

INDIA

India telecoms

21 January 2008

BHARTI IN Outperform

Stock price as of 18 Jan 08	Rs	873.90
12-month target	Rs	1,400.00
Market cap	US\$m	42,299

BHARTI investment fundamentals

Year end 31 Mar		2007A	2008E	2009E	2010E
Total revenue	bn	185.2	267.1	348.7	418.7
EBITDA	bn	74.5	114.1	154.1	191.2
EBITDA growth	%	71.0	53.2	35.1	24.0
EBIT Growth	%	77.7	55.0	36.3	25.3
Adjusted profit	bn	42.6	66.9	89.8	112.9
EPS adj	Rs	22.46	35.25	47.34	59.49
EPS adj growth	%	87.3	57.0	34.3	25.7
PE adj	x	38.9	24.8	18.5	14.7
EV/EBITDA	x	22.9	15.0	11.1	8.9

RCOM IN Outperform

Stock price as of 18 Jan 08	Rs	702.35
12-month target	Rs	865.00
Market cap	US\$m	36,951

RCOM investment fundamentals

Year end 31 Mar		2007A	2008E	2009E	2010E
Total revenue	bn	144.7	191.8	252.7	310.9
EBITDA	bn	57.2	80.0	109.6	140.7
EBITDA growth	%	128.6	39.9	37.0	28.3
Adjusted profit	bn	31.9	54.7	76.5	101.1
EPS adj	Rs	15.62	25.37	35.47	46.86
EPS adj growth	%	562.1	62.4	39.8	32.1
PE adj	x	45.0	27.7	19.8	15.0
EV/EBITDA	x	25.7	19.4	14.1	11.0

IDEA IN Outperform

Stock price as of 18 Jan 08	Rs	135.75
12-month target	Rs	190.00
Market cap	US\$m	8,977

IDEA investment fundamentals

Year end 31 Mar		2007A	2008E	2009E	2010E
Total revenue	bn	43.7	70.0	100.0	128.8
EBITDA	bn	14.6	24.7	34.7	43.3
EBITDA growth	%	37.1	68.9	40.4	24.8
Adjusted profit	bn	5.0	13.7	17.8	19.8
EPS adj	Rs	1.91	5.20	6.75	7.52
EPS adj growth	%	103.8	172.4	29.8	11.3
PE adj	x	71.1	26.1	20.1	18.1
EV/EBITDA	x	27.1	16.0	11.4	9.1

Analysts

Shubham Majumder
9122 66533049 shubham.majumder@macquarie.com
Tim Smart
852 2823 3565 tim.smart@macquarie.com

Bharti gets spectrum

Event

- **The Government of India Department of Telecoms (DoT) has notified new norms for spectrum allocation**, which are significantly more positive for incumbent GSM operators like Bharti and Idea.

Impact

- Three key changes in the new norms are: 1) spectrum allocation cap in GSM is now 15 MHz compared to the earlier proposed cap of 7.2MHz; 2) spectrum allocation cap in CDMA is now 7.5MHz compared to the earlier proposed cap of 7.2MHz; 3) the new norms allow spectrum to be granted in incremental blocks of 1MHz, as opposed to the earlier standards where incremental blocks of 1.8–2.4MHz were granted each time, on achieving the mandated subscriber thresholds in a circle.
- **Spectrum in 4 circles already in for Bharti, 5 more imminent:** The government has already awarded 1MHz of incremental spectrum to Bharti in four circles each, and has formally notified the WPC (controller of spectrum) to award 1MHz of spectrum to Bharti in five more circles, taking the number of circles in which Bharti will have 1MHz more spectrum to nine. In addition, we believe Bharti is likely to be allocated 1MHz spectrum in three more circles in the next 3–6 months. These 12 circles are key for Bharti to alleviate spectrum congestion – see Figure 1.
- **New DoT policy marginally more stringent than TRAI norms:** The new subscriber-linked norms for incremental spectrum award are marginally more strict than the original TRAI norms of 28 Aug-07, but much more stringent than the WPC policy that existed before 28 Aug-07. Charts 6–10 show the comparative gradients of spectrum allocation to a GSM operator by circle as it ramps up its subscriber base. We compare the three key sets of standards to determine the eligibility for incremental spectrum allocation of existing GSM operators in a circle – new DoT norms notified on 17 Jan-08, original TRAI norms notified on 28 Aug-07 and the old WPC norms that were in place before the TRAI norms.
- **Spectrum available sooner, but in lesser quantity each time:** Incumbent GSM operators like Bharti and Idea will be able to get top-up spectrum sooner, albeit in smaller incremental quantity each time as per the new policy.
- **The market is overestimating the execution and competitive ability of the new non-telecom players** which are likely to enter the market even as it underestimates the ability of large incumbent operators to fight back with a wide array of weapons, namely on-net calling platforms, scale economics and majority ownership in all major tower companies.

Outlook

- **We believe the definitive time to start accumulating Bharti Airtel has arrived and reiterate our Outperform rating on Bharti at current levels:** We are reviewing Bharti's financials and target price in light of these changes, to incorporate all the changes in spectrum, entry of 4–5 new competitors in each circle and the likely acceleration in tariff declines on the back of that. Bharti now trades at FY09E PER of 18.4x but only 13.2x ex-towers and EV/EBITDA of 11.1x, but only 8.0x ex-towers.

