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September 19, 2008
Telecom Sector Report

Viabile Connection



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Executive Summary

Enabling policies, competition, strong GDP growth power subscriber numbers

The Indian Mobile Telecom Industry has been one of the best examples of the success of the Indian Government's reforms programme. The sector has grown at a scorching pace over the past few years aided by enabling regulations, heightened competition resulting in across-the-board lowering of telecom tariffs, higher disposable income due to India's strong GDP growth rates and greater coverage of India's landscape by mobile service operators.

Going ahead, there exists scope for mobile companies to grow their subscriber base. Mobile tele-density stands at around 26% as of July 2008, with 291.2mn subscribers. China, on the other hand, has a mobile tele-density of over 45% and has around 600mn mobile subscribers. Even on this huge base, the country is still adding 7.5-8mn subscribers each month. Thus, there exists significant scope for further growth of the Indian Telecom Industry.

India to have 541.3mn mobile subscribers by FY2011

We estimate the Indian mobile market hit 541.3mn mobile by FY2011 (excluding BSNL and MTNL CDMA-WLL subscribers). This implies a CAGR growth of 28.3% over FY2008-11E. Thus, the industry in the medium-term is expected to continue to record good subscriber growth rates on as-yet low penetration levels, heightened competitive intensity, a continued fall in minimum subscription costs and tariffs leading to better affordability for lower-income rural users, expansion of coverage area by mobile operators and government support through schemes like the rural infrastructure roll out funded by subsidies from the USO Fund. We expect a majority of this growth to be driven by the 'A' and 'B' circle categories, which have been rapidly growing over the past few years and where tele-density is still relatively low at 21-29% levels.

Rural India, the next bastion of growth

The next phase of growth will undoubtedly be led by rural India. It should be noted that a majority of the Indian population still does not have access to mobile services and has largely remained untouched by the 'mobile revolution' that has swept the country. This has led to a huge 'digital divide', which is reflected in the urban tele-density levels, which stand at over 60%, whereas rural tele-density has barely touched double digits. As many as 800mn people in the country do not own a mobile phone and connection, in spite of the rapid expansion that has been witnessed over the past many years by all mobile operators. Thus, this is clearly the next bastion of growth for mobile operators.

Fixed Line subscriber base - 'Triple-play', value-added services provide hope

India's fixed line subscriber base has dwindled. With mobile telephony proving to be a considerably superior technology, there has been de-growth in the fixed line base, with many people surrendering their landlines in favour of mobile phones. In July 2008, the total number of fixed line subscribers in the country stood at 38.76mn (penetration of just 3.4%). Going forward, to grow the fixed line subscriber base, it is necessary for telcos to introduce a greater number of value-added services such as broadband and 'triple play', that is, voice, data and video connectivity through a single line, also known as Internet Protocol Television (IPTV). This could arrest the decline in the fixed line subscriber base.

The move towards fully integrated entertainment companies

Major telcos are taking initiatives to expand their suite of services and become 'fully integrated entertainment players' rather than remaining merely telephone companies. These companies are making investments in businesses such as DTH and IPTV with a view to tap a greater share of the entertainment spend of consumers. Ball-park calculations suggest an approximate market size of Rs27,000cr for the DTH market, assuming average cable expenditure of Rs300 per household per month and if all C&S households (75mn) were assumed to go for DTH connections. Thus, the market size and growth potential is significant.

Spectrum remains the biggest concern...

Despite the strong growth prospects of the sector, the biggest concern remains that of spectrum. Spectrum is the lifeblood of the Telecom business, without which growth is likely to get severely restricted. Even though in the short-term, the issue does seem to have been resolved, going ahead, with the Defence Forces scheduled to release more spectrum for 3G services, any delays on this front could have adverse implications for the sector.

...while increasing competition may further queer the pitch for tariffs

The ever-increasing competitive intensity in the sector, with licences and spectrum in several circles like Tamil Nadu (including Chennai), Orissa, Kerala and Karnataka allotted to newer operators like Loop Telecom, Swan Telecom, Datacom and Unitech Wireless, is also a concern and could lead to unrealistic pricing levels to grab subscribers.

Outlook

Going ahead, we expect robust growth in the Indian mobile subscriber base. However, with a more challenging business environment likely going ahead, given factors such as a secular fall in ARPUs and slowing subscriber growth, thus leading to slowing Top-line growth, increasing competition, which could further queer the pitch for tariffs, higher network expansion costs, all leading to margin pressure and regulatory risks, we believe chances of a major valuation re-rating in the sector are remote. Nonetheless, at current levels, with valuations closer to the bottom-end of historical valuations, downside risk appears limited. Apart from this, there is also embedded value in the form of towerco valuations, providing a cushion.

Bharti Airtel - Sector top pick

Bharti Airtel is our top pick in the Telecom sector, given its flawless execution track record, market leadership position, rapidly growing other business segments like long distance and enterprise, and embedded value in the form of its tower business, Bharti Infratel. We recommend a Buy on the stock, with a Target Price of Rs1,105. On the other hand, we rate Idea Cellular and RCOM also as Buys with Target Prices of Rs104 and Rs595, respectively.

Comparative Valuation

Company	Reco	CMP (Rs)*	MCap (Rs cr)	Target Price (Rs)	P/E (x)			EV/EBITDA (x)			RoE (%)			RoCE (%)		
					FY08	FY09E	FY10E	FY08	FY09E	FY10E	FY08	FY09E	FY10E	FY08	FY09E	FY10E
Bharti Airtel	Buy	799	1,51,671	1,105	22.6	17.4	13.8	13.7	9.8	7.2	37.4	33.0	31.0	22.0	22.7	23.1
Idea Cellular	Buy	82	21,505	104	25.3	19.9	14.5	12.2	6.3	5.0	36.4	16.7	13.7	19.8	16.5	21.7
RCOM	Buy	374	77,205	595	14.9	12.9	10.9	11.0	10.0	8.3	23.5	22.0	21.2	14.1	11.0	12.6

Source: Company, Angel Research; Note: All financials are consolidated, key financial ratios exclude tower valuations; Target Prices are based on SOTP valuations; * Prices as on September 19, 2008

Industry

No call disconnection!

Enabling policies, competition, strong GDP growth power subscriber growth

The Indian Mobