being lower-than-expected commodity prices and inimical regulations.

Fine-tuned estimates and two observations on annual report. We have fine-tuned our earnings model for FY2007 data. There is no major change to our price/tariff and volume assumptions. We make two observations regarding the annual report. (1) GAIL's net cash balance has declined to Rs13.2 bn at end-FY2007 from Rs25.8 bn at end-FY2006 because it has returned a substantial portion of the gas pool money that had been lying with it to ONGC (Rs715 mn at end-FY2007 versus Rs7.3 bn at end-FY2006) and it incurred significantly higher capex at Rs20.4 bn in FY2007 versus Rs6.1 bn in FY2006. (2) GAIL had incurred significant E&P expenditure in FY2007, which it wrote off through the P&L based on the "Successful Efforts Method" accounting policy. The company wrote off Rs2.8 bn of survey and dry well expenses in FY2007 compared to Rs0.96 bn in FY2006.

Nature of gas sector regulations and implementation of growth strategy are keys to stock price. We see imminent regulations for the gas transportation sector as providing potential risks to GAIL's transmission business. Nonetheless, likely strong growth in gas supply will provide tremendous growth opportunity through investment in new pipelines as well.

1. **Nature of regulations.** The methodology adopted for determination of transmission tariff by the newly-constituted Petroleum and Natural Gas Regulatory Board will influence GAIL's future profits from its mainstay gas transmission business. The key variables include (1) reasonable rate of return, (2) total capital employed (or return-earning asset) on which the reasonable rate of return will apply, (3) operating costs and (4) volumes. We see the first two as being more important.

   The draft regulations for natural gas pipelines prepared by the ministry of petroleum and natural gas defines capital employed as gross fixed assets less depreciation plus normative working capital; this is in line with COS methodology followed globally. This would mean that GAIL's tariff for a pipeline (and earnings from the pipeline) would decline over a period of time due to a declining return-earning asset base. However, if the regulator allows a constant asset base for the economic life of the pipeline as in the power sector, GAIL's tariff and earnings from a pipeline will largely remain constant over time and change modestly with changes in pass-through operating costs.

Exhibit 1 gives our computation of GAIL's ROCE for its various segments based on FY2007 and 1QFY08 data. The pipeline segment shows a ROCE of 21.3% for 1QFY08 and 25.7% for FY2007. The decline in 1QFY08 reflects the addition of new assets but limited revenues and profits on those assets. We clarify that the computed ROCE is on the current capital employed (end-1QFY08), which may or may not be the base to be used for regulation. The regulator may decide to use a different capital employed (total investment in pipeline and associated infrastructure since the inception of a pipeline [GCI] or replacement value).

2. **Growth from steep increase in gas supply through to-be-constructed new pipelines.** GAIL management has formulated an aggressive plan to expand its extant 5,600 km pipeline network to participate in the likely steep increase in gas supply in India from 2HCY08. It plans to set up five new pipelines and augment capacities at three extant pipelines. It expects to build the new pipelines over the next 3-4 years at a total cost of Rs180 bn. When implemented, the new pipelines will increase GAIL's capital employed and grow its earnings or sustain earnings if the capital employed of extant pipelines is fixed on net fixed assets basis (gross block less reasonable depreciation) by the regulator.

GAIL's earnings may be at risk if impending regulations are less favorable versus street expectations

Return on capital employed for various segments of GAIL

	Transmission	Petrochemicals	LPG and liquid hydrocarbons
FY2007			
EBIT (Rs mn)	17,060	9,545	1,022
EBIT * (1-t)	12,215	6,834	731
Capital employed (Rs mn)	47,521	19,128	8,970
ROCE (%)	**25.7**	**35.7**	**8.2**
1QFY08			
Annualized EBIT (Rs mn)	16,912	13,720	7,940
EBIT * (1-t)	11,957	9,700	5,614
Capital employed (Rs mn)	56,056	18,282	10,141
ROCE (%)	**21.3**	**53.1**	**55.4**

Source: Company, Kotak Institutional Equities.

