

## India Wireless

### Myths and Realities, TRAI Data an Eye-Opener

- **Key takeaway(s)** — We have analysed the recent data from TRAI, which provides excellent granularity on circles/operators, dispels quite a few widely held myths among investors and reaffirms our thesis on sustained profitable growth for Indian wireless. We reiterate Bharti (BRTI.BO - Rs842.00; 1L) as our top pick.
- **Myth #1: Circle C = Lowest ARPU** — ARPU of C circle is higher than that of both A and B circles despite lower per capita income. This could be on account of 1) deeper penetration in A/B circles, and 2) fixed-line-like usage by the initial adapters in the C circle. The QoQ fall in Circle C ARPUs may be higher, though.
- **Myth #2: Increasing penetration leads to deteriorating in/out mix** — TRAI data suggest that the in/out mix is improving constantly. This is a result of mobile penetration at ~4x fixed line leading to a greater share of M-M traffic.
- **Myth #3: Increasing penetration = Lower usage** — On the contrary, MOUs have surged, led by 1) higher affordability and 2) lowering of tariff differentials vis-à-vis fixed, leading to traffic substitution as well.
- **Myth #4: Higher market share is at the cost of ARPU** — TRAI data suggest otherwise, as Bharti's largest market share is accompanied by higher ARPUs. This is potentially due to 1) the speed of rollout ensuring early access to the creamy layer and 2) the national footprint, which helps capture a greater share of traffic.
- **Myth #5: Fixed to mobile substitution is only an urban phenomenon** — In contrast, the fixed to mobile substitution faced by incumbent wireline telcos is apparent even in rural DELs. Faster rollouts and declining tariffs have turned wireless into an increasingly preferred mode of communication in phone-starved areas.

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## Myth #1 – Circle C = Lowest ARPU

Intuitively speaking, one would assume Circle C to have the lowest ARPU in the country on account of the lowest per capita income. However, circle wise breakdown of ARPU figures shows that C Circle's ARPU at Rs/326 is higher than those of A (Rs306) and B (Rs280).

**Figure 1. ARPU Breakdown by Circle**

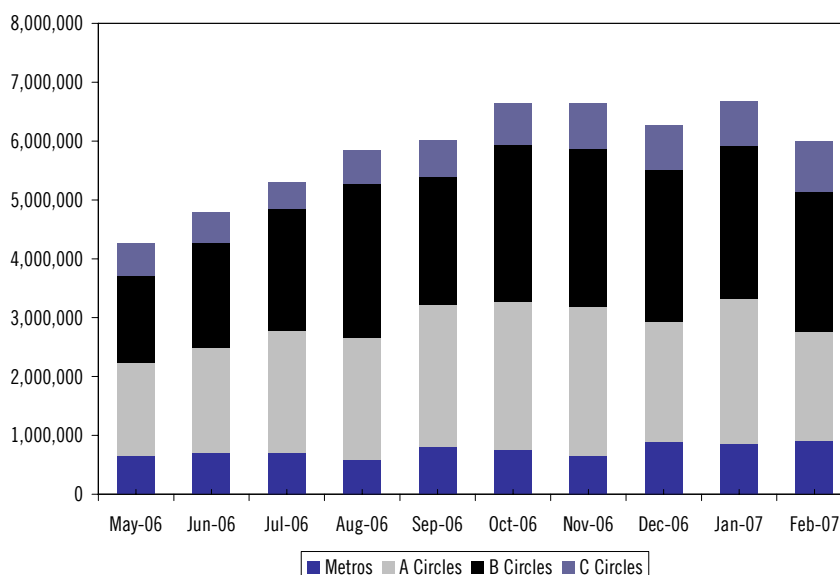
	Jun-06	Sep-06	Dec-06
Circle A	343	322	306
Circle B	319	313	280
<b>Circle C</b>	<b>374</b>	<b>342</b>	<b>326</b>
Metro	406	400	393
<b>All India</b>	<b>352</b>	<b>337</b>	<b>316</b>
C Circle ARPU (premium %)			
<i>Premium to B circles</i>	<i>17.2%</i>	<i>9.3%</i>	<i>16.4%</i>
<i>Premium to A circles</i>	<i>9.0%</i>	<i>6.2%</i>	<i>6.5%</i>

Source: Citigroup Investment Research and TRAI

This higher ARPU experienced is on account of a couple of reasons:

1. Lower net adds compared with A and B circles — Operators in A and B circles are increasingly focusing on low value users as the penetration rates in these circles increase, negatively impacting the ARPUs. Operators in Circle C, meanwhile, are still focusing on the creamy layer, resulting in higher usage and ARPU.
2. Low fixed-line penetration in C circles — The low fixed-line penetration in C circles forces the users (at least the early adapters) to make mobiles as their primary communication device, helping to increase the usage.

**Figure 2. Net Adds by Circle**



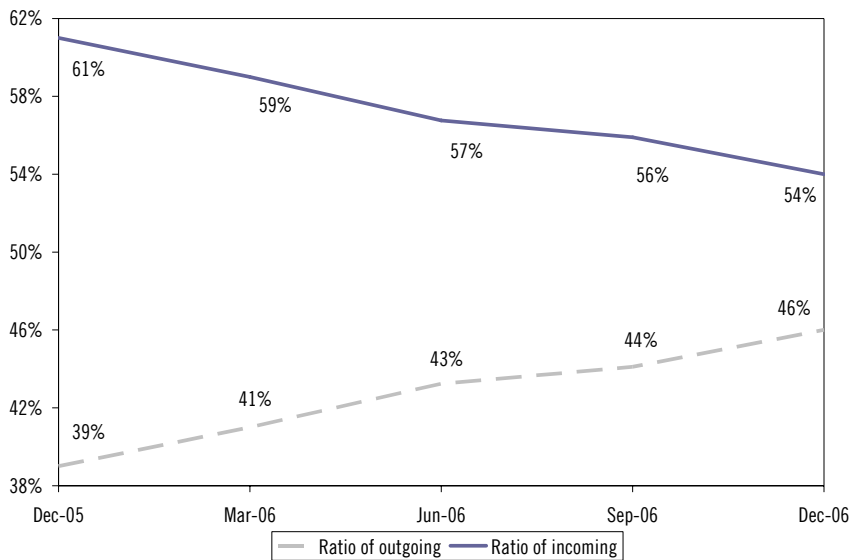
Source: Citigroup Investment Research, COAI and AUSPI

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### Myth #2 – Increasing penetration leads to deteriorating in/out mix

The ratio of outgoing-incoming calls was 54:46 in the quarter ended Dec 2006, which has been improving steadily. This increase in the share of outgoing calls augurs well for the wireless operators. A high ratio of incoming calls suggests a passive revenue stream wherein the operators earn only the termination charges (Rs0.3/min) as against Rs1.0-2.0/min on outgoing calls. An improving outgoing proportion, therefore, also aids in moderating the decline in revenue/min.

Figure 3. Share of Incoming and Outgoing Calls (% of MOU)

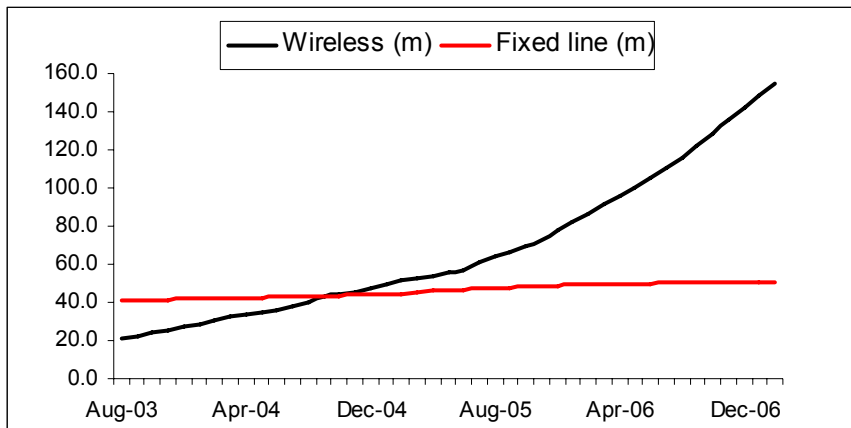


Source: TRAI

We believe the improvement is on account of the following:

