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FIRST GLOBAL

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India Research

Sector: Wireless Telecom Services

Food for Thought

How we are drawing water from a well

Or

How America Movil, Vimpelcom, Mobile Teleystems, Vodafone are getting beaten hands down in the valuation sweepstakes by the Indian wireless plays

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Inside…

FG Penetration - Per capita Income (FG PPCI) Index

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The Short Story

We have to view the Indian wireless space (in fact, any wireless space) as a classical drawing-water-from-a-well business.

Simply put, it is like this: every market has a finite number of wireless subscribers. In India, let's say, it is 400-500 mn subs, in the next 10 years or so. Hence, to win a subscriber today, is akin to drawing a bucket of water from a well…there is a finite, limited, model-able amount of water in a well (sure, there is replenishment, but not like in a river), so a bucket drawn, reduces the amount of water available in the well.

India's wireless carriers have been adding subs in a frenzy. And this situation will continue for the next 2-3 years, till the 400-500 mn number is reached.

Well, it depends on how you want to look at it: the optimistic view is that there are still three years of great growth left. The not-so-optimistic view is that now there is clarity on when growth tapers off, and hence, it's time to start paying lower multiples for the stock.

Which way should this be viewed?

Our take is: the not-so-optimistic view is the more prudent view to take.

There is plenty of evidence across the world that mobile valuations do begin contracting a while ahead to final growth tapering off.

In this piece, we take a look at how other hot wireless plays across the world, in emerging economies have done, how they are valued, and what that might hold for the Indian wireless plays.

We had downgraded the Indian Wireless Sector in February due to its unrealistically high valuations (please refer to First Global's, "*Bharti Airtel Ltd. (BHARTI.IN/BRTI.BO) & Reliance Communications (RCOM.IN/RLCM.BO): Downgrading on FY10/FY15 Reality Check*", dated February 23, 2007).

In this piece, we have increased the scope of the Reality Check by looking at selected wireless companies across the world that could offer valuable insights in terms of valuations, particularly in the Indian context. While we have focused mainly on BHARTIARTL, as we believe it to be a good proxy for the Indian wireless sector, our conclusions apply to other listed companies, namely RCOM and Idea Cellular as well.

India Wireless Sector Snapshot

India's wireless subscriber base (mn)			166
Penetration			15%
	BHARTIARTL	**RCOM**	**IDEA**
Market Cap ($ bn)	38	23	7
EV ($ bn)	39	24	8
Subscriber base (mn)	37.1	28.0	14.2
Market Share	22.4%	16.9%	8.6%
ARPU per month (Latest Quarter) ($)	10.0	9.3	8.2
EBITDA Margins (Latest Quarter)	42%	42%	35%
FY08 EV/EBITDA	14.0	12.5	14.5
FY08 P/E	24.0	22.5	34.7

Comparative Valuation

		P/E		**P/S**		**P/BV**		**EV/EBITDA**		**EV/Sales**		**EBITDA Margin %**	**ROE %**	**EPS Growth %**	**Sales Growth %**	**EV/Sub ($)**	**Market Cap/Sub ($)**	**ARPU ($)**
	YE		**FY**		**FY**		**FY**		**FY**		**FY**	**FY**	**FY**					
Company		**08E**	**09E**	**08E**	**09E**	**08E**	**09E**	**08E**	**09E**	**08E**	**09E**	**08E**	**08E**	**09/08**	**09/08**			
Bharti Airtel	Mar	24.0	18.4	5.7	4.3	7.8	5.6	14.0	10.6	5.9	4.4	42%	39%	31%	33%	1,011	984	10.0
Reliance Comm^	Mar	22.5	19.0	5.1	4.0	4.9	4.0	12.5	9.8	5.2	4.0	42%	27%	18%	29%	833	817	9.3
Idea Cellular	Mar	34.7	23.5	4.2	3.0	6.6	5.1	14.5	9.7	4.8	3.4	33%	21%	48%	42%	578	504	8.2
Vodafone	Mar	13.2	12.5	2.6	2.5	1.0	1.0	8.4	8.1	3.1	3.0	38%	8%	6%	4%	1,028	819	39.3
America Movil	Dec	18.7	14.5	3.3	2.9	7.7	7.3	11.2	8.4	4.0	3.5	35%	46%	23%	14%	827	778	13.5
Mobile TeleSystem	Dec	12.8	11.9	3.0	2.8	4.4	3.7	7.0	6.2	3.4	3.1	48%	34%	7%	8%	339	301	8.1
VimpelCom	Dec	19.5	16.4	3.7	3.3	2.5	2.1	7.4	6.6	3.7	3.3	50%	27%	19%	13%	391	392	8.1
China Mobile	Dec	18.2	14.8	4.1	3.7	4.1	3.5	7.0	6.4	3.8	3.4	54%	23%	23%	12%	538	586	10.8