We value GAIL stock at Rs350 per share

Sum-of-the-parts valuation of GAIL, FY2009 basis (Rs bn)

	Valuation base (Rs bn)		Multiples (X)		EV (Rs bn)		EV
	Replacement cost	EBITDA	EV/RC	EV/EBITDA	Replacement cost basis	EBITDA basis	(Rs/share)
Natural gas/LPG transportation		17		6.0		101	119
LPG production		23		3.5		79	93
Petrochemicals		7		3.5		25	29
Oil and gas upstream	18		1.00		18		22
Subsidy sharing scheme		(10)		1.0		(10)	(12)
Investments	66		0.80		53		63
ONGC shares	43		0.80		34		40
Others	23		0.80		19		22
Total		**36**				**195**	**314**
Net debt/(cash)					(26)	(26)	(31)
Implied value of share (Rs/share)							**345**

Source: Kotak Institutional Equities estimates.

GAIL (India) Ltd: Profit model, balance sheet, cash model of GAIL 2004-2010E, March fiscal year-ends (Rs mn)

	2004	2005	2006	2007	2008E	2009E	2010E
Profit model (Rs mn)							
Net sales	116,395	135,914	163,513	160,472	229,665	244,923	272,785
EBITDA	**30,667**	**36,040**	**35,731**	**29,896**	**37,728**	**38,623**	**38,757**
Other income	2,440	3,491	4,555	5,450	5,916	7,196	9,556
Interest	(1,380)	(1,341)	(1,174)	(1,071)	(726)	(656)	(656)
Depreciation	(6,640)	(9,467)	(5,595)	(5,754)	(6,084)	(6,516)	(6,556)
Pretax profits	25,088	28,723	33,518	28,521	36,834	38,647	41,102
Tax	(8,373)	(8,898)	(9,221)	(7,941)	(8,378)	(10,418)	(11,786)
Deferred taxation	(1,078)	(277)	(445)	(190)	(2,279)	(921)	(446)
Net profits	**18,693**	**19,539**	**23,101**	**23,867**	**26,177**	**27,308**	**28,870**
Earnings per share (Rs)	**22.1**	**23.1**	**27.3**	**28.2**	**31.0**	**32.3**	**34.1**
Balance sheet (Rs mn)							
Total equity	74,452	86,261	99,733	113,929	130,212	146,637	163,635
Deferred taxation liability	12,276	12,552	12,997	13,187	15,466	16,387	16,833
Total borrowings	21,335	19,974	19,166	13,379	11,000	11,000	11,000
Current liabilities	30,302	34,742	37,522	45,512	43,844	45,970	50,158
Total liabilities and equity	**138,364**	**153,529**	**169,418**	**186,007**	**200,522**	**219,994**	**241,626**
Cash	15,680	34,468	44,959	26,604	12,675	37,597	63,776
Other current assets	25,391	29,671	28,309	50,851	63,060	62,316	62,514
Total fixed assets	89,574	81,550	81,716	93,913	110,149	105,443	100,697
Investments	7,720	7,840	14,434	14,638	14,638	14,638	14,638
Total assets	**138,364**	**153,529**	**169,418**	**186,007**	**200,522**	**219,994**	**241,626**
Free cash flow (Rs mn)							
Operating cash flow, excl. working capital	23,954	26,912	25,165	23,920	28,624	27,549	26,316
Working capital changes	580	49	5,950	(10,151)	(13,877)	2,870	3,990
Capital expenditure	(26,924)	(1,472)	(5,811)	(20,449)	(22,320)	(1,810)	(1,810)
Investments	(841)	(120)	(6,462)	(205)	—	—	—
Other income	1,826	2,416	3,995	3,884	5,916	7,196	9,556
Free cash flow	**(1,405)**	**27,787**	**22,837**	**(3,002)**	**(1,657)**	**35,806**	**38,052**
Ratios (%)							
Debt/equity	24.6	20.2	17.0	10.5	7.6	6.7	6.1
Net debt/equity	6.5	(14.7)	(22.9)	(10.4)	(1.1)	(16.3)	(29.2)
ROAE (%)	23.2	21.1	21.8	19.9	19.2	17.7	16.8
ROACE (%)	**16.2**	**18.0**	**19.7**	**15.5**	**18.0**	**16.8**	**16.0**

Source: Kotak Institutional Equities estimates.