1. Wireless subscriber base is presently almost 4x wireline resulting in origination of the majority of the calls from wireless networks. Every incoming call on a mobile has a higher probability of originating from a mobile phone now than a year back. This has a self-balancing effect on the incoming/outgoing mix for mobile operators.

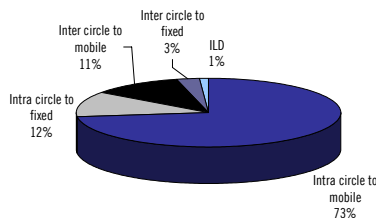
Figure 4. Mobile vs. Fixed Subs



Source: Citigroup Investment Research, COAI and AUSPI

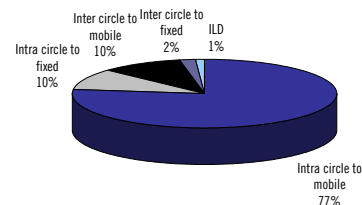
2. Increasing affordability of wireless tariffs, absolute as well as versus fixed line, leads to relative growth in M-F and M-M traffic.
3. While in the beginning users, especially at the lower end, use cell phones mainly for receiving calls, over time the ratio of outgoing calls starts increasing.

Figure 5. Outgoing Traffic Breakdown (June 06)



Source: TRAI

Figure 6. Outgoing Traffic Breakdown (Dec 06)

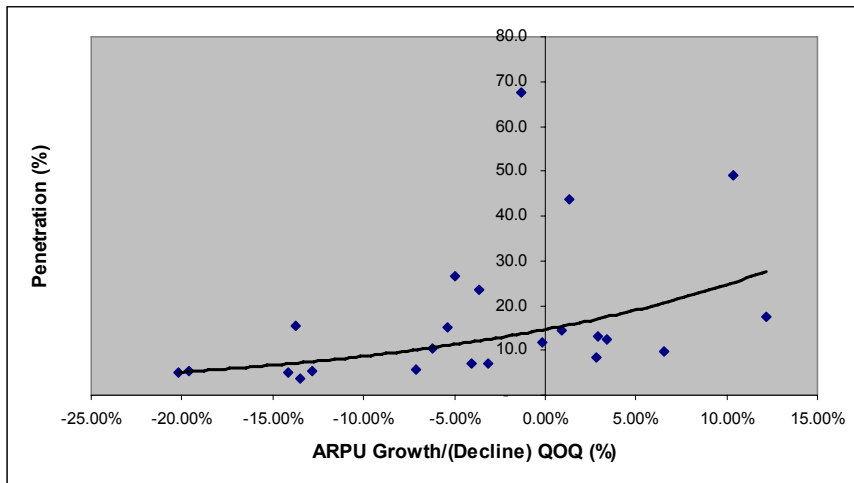


Source: TRAI

### Decline in ARPUs may be sharper in Circle C, though

Though the absolute ARPUs are the highest in Circle C, it might face sharper QoQ declines. This is quite evident in the co-relation between the penetration rates and the ARPU declines – circles with lower penetration have witnessed sharper declines in ARPUs and vice versa. This is because in circles with higher penetration, the MOU increase from the existing customers tends to offset the negative impact of incremental low MOU users.

