



## INDIA

### Stocks mentioned in the report

Company	Bberg Ticker	Rec	Price (Rs)	TP (Rs)	Down (%)
Bharti	BHARTI	UP	260	280	8%
RCOM	RCOM	UP	137	160	17%
Idea	IDEA	UP	53	35	-34%
MTNL	MTNL	UP	56	47	-16%

Note: Prices as of 19 May 2010

Source: Bloomberg, Macquarie Research, May 2010

### Investment fundamentals – Bharti

	2009A	2010E	2011E
Total revenue (Rsbn)	369.6	396.0	433.8
EBITDA (Rsbn)	151.7	162.6	171.4
EPS adj. (Rs)	22.3	24.5	23.0
PER adj (x)	11.6	10.6	11.3
EV/EBITDA (x)	6.8	6.3	5.8

### Investment fundamentals – RCOM

	2009A	2010E	2011E
Total revenue (Rsbn)	229.4	235.9	276.6
EBITDA (Rsbn)	92.9	86.3	100.0
EPS adj. (Rs)	27.2	17.6	20.8
PER adj (x)	5.0	7.8	6.6
EV/EBITDA (x)	5.5	5.8	5.0

### Investment fundamentals – Idea

	2009A	2010E	2011E
Total revenue (Rsbn)	101.2	118.0	135.3
EBITDA (Rsbn)	28.2	34.6	43.2
EPS adj. (Rs)	3.1	2.4	0.6
PER adj (x)	17.2	21.6	88.2
EV/EBITDA (x)	7.3	6.2	5.0

### Investment fundamentals – MTNL

	2009A	2010E	2011E
Total revenue (Rsbn)	45.0	37.5	34.8
EBITDA (Rsbn)	1.8	0.6	-0.8
EPS adj. (Rs)	1.5	-1.2	-6.4
PER adj (x)	37.1	nmf	nmf
EV/EBITDA (x)	-5.3	-15.1	11.1

Source: Company data, Macquarie Research, May 2010

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# India Wireless Sector

## 3G: End or endgame (for incumbents)

### Event

- 3G auctions ended at the pan India winning price of Rs167.5bn per slot. There were no pan India winners with Bharti winning 13 circles, RCOM 13, Aircel 13, Idea 11, Vodafone Essar 9, Tata Tele (DoCoMo) 9 and STel 3. Maintaining Underperform on India Telecom sector in view of increased balance sheet stress on account of immediate 3G payout, disruption likely on introduction on MNP and uncertain regulatory environment post recent TRAI recos on licensing & spectrum. The emergence of Aircel and Tata Teleservices with strong wins in 3G is structurally a negative for the sector as 3G will lead to further splintering of the sector while 3G could/should have been a consolidator of the wireless space in favour of the top four incumbents.

### Impact

- Bharti will have the highest 3G license payout of Rs122.95bn** followed by Vodafone Essar (Rs116bn), RCOM (Rs86bn), Aircel (Rs65bn), Tata Tele (Rs59bn), Idea (Rs58bn), and STel (Rs3bn). **Key Metro circles of Delhi & Mumbai were won by Bharti, Vodafone and RCOM** and together cost Rs65.6bn (US\$1.4bn), accounting for 39% of pan India price. Outcome for incumbents was splintered in the important 5 category A circles and Kolkata.
- The biggest surprise winner in multiple circles is Aircel (Maxis' 74% subsidiary) in 13 circles** (see Figure 3) comprising 3 Category A circles of Karnataka, Tamil Nadu, Andhra Pradesh. This is a good use of proceeds from the recent sale of passive infra assets by Aircel for EV of Rs84bn (US\$1.8bn).
- The biggest negative surprise in terms of not winning in quite a few key circles was Bharti Airtel, followed by Vodafone and IDEA.** Bharti has not won spectrum in 9 circles, of which 8 are important, implying Bharti hasn't got 3G in areas that cumulatively contribute 31.6% to Bharti wireless revenues. IDEA has not won spectrum in 13 circles, implying it has not got 3G in areas which cumulatively contribute 17.9% to IDEA's all India wireless revenue.
- 3G roaming to come to the rescue of operators who have not won 3G in a circle. However, that does not resolve the problem of incumbents who were banking on the extra 5MHz of 3G spectrum helping their strained & overburdened 2G network**, that's possibly already behind (voice) demand.
- MTNL liable to pay Rs65.6bn for 3G slots already awarded** in Mumbai and Delhi, unless the Govt specifically waives MTNL's liability in this regard, implying MTNL gets 3G spectrum for free. If MTNL ends up paying cash for 3G, it translates to Rs104/share, implying considerable debt to be raised to fund this.
- Payment for 3G within 10 days though spectrum will be available only after September 2010.** We expect launch of 3G services by December 2010.

### Outlook

- India unlikely to see meaningful uplift to data revenues in next two years** as existing base of high end subs will move to 3G from existing EDGE/GPRS networks, implying 3G will have a cannibalising effect on existing 2G led data revenues. Note only ~5% of India's SIM holders have 3G capable handsets.

## Circle wise details and Impact of 3G license payouts on Indian Telcos

Fig 1 Final Operator-wise 3G spectrum payout in cash

	No of Slots	Base Price	Final Bid	3G spectrum payout						
				Bharti	Vodafone	RCOM	Idea	Tata Tele	Aircel	STel
Delhi	3	3,200	33,169	33,169	33,169	33,169	-	-	-	-
Mumbai	3	3,200	32,471	32,471	32,471	32,471	-	-	-	-
Karnataka	3	3,200	15,799	15,799	-	-	-	15,799	15,799	-
Tamil Nadu	3	3,200	14,649	14,649	14,649	-	-	-	-	14,649
Andhra Pradesh	3	3,200	13,731	13,731	-	-	13,731	-	-	13,731
Maharashtra	3	3,200	12,578	-	12,578	-	12,578	12,578	-	-
Gujarat	3	3,200	10,761	-	10,761	-	10,761	10,761	-	-
Kolkata	3	1,200	5,443	-	5,443	5,443	-	-	-	5,443
Uttar Pradesh (West)	3	1,200	5,140	5,140	-	-	5,140	5,140	-	-
Uttar Pradesh (East)	3	1,200	3,646	-	3,646	-	3,646	-	-	3,646
Punjab	4	1,200	3,220	-	-	3,220	3,220	3,220	3,220	-
Rajasthan	3	1,200	3,210	3,210	-	3,210	-	3,210	-	-
Kerala	3	1,200	3,125	-	-	-	3,125	3,125	3,125	-
Madhya Pradesh	3	1,200	2,584	-	-	2,584	2,584	2,584	-	-
Haryana	3	1,200	2,226	-	2,226	-	2,226	2,226	-	-
West Bengal	4	1,200	1,236	1,236	1,236	1,236	-	-	-	1,236
Bihar	4	300	2,035	2,035	-	2,035	-	-	-	2,035
Orissa	3	300	970	-	-	970	-	-	-	970
North East	3	300	423	423	-	423	-	-	-	423
Assam	3	300	415	415	-	415	-	-	-	415
Himachal Pradesh	3	300	372	372	-	372	372	-	-	372
Jammu & Kashmir	4	300	303	303	-	303	303	-	-	303
<b>Total</b>	<b>70</b>	<b>35,000</b>	<b>167,506</b>	<b>122,955</b>	<b>116,179</b>	<b>85,850</b>	<b>57,686</b>	<b>58,643</b>	<b>64,995</b>	<b>3,377</b>
<b>Total (US\$m)</b>		<b>761</b>	<b>3,641</b>	<b>2,673</b>	<b>2,526</b>	<b>1,866</b>	<b>1,254</b>	<b>1,275</b>	<b>1,413</b>	<b>73</b>
Metro & Category A				5	5	2	3	3	3	-
Category B				3	4	5	6	6	5	-
Category C				5	-	6	2	-	5	3
<b>Total Circles won</b>				<b>13</b>	<b>9</b>	<b>13</b>	<b>11</b>	<b>9</b>	<b>13</b>	<b>3</b>

Source: Macquarie Research, May 2010

Fig 2 3G license payout to stretch Balance Sheets across the board

	FY3/11	FY3/12
<b>Bharti (Post Zain integration and post 3G/BWA)</b>		
EPS (Rs)	15.6	19.8
Net Debt (Rsm)	497,949.4	445,919.3
Gross debt (Rsm)	558,119.0	484,534.5
Net Debt/ Equity	1.1	0.8
<b>Net Debt/EBITDA</b>	<b>2.1</b>	<b>1.7</b>
FCF (Rsm)	(29,004.0)	94,954.2
Assumed US\$2.7bn for 3G, US\$978m for BWA and US\$9bn for Zain Africa		
<b>RCOM (Post 3G)</b>		
EPS (Rs)	17.3	12.7
Net Debt (Rsm)	305,758.6	268,031.2
Gross debt (Rsm)	322,688.4	287,218.6
Net Debt/ Equity	0.6	0.5
<b>Net Debt/EBITDA</b>	<b>4.6</b>	<b>3.9</b>
FCF (Rsm)	(119,391.8)	(18,578.9)
Assumes US\$1.9b for 3G, zero for BWA		
<b>IDEA CELLULAR (Post 3G)</b>		
EPS (Rs)	1.07	0.74
Net Debt (Rsm)	129,873	141,955
Gross debt (Rsm)	152,501.9	173,501.9
Net Debt/ Equity	1.0	1.1
<b>Net Debt/EBITDA</b>	<b>3.2</b>	<b>3.0</b>
FCF (Rsm)	(65,393.4)	(4,589.0)
Assumes US\$1.3b for 3G, zero for BWA		

Source: Macquarie Research, May 2010

Fig 3 Final Operator wise 3G spectrum – Circles Won

<i>In Rsm unless mentioned</i>				Circles won						
	No of Slots	Base Price	Final Bid	Bharti	Vodafone	RCOM	Idea	Tata Tele	Airtel	STel
Delhi	3	3,200	33,169	1	1	1				
Mumbai	3	3,200	32,471	1	1	1				
Karnataka	3	3,200	15,799	1				1	1	
Tamil Nadu	3	3,200	14,649	1	1				1	
Andhra Pradesh	3	3,200	13,731	1			1		1	
Maharashtra	3	3,200	12,578		1		1	1		
Gujarat	3	3,200	10,761		1		1	1		
Kolkata	3	1,200	5,443		1	1				1
Uttar Pradesh (West)	3	1,200	5,140	1			1	1		
Uttar Pradesh (East)	3	1,200	3,646		1		1		1	
Punjab	4	1,200	3,220			1	1	1	1	
Rajasthan	3	1,200	3,210	1		1		1		
Kerala	3	1,200	3,125				1	1	1	
Madhya Pradesh	3	1,200	2,584			1	1	1		
Haryana	3	1,200	2,226		1		1	1		
West Bengal and And	4	1,200	1,236	1	1	1				1
Bihar	4	300	2,035	1		1			1	1
Orissa	3	300	970			1			1	1
North East	3	300	423	1		1			1	
Assam	3	300	415	1		1			1	
Himachal Pradesh	3	300	372	1		1	1			1
Jammu & Kashmir	4	300	303	1		1	1		1	
<b>Total</b>	<b>70</b>	<b>35,000</b>	<b>167,506</b>	<b>13</b>	<b>9</b>	<b>13</b>	<b>11</b>	<b>9</b>	<b>13</b>	<b>3</b>
<b>Total (US\$m)</b>		<b>761</b>	<b>3,641</b>							
Metro & Category A				5	5	2	3	3	3	-
Category B				3	4	5	6	6	5	-
Category C				5	-	6	2	-	5	3
<b>Total Circles won</b>				<b>13</b>	<b>9</b>	<b>13</b>	<b>11</b>	<b>9</b>	<b>13</b>	<b>3</b>

Source: Macquarie Research, May 2010

- **The biggest negative surprise in terms of not winning in quite a few key circles was Bharti Airtel and to a lesser extent, Vodafone.** Bharti has not won spectrum in key circles (noted in parentheses - Bharti's current revenue market share in the circle; Revenue contribution from the circle to Bharti pan India wireless revenue, respectively) Delhi (38.6%, 5.1%), Gujarat (19.6%, 3.7%), Kolkata (32.4%, 2.4%), Kerala (16.2%, 2.7%), Punjab (39.1%, 5.0%), Haryana (19.0%, 1.3%), UP – East (29.0%, 5.1%) and Madhya Pradesh (32.0%, 3.9%), implying Bharti has not got 3G spectrum in nine circles which cumulatively contribute 31.6% to its overall wireless revenue.
- **IDEA has not won spectrum in key circles** (with Idea's current subscriber market share in the circle noted in parentheses alongside revenue market share and the Revenue contribution by that circle to Idea wireless revenue, respectively), Delhi (9.4%, 7.1%), Karnataka (6.9%, 4.0%), Mumbai (2.8%, 3.0%) and Bihar (4.5%, 2.6%), implying IDEA has not got 3G spectrum in 13 circles which cumulatively contribute 17.9% to IDEA's India wireless revenue.