We model strong increase in gas volumes between FY2007 and FY2010

Key assumptions behind GAIL model, March fiscal year-ends, 2004-2010E

	2004	2005	2006	2007	2008E	2009E	2010E
Volumes							
Natural gas transportation, gross (mcm/day)							
HBJ pipeline	32	32	32	32	32	32	32
Other pipelines	31	36	36	39	40	40	40
Regassified LNG							
Dahej-Vijaipur pipeline (transmitted and sold)		2	7	6	9	9	9
Dahej-Vijaipur pipeline (transmitted)		1	4	4	6	6	6
Dahej-Uran pipeline					6	12	12
Panvel-Dabhol pipeline					4	6	8
Elimination of double-counted volumes (a)			(1)	(3)	(7)	(9)	(11)
Total gas transmission	**63**	**72**	**79**	**77**	**90**	**96**	**96**
LPG (000 tons)							
Sold	1,089	1,089	1,039	1,037	1,100	1,100	1,100
Transported	1,841	2,138	2,228	2,490	2,750	2,800	2,800
Petrochemicals (000 tons)							
Polyethylene							
Domestic sales	225	279	271	337	400	420	420
Exports	40	40	40	10	10	—	—
Total petrochemicals	**265**	**319**	**311**	**347**	**410**	**420**	**420**
Prices							
Natural gas (Rs/cubic meter)							
Natural gas ceiling price	2.85	2.85	3.52	4.21	5.24	5.83	6.42
Regassified LNG including transportation	6.61	6.50	6.47	6.93	6.51	5.39	6.97
Transmission plus marketing charges							
HBJ pipeline, Dahej-Vijaipur pipeline (from FY2007)	1.15	1.15	1.15	0.99	0.96	0.96	0.97
Dahej-Vijaipur, Dahej-Uran, Panvel-Dabhol pipeline	0.69	0.67	0.69	0.99	1.04	1.04	1.05
Other pipelines	0.40	0.41	0.42	0.40	0.42	0.44	0.46
LPG							
LPG (US$/tonne)	319	399	510	531	609	593	593
Transmission charges (Rs/tonne)							
Jamnagar-Loni	1,436	1,522	1,522	1,522	1,522	1,522	1,522
Vizag-Secunderabad	1,450	1,450	1,450	1,450	1,450	1,450	1,450
Other assumptions							
Polyethylene, HDPE (US$/tonne)	680	990	1,055	1,315	1,380	1,305	1,255
Import tariff, Polyethylene	28%	17%	10%	5%	5%	4%	4%
Import tariff, LPG	10%	7%	0%	0%	0%	0%	0%
Exchange rate (Rs/US$)	46.0	45.0	44.3	45.3	41.0	41.0	41.0
Subsidy losses	**4,280**	**11,380**	**10,640**	**14,880**	**11,500**	**10,000**	**8,500**

Note:

(a) Gas transported through the HVJ or DV pipeline and then to smaller pipelines.

Source: Company, Kotak Institutional Equities estimates.

Telecom

Sector coverage view			Cautious

		Price, Rs	
Company	**Rating**	**29-Aug**	**Target**
Bharti	U	880	750
Rcom	U	520	500
Idea Cellular	U	120	110

TRAI presses for more competition through recommendations on spectrum allocation, M&A

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- **Spectrum allocation policy, if accepted by the government, to result in lower spectrum and higher capex**
- **Our analysis suggests most extant operators may not receive additional spectrum for some time**
- **Stiffer M&A guidelines recommended**

We believe that TRAI recommendations on licensing terms and spectrum charges will increase competition, capex and spectrum charge payouts. Key recommendations include (a) revision in subscriber base criteria for spectrum allocation; this will likely increase capex spend and free up spectrum to meet pan-Indian coverage aspiration of all the players including Idea, Aircel and RCL (GSM); (b) no cap on number of service providers in any service area; (c) reduction in market share (adjusted gross revenue and subscriber) ceiling for M&A (to 40% from 67%); this will reduce M&A prospects significantly, at least among the larger players; (d) increase in spectrum usage charge above 8 MHz and introduction of one-time spectrum charge above 10 MHz; and (e) reduction in USO fee to 3% of AGR from 5% for operators with >75% coverage in development blocks and >90% street coverage in a given service area; none of the operators fulfill this criteria (also economically not feasible). The increase in spectrum usage charges will likely have a negative impact of 0.8-1% on our FY2009E EPS estimates for Bharti and Idea. We maintain U 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.

Revised spectrum allocation norms would ease the entry for new players. Exhibit 1 shows the revised subscriber base criteria for spectrum allocation for both GSM and CDMA operators. The revised norms more than double the subs' base required for incremental spectrum allocation. If accepted by DOT, this will have the following implications:

1. **Higher capex.** Existing players may receive significantly lower spectrum under the revised criteria versus under the previous criteria for the same subscriber base. This would result in higher investments in BTS and technologies such as synthetic frequency hopping. This will likely realign the current high return on investments to more realistic levels.
2. **Enough spectrum to foster true competition.** Lower allocation of spectrum to extant players under the revised criteria would allow more spectrum to be allocated to new players. Our analysis (see Exhibits 2 and 3) suggests that 20 MHz (to be released by the Department of Defense) would suffice to meet (1) growth requirements of all the existing operators in most circles, (2) leave enough for extant operators looking to expand in new circles and (3) potentially allow entry of entirely new operators. In our view, Idea, Aircel and Vodafone-Essar would be able to start operations in new circles and RCL may also receive GSM spectrum (under stiffer conditions albeit) although there is no clarity as yet on the prioritization of spectrum allocation. We expect this to result in increased competition in the Indian wireless industry.

Spectrum usage charge increase recommended for higher allocations. The regulator has recommended a 1% increase in spectrum usage charge (as % of AGR) for spectrum allocations >=10MHz (see Exhibit 4). We believe that the increase aims at penalizing operators for inefficient spectrum utilization. Based on the current spectrum allocated, this increase would impact Bharti in two circles (Delhi and Karnataka), Vodafone-Essar in three circles (Delhi and Mumbai) and Idea Cellular in the Maharashtra circle. We estimate the potential impact on FY2009E EPS of Bharti and Idea to be Rs0.30 (0.7% of our FY2009E EPS of Rs45.8) and Rs0.06 (1% of our FY2009E EPS of Rs6), respectively.

Recommendations on M&A guidelines—rules out any major consolidation. Key recommendations in M&A guidelines include (1) market share of subscribers and AGR to be used to measure an operator's dominance, (b) reduction in market share ceiling (for both subs and AGR) for the post-merger entity to 40% from the current 67% and (c) removal of the existing spectrum ceilings (2 X 15 MHz and 2 X 12.4 MHz per operator per service area in metros/A and B/C circles respectively). We believe that the reduction in market share ceiling will effectively rule out any major consolidation in the industry thus ensuring continuation of competitive intensity in the industry.

TRAI recommends allocation of dual spectrum although at cost; RCL would be able to pursue GSM expansion. TRAI has recommended that service providers be allowed to pursue usage of alternative technology on the following conditions (1) payment of a one-time entry fee, which equal the entry fee for UAS license and (2) imposition of roll-out obligations, as if it were a separate license. The spectrum charge would be computed by combining the AGR on both the license after the first year. However, the spectrum allocation would be based on subs base on separate technologies. RCL would be in a position to pursue GSM expansion in the remaining 15 circles although it may have to pay entry fees of Rs15.4 bn.