Source: FG estimates for Bharti Airtel, Reliance Communications and Idea Cellular and Bloomberg estimates for the rest

^ Return ratios and Book Value per share (used in the calculation of P/BV) is adjusted for revaluation of assets based on our estimates.

Note: FY08 implies YE Mar 08 for Bharti Airtel, Reliance Communication, Idea Cellular and Vodafone and YE December 07 for the rest and so on.

What should the market cap of BHARTIARTL & RCOM be, upon reaching the 200 mn subscriber mark?

Let us begin with Vodafone, which presently has a subscriber base of around 200 mn. The stock trades at a market cap of $163 bn and an EV of $204 bn. The ARPU stands at $38, which is 4 times that of BHARTIARTL's current ARPU of $10, and could well be 5 times when BHARTIARTL reaches the 200 mn subscriber mark. On assuming BHARTIARTL's EV to be 1/5 that of Vodafone, the EV comes in at $41 bn and assuming current debt levels, the market cap comes in at $40 bn.

Assuming India's total population reaches 1.3 bn by 2020 and a penetration level of 80% (a very aggressive assumption!), the wireless subscriber base will reach 1000 mn by then. Therefore, we believe that a subscriber base of 200 mn is around the theoretical maximum that BHARTIARTL can achieve. Thus, our estimated market cap of $40 bn for BHARTIARTL is pretty much the ceiling. ***Further, the milestone is at least 10 years away from now. Bharti's market cap is $38 bn today. The math is quite clear…***

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We don't believe the difference in return ratios entirely explains disconnect in the valuations.

Vodafone – Snapshot

Subscriber base (Dec 31, 2006) (mn)			199
Market Cap ($ bn)			163
Enterprise Value (EV) ($ bn)			204
ARPU per month ($)			39.1
	FY07E	**FY08E**	**FY09E**
Revenues ($ mn)	62,196	65,942	68,753
Revenue Growth		6%	4%
EBITDA Margin	39%	38%	38%
PAT Margin	19%	18%	18%
ROE	7.9%	8.2%	8.4%

Source: Company reports, Bloomberg

We believe our assumptions are quite aggressive, as n times the differential in the ARPU means over n times the differential in the profit, given the high operating leverage nature of the telecom business, and thereby, over n times the differential in valuations. But let us give due credit to the fact that BHARTIARTL is comparatively more profitable and could be more profitable even when the company reaches the 200 mn subscriber mark by leveraging upon the learning curve of the global telecom majors. Nevertheless, the intensifying competition could wipe out some of BHARTIARTL's future profitability. Vodafone will be under pressure to achieve rapid growth in India, thanks to the hefty acquisition price that it has paid for Hutchison Essar. And BSNL's 45-mn subscriber line tender too is free from legal wrangles. RCOM's GSM expansion and significant expansions by small operators could further spoil the party that BHARTIARTL and the wireless market have been enjoying over the last one-year or so.