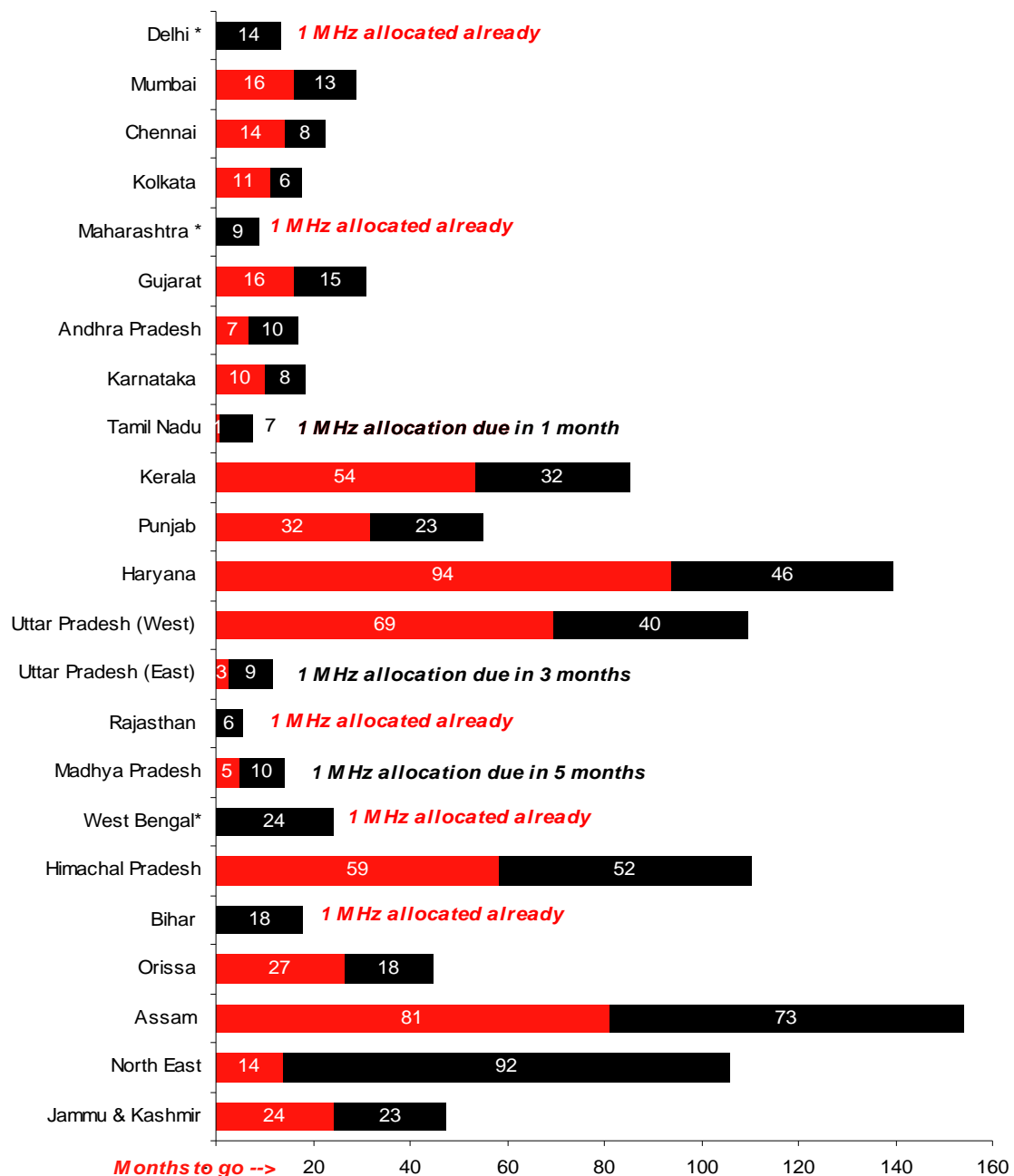
Please refer to the important disclosures on inside back cover of this document, or on our website www.macquarie.com.au/research/disclosures.

The market's spectrum concerns for Bharti have been relieved; more positive news likely to come in the coming week

Bharti gets 1 MHz spectrum in 4 circles, spectrum imminent in five more

- The government has already awarded 1MHz of incremental spectrum to Bharti in four circles each, and has formally notified the WPC (controller of spectrum) to award 1 MHz of spectrum to Bharti in five more circles, taking the number of circles in which Bharti will have 1MHz more spectrum to nine.
- In addition, we believe Bharti is likely to be allocated 1MHz spectrum in three more circles during the next 3–6 months. Thus in 3–6 months Bharti will have 1 MHz more spectrum in 12 circles than it did at the beginning of 2008. These are the key 12 circles where extra spectrum will come in handy for Bharti to alleviate spectrum congestion – see Figure 1.

Fig 1 Bharti new spectrum allocation timetable: 1 MHz spectrum allocated already in Delhi, Rajasthan, WB and Bihar circles. Maharashtra and Tamil Nadu allocation imminent



Source: Macquarie Research, January 2008

The barrage of negative news flow for the sector and Bharti is likely over

- Over the five months since 28 August 2007, there has been an unending flow of negative news and developments for Bharti. The announcement of 1) spectrum being granted in four circles, 2) the cap of 7.2MHz for GSM spectrum allotment in any circle being abolished and raised to 15MHz and 3) the new spectrum policy being largely in line with the TRAI recommendations, is very positive for Bharti, after a spate of bad news.
- We expect positive news flow on the regulatory front in the coming week for GSM operators like Bharti. With almost all key issues now resolved on spectrum, we advise investors to start focusing on operational and financial delivery of key operators, Bharti and RCOM.

Comparative analysis of new DoT policy with TRAI norms and old policy

- We present the key features of the new DoT policy compared to the old WPC policy and original TRAI norms:
 - ⇒ **In the new DoT policy, granularity has increased compared to the old WPC policy and original TRAI norms:** From 5 levels of subscriber eligibility thresholds as per the old WPC policy, the total number of subscriber thresholds has been increased to 11 in the new policy.
 - ⇒ The new DoT policy allows top-up spectrum to be granted in incremental blocks of 1MHz, as opposed to the earlier standards where it was granted in incremental blocks of 1.8–2.4 MHz each time, on achieving the mandated subscriber thresholds in a circle.
 - ⇒ **Only three categories of circles in the new DoT policy as opposed to five categories that were in place earlier:** Differing norms for 'Delhi and Mumbai' and 'Chennai and Kolkata' have been made uniform as Metro-s in the new policy. Similarly, norms for A and B circles have also been made uniform.

Fig 2 New DoT policy of 17 Jan'08: Subscriber linked spectrum criteria

Subscriber base (in m) supported by GSM spectrum in MHz (eligibility for allotment)			
	Metro Circles	'A' and 'B' Circles	'C' Circles
2 X 4.4 MHz	Start-up	Start-up	Start-up
2 X 6.2 MHz	0.5	0.8	0.6
2 X 7.2 MHz	1.5	3.0	2.0
2 X 8.2 MHz	1.8	4.1	3.1
2 X 9.2 MHz	2.1	5.3	4.2
2 X 10.2 MHz	2.6	6.8	5.2
2 X 11.2 MHz	3.2	8.2	6.2
2 X 12.2 MHz	4.0	9.0	7.0
2 X 13.2 MHz	4.8	9.8	7.8
2X 14.2 MHz	5.7	10.7	8.7
2 X 15 MHz	6.5	11.6	9.6

Source: DoT, Macquarie Research, January 2008

Fig 3 Original TRAI recos of 28 Aug'07: Subscriber linked spectrum criteria

Minimum subscribers required (in m)					
Amount of spectrum allocated	Delhi & Mumbai	Chennai & Kolkata	A' Circles	B' Circles	C' Circles
2 X 6.2 MHz	0.5	0.5	0.8	0.8	0.6
2 X 8.0 MHz	1.5	1.5	3	3	2
2 X 10 MHz	2	2	5	5	4
2 X 12.4	3	3	8	8	6
2 X 15.0 MHz	5	5	10	10	8

Source: DoT, Macquarie Research, January 2008

Fig 4 Old WPC policy valid until 28 Aug 2007: subscriber-linked spectrum criteria

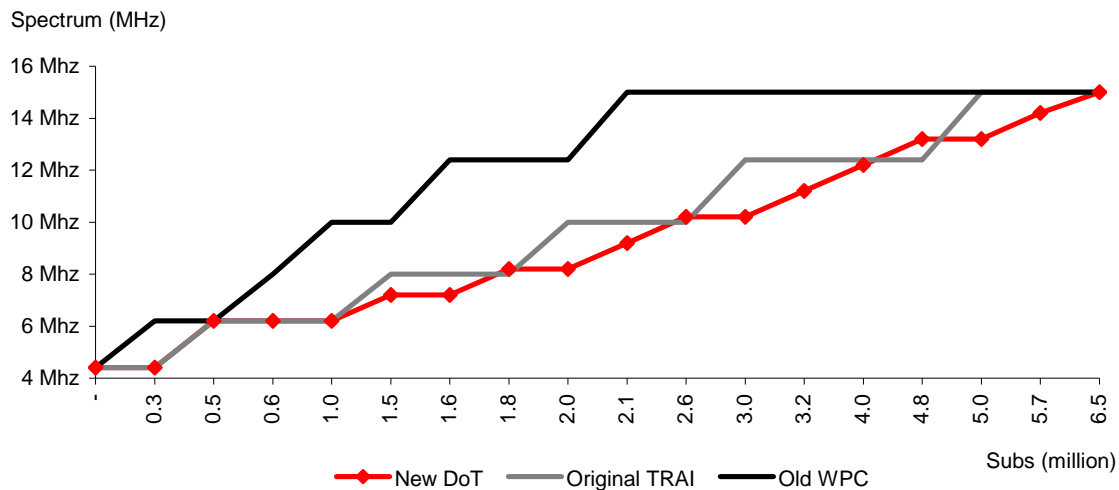
Amount of spectrum allocated	Minimum subscribers required (in m)				
	Delhi & Mumbai	Chennai & Kolkata	A' Circles	B' Circles	C' Circles
2 X 6.2 MHz	0.3	0.2	0.4	0.3	0.2
2 X 8.0 MHz	0.6	0.4	0.8	0.6	0.4
2 X 10 MHz	1	0.6	1.4	1	0.6
2 X 12.4	1.6	1	2	1.6	0.9
2 X 15.0 MHz	2.1	1.3	2.6	2.1	1.2

Source: DoT, Macquarie Research, January 2008

Comparison of subscriber ramp-up and spectrum allocation gradient between new DoT policy, TRAI recs and WPC policy for circles

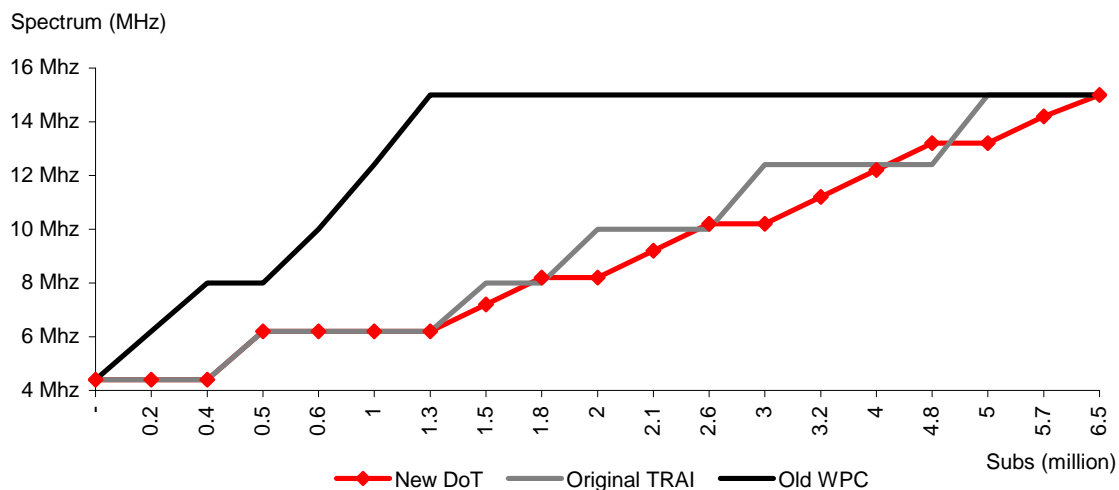
- We compare the three key sets of standards to determine the eligibility for incremental spectrum allocation of an existing GSM operator in a circle. These have been presented from time to time in the last five months – new DoT norms notified on 17 January 2008, original TRAI norms notified on 28 August 2007 and the old WPC norms that were in place before the TRAI norms.

Fig 5 Delhi & Mumbai



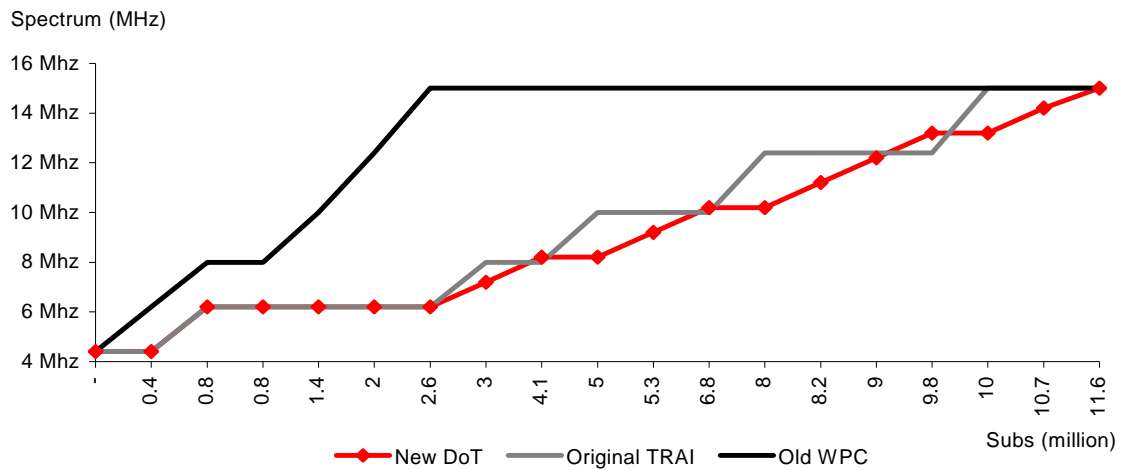
Source: Macquarie Research, January 2008

Fig 6 Chennai & Kolkata



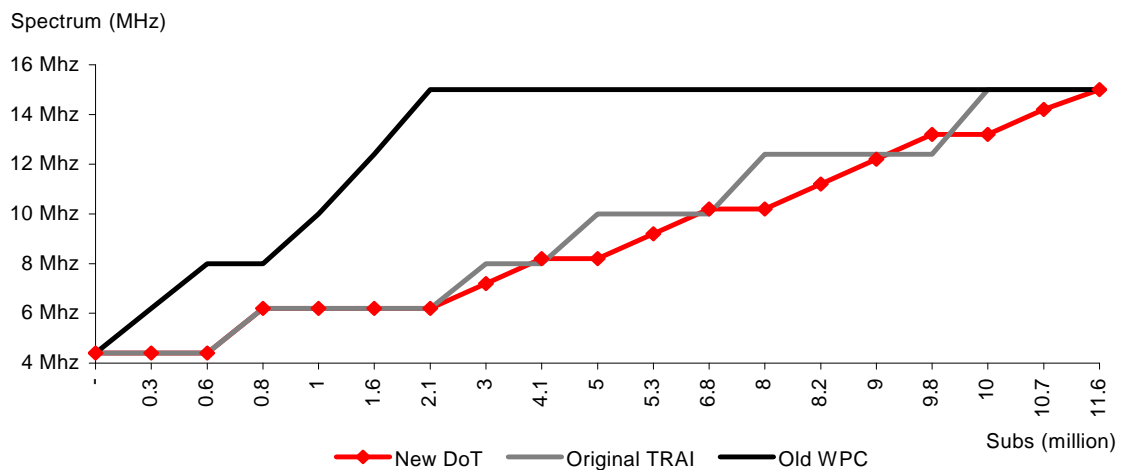
Source: Macquarie Research, January 2008

Fig 7 A Circles



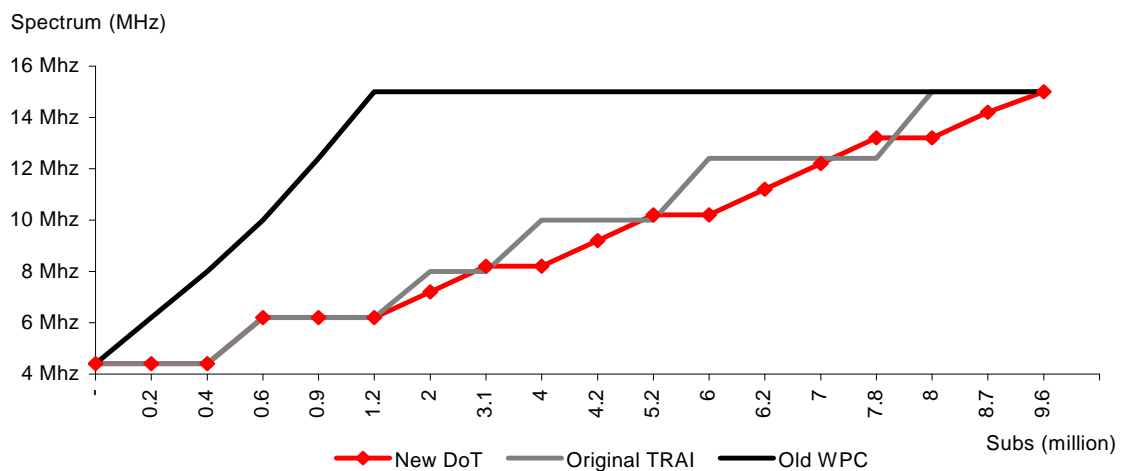
Source: Macquarie Research, January 2008

Fig 8 B Circles



Source: Macquarie Research, January 2008

Fig 9 C Circles



Source: Macquarie Research, January 2008

Fig 10 Macquarie – Global emerging markets wireless telecoms comparative valuation table; Bharti, RCOM and Idea ex-towers valuations

Company Name	B'berg Ticker	Rec	Price lcy	EV/EBITDA				EV/EBITDA by EBITDA CAGR				PER				Div Yield (%)		FCF Yield (%)	
				2006A	2007E	2008E	2009E	2006-09E				2006A	2007E	2008E	2009E	2006-09E		2008E	2008E
China Mobile	941 HK	OP	122.50	13.9	11.7	10.0	8.8	0.7		34.6	27.2	20.8	18.4	1.2	2.7	3.7			
China Unicom	762 HK	OP	17.44	6.8	6.7	6.3	5.9	0.9		33.5	29.6	23.2	20.6	1.7	1.4	4.0			
SK Telecom	017670 KS	OP	218,000	4.7	4.6	4.5	4.3	1.3		11.1	8.7	9.5	8.5	0.9	4.6	8.7			
KT Freetel	032390 KS	UP	27,100	3.7	3.4	3.4	3.6	-2.4		13.3	11.2	11.0	11.2	2.0	3.0	10.6			
LG Telecom	032640 KQ	OP	8,210	3.8	3.6	3.3	3.1	0.5		9.6	6.0	5.0	4.4	0.2	4.9	23.4			
Far EasTone	4904 TT	OP	39.20	5.1	5.4	5.5	5.8	-1.1		11.7	12.9	12.5	12.3	-6.9	6.8	11.6			
Taiwan Mobile	3045 TT	OP	46.80	8.2	5.6	5.5	5.4	1.0		14.2	33.6	10.6	10.1	2.8	1.7	9.8			
MobileOne	M1 SP	N	1.96	6.3	6.5	6.6	6.6	-2.9		11.9	12.2	12.3	12.2	-20.7	6.9	9.6			
AIS	ADVANC TB	N	95.50	7.1	6.5	6.0	5.6	0.8		16.2	14.8	13.4	12.2	1.5	7.1	9.2			
TAC	DTAC TB	OP	42.00	3.1	6.7	5.6	5.1	0.4		4.0	14.8	10.6	9.2	-0.6	4.7	6.8			
Digi.Com	DIGI MK	OP	24.00	10.2	8.4	8.0	7.3	0.6		21.7	16.4	14.9	13.4	0.9	4.9	5.8			
Indosat	ISAT IJ	OP	7,250	6.8	5.5	4.5	3.8	0.3		23.9	17.7	13.7	11.0	0.6	3.4	-3.8			
Bharti Airtel*	BHARTI IN	OP	873.90	22.9	14.9	11.1	8.9	0.4		38.8	24.7	18.4	14.7	0.6	0.0	2.7			
Bharti Airtel - Ex Tower Co	BHARTI IN	OP	623.90	16.6	10.8	8.0	6.5			27.8	17.7	13.2	10.5						
Reliance Comms*	RCOM IN	OP	702.15	26.7	20.1	14.7	11.4	0.6		45.4	27.7	19.8	15.0	0.7	0.3	1.1			
Reliance Comms - Ex Tower Co	RCOM IN	OP	639.40	20.9	15.7	11.5	8.9			36.3	22.4	16.0	12.1						
Idea Cellular*	IDEA IN	OP	136.05	29.8	17.6	12.5	10.0	0.4		71.2	26.2	20.1	18.1	0.5	0.0	-6.6			
Idea Cellular - Ex Tower Co	IDEA IN	OP	92.05	19.2	11.4	8.1	6.5			49.0	17.7	13.6	12.2						
Globe	GLO PM	OP	1,600.00	6.4	5.8	5.3	5.1	0.7		18.1	16.1	13.1	11.4	1.0	4.6	6.8			
Orascom Telecom Holding	ORTE EY	NR	86.65		8.1	7.0	6.2				11.8	10.6	14.5						
Mtn Group Ltd	MTN SJ	NR	11,301.00		7.2	6.0	5.0				18.3	13.9	11.0						
Vivo Participacoes Sa	VIVO3 BZ	NR	12.50		7.9	6.9	5.9				nmf	33.9	17.9						
America Movil Sab De C-Ser L	AMXL MM	NR	28.65		10.3	8.8	7.6				16.6	12.7	10.7						
Etihad Etisalat Co	EEC AB	NR	67.00		14.4	10.7	9.3				24.7	15.5	12.4						
Saudi Telecom Co	STC AB	NR	83.00		8.3	7.5	7.3				13.5	13.2	12.8						
Qatar Telecom (Q-Tell) Q.S.C	QTEL QD	NR	273.00		9.1	6.5	6.0				15.7	12.0	10.3						
Wireless Average				11.7	9.1	7.4	6.5			25.9	18.3	14.7	12.6						
Average (ex-China Mobile)				11.6	9.0	7.3	6.5			25.4	18.0	14.5	12.3						

Source: Macquarie Research, January 2008

Bharti trading at ex-towers value of 13.2x PER and 8x EV/EBITDA, significantly below RCOM's valuations ex-towers

- Bharti is trading at 13.2x PER ex-towers, on Mar-2009 valuations, which is in line or marginally higher than ex-growth or low growth wireless companies like Far Eastone Taiwan, AIS Thailand, Digi.com Malaysia, Indosat Indonesia, Globe Philippines, Orascom Egypt, MTN South Africa, Vivo Brazil, America Movil Mexico/Latam, Etihad Etisalat Saudi Arabia, Saudi Telecom Saudi Arabia, etc.
- The reason why Bharti is significantly superior to global emerging market wireless peers is because Bharti's EPS CAGR over the next 2-years is 45% and EBITDA CAGR is 44%. Even over a 3-year basis, Bharti's EPS CAGR is 38% while EBITDA CAGR is 37%.
- Bharti's RoE is already at 42%, the second highest in the worldwide telecom services sector (right behind PT Telkom Indonesia).

Bharti has underperformed both the BSE Sensex and MSCI India benchmarks – solid base for outperformance

- Bharti has underperformed both the BSE Sensex and MSCI India benchmarks in the last 1, 3, 6 and 12 months periods. The absolute stock performance is also negative over 1 and 3 month periods. We believe that sets the stage for solid outperformance.

Fig 11 Absolute price performance (%) – Local currency

Name	BBerg Ticker	Rec	Price lcy	Absolute price performance (%) - lcy				YTD
				1 month	3 months	6 months	12 months	
India								
Reliance Com	RCOM IN	Outperform	702	-1.2%	-3.4%	21.2%	57.2%	-5.9%
Bharti Airtel	BHARTI IN	Outperform	874	-3.7%	-9.8%	-2.5%	28.1%	-12.1%
Idea Cellular	IDEA IN	Outperform	136	5.0%	-5.8%	3.5%	nmf	-1.9%
MSCI India Telecoms			213	-1.3%	-1.6%	20.1%	50.2%	-7.1%
MSCI India			803	0.1%	12.3%	26.7%	39.4%	-6.0%
BSE Sensex			19,014	-0.8%	8.3%	22.2%	34.1%	-6.3%

Source: Macquarie Research, January 2008

Fig 12 Relative price performance (%) – Bharti relative to benchmark MSCI India index

Name	BBerg Ticker	Rec	Price lcy	Absolute price performance (%) - lcy				YTD
				1 month	3 months	6 months	12 months	
India								
Reliance Com	RCOM IN	Outperform	702	-1.3%	-15.8%	-5.5%	17.8%	0.1%
Bharti Airtel	BHARTI IN	Outperform	874	-3.7%	-22.1%	-29.1%	-11.3%	-6.1%
Idea Cellular	IDEA IN	Outperform	136	4.9%	-18.1%	-23.2%	nmf	4.1%
MSCI India Telecoms			213	-1.4%	-14.0%	-6.6%	10.8%	-1.0%
MSCI India			803					
BSE Sensex			19,014	-0.9%	-4.1%	-4.5%	-5.4%	6.0%

Source: Macquarie Research, January 2008

Fig 13 Relative price performance (%) – Bharti relative to benchmark BSE Sensex

Name	BBerg Ticker	Rec	Price lcy	Absolute price performance (%) - lcy				YTD
				1 month	3 months	6 months	12 months	
India								
Reliance Com	RCOM IN	Outperform	702	-0.5%	-11.7%	-0.9%	23.2%	-5.9%
Bharti Airtel	BHARTI IN	Outperform	874	-2.9%	-18.0%	-24.6%	-5.9%	-12.1%
Idea Cellular	IDEA IN	Outperform	136	5.8%	-14.1%	-18.7%	nmf	-1.9%
MSCI India Telecoms			213	-0.5%	-9.9%	-2.1%	16.1%	-7.1%
MSCI India			803	0.9%	4.1%	4.5%	5.4%	-6.0%
BSE Sensex			19,014					

Source: Macquarie Research, January 2008

Appendix I – New DOT order outlining policy for GSM spectrum allocation

Government of India
Ministry of Communications & I T
Department of Telecommunication
WPC Wing, Sanchar Bhawan, New Delhi-1

No. J-14025/200(17)/2004-NT

Dated the 17th January, 2008

O R D E R

In continuation of the orders dated 09-01-2008 relating to subscriber base criteria for allotment of **GSM** spectrum, the following subscriber based criteria, in line with TRAI recommendations shall be followed, as an interim measure.

Service Area	Subscriber base* (In Lakh) supported by GSM spectrum in MHz. (eligibility for allotment of next step)										
	2 X 4.4	2X 6.2	2X 7.2	2X 8.2	2X 9.2	2X 10.2	2X 11.2	2X 12.2	2X 13.2	2X 14.2	2x 15 @
Metro Service Areas	5	15	18	21	26	32	40	48	57	65	
Telecom Circles as Service Area Category 'A' & B	8	30	41	53	68	82	90	98	107	116	
Category 'C' Circles	6	20	31	42	52	62	70	78	87	96	

@ Present upper limit for spectrum allotment.

* These are the figures of active subscribers (VLR) averaged over a month. In addition, peak traffic, averaged over a month should be 40 milli-Erlangs per active subscriber in the criteria.

2. The spectrum allotment is subject to availability of spectrum.
3. The active subscribers and peak traffic averaged over a month (for a minimum of 40mErlangs per subscriber) in the Visitor Locator Register (VLR) would be taken into account for this purpose.
4. The revenue share for spectrum charges, as per orders in this regard, would apply on the AGR for the complete service area.
5. This comes into force with immediate effect.

(D.JHA)
Assistant Wireless Adviser
Ph: 2303 6681

- To,
- 1) All concerned.
 - 2) Unified Access Service Providers / Cellular Mobile Telephone Service providers.
 - 3) COAI.

Appendix II – New DOT order outlining policy for CDMA spectrum allocation

Government of India
Ministry of Communications & IT
Department of Telecommunications
WPC Wing, Sanchar Bhawan, New Delhi-11001

No. J-14025/200(17)/2004-NT

Dated the 17th January, 2008

O R D E R

In continuation of the orders dated 09-01-2008 relating to subscriber base criteria for allotment of CDMA spectrum, the following subscriber based criteria, in line with TRAI recommendations shall be followed, as an interim measure.

Service Area	Subscriber base * (In Lakh) supported by CDMA spectrum in MHz. (eligibility for allotment of next step)				
	2X2.5 MHz (2 carriers)	2X3.75 MHz (3 Carriers)	2X5 MHz (4 carriers)	2X6.25 MHz (5 Carriers)	2X7.5 MHz (6 carriers) @
Metro Service Areas.	5	20	30	50	
Telecom Circles as Service Area					
Category 'A' and 'B' circles.	8	50	80	100	
Category 'C' circles.	6	40	60	80	

@ Present upper limit for spectrum allotment.

* These are the figures of active subscribers (VLR) averaged over a month. In addition, peak traffic, averaged over a month should be 40 milli-Erlangs per active subscriber in the criteria.

2. The spectrum allotment is subject to availability of spectrum.
3. The active subscribers and peak traffic averaged over a month (for a minimum of 40mErlangs per subscriber) in the Visitor Locator Register (VLR) would be taken into account, for this purpose.
4. The revenue share for spectrum charges, as per orders in this regard, would apply on the AGR for the complete service area.
5. This comes into force with immediate effect.

(D. JHA)
Assistant Wireless Adviser
Ph: 2303 6681

- To:
- 1) All concerned.
 - 2) Unified Access Service Providers/ Basic Service providers.
 - 3) AUSPI.

Important disclosures:

Recommendation definitions	Volatility index definition*	Financial definitions
<p>Macquarie - Australia/New Zealand Outperform – return >5% in excess of benchmark return (>2.5% in excess for listed property trusts) Neutral – return within 5% of benchmark return (within 2.5% for listed property trusts) Underperform – return >5% below benchmark return (>2.5% below for listed property trusts)</p> <p>Macquarie - Asia Outperform – expected return >+10% Neutral – expected return from -10% to +10% Underperform – expected return <-10%</p> <p>Macquarie First South - South Africa Outperform – expected return >+10% Neutral – expected return from -10% to +10% Underperform – expected return <-10%</p> <p>Macquarie - Canada Outperform – return >5% in excess of benchmark return Neutral – return within 5% of benchmark return Underperform – return >5% below benchmark return</p> <p>Macquarie - USA Outperform – return >5% in excess of benchmark return Neutral – return within 5% of benchmark return Underperform – return >5% below benchmark return</p> <p>Recommendations – 12 months Note: Quant recommendations may differ from Fundamental Analyst recommendations</p>	<p>This is calculated from the volatility of historic price movements.</p> <p>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.</p> <p>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.</p> <p>Medium – stock should be expected to move up or down at least 30–40% in a year.</p> <p>Low–medium – stock should be expected to move up or down at least 25–30% in a year.</p> <p>Low – stock should be expected to move up or down at least 15–25% in a year. * Applicable to Australian/NZ stocks only</p>	<p>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</p> <p>EPS = adjusted net profit / efpowa* 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</p> <p>All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).</p>

Recommendation proportions – For quarter ending 31 December 2007

	AU/NZ	Asia	RSA	USA	CA
Outperform	46.39%	67.98%	73.08%	47.06%	70.00%
Neutral	41.24%	16.78%	21.15%	41.18%	26.92%
Underperform	12.37%	15.24%	5.77%	11.76%	3.08%

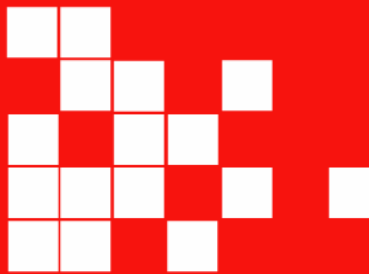
Analyst Certification: The views expressed in this research accurately reflect the personal views of the analyst(s) about the subject securities or issuers and no part of the compensation of the analyst(s) was, is, or will be directly or indirectly related to the inclusion of specific recommendations or views in this research. The analyst principally responsible for the preparation of this research receives compensation based on overall revenues of Macquarie Group Ltd ABN 94 122 169 279 (AFSL No. 318062) ('Macquarie') and its related entities ('the Macquarie group') and has taken reasonable care to achieve and maintain independence and objectivity in making any recommendations.

Disclaimers: Macquarie Capital Securities (Australia) Ltd; Macquarie Capital (Europe) Ltd; Macquarie Capital Markets Canada Ltd; Macquarie Capital Markets North America Ltd; Macquarie Securities (USA) Inc; Macquarie Securities Ltd; Macquarie Securities (Singapore) Pte Ltd; Macquarie Capital Securities (NZ) Ltd; and Macquarie First South Securities (Pty) Limited are not authorised deposit-taking institutions for the purposes of the Banking Act 1959 (Commonwealth of Australia), and their obligations do not represent deposits or other liabilities of Macquarie. Macquarie provides a guarantee to the Monetary Authority of Singapore in respect of Macquarie Securities (Singapore) Pte Ltd for up to SGD25m under the Securities and Futures Act (Chapter 289). Macquarie does not otherwise guarantee or provide assurance in respect of the obligations of any of the above mentioned entities. This research has been prepared for the general use of the wholesale clients of the Macquarie group and must not be copied, either in whole or in part, or distributed to any other person. If you are not the intended recipient you must not use or disclose the information in this research in any way. Nothing in this research shall be construed as a solicitation to buy or sell any security or product, or to engage in or refrain from engaging in any transaction. In preparing this research, we did not take into account the investment objectives, financial situation and particular needs of the reader. Before making an investment decision on the basis of this research, the reader needs to consider, with or without the assistance of an adviser, whether the advice is appropriate in light of their particular investment needs, objectives and financial circumstances. There are risks involved in securities trading. The price of securities can and does fluctuate, and an individual security may even become valueless. International investors are reminded of the additional risks inherent in international investments, such as currency fluctuations and international stock market or economic conditions, which may adversely affect the value of the investment. This research is based on information obtained from sources believed to be reliable but we do not make any representation or warranty that it is accurate, complete or up to date. We accept no obligation to correct or update the information or opinions in it. Opinions expressed are subject to change without notice. No member of the Macquarie group accepts any liability whatsoever for any direct, indirect, consequential or other loss arising from any use of this research and/or further communication in relation to this research.

Other Disclaimers: In Canada, securities research is prepared, approved and distributed by Macquarie Capital Markets Canada Ltd, a participating organisation of the Toronto Stock Exchange, TSX Venture Exchange & Montréal Exchange. Macquarie Capital Markets North America Ltd., which is a registered broker-dealer and member of FINRA, accepts responsibility for the contents of reports issued by Macquarie Capital Markets Canada Ltd in the United States and to US persons and any person wishing to effect transactions in the securities described in the reports issued by Macquarie Capital Markets Canada Ltd should do so with Macquarie Capital Markets North America Ltd. Securities research is issued and distributed by Macquarie Capital Securities (Australia) Ltd (AFSL No. 238947) in Australia, a participating organisation of the Australian Securities Exchange; Macquarie Capital Securities (NZ) Ltd in New Zealand, a licensed sharebroker and New Zealand Exchange Firm; Macquarie Capital (Europe) Ltd in the United Kingdom, which is authorised and regulated by the Financial Services Authority (No. 193905); Macquarie Securities Ltd in Hong Kong, which is licensed and regulated by the Securities and Futures Commission; Macquarie Securities (Japan) Limited in Japan, a member of the Tokyo Stock Exchange, Inc. and Osaka Securities Exchange Co. Ltd, Jasdqa Securities Exchange, Inc. (Financial Instruments Firm, Kanto Financial Bureau(kin-sho) No. 231, a member of Japan securities Dealers Association), Macquarie First South Securities (Pty) Limited in South Africa, a member of the JSE Limited and in Singapore, Macquarie Securities (Singapore) Pte Ltd (Company Registration Number: 198702912C), a Capital Markets Services licence holder under the Securities and Futures Act to deal in securities and provide custodial services in Singapore. Pursuant to the Financial Advisers (Amendment) Regulations 2005, Macquarie Securities (Singapore) Pte Ltd is exempt from complying with sections 25, 27 and 36 of the Financial Advisers Act. Clients should contact analysts at, and execute transactions through, a Macquarie group entity in their home jurisdiction unless governing law permits otherwise. Macquarie Securities (USA) Inc., which is a registered broker-dealer and member of FINRA, accepts responsibility for the content of each research report prepared by one of its non-US affiliates when the research report is distributed in the United States by Macquarie Securities (USA) Inc. Any persons receiving this report directly from Macquarie Securities (USA) Inc. and wishing to effect a transaction in any security described herein should do so with Macquarie Securities (USA) Inc. The information contained in this document is confidential. If you are not the intended recipient, you must not disclose or use the information in this document in any way. If you received it in error, please tell us immediately by return e-mail and delete the document. We do not guarantee the integrity of any e-mails or attached files and are not responsible for any changes made to them by any other person. Macquarie has established and implemented a conflicts policy at group level (which may be revised and updated from time to time) (the "Conflicts Policy") pursuant to regulatory requirements (including the FSA Rules) which sets out how we must seek to identify and manage all material conflicts of interest. Disclosures with respect to the issuers, if any, mentioned in this research are available at www.macquarie.com/research/disclosures. © Macquarie Group