Exhibit 1: 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 X 6.2		2 X 8		2 X 10		2 X 12.4		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**
B	0.3	**0.8**	0.6	**3.0**	1.0	**5.0**	1.6	**8.0**	2.1	**10.0**
C	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 carrier	
Service area	2 X 3.75		2 X 5		2 X 6.25		2 X 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**
A	0.4	**0.8**	1.2	**5.0**	2.0	**8.0**	2.6	**10.0**
B	0.3	**0.8**	1.0	**5.0**	1.6	**8.0**	2.1	**10.0**
C	0.15	**0.6**	0.5	**4.0**	0.9	**6.0**	1.2	**8.0**

Source: TRAI, compiled by Kotak Institutional Equities

Exhibit 2: Fewer circles with spectrum deficiency for most players

Assessment of spectrum 'position' of operators under the revised and previous criteria for spectrum allocation

Wireless operator	# of circles present in	# of circles with spectrum deficiency (revised criteria)	# of circles with spectrum deficiency (earlier 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.

Exhibit 3: New spectrum allocation criteria will result in new operators getting spectrum easily if the defence department releases 20 MHz spectrum

Computation of additional spectrum required by extant and new operators

Circle	Spectrum allocated (MHz)	Spectrum reqd-Mar '08 (MHz)	Addl spectrum req. (MHz)	New licensees	Total shortfall (MHz)	Shortfall ex-new licensees	Spectrum enough for?
Calcutta	30.20	34.60	4.40	Dishnet Wireless	-	-	All
Chennai	33.20	33.20	-	-	-	-	All
Delhi	36.00	42.80	6.80	Aircel	-	-	All
Mumbai	37.20	46.00	8.80	Idea, Aircel	-	-	All
Andhra Pradesh	31.00	36.60	5.60	Aircel	-	-	All
Gujarat	29.60	34.00	4.40	Aircel	-	-	All
Karnataka	32.20	36.60	4.40	Aircel	-	-	All
Maharashtra	30.40	36.60	6.20	Aircel	-	-	All
Tamil Nadu	30.40	30.40	-	-	-	-	All
Haryana	24.80	24.80	-	Aircel	-	-	All
Kerala	28.40	32.80	4.40	Aircel	-	-	All
Madhya Pradesh	26.60	26.60	-	Aircel	-	-	All
Punjab	28.40	32.80	4.40	Aircel	-	-	All
Rajasthan	26.60	31.00	4.40	Aircel	-	-	All
Uttar Pradesh (east)	30.00	34.40	4.40	Aircel	-	-	All
Uttar Pradesh (west)	28.40	32.80	4.40	Aircel	-	-	All
West Bengal	25.60	31.00	5.40	-	-	-	All
Assam	23.00	24.80	1.80	Hutch	-	-	All
Bihar	24.80	33.60	8.80	Hutch, Idea	-	-	All
Himachal Pradesh	27.40	27.40	-	Hutch	-	-	All
North East	19.40	23.80	4.40	Hutch	-	-	All
Orissa	24.80	29.20	4.40	Hutch	-	-	All
J&K	18.60	23.00	4.40	Hutch	-	-	All

Source: Kotak Institutional Equities estimates

Exhibit 4: Changes proposed to spectrum usage charges

Spectrum	Current (% of AGR)	Proposed
Upto 2 X 4.4 MHz	2.0	2.0
Upto 2 X 6.2 MHz	3.0	3.0
Upto 2 X 8 MHz	4.0	4.0
Upto 2 X 10 MHz	**4.0**	**5.0**
Upto 2 X 12.5 MHz	**5.0**	**6.0**
Upto 2 X 15 MHz	**6.0**	**7.0**
Beyond 2 X 15 MHz	**NA**	**8.0**