**Fig 4 Current Revenue and Subscriber Market shares for six key operators by circle and presence on 900 MHz 2G spectrum and presence on 3G spectrum**

In Rsm unless mentio	Revenue Market Share						Spectrum in 900MHz band ("Y" if yes, "N" if no)						3G Spectrum ("Y" if yes, "N" if no)					
	Bharti	Vodafone	RCOM	Idea	Tata Tele	Aircel	Bharti	Vodafone	RCOM	Idea	Tata Tele	Aircel	Bharti	Vodafone	RCOM	Idea	Tata Tele	Aircel
Delhi	38.6%	22.5%	12.3%	9.4%	12.2%	0.6%	Y	Y	N	N	Y	N	Y	Y	N	N	N	N
Mumbai	20.0%	30.3%	17.3%	2.8%	16.1%	0.3%	N	Y	N	N	N	N	Y	Y	Y	N	N	N
Karnataka	54.2%	14.4%	8.9%	6.9%	6.3%	0.4%	Y	N	N	N	N	N	Y	N	N	N	Y	Y
Tamil Nadu	34.9%	21.6%	8.0%	0.0%	1.9%	22.6%	N	Y	N	N	N	Y	Y	Y	N	N	N	Y
Andhra Pradesh	40.5%	12.9%	9.7%	18.0%	9.2%	0.2%	Y	N	N	Y	N	N	Y	N	N	Y	N	Y
Maharashtra	22.3%	18.4%	8.0%	30.4%	10.5%	0.2%	N	Y	N	Y	N	N	N	Y	N	Y	Y	N
Gujarat	19.6%	42.8%	7.4%	17.8%	5.1%	na	N	Y	N	Y	N	N	N	Y	N	Y	Y	N
Kolkata	32.4%	32.9%	17.9%	0.5%	9.7%	1.4%	Y	Y	N	N	N	N	N	Y	Y	N	N	Y
Uttar Pradesh (West)	16.6%	25.6%	10.6%	27.9%	6.5%	0.2%	N	Y	N	Y	N	N	Y	N	N	Y	Y	N
Uttar Pradesh (East)	29.0%	32.7%	11.2%	7.9%	3.2%	0.1%	Y	Y	N	N	Y	N	N	Y	N	Y	N	Y
Punjab	39.1%	15.7%	4.3%	3.2%	5.2%	na	Y	N	N	N	N	N	N	N	Y	Y	Y	Y
Rajasthan	46.7%	24.3%	7.3%	5.2%	5.3%	na	Y	Y	N	N	N	N	Y	N	Y	N	Y	N
Kerala	16.2%	21.0%	10.3%	31.0%	3.2%	0.5%	N	Y	N	Y	N	N	N	N	N	Y	Y	Y
Madhya Pradesh	32.0%	2.4%	18.9%	29.9%	3.8%	na	N	N	Y	Y	N	N	N	N	Y	Y	Y	N
Haryana	19.0%	24.9%	7.2%	20.6%	9.4%	na	N	Y	N	Y	N	N	N	Y	N	Y	Y	N
West Bengal and And	28.8%	37.6%	11.7%	0.3%	5.8%	3.4%	Y	N	Y	N	N	N	Y	Y	Y	N	N	Y
Bihar	51.2%	3.7%	20.1%	4.5%	6.0%	4.0%	Y	N	Y	N	N	N	Y	N	Y	N	N	Y
Orissa	46.7%	3.7%	18.0%	0.6%	5.0%	5.7%	Y	N	Y	N	N	N	N	N	Y	N	N	Y
North East	38.4%	3.8%	6.5%	0.0%	0.6%	28.6%	Y	N	Y	N	Y	N	Y	N	Y	N	N	Y
Assam	37.0%	2.4%	16.9%	0.0%	0.8%	25.1%	Y	N	Y	N	Y	N	Y	N	Y	N	N	Y
Himachal Pradesh	46.0%	2.2%	21.0%	4.9%	3.7%	2.7%	Y	N	Y	N	Y	N	Y	N	Y	Y	N	N
Jammu & Kashmir	65.7%	1.5%	1.2%	0.2%	1.2%	24.4%	Y	N	N	N	Y	Y	Y	N	Y	Y	N	Y

Source: Macquarie Research, May 2010

**Fig 5 3G roaming potential in circles of no overlap for incumbents, Bharti, Vodafone and IDEA**

	3G spectrum overlap ("Y" if overlap, "N" otherwise)		
	Bharti with Vodafone	Vodafone with Idea	Bharti with Idea
Delhi	Y	N	N
Mumbai	Y	N	N
Karnataka	N	N	N
Tamil Nadu	Y	N	N
Andhra Pradesh	N	N	Y
Maharashtra	N	Y	N
Gujarat	N	Y	N
Kolkata	N	N	N
Uttar Pradesh (West)	N	N	Y
Uttar Pradesh (East)	N	Y	N
Punjab	N	N	N
Rajasthan	N	N	N
Kerala	N	N	N
Madhya Pradesh	N	N	N
Haryana	N	Y	N
West Bengal and Andaman & Nicobar	Y	N	N
Bihar	N	N	N
Orissa	N	N	N
North East	N	N	N
Assam	N	N	N
Himachal Pradesh	N	N	Y
Jammu & Kashmir	N	N	Y