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A similar analysis of RCOM vis-à-vis Vodafone – i.e. a 1/6th differential in the ARPU and valuations when the former reaches the 200 mn subscriber mark – gives us a theoretical maximum market cap of $32 bn for RCOM. The company's current market cap is $23. Again, this points to very capped upsides. ***Also, there are some serious issues over RCOM's pan India GSM rollout, which depends upon the timely and adequate availability of the requisite spectrum. The greater the delay in spectrum allotment, the greater the ground that RCOM could lose to its competitors, as the company appears to have gone slow on its CDMA expansion. Further, one cannot rule out the company's GSM based services cannibalizing on its own CDMA business***.

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Does India's lower penetration justify massive disconnect in valuations vis-à-vis China?

Let us now look at China Mobile, which had 316 mn subscribers, as on December 31, 2006. The company's ARPU at $10 is comparable to that of BHARTIARL. It has an EV and market cap of $170 bn and $185 bn. BHARTIARTL'S EV is about 1/4th that of China Mobile, although the former is just little over 1/10th the size (in terms of subscribers) of the latter. Is this massive disconnect in valuations justified simply because India is behind China in terms of penetration?

While comparing penetration levels, and thereby the potential for further growth, across the countries, one must also consider the differences in per capita income ***(See FG PPCI Index on Page 8).*** For instance, China's per capita income is much lower than that of the developed countries with a penetration level in excess of 80%, which explains why Chinese wireless companies could grow at a rate of 12-18% despite wireless penetration in the country standing at merely 37%. India's per capita income based on purchasing power parity is half that of China and a much earlier slowdown is on the cards for India.

China's per capita income is much lower than that of the developed countries with a penetration level in excess of 80%, which explains why Chinese wireless companies could grow at a rate of 12-18% despite wireless penetration in the country standing at merely 35%. India's per capita income based on purchasing power parity is half that of China and a much earlier slow down is on the cards for India.

China Mobile - Snapshot

Wireless Penetration in the country			37%
Company's Market Share			65%
Subscriber base (Mar 31, 2006) (mn)			316
Market Cap ($ bn)			185
Enterprise Value (EV) ($ bn)			170
ARPU per month ($)			10.8
	CY06	**CY07E**	**CY08E**
Revenues ($ mn)	38,264	45,115	50,596
Revenue Growth		18%	12%
EBITDA Margin	54%	54%	53%
PAT Margin	22%	22%	25%
ROE	22%	23%	24%

Source: Company reports, Bloomberg

Comparison with America Movil implies CAGR in EV of slightly over 8% for BHARTIARTL

In the case of America Movil (NYSE: AMX), the telecom giant of Latin America, with a subscriber base of 125 mn, as on December 31, 2006, the EV and market cap stands at $99 bn and $106 bn. We believe that when BHARTIARTL achieves a similar subscriber base as America Movil, its ARPU is likely to be in the range of $8-8.25, which is slightly over 60% of America Movil's current ARPU of $13. This suggests that BHARTIARTL's EV should then be around 60% of that of America Movil, around $60 bn, which implies an upside of 50% from the current valuations. One has to take a call on when BHARTIARTL will achieve a subscriber base of 125 mn. We do not see that happening before FY12, or 5 years from now, which implies a CAGR in the EV of slightly over 8% for BHARTIARTL.

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America Movil – Snapshot

Wireless Penetration in the country			58%
Company's Market Share			45%
Subscriber base (Dec 31, 2006) (mn)			128
Market Cap ($ bn)			99
Enterprise Value (EV) ($ bn)			106
ARPU per month ($)			13.5
	CY06	**CY07E**	**CY08E**
Revenues ($ mn)	21,101	26,652	30,494
Revenue Growth		26%	14%
EBITDA Margin	37%	35%	41%
PAT Margin	19%	21%	22%
ROE	39%	46%	53%

Source: Company reports, Bloomberg

Note: Penetration and market shares based on population, penetration and the company's market share in top 5 countries that contribute 80% of the company's subscriber base

India may never achieve Russia's penetration level, at least in the foreseeable future