Note:
(a) AGR = Adjusted gross revenues

Source: TRAI

Exhibit 5: Increase in spectrum usage charge will have a marginal impact on the EPS estimates for Bharti and Idea

Operator	Circle	Spectrum Allocated (MHz)	Circle AGR - Jun '07 quarter (Rs mn)	Circle AGR as % of total mobile AGR	Annualized increase in spectrum usage charge (Rs mn)	EPS impact (Rs)
Bharti	Delhi	10	5,675	13.1	272	0.14
	Karnataka	10	5,625	13.0	292	0.15
Bharti total			**11,299**	**26.1**	**565**	**0.30**
Vodafone Essar	Delhi	10	3,157	11.4	126	NA
	Mumbai	10	4,133	14.9	165	NA
Vodafone Essar total			**7,290**	**16.8**	**292**	**NA**
Idea total	Maharashtra	10	2,845	22.6	148	**0.06**

Note:
(a) EPS impact calculated on the basis of annualized AGR Jun '07 AGR
(b) Impact computed based on current spectrum allocated to wireless operators
(c) Computed EPS impact is FY2009E impact; impact on FY2008E EPS will be negligible

Source: TRAI, Kotak Institutional Equities estimates

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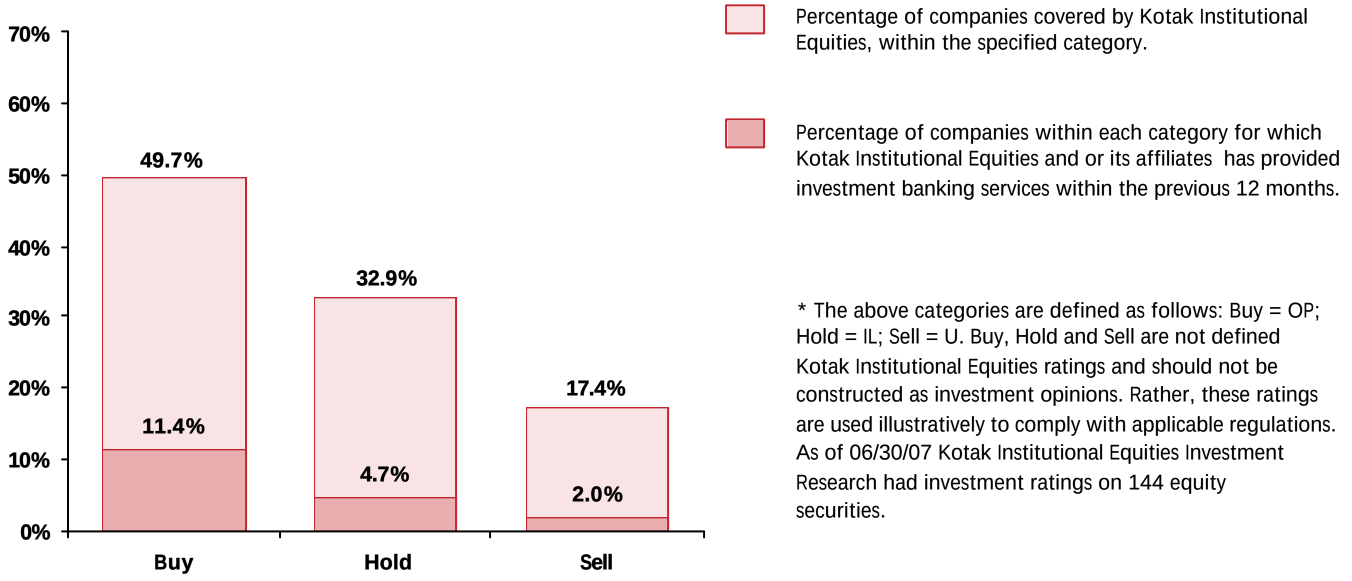

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Source: Kotak Institutional Equities. As of June 30, 2007

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