Source: Macquarie Research, May 2010

Fig 6 Global emerging market telecom valuation

Macquarie - Asia Wireless Telecom Valuation Table (March Year End)													
Company Name	Bloomberg Ticker	Rec	Price lcy	EV/EBITDA			EV/EBITDA by EBITDA CAGR 2009-12E	PER			P/B 2011E	PEG 2009-12E	Div Yield (%) 2011E
				2010E	2011E	2012E		2010E	2011E	2012E			
China Mobile	941 HK	Neutral	74.35	4.7	4.5	4.4	1.3	11.5	11.2	11.1	2.0	4.9	3.9
China Unicom	762 HK	Neutral	9.04	4.4	4.1	3.7	-5.3	20.8	32.6	19.7	0.9	-0.3	2.1
China Telecom	728 HK	Underperform	3.41	4.2	4.3	4.2	-0.9	17.2	16.6	13.5	1.0	-0.8	3.3
Bharti Airtel*	BHARTI IN	Underperform	259.55	6.3	5.8	5.0	0.8	10.6	11.3	10.0	1.9	9.2	3.5
Reliance Comms*	RCOM IN	Underperform	136.80	5.8	5.0	4.3	0.7	7.8	6.6	5.3	0.5	-0.3	2.2
Idea Cellular*	IDEA IN	Underperform	52.75	6.2	5.0	4.2	0.3	21.6	88.2	27.1	1.1	-0.2	0.0
TCOM	TCOM IN	Underperform	243.90	8.5	7.4	6.3	0.4	142.9	nmf	nmf	1.6	6.0	1.8
MTNL	MTNL IN	Underperform	56.15	-15.1	11.1	11.9	nmf	nmf	nmf	nmf	0.5	nmf	33.1
PT Telkom	TLKM IJ	Outperform	7,550.00	6.5	6.2	5.6	0.7	13.1	12.1	11.4	3.0	1.8	4.1
Indosat	ISAT IJ	Neutral	4,975.00	5.7	5.1	4.7	1.3	45.4	17.9	14.9	1.2	-0.3	3.1
XL Axiata	EXCL IJ	Outperform	3,625.00	6.3	5.7	5.1	0.4	15.1	13.3	9.6	2.2	1.3	1.5
Bakrie Telecom	BTEL IJ	Outperform	143.00	4.8	3.7	3.5	0.3	20.9	14.3	11.4	0.7	0.8	0.0
SK Telecom	017670 KS	Outperform	167,500.00	4.1	3.5	3.2	0.6	9.4	7.3	7.0	0.9	0.6	7.2
KT	030200 KS	Outperform	47,150.00	4.7	3.7	3.5	1.0	16.9	9.0	8.1	1.1	0.4	5.7
LG Telecom	032640 KS	Neutral	7,810.00	4.0	4.0	3.7	0.2	8.6	8.3	7.2	0.7	-1.9	5.8
SK Broadband	033630 KS	Neutral	5,800.00	9.7	7.0	5.7	0.9	nmf	nmf	88.7	1.3	nmf	0.0
Chunghwa Telecom	2412 TT	Neutral	61.80	5.2	5.8	5.8	-3.2	13.7	13.0	12.8	1.5	-3.5	7.1
Taiwan Mobile	3045 TT	Outperform	60.50	6.5	6.9	6.5	1.2	13.0	13.1	12.4	2.4	-2.1	7.3
Far EasTone	4904 TT	Neutral	37.85	4.8	5.0	4.9	-1.2	13.4	13.2	12.5	1.7	-13.1	7.2
SingTel *	ST SP	Neutral	2.91	6.9	6.4	5.9	1.3	11.7	11.8	10.6	1.7	-88.6	5.5
Starhub	STH SP	Outperform	2.24	6.9	7.0	6.8	6.7	12.0	13.4	12.4	102.1	-2.5	8.9
MobileOne	M1 SP	Outperform	2.09	6.8	6.6	6.5	9.0	12.4	12.4	12.3	5.9	32.3	6.5
Axiata	AXIATA MK	Outperform	3.76	6.9	6.0	5.6	0.4	17.0	13.5	12.2	1.4	0.6	2.7
Digi.Com	DIGI MK	Neutral	22.98	8.6	7.8	7.1	1.4	17.9	16.4	14.3	18.0	-5.7	7.0
Telekom Malaysia	T MK	Outperform	3.31	4.8	4.8	4.6	1.4	18.2	16.5	15.9	1.7	1.3	6.0
PLDT	TEL PM	Outperform	2,455.00	6.0	5.7	5.4	2.2	11.6	10.9	10.6	4.4	2.8	6.6
Globe	GLO PM	Neutral	900.00	4.3	4.5	4.4	-9.0	8.8	11.2	11.1	2.4	-1.0	7.6
AIS	ADVANC TB	Underperform	75.25	5.1	5.1	5.0	18.2	13.1	12.5	11.7	4.0	3.3	8.6
Shin Corp	SHIN TB	Underperform	23.80	9.8	7.5	7.3	0.5	11.7	8.8	8.7	2.2	0.6	10.1
TAC	DTAC TB	Neutral	33.50	4.5	4.5	4.4	-18.1	12.0	10.8	10.6	1.2	-0.7	6.6
True Corp	TRUE TB	Underperform	2.74	4.6	4.4	4.4	1.3	nmf	11.7	10.0	1.5	0.6	0.0
Thaicom	THCOM TB	Neutral	5.20	6.9	4.3	4.1	0.4	nmf	40.6	13.6	0.4	nmf	0.0
HTIL	2332 HK	Neutral	2.19	2.6	-6.8	-24.0	nmf	nmf	nmf	nmf	1.5	nmf	0.0
Smartone	315 HK	Underperform	8.41	4.3	3.4	3.2	1.3	112.5	21.4	18.0	1.7	-1.9	5.4
NTT*	9432 JP	Outperform	3,865.00	2.8	2.8	2.7	-5071.1	10.5	10.5	9.3	0.6	3.0	3.1
NTT DoCoMo *	9437 JP	Neutral	138,700.00	3.7	3.8	3.6	-2.2	11.6	12.1	10.9	1.1	2.5	3.7
Softbank*	9984 JP	Underperform	2,214.00	6.0	5.3	5.0	0.9	15.2	14.5	13.0	2.9	3.5	0.2
KDDI *	9433 JP	Outperform	433,500.00	2.9	2.7	2.7	1.2	7.2	7.1	7.7	0.8	-3.5	2.9
eAccess	9427 JP	Outperform	70,000.00	5.7	5.1	5.0	-21.2	19.7	12.0	9.4	4.2	nmf	3.4
Okinawa Cellular *	9436 JP	Outperform	183,500.00	3.5	3.4	3.1	0.8	8.7	8.6	8.1	1.0	-2.2	4.1
Telstra	TLS AU	Neutral	3.02	4.8	4.8	4.8	3.2	9.2	9.7	9.9	2.8	3.9	9.3
TCNZ	TEL NZ	Underperform	2.05	3.4	3.5	3.5	-1.4	7.8	9.5	10.9	1.5	-0.2	8.2

Note: Prices as of 19 May 2010. Aircel, Tata Teleservices, Telenor Unitech and Vodafone Essar are unlisted.