Figure 7. ARPU Trends Vary With Penetration

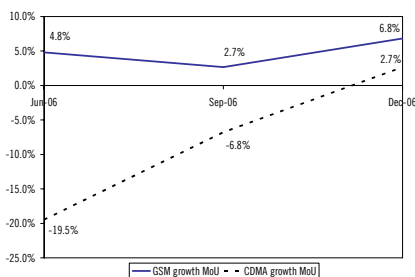


Source: TRAI, Citigroup Investment Research

### Myth #3 – Higher penetration = Lower usage

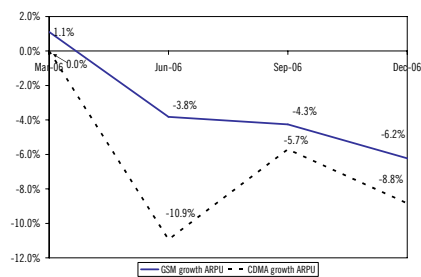
Declining ARPUs have been offset by consistent increase in MOU for the GSM players with average MOU of 454 min as of Dec 06. Though the CDMA MOU declined qoq during 1HFY07, we believe it was mainly on account of the discontinuation of some of the low revenue-yielding schemes by RCOM. The increase in MOU has supported the GSM ARPUs. Though this has been evident in Bharti's KPIs over the last few quarters, it's reassuring to see the rest of the industry following similar trends. Higher usage is mainly a result of reducing tariff differential vis-à-vis fixed line. The usage levels in Indian wireless now are the highest in the region as a result.

Figure 8. MOU Growth Rates (qoq)



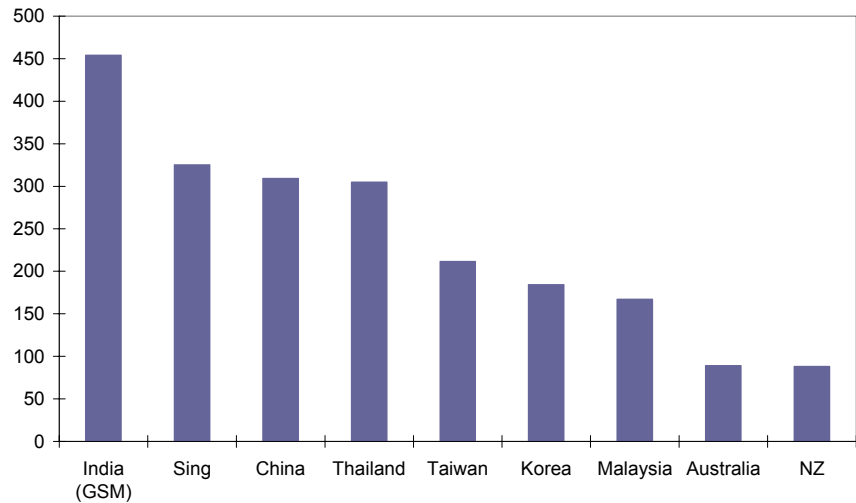
Source: TRAI

Figure 9. ARPU Decline Rates (qoq)



Source: TRAI

Figure 10. India's MOU are the Highest in the Region (min)