Let's not get too carried away by Russia's high penetration of 100%, as compared to 15% in India. Thanks to wide differences in the per capita income of the two countries, India may never achieve Russia's penetration level, at least in the foreseeable future

Let us now turn to Russia. Russian wireless companies, Mobile Telesystem and Vimplecom (both have been covered by First Global), have a subscriber base of 74 mn and 55 mn and an EV of $25 bn and $ 22 bn respectively. BHARTIARTL has a lower subscriber base in comparison to both these companies, although its EV is higher by 56% and 86% respectively. Let's not get too carried away by Russia's high penetration of 100%, as compared to 15% in India. Thanks to wide differences in the per capita income of the two countries, India may never achieve Russia's penetration level, at least in the foreseeable future.

Mobile Telesystem – Snapshot

Wireless Penetration in the country			89%
Company's Market Share			36%
Proportionate Subscriber base (Dec 31, 2006) (mn)			74
Market Cap ($ bn)			22
Enterprise Value (EV) ($ bn)			25
ARPU per month ($)			8.1
	CY06	**CY07E**	**CY08E**
Revenues ($ mn)	6,384	7,415	8,044
Revenue Growth		16%	8%
EBITDA Margin	51%	48%	50%
PAT Margin	20%	24%	24%
ROE	35%	34%	39%

Source: Company reports, FG estimates, Bloomberg

Note: Penetration and market shares based on population, penetration and the company's market share in Russia, Ukraine, Uzbekistan, Turkmenistan and Belarus where the company operates.

Vimpelcom – Snapshot

Wireless Penetration in the country			88%
Company's Market Share			26%
Subscriber base (Dec 31, 2006) (mn)			55
Market Cap ($ bn)			21
Enterprise Value (EV) ($ bn)			21
ARPU per month ($)			8.1
	CY06	**CY07E**	**CY08E**
Revenues ($ mn)	4,868	5,749	6,508
Revenue Growth		18%	13%
EBITDA Margin	50%	50%	50%
PAT Margin	17%	20%	21%
ROE	27%	27%	30%

Source: Company reports, FG estimates, Bloomberg

Note: Penetration and market shares based on population, penetration and the company's market share in in Russia, Kazakhstan, Ukraine, Uzbekistan and Tajikistan where the company operates.

In a nutshell…

There is almost no way one can justify Indian wireless valuations, if one looks around. Of course, the stocks can still keep flying off the charts, but it is instructive to see the way the rest of the wireless world is trading.

FG Penetration - Per capita Income (FG PPCI) Index

Per capita income one of the very important factors that explain differences in penetration levels in any country. We have found a good 78% correlation between per capita income and wireless penetration in a country. So to give one an idea of how countries stack together on wireless penetration levels in light of wide differences in per capita income, we have devised FG PPCI index (FG Penetration-Per capita income), which is nothing but ratio of Wireless penetration index to Per capita income index. Penetration index is a ratio of wireless penetration in a country to the world average, while Per capita Income (PCI) index is ratio of PCI based on Purchasing Power Parity (PPP) in a country to the world average. Lower the index greater the room for expansion in wireless penetration. India has climbed up significantly on the list over last 2 years.

Country	Wireless Penetration	Penetration Index*	PCI $ (PPP)	PCI Index#	Penetration/PCI Index
Pakistan	34%	0.80	2,722	0.25	**3.14**
Russia	104%	2.44	12,096	1.13	**2.16**
Philippines	38%	0.90	5,314	0.50	**1.81**
Poland	99%	2.32	14,880	1.39	**1.67**
Chile	82%	1.92	12,983	1.21	**1.59**
Brazil	54%	1.26	9,108	0.85	**1.48**
Argentina	85%	1.99	15,937	1.49	**1.34**
Portugal	115%	2.70	22,677	2.12	**1.28**
Greece	127%	2.98	25,975	2.42	**1.23**
Mexico	54%	1.28	11,249	1.05	**1.22**
Indonesia	20%	0.47	4,323	0.40	**1.16**
China	34%	0.79	7,598	0.71	**1.11**
Italy	134%	3.14	30,732	2.87	**1.09**
Thailand	36%	0.85	9,084	0.85	**1.01**
India	15%	0.34	3,737	0.35	**0.99**
Spain	102%	2.40	27,522	2.57	**0.93**
United Kingdom	120%	2.82	35,051	3.27	**0.86**
South Korea	82%	1.92	23,926	2.23	**0.86**
Taiwan	100%	2.34	30,084	2.81	**0.83**
Germany	102%	2.39	31,095	2.90	**0.82**
Hong Kong	120%	2.81	38,127	3.56	**0.79**
Netherlands	102%	2.38	35,078	3.27	**0.73**
Austria	104%	2.45	36,031	3.36	**0.73**
Australia	95%	2.23	32,938	3.07	**0.73**
Singapore	93%	2.17	32,867	3.07	**0.71**
Belgium	95%	2.22	34,478	3.22	**0.69**
France	77%	1.81	30,693	2.86	**0.63**
Japan	77%	1.81	32,647	3.05	**0.60**
Norway	101%	2.36	43,574	4.07	**0.58**
Luxembourg	161%	3.77	80,471	7.51	**0.50**
United States	79%	1.85	43,444	4.05	**0.46**
Canada	55%	1.30	35,494	3.31	**0.39**
World Average@	**43%**	**1.00**	**10,719**	**1.00**	**1.00**

Source: International Monetary Fund, Company Reports, FG Estimates, etc.

** Penetration Index=Country penetration /Average world penetration (Penetration as on Dec 2006/March 2007)*
 # Per Capita Income Index=Country per capita income /Average world per capita income (PCI estimates for 2005/2006)
~ FG PPCI Index = Penetration Index/PCI Index
@ Based on data on 118 countries

IMPORTANT DISCLOSURES

Price Target

Price targets (if any) are derived from a subjective and/or quantitative analysis of financial and non financial data of the concerned company using a combination of P/E, P/Sales, earnings growth, discounted cash flow (DCF) and its stock price history.

First Global's Rating System

Our rating system consists of three categories of ratings: Positive, Neutral and Negative. Within each of these categories, the rating may be absolute or relative. When assigning an absolute rating, the price target, if any, and the time period for the achievement of this price target, are given in the report. Similarly when assigning a relative rating, it will be with respect to certain market/sector index and for a certain period of time, both of which are specified in the report.

Rating in this report is relative to: S&P CNX Nifty Index

Positive Ratings

(i) Buy (B) *– This rating means that we expect the stock price to move up and achieve our specified price target, if any, over the specified time period.*

(ii) Buy at Declines (BD) *– This rating means that we expect the stock to provide a better (lower) entry price and then move up and achieve our specified price target, if any, over the specified time period.*

(iii) Outperform (OP) – *This is a relative rating, which means that we expect the stock price to outperform the specified market/sector index over the specified time period.*

Neutral Ratings

(i) Hold (H) – *This rating means that we expect no substantial move in the stock price over the specified time period.*

(ii) Marketperform (MP) *– This is a relative rating, which means that we expect the stock price to perform in line with the performance of the specified market/sector index over the specified time period.*

Negative Ratings

(i) Sell (S) – *This rating means that we expect the stock price to go down and achieve our specified price target, if any, over the specified time period.*

(ii) Sell into Strength (SS) *– This rating means that we expect the stock to provide a better (higher) exit price in the short term, by going up. Thereafter, we expect it to move down and achieve our specified price target, if any, over the specified time period.*

(iii) Underperform (UP) – *This is a relative rating, which means that we expect the stock price to underperform the specified market/sector index over the specified time period.*

(iv) Avoid (A) – *This rating means that the valuation concerns and/or the risks and uncertainties related to the stock are such that we do not recommend considering the stock for investment purposes.*

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