Source: Bloomberg, Macquarie Research, May 2010

Fig 7 India Wireless sector- Key metrics

March Year ends; Rs million	3QFY08	4QFY08	1QFY09	2QFY09	3QFY09	4QFY09	1QFY10	2QFY10	3QFY10A	4QFY10A
<b>Bharti Gross ARPU (Rs)</b>	<b>358</b>	<b>357</b>	<b>350</b>	<b>331</b>	<b>324</b>	<b>305</b>	<b>278</b>	<b>252</b>	<b>230</b>	<b>220</b>
YoY growth (%)	-16.2	-12.1	-10.4	-9.5	-9.3	-14.6	-20.4	-23.9	-29.0	-27.9
QoQ growth (%)	-2.2	-0.2	-2.1	-5.3	-2.0	-6.0	-8.8	-9.4	-8.6	-4.5
<b>RCOM Gross ARPU (Rs)</b>	<b>339</b>	<b>317</b>	<b>282</b>	<b>271</b>	<b>251</b>	<b>224</b>	<b>210</b>	<b>161</b>	<b>149</b>	<b>139</b>
YoY growth (%)	3.4	-15.9	-24.8	-24.9	-26.0	-29.3	-25.5	-40.6	-40.6	-37.9
QoQ growth (%)	-6.1	-6.5	-11.0	-3.9	-7.4	-10.8	-6.3	-23.3	-7.5	-6.7
<b>Idea Gross ARPU (Rs)</b>	<b>292</b>	<b>297</b>	<b>294</b>	<b>266</b>	<b>271</b>	<b>261</b>	<b>236</b>	<b>215</b>	<b>206</b>	<b>190</b>
YoY growth (%)			-11.2	-12.2	-7.2	-12.0	-19.7	-19.1	-23.8	-27.4
QoQ growth (%)	-3.8	1.8	-1.0	-9.4	1.6	-3.5	-9.7	-8.7	-4.3	-8.0
<b>VOD Gross ARPU (Rs)</b>	<b>349</b>	<b>350</b>	<b>332</b>	<b>305</b>	<b>297</b>	<b>274</b>	<b>247</b>	<b>222</b>	<b>209</b>	<b>197</b>
YoY growth (%)	-15.7	-13.6 na		-15.5	-14.9	-21.7	-25.7	-27.2	-29.6	-28.1
QoQ growth (%)	-3.3	0.3	-5.1	-8.1	-2.6	-7.7	-10.0	-10.0	-5.9	-5.7
<b>Bharti MoUs per subscriber</b>	<b>474</b>	<b>507</b>	<b>534</b>	<b>526</b>	<b>505</b>	<b>485</b>	<b>478</b>	<b>450</b>	<b>446</b>	<b>468</b>
YoY growth (%)	1.4	6.8	11.8	12.2	6.7	-4.3	-10.6	-14.5	-11.8	-3.6
QoQ growth (%)	1.1	7.0	5.4	-1.6	-3.9	-4.0	-1.5	-5.9	-0.9	5.0
<b>RCOM MoUs per subscriber</b>	<b>449</b>	<b>430</b>	<b>425</b>	<b>423</b>	<b>410</b>	<b>372</b>	<b>365</b>	<b>340</b>	<b>330</b>	<b>318</b>
YoY growth (%)	-1.1	-20.5	-16.7	-13.7	-8.7	-13.5	-14.1	-19.6	-19.5	-14.5
QoQ growth (%)	-8.4	-4.2	-1.2	-0.4	-3.1	-9.3	-1.9	-6.8	-2.9	-3.6
<b>Idea MoUs per subscriber</b>	<b>377</b>	<b>411</b>	<b>431</b>	<b>421</b>	<b>416</b>	<b>402</b>	<b>399</b>	<b>375</b>	<b>389</b>	<b>398</b>
YoY growth (%)	2.2	6.2	13.1	16.9	10.3	-2.2	-7.4	-10.9	-6.5	-1.0
QoQ growth (%)	4.7	9.0	4.9	-2.3	-1.2	-3.4	-0.7	-6.0	3.7	2.3
<b>VOD MoUs per subscriber</b>	<b>384</b>	<b>391</b>	<b>374</b>	<b>364</b>	<b>355</b>	<b>336</b>	<b>330</b>	<b>319</b>	<b>318</b>	<b>325</b>
YoY growth (%)	-10.5	-9.6 na		-2.2	-7.4	-14.1	-11.9	-12.6	-10.5	-3.1
QoQ growth (%)	3.0	1.8	-4.2	-2.6	-2.5	-5.6	-1.8	-3.3	-0.1	2.1
<b>Bharti ARPM (Rs)</b>	<b>0.76</b>	<b>0.70</b>	<b>0.65</b>	<b>0.63</b>	<b>0.64</b>	<b>0.63</b>	<b>0.58</b>	<b>0.56</b>	<b>0.52</b>	<b>0.47</b>
YoY growth (%)	-17.3	-17.7	-19.9	-19.4	-14.9	-10.7	-11.0	-10.9	-19.5	-25.2
QoQ growth (%)	-3.3	-6.7	-7.1	-3.8	2.1	-2.1	-7.4	-3.7	-7.8	-9.1
<b>RCOM ARPM (Rs)</b>	<b>0.76</b>	<b>0.74</b>	<b>0.66</b>	<b>0.64</b>	<b>0.61</b>	<b>0.60</b>	<b>0.58</b>	<b>0.47</b>	<b>0.45</b>	<b>0.44</b>
YoY growth (%)	4.5	5.8	-9.7	-13.0	-18.9	-18.3	-13.4	-26.1	-26.2	-27.4
QoQ growth (%)	2.5	-2.4	-9.9	-3.5	-4.4	-1.6	-4.5	-17.7	-4.6	-3.2
<b>Idea ARPM (Rs)</b>	<b>0.74</b>	<b>0.72</b>	<b>0.68</b>	<b>0.62</b>	<b>0.64</b>	<b>0.63</b>	<b>0.58</b>	<b>0.56</b>	<b>0.51</b>	<b>0.48</b>
YoY growth (%)	-15.2	-11.8	-18.9	-22.5	-13.5	-12.8	-14.9	-9.7	-20.3	-24.4
QoQ growth (%)	-7.5	-2.4	-5.6	-9.0	3.2	-1.6	-7.9	-3.4	-8.9	-6.6
<b>VOD ARPM (Rs)</b>	<b>0.91</b>	<b>0.90</b>	<b>0.89</b>	<b>0.84</b>	<b>0.84</b>	<b>0.82</b>	<b>0.75</b>	<b>0.70</b>	<b>0.66</b>	<b>0.61</b>
YoY growth (%)	-5.8	-4.4 na		-13.6	-8.1	-8.9	-15.7	-16.8	-21.4	-25.8
QoQ growth (%)	-6.1	-1.5	-0.9	-5.7	-0.2	-2.3	-8.4	-6.9	-5.7	-7.7

Source: Macquarie Research, May 2010

Fig 8 Key quarterly operating and financial metrics – wireless business: Bharti and RCOM