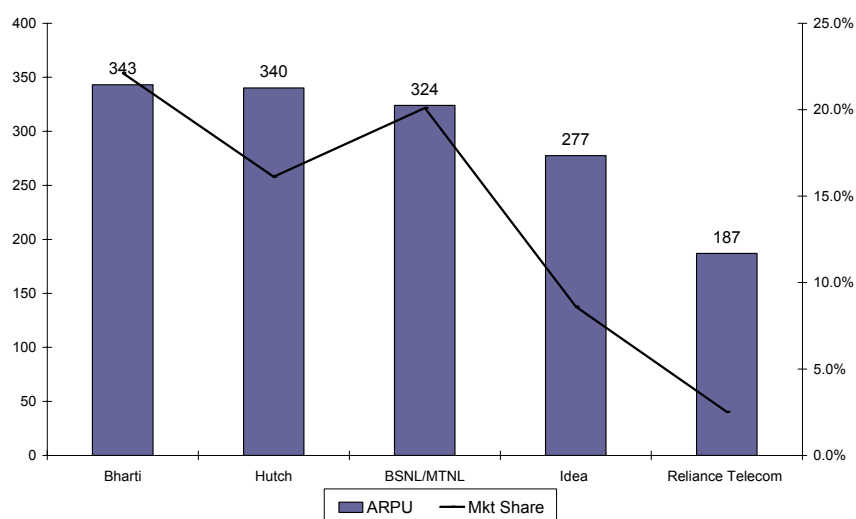


Source: Citigroup Investment Research, TRAI

#### Myth#4 – Higher market share is at the cost of ARPU

The increase in the operators' market share is not at the cost of lower incremental ARPUs, as is clearly evident in Figure 10. Bharti, with a dominant presence in the Indian wireless market with a market share of 22% (as on Dec-06), presence in 23 circles and increasing coverage, overtook Hutch, which is present in only 16 circles including the lucrative metros, in terms of ARPU — highlighting that mere cherry picking of circles doesn't necessarily translate into higher ARPUs. Bharti's superior ARPU is potentially due 1) Speed of rollout, ensuring early access to the creamy layer and 2) the national footprint, which allows it to capture a greater share of traffic.

Figure 11. Operator ARPU and Market Share <sup>1</sup>



Source: Citigroup Investment Research, TRAI, COAI, AUSPI  
<sup>1</sup> Only for GSM operators, ARPU and market share is for QE Dec-06

It should also be noted that the revenue per min is also similar across operators irrespective of market shares. This further vindicates our view that market shares in what is essentially a supply-driven market is being driven more by the speed of rollout rather than tariff strategies.

Figure 12. Revenue Per Min Comparison (Rs/min)

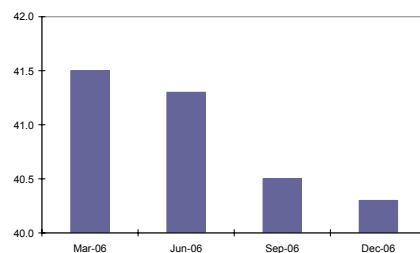
For the quarter ended	Jun-05	Sep-05	Dec-05	Mar-06	Jun-06	Sep-06	Dec-06
Bharti	1.31	1.25	1.17	1.04	1.01	0.98	0.91
Hutch Essar	1.58	1.40	1.33	1.20	1.10	1.03	0.97
Reliance	0.80	0.74	0.76	0.71	0.77	0.77	0.72
Idea	1.49	1.33	1.37	1.26	1.06	0.97	na

Source: Citigroup Investment Research and Company Reports

## Myth #5 - Fixed to mobile substitution is an urban phenomenon

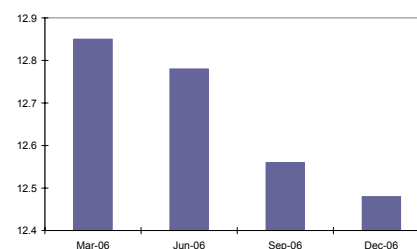
The threat of fixed to mobile substitution is significant for incumbent operators MTNL and BSNL, which together control 92% of the market. There is a consistent decline in the overall wireline subscriber base, which has accelerated in the past 2 quarters. This trend has been visible not only in the highly penetrated metros and A circles where people are increasingly surrendering their fixed line but surprising also in the rural areas where the overall teledensity itself is very low. While part of this decline could be on account of the success of Fixed Wireless (FWTs), we believe increasing wireless coverage has a role to play. Declining wireless tariffs and innovative service offerings (viz. lifetime pre-paid, only incoming options, micro pre-paid) have made the consumer decision easier.

Figure 13. Total Wireline Subscriber Base



Source: TRAI, Sub figures do not include FWT

Figure 14. Rural Wireline Subscriber Base



Source: TRAI

## Bharti Airtel

### Company description

Bharti Airtel, through its group companies, provides cellular-phone services in all the 23-telecom circles of India. The group also provides fixed-line phone services, broadband, long-distance and enterprise services. The company is listed on The Stock Exchange, Mumbai (BSE) and The National Stock Exchange of India Limited (NSE). Major shareholders are Bharti Telecom, SingTel and Vodafone.