Auckland Tel: (649) 377 6433	Bangkok Tel: (662) 694 7999	Calgary Tel: (1 403) 218 6650	Hong Kong Tel: (852) 2823 3588	Jakarta Tel: (62 21) 515 1818	Johannesburg Tel: (27 11) 343 2258	Kuala Lumpur Tel: (60 3) 2059 8833
London Tel: (44 20) 7065 2000	Manila Tel: (63 2) 857 0888	Melbourne Tel: (613) 9635 8139	Montreal Tel: (1 514) 925 2850	Mumbai Tel: (91 22) 6653 3000	Perth Tel: (618) 9224 0888	Seoul Tel: (82 2) 3705 8500
Shanghai Tel: (86 21) 6841 3355	Singapore Tel: (65) 6231 1111	Sydney Tel: (612) 8232 9555	Taipei Tel: (886 2) 2734 7500	Tokyo Tel: (81 3) 3512 7900	Toronto Tel: (1 416) 848 3500	New York Tel: (1 212) 231 2500

Available to clients on the world wide web at www.macquarie.com/research and through Thomson Financial, Reuters, Bloomberg and Factset.



Research

Head of Equity Research

Stephen O'Sullivan (852) 2823 3566

Automobiles/Auto Parts

Claire Ding (China) (852) 2823 3578
 Deepak Jain (India) (9122) 6653 3157
 Kenneth Yap (Indonesia) (6221) 515 7343
 Toshiyuki Hayami (Japan) (813) 3512 7873
 Eunsook Kwak (Korea) (822) 3705 8644
 Linda Huang (Taiwan) (8862) 2734 7539

Banks and Non-Bank Financials

Ismael Pili (Asia) (65) 6231 2840
 Nick Lord (Asia, China, Hong Kong) (852) 2823 4774
 Seshadri Sen (India) (9122) 6653 3053
 Mark Barclay (Korea) (822) 3705 8658
 Young Chung Mok (Korea) (822) 3705 8668
 Chin Seng Tay (Malaysia, S'pore) (65) 6231 2837
 Chris Hunt (Taiwan) (8862) 2734 7526
 Matthew Smith (Taiwan) (8862) 2734 7514
 Alastair Macdonald (Thailand) (662) 694 7741

Chemicals/Textiles

Scott Weaver (Taiwan) (8862) 2734 7512
 Jal Irani (India) (9122) 6653 3040
 Christina Lee (Korea) (822) 3705 8670

Conglomerates

Gary Pinge (Asia) (852) 2823 3557
 Leah Jiang (China) (8621) 2412 9020
 Kenneth Yap (Indonesia) (6221) 515 7343
 Ashwin Sanketh (Singapore) (65) 6231 2830

Consumer

Nicolas Wang (China) (8621) 2412 9018
 Jessie Qian (China, Hong Kong) (852) 2823 3568
 Unmesh Sharma (India) (9122) 6653 3042
 Sarina Lesmina (Indonesia) (6221) 515 7339
 Duane Sandberg (Japan) (813) 3512 7867
 Heather Kang (Korea) (822) 3705 8677
 HongSuk Na (Korea) (822) 3705 8678
 Woochang Chung (Korea) (822) 3705 8667
 Edward Ong (Malaysia) (603) 2059 8982
 Alex Pomento (Philippines) (632) 857 0899
 Linda Huang (Taiwan) (8862) 2734 7539

Custom Products

Patrick Hansen (Japan) (813) 3512 7876
 Tsumugi Akiba (Japan) (813) 3512 7560

Emerging Leaders

Hui-Lui Ko (China) (852) 2823 4704
 Madhur Rao (India) (9122) 6653 3047
 Robert Burghart (Japan) (813) 3512 7853
 Heather Kang (Korea) (822) 3705 8677
 Woochang Chung (Korea) (822) 3705 8667
 Nadine Javellana (Philippines) (632) 857 0890
 Scott Weaver (Taiwan) (8862) 2734 7512

Industrials

Bin Liu (China) (8621) 2412 9006
 Inderjeetsingh Bhatia (India) (9122) 6653 3166
 Christopher Cintavey (Japan) (813) 3512 7432
 Janet Lewis (Japan) (813) 3512 7475

Insurance

Makarim Salman (Japan) (813) 3512 7421

Sales

Regional Heads of Sales

Peter Slater (Boston) (1 617) 217 2103
 Michelle Paisley (China, Hong Kong) (852) 2823 3516
 Ulrike Pollak-Tsutsumi (Frankfurt) (49) 69 7593 8747
 Thomas Renz (Geneva) (41) 22 818 7712
 Ajay Bhatia (India) (9122) 6653 3200
 Stuart Smythe (India) (9122) 6653 3200
 Chris Gray (Indonesia) (6221) 515 7304
 K.Y. Nam (Korea) (822) 3705 8607
 Derek Wilson (London) (N Asia) (44) 20 7065 5856
 Julien Roux (London) (44) 20 7065 5887
 Lena Yong (Malaysia) (603) 2059 8888
 Ismael Pili (Philippines) (65) 6231 2840
 Greg Norton-Kidd (New York) (1 212) 231 2527
 Luke Sullivan (New York) (1 212) 231 2507

Media

Jessie Qian (China, Hong Kong) (852) 2823 3568
 Shubham Majumder (India) (9122) 6653 3049
 Prem Jearajasingam (Malaysia) (603) 2059 8989
 Alex Pomento (Philippines) (632) 857 0899

Metals and Mining

Simon Francis (Asia, China) (852) 2823 3590
 Laban Yu (China) (852) 2823 3575
 YeeMan Chin (China) (852) 2823 3562
 Rakesh Arora (India) (9122) 6653 3054
 Adam Worthington (Indonesia) (6221) 515 7338
 Polina Diyachkina (Japan) (813) 3512 7886
 Christina Lee (Korea) (822) 3705 8670
 Amornrat Cheevavichawalkul (Thai) (662) 694 7829