Bharti Airtel - Actuals for 4QFY10										
March Year ends; Rs million	3QFY08	4QFY08	1QFY09	2QFY09	3QFY09	4QFY09	1QFY10	2QFY10	3QFY10A	4QFY10A
<b>Wireless Revenues (Rs m)</b>	<b>56,105</b>	<b>64,201</b>	<b>69,150</b>	<b>72,843</b>	<b>79,392</b>	<b>82,216</b>	<b>82,285</b>	<b>80,994</b>	<b>79,618</b>	<b>81,975</b>
YoY growth (%)	49.3	51.3	47.2	44.0	41.5	28.1	19.0	11.2	0.3	-0.3
QoQ growth (%)	10.9	14.4	7.7	5.3	9.0	3.6	0.1	-1.6	-1.7	3.0
<b>Subscribers (m)</b>	<b>55.16</b>	<b>61.98</b>	<b>69.38</b>	<b>77.48</b>	<b>85.65</b>	<b>93.92</b>	<b>102.37</b>	<b>110.51</b>	<b>118.86</b>	<b>127.62</b>
YoY growth (%)	72.5	66.9	62.5	58.5	55.3	51.5	47.5	42.6	38.8	35.9
QoQ growth (%)	12.9	12.4	11.9	11.7	10.5	9.7	9.0	8.0	7.6	7.4
<b>Gross ARPU (Rs)</b>	<b>358</b>	<b>357</b>	<b>350</b>	<b>331</b>	<b>324</b>	<b>305</b>	<b>278</b>	<b>252</b>	<b>230</b>	<b>220</b>
YoY growth (%)	-16.2	-12.1	-10.4	-9.5	-9.3	-14.6	-20.4	-23.9	-29.0	-27.9
QoQ growth (%)	-2.2	-0.2	-2.1	-5.3	-2.0	-6.0	-8.8	-9.4	-8.6	-4.5
<b>Avg. monthly MoUs per subscriber</b>	<b>474</b>	<b>507</b>	<b>534</b>	<b>526</b>	<b>505</b>	<b>485</b>	<b>478</b>	<b>450</b>	<b>446</b>	<b>468</b>
YoY growth (%)	1.4	6.8	11.8	12.2	6.7	-4.3	-10.6	-14.5	-11.8	-3.6
QoQ growth (%)	1.1	7.0	5.4	-1.6	-3.9	-4.0	-1.5	-5.9	-0.9	5.0
<b>ARPM (Rs)</b>	<b>0.76</b>	<b>0.70</b>	<b>0.65</b>	<b>0.63</b>	<b>0.64</b>	<b>0.63</b>	<b>0.58</b>	<b>0.56</b>	<b>0.52</b>	<b>0.47</b>
YoY growth (%)	-17.3	-17.7	-19.9	-19.4	-14.9	-10.7	-11.0	-10.9	-19.5	-25.2
QoQ growth (%)	-3.3	-6.7	-7.1	-3.8	2.1	-2.1	-7.4	-3.7	-7.8	-9.1
<b>Total minutes carried (m)</b>	<b>73,840</b>	<b>89,058</b>	<b>105,217</b>	<b>115,834</b>	<b>123,626</b>	<b>130,669</b>	<b>140,713</b>	<b>143,680</b>	<b>153,241</b>	<b>172,797</b>
YoY growth (%)	78.8	80.9	84.2	79.9	67.4	46.7	33.7	24.0	24.0	32.2
QoQ growth (%)	14.7	20.6	18.1	10.1	6.7	5.7	7.7	2.1	6.7	12.8
<b>Avg. EBITDA per minute (Rs)</b>	<b>0.31</b>	<b>0.26</b>	<b>0.20</b>	<b>0.19</b>	<b>0.20</b>	<b>0.20</b>	<b>0.19</b>	<b>0.18</b>	<b>0.16</b>	<b>0.14</b>
YoY growth (%)	-9.3	-24.2	-39.6	-41.0	-34.8	-22.6	-4.1	-5.2	-21.9	-30.0
QoQ growth (%)	-3.8	-17.4	-21.2	-5.7	6.3	-2.0	-2.4	-6.7	-12.5	-12.2
<b>Wireless EBITDA (Rs m)</b>	<b>22,887</b>	<b>22,779</b>	<b>21,218</b>	<b>22,009</b>	<b>24,963</b>	<b>25,860</b>	<b>27,183</b>	<b>25,860</b>	<b>24,178</b>	<b>23,969</b>
YoY growth (%)	62.0	37.2	11.2	6.2	9.1	13.5	28.1	17.5	-3.1	-7.3
QoQ growth (%)	10.4	-0.5	-6.9	3.7	13.4	3.6	5.1	-4.9	-6.5	-0.9
<b>Wireless EBITDA margin (%)</b>	<b>40.8</b>	<b>35.5</b>	<b>30.7</b>	<b>30.2</b>	<b>31.4</b>	<b>31.5</b>	<b>33.0</b>	<b>31.9</b>	<b>30.4</b>	<b>29.2</b>
YoY expansion (basis points)	319.5	-365.1	-994.7	-1,076.7	-935.0	-402.7	235.1	171.4	-107.5	-221.4
QoQ expansion (basis points)	-18.8	-531.2	-479.7	-47.0	122.8	1.1	158.1	-110.7	-156.1	-112.8
<b>Blended Churn</b>	<b>3.8%</b>	<b>4.2%</b>	<b>3.7%</b>	<b>3.2%</b>	<b>2.9%</b>	<b>3.2%</b>	<b>3.4%</b>	<b>4.4%</b>	<b>6.3%</b>	<b>5.7%</b>
<b>VAS as % of total revenue</b>	<b>9.3%</b>	<b>9.4%</b>	<b>9.7%</b>	<b>10.0%</b>	<b>9.5%</b>	<b>9.3%</b>	<b>9.3%</b>	<b>9.8%</b>	<b>11.0%</b>	<b>11.8%</b>
YoY growth (%)	-10.6	-6.9	-2.0	2.0	2.2	-1.1	-4.1	-2.0	15.8	26.9
QoQ growth (%)	-5.1	1.1	3.2	3.1	-5.0	-2.1	0.0	5.4	12.2	7.3
<b>Total Cell Sites</b>	<b>60,299</b>	<b>69,141</b>	<b>75,876</b>	<b>82,554</b>	<b>88,319</b>	<b>93,368</b>	<b>96,149</b>	<b>99,501</b>	<b>102,190</b>	<b>104,826</b>
YoY growth (%)	75.8	76.3	65.7	56.3	46.5	35.0	26.7	20.5	15.7	12.3
QoQ growth (%)	14.1	14.7	9.7	8.8	7.0	5.7	3.0	3.5	2.7	2.6
<b>Wireless Capex (Rsm)</b>	<b>27,538</b>	<b>17,995</b>	<b>32,227</b>	<b>23,396</b>	<b>29,012</b>	<b>16,039</b>	<b>13,037</b>	<b>15,028</b>	<b>12,513</b>	<b>8,565</b>
YoY growth (%)	76.6	68.1	-1.8	-18.4	5.4	-10.9	-59.5	-35.8	-56.9	-46.6
QoQ growth (%)	-3.9	-34.7	79.1	-27.4	24.0	-44.7	-18.7	15.3	-16.7	-31.6
<b>Total Population Centres covered</b>	<b>325,525</b>	<b>347,646</b>	<b>369,335</b>	<b>389,571</b>	<b>406,939</b>	<b>419,966</b>	<b>428,216</b>	<b>434,795</b>	<b>438,929</b>	<b>444,024</b>
YoY growth (%)	79.7	64.0	48.7	32.1	25.0	20.8	15.9	11.6	7.9	na
QoQ growth (%)	10.4	6.8	6.2	5.5	4.5	3.2	2.0	1.5	1.0	na
<b>Total employees</b>	<b>24,703</b>	<b>25,543</b>	<b>26,144</b>	<b>25,616</b>	<b>25,553</b>	<b>24,538</b>	<b>23,789</b>	<b>18,598</b>	<b>18,201</b>	<b>18,354</b>
YoY growth (%)	35.6	25.7	13.9	10.1	3.4	-3.9	-9.0	-27.4	-28.8	na
QoQ growth (%)	6.2	3.4	2.4	-2.0	-0.2	-4.0	-3.1	-21.8	-2.1	na
<b>India Total Wireless Subscribers</b>	<b>233.63</b>	<b>261.08</b>	<b>286.87</b>	<b>315.31</b>	<b>346.89</b>	<b>391.76</b>	<b>437.51</b>	<b>483.27</b>	<b>515.5</b>	<b>574.77</b>
YoY growth (%)	59.5	58.1	55.1	50.8	48.5	50.1	52.5	53.3	48.6	46.7
QoQ growth (%)	11.7	11.8	9.9	9.9	10.0	12.9	11.7	10.5	6.7	11.5





Fig 10 Key quarterly operating and financial metrics – wireless business: MTNL and Tata Teleservices Maha.

MTNL- Actuals for 4QFY10										
March Year ends; Rs million	3QFY08	4QFY08	1QFY09	2QFY09	3QFY09	4QFY09	1QFY10	2QFY10	3QFY10	4QFY10
<b>Wireless Revenues (Rs m)</b>	<b>2,329</b>	<b>2,409</b>	<b>2,298</b>	<b>2,332</b>	<b>2,269</b>	<b>2,089</b>	<b>1,870</b>	<b>1795.57</b>	<b>1656.42</b>	1840
YoY growth (%)	6.3	22.0	2.5	-7.6	-2.6	-13.3	-18.6	-23.0	-27.0	-11.9
QoQ growth (%)	-7.7	3.4	-4.6	1.5	-2.7	-7.9	-10.5	-4.0	-7.7	11.1
<b>Subscribers (m)</b>	<b>3.21</b>	<b>3.53</b>	<b>3.72</b>	<b>3.96</b>	<b>4.19</b>	<b>4.48</b>	<b>4.58</b>	<b>4.68</b>	<b>4.60</b>	<b>5.09</b>
YoY growth (%)	26.5	20.1	32.2	32.2	30.5	26.9	23.1	18.2	9.8	13.6
QoQ growth (%)	7.2	10.0	5.3	6.4	5.8	7.0	2.1	2.2	-1.7	10.7
<b>Blended ARPU GSM (Rs)</b>	<b>242</b>	<b>237</b>	<b>213</b>	<b>207</b>	<b>188</b>	<b>162</b>	<b>138</b>	<b>133</b>	<b>116</b>	<b>127</b>
YoY growth (%)	-12.6	3.7	-15.7	-27.2	-22.2	-31.5	-35.0	-35.5	-38.6	-21.6
QoQ growth (%)	-14.8	-2.3	-10.0	-2.8	-9.0	-14.0	-14.6	-3.6	-13.3	9.9
Tata Tele Maha. - Actuals for 3Q FY10										
	3QFY08	4QFY08	1QFY09	2QFY09	3QFY09	4QFY09	1QFY10A	2QFY10A	3QFY10A	4QFY10A
<b>Subscribers (m)</b>	<b>4.33</b>	<b>4.68</b>	<b>5.19</b>	<b>5.70</b>	<b>6.15</b>	<b>6.96</b>	<b>7.44</b>	<b>9.04</b>	<b>10.90</b>	<b>12.34</b>
YoY growth (%)	na	na	64%	50%	42%	49%	43%	59%	77%	77%
QoQ growth (%)	14%	8%	11%	10%	8%	13%	7%	22%	21%	13%
<b>Gross ARPU (Rs)</b>	<b>254</b>	<b>254</b>	<b>232</b>	<b>210</b>	<b>196</b>	<b>178</b>	<b>154</b>	<b>148</b>	<b>143</b>	<b>125</b>
YoY growth (%)	na	na	-23%	-21%	-23%	-30%	-34%	-30%	-27%	-30%
QoQ growth (%)	-4%	0%	-9%	-9%	-7%	-9%	-13%	-4%	-3%	-13%
<b>Avg. monthly MoUs per subscriber</b>	<b>313</b>	<b>302</b>	<b>369</b>	<b>336</b>	<b>323</b>	<b>311</b>	<b>292</b>	<b>271</b>	<b>266</b>	<b>250</b>
YoY growth (%)	na	na	-7%	-6%	3%	3%	-21%	-19%	-18%	-20%
QoQ growth (%)	-12%	-4%	22%	-9%	-4%	-4%	-6%	-7%	-2%	-6%
<b>ARPM (Rs)</b>	<b>0.81</b>	<b>0.84</b>	<b>0.63</b>	<b>0.62</b>	<b>0.61</b>	<b>0.57</b>	<b>0.53</b>	<b>0.55</b>	<b>0.54</b>	<b>0.5</b>
YoY growth (%)	na	na	-18%	-16%	-25%	-32%	-16%	-11%	-11%	-12%
QoQ growth (%)	9%	4%	-25%	-2%	-2%	-7%	-7%	4%	-2%	-7%
<b>Total minutes carried (m)</b>	<b>na</b>	<b>4083</b>	<b>5463</b>	<b>5487</b>	<b>5741</b>	<b>6113</b>	<b>6301</b>	<b>6705</b>	<b>7957</b>	<b>8713</b>
YoY growth (%)	na	na	na	na	na	50%	15%	22%	39%	43%
QoQ growth (%)	na	na	34%	0%	5%	6%	3%	6%	19%	10%
<b>Blended Churn</b>	<b>1.80%</b>	<b>2.20%</b>	<b>0.80%</b>	<b>0.80%</b>	<b>1.80%</b>	<b>1.10%</b>	<b>1.20%</b>	<b>2.80%</b>	<b>0.50%</b>	<b>2.20%</b>
<b>VAS as % of total revenue</b>	<b>10.40%</b>	<b>11.80%</b>	<b>12.30%</b>	<b>13.40%</b>	<b>13.40%</b>	<b>13.90%</b>	<b>15.40%</b>	<b>14.30%</b>	<b>13.90%</b>	<b>14.80%</b>
YoY growth (%)	na	na	48.2	44.1	28.8	17.8	25.2	6.7	3.7	6.5
QoQ growth (%)	11.8	13.5	4.2	8.9	-	3.7	10.8	(7.1)	(2.8)	6.5
<b>Total Population Centres covered</b>	<b>na</b>	<b>7,966</b>	<b>8,026</b>	<b>8,115</b>	<b>9,378</b>	<b>10,664</b>	<b>10,904</b>	<b>11,055</b>	<b>11,303</b>	<b>11,421</b>
YoY growth (%)	na	na	na	na	na	34%	36%	36%	21%	7%
QoQ growth (%)	na	na	1%	1%	16%	14%	2%	1%	2%	1%

Source: Company data, Macquarie Research, May 2010

Fig 11 Key quarterly operating and financial metrics – Vodafone India

	1QFY09	2QFY09	3QFY09	4QFY09	1QFY10	2QFY10	3QFY10A	4QFY10A
<b>Subscribers (m)</b>	<b>49</b>	<b>55</b>	<b>61</b>	<b>69</b>	<b>76</b>	<b>83</b>	<b>91</b>	<b>101</b>
YoY growth (%)	60.0	62.2	70.9	55.8	55.4	51.7	50.0	46.7
QoQ growth (%)	11.5	11.0	11.5	12.9	11.2	8.4	10.3	10.3
<b>Gross ARPU (Rs)</b>	<b>332</b>	<b>305</b>	<b>297</b>	<b>274</b>	<b>247</b>	<b>222</b>	<b>209</b>	<b>197</b>
YoY growth (%)	na	(15.5)	(14.9)	(21.7)	(25.7)	(27.2)	(29.6)	(28.1)
QoQ growth (%)	(5.1)	(8.1)	(2.6)	(7.7)	(10.0)	(10.0)	(5.9)	(5.7)
<b>Avg. monthly MoUs per subscriber</b>	<b>374</b>	<b>364</b>	<b>355</b>	<b>336</b>	<b>330</b>	<b>319</b>	<b>318</b>	<b>325</b>
YoY growth (%)	na	(2.2)	(7.4)	(14.1)	(11.9)	(12.6)	(10.5)	(3.1)
QoQ growth (%)	(4.2)	(2.6)	(2.5)	(5.6)	(1.8)	(3.3)	(0.1)	2.1
<b>ARPM (Rs)</b>	<b>0.89</b>	<b>0.84</b>	<b>0.84</b>	<b>0.82</b>	<b>0.75</b>	<b>0.70</b>	<b>0.66</b>	<b>0.61</b>
YoY growth (%)	na	(13.6)	(8.1)	(8.9)	(15.7)	(16.8)	(21.4)	(25.8)
QoQ growth (%)	(0.9)	(5.7)	(0.2)	(2.3)	(8.4)	(6.9)	(5.7)	(7.7)
<b>Total minutes carried (m)</b>	<b>52,349</b>	<b>56,745</b>	<b>61,606</b>	<b>65,276</b>	<b>71,775</b>	<b>76,135</b>	<b>83,172</b>	<b>93,735</b>
YoY growth (%)	na	57.6	54.4	39.7	37.1	34.2	35.0	43.6
QoQ growth (%)	12.0	8.4	8.6	6.0	10.0	6.1	9.2	12.7

Source: Macquarie Research, May 2010

## Important disclosures:

## Recommendation definitions

**Macquarie - Australia/New Zealand**

Outperform – return >5% in excess of benchmark return  
Neutral – return within 5% of benchmark return  
Underperform – return >5% below benchmark return

**Macquarie – Asia/Europe**

Outperform – expected return >+10%  
Neutral – expected return from -10% to +10%  
Underperform – expected return <-10%

**Macquarie First South - South Africa**

Outperform – expected return >+10%  
Neutral – expected return from -10% to +10%  
Underperform – expected return <-10%

**Macquarie - Canada**

Outperform – return >5% in excess of benchmark return  
Neutral – return within 5% of benchmark return  
Underperform – return >5% below benchmark return

**Macquarie - USA**

Outperform (Buy) – return >5% in excess of Russell 3000 index return  
Neutral (Hold) – return within 5% of Russell 3000 index return  
Underperform (Sell) – return >5% below Russell 3000 index return

**Recommendations** – 12 months

**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

## Volatility index definition\*

This is calculated from the volatility of historical price movements.

**Very high-highest risk** – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

**High** – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

**Medium** – stock should be expected to move up or down at least 30–40% in a year.

**Low-medium** – stock should be expected to move up or down at least 25–30% in a year.

**Low** – stock should be expected to move up or down at least 15–25% in a year.

\* Applicable to Australian/NZ/Canada stocks only

## Financial definitions

All "Adjusted" data items have had the following adjustments made:

Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense  
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

**EPS** = adjusted net profit / epowa\*

**ROA** = adjusted ebit / average total assets

**ROA Banks/Insurance** = adjusted net profit / average total assets

**ROE** = adjusted net profit / average shareholders funds

**Gross cashflow** = adjusted net profit + depreciation

\*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

## Recommendation proportions – For quarter ending 31 March 2010

	AU/NZ	Asia	RSA	USA	CA	EUR	
Outperform	50.55%	62.20%	42.25%	42.39%	62.16%	46.74%	(for US coverage by MCUSA, 6.53% of stocks covered are investment banking clients)
Neutral	36.63%	19.02%	47.89%	50.35%	31.89%	34.78%	(for US coverage by MCUSA, 9.62% of stocks covered are investment banking clients)
Underperform	12.82%	18.78%	9.86%	7.27%	5.95%	18.48%	(for US coverage by MCUSA, 0.00% of stocks covered are investment banking clients)

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