### Investment thesis

We rate Bharti as Buy/Low Risk (1L). We believe continued robust wireless market expansion and Bharti's ability to capture this growth profitably will be a recurring theme. We estimate an FY06-09 earnings CAGR of 47.9%, more than double that of the broader market. We believe that competitive pressures, though intense, will continue to be rational as low revenue yields and moderate EBITDA margins leave little room for disruptive pricing. Additionally, most regulatory concerns are behind us and 3G recommendations, though discomfiting, cannot derail the growth path, in our view. The strategic shareholding of SingTel leaves us comfortable with execution issues and new initiatives. Combined with a strong brand presence and a good corporate governance standard, Bharti appears a strong investment. The company has yet to realize the benefits of economies of scale, and we expect a slight strengthening of margins.

### Valuation

Our 12-month target price of Rs960 is based on core DCF of Rs800 and a towerco option value of Rs158. The core DCF (as on March-08) is based on a WACC of 10.8%, a terminal growth rate of 4% and beta of 0.9 (implying a terminal EV/EBITDA multiple of 8.5x). We prefer DCF as our primary valuation methodology because the wireless market will likely continue to see robust growth, requiring upfront capex, but should generate significant free cash beyond 2009-10E. Our target price (net of towerco value) represents an FY09E P/E of 20.8x, P/CEPS of 12.9x and EV/EBITDA of 11.3x. The imputed target P/E (net of towerco) of 25.0x FY08E is at a 25% premium to the broad market P/E (20.0x FY08E at the higher end of our Sensex target of 16,000). This, we believe, is justified by above-average earnings growth, improved earnings visibility and relative insulation from macro risks.



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### Risks

Our quantitative risk-rating system, which tracks 260-day share price volatility, rates Bharti as Low Risk. We are comfortable attributing a Low Risk rating for the following reasons: (1) Bharti has a track record of profitability and execution; (2) the company's capex plans are fully funded; and (3) the strategic shareholding of SingTel leaves us comfortable with execution issues and initiatives. The risks that could prevent the stock from reaching our target price include competition-led tariff pressures, un-remunerative capex, overall market downside, and slower-than-expected execution of the tower-sharing initiative.

## Appendix A-1

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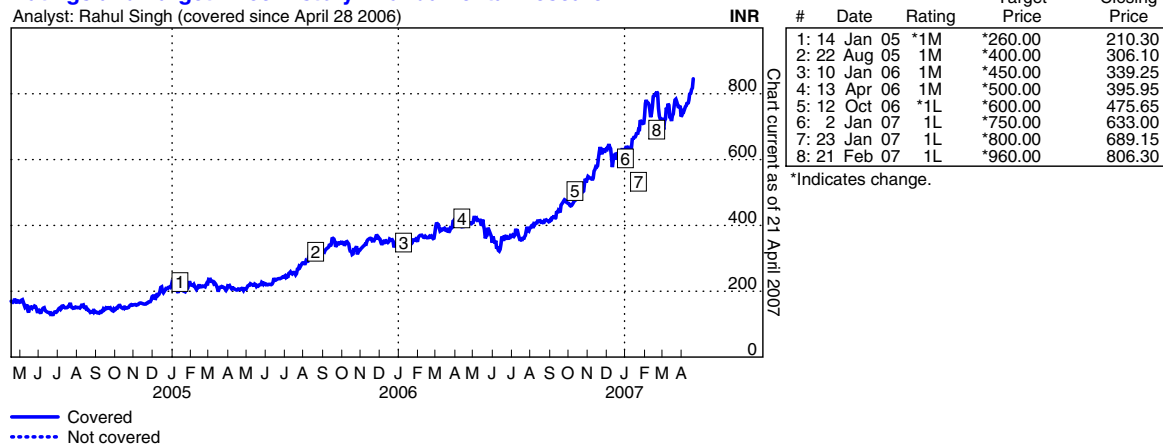
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Analyst: Rahul Singh (covered since April 28 2006)



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