Oil and Gas

David Johnson (Asia, China) (852) 2823 4691
 Scott Weaver (Taiwan) (8862) 2734 7512
 Jal Irani (India) (9122) 6653 3040
 Christina Lee (Korea) (822) 3705 8670
 Mark Barclay (Korea) (822) 3705 8658
 Edward Ong (Malaysia) (603) 2059 8982
 Sunaina Dhanuka (Malaysia) (603) 2059 8993
 Ashwin Sanketh (Singapore) (65) 6231 2830
 Trevor Buchinski (Thailand) (662) 694 7728

Pharmaceuticals

Shubham Majumder (India) (9122) 6653 3049
 Naomi Kumagai (Japan) (813) 3512 7474
 Christina Lee (Korea) (822) 3705 8670

Property

Matt Nacard (Asia) (852) 2823 4731
 Eva Lee (China, Hong Kong) (852) 2823 3573
 Corinne Jian (China) (852) 2823 4077
 Chang Han Joo (Japan) (813) 3512 7885
 Hiroshi Okubo (Japan) (813) 3512 7433
 Paolo Perique (Philippines) (632) 857 0897
 Tuck Yin Soong (Singapore) (65) 6231 2838
 Elaine Cheong (Singapore) (65) 6231 2839
 Patti Tomaitrichitr (Thailand) (662) 694 7727

Technology

Warren Lau (Asia) (852) 2823 3592
 Andrew Lin (China, Hong Kong) (852) 2823 3563
 Suveer Chainani (India) (9122) 6653 3045
 Damian Thong (Japan) (813) 3512 7877
 David Gibson (Japan) (813) 3512 7880
 George Chang (Japan) (813) 3512 7854
 Yoshihiro Shimada (Japan) (813) 3512 7862
 Do Hoon Lee (Korea) (822) 3705 8641
 Michael Bang (Korea) (822) 3705 8659
 Patrick Yau (Singapore) (65) 6231 2835
 Andy Kung (Taiwan) (8862) 2734 7534
 Daniel Chang (Taiwan) (8862) 2734 7516
 Dominic Grant (Taiwan) (8862) 2734 7528
 James Chiu (Taiwan) (8862) 2734 7517
 Nicholas Teo (Taiwan) (8862) 2734 7523

Telecoms

Tim Smart (Asia, China) (852) 2823 3565
 Shubham Majumder (India) (9122) 6653 3049
 Kenneth Yap (Indonesia) (6221) 515 7343
 Nathan Ramler (Japan) (813) 3512 7875
 Prem Jearajasingam (Malaysia) (603) 2059 8989
 Ramakrishna Maruvada (Philippines, Singapore) (65) 6231 2842
 Dominic Grant (Taiwan) (8862) 2734 7528

Regional Heads of Sales cont'd

Mark Lawrence (New York) (1 212) 231 2516
 Sheila Schroeder (San Francisco) (1 415) 835 1235
 Giles Heyring (Singapore) (65) 6231 2888
 Mark Duncan (Taiwan) (8862) 2734 7510
 Angus Kent (Thailand) (662) 694 7601
 Dominic Henderson (Tokyo) (813) 3512 7820
 Nick Cant (Tokyo) (813) 3512 7821
 Charles Nelson (UK/Europe) (44) 20 7065 2032
 Rob Fabbro (UK/Europe) (44) 20 7065 2031

Sales Trading

Adam Zaki (North Asia) (852) 2823 3528
 Duncan Rutherford (ASEAN, India) (65) 6231 2888
 Mona Lee (Hong Kong) (852) 2823 3519

Transport & Infrastructure

Anderson Chow (Asia, China) (852) 2823 4773
 Jonathan Windham (Asia, China) (852) 2823 5417
 Tim Bacchus (Asia, China) (852) 2823 3586
 Wei Sim (China, Hong Kong) (852) 2823 3598
 Eunsook Kwak (Korea) (822) 3705 8644

Utilities

Carol Cao (China, Hong Kong) (852) 2823 4075
 Adam Worthington (Indonesia) (6221) 515 7338
 Prem Jearajasingam (Malaysia) (603) 2059 8989
 Dante Tinga (Philippines) (632) 857 0815

Commodities

Jim Lennon (4420) 7065 2014
 Adam Rowley (4420) 7065 2013
 Jonathan Butcher (4420) 7065 5938
 Max Layton (4420) 7065 2000
 Bonnie Liu (8621) 2412 9008
 Henry Liu (8621) 2412 9005

Data Services

Andrea Clohessy (Asia) (852) 2823 4076
 Henry Hon (Asia) (852) 2823 3593
 Max Choi (Asia) (852) 2823 5479

Economics

Roland Randall (Asean) (852) 2823 3572
 Bill Belchere (Asia) (852) 2823 4636
 Eli Polatinsky (Asia) (852) 2823 4074
 Richard Gibbs (Australia) (612) 8232 3935
 Paul Cavey (China) (852) 2823 3570
 Richard Jerram (Japan) (813) 3512 7855

Quantitative

Martin Emery (Asia) (852) 2823 3582
 Viking Kwok (Asia) (852) 2823 4735
 George Platt (Australia) (612) 8232 6539
 Raelene de Souza (Australia) (612) 8232 8388

Strategy/Country

Tim Rocks (Asia) (852) 2823 3585
 Daniel McCormack (Asia) (852) 2823 4073
 Desh Peramunetilleke (Asia) (852) 2823 3564
 Jake Lynch (China) (8621) 2412 9007
 Seshadri Sen (India) (9122) 6653 3053
 Kenneth Yap (Indonesia) (6221) 515 7343
 Peter Eadon-Clarke (Japan) (813) 3512 7850
 Eugene Ha (Korea) (822) 3705 8643
 Uday Jayaram (Malaysia) (603) 2059 8988
 Edward Ong (Malaysia) (603) 2059 8982
 Alex Pomento (Philippines) (632) 857 0899
 Tuck Yin Soong (ASEAN, Singapore) (65) 6231 2838
 Chris Hunt (Taiwan) (8862) 2734 7526
 Alastair Macdonald (Thailand) (662) 694 7741

Find our research at

Macquarie: www.macquarie.com.au/research
 Thomson: www.thomson.com/financial
 Reuters: www.rbr.reuters.com
 Bloomberg: [MAC GO](http://www.bloomberglp.com)
 Factset: <http://www.factset.com/home.aspx>
 Email macresearch@macquarie.com for access

Sales Trading cont'd

Stuart Goddard (Europe) (44) 20 7065 2033
 Brendan Rake (India) (9122) 6653 3204
 Edward Robinson (London) (44) 20 7065 5883
 Robert Risman (New York) (1 212) 231 2555
 Isaac Huang (Taiwan) (8862) 2734 7582
 Jon Omori (Tokyo) (813) 3512 7838

Alternative Strategies

Convertibles - Roland Sharman (852) 2823 4628
 Depository Receipts - Robert Ansell (852) 2823 4688
 Derivatives - Tim Connolly (852) 2249 3380
 Futures - Tim Smith (852) 2823 4637
 Hedge Fund Sales - Darin Lester (852) 2823 4736
 Structured Products - Andrew Terlich (852) 2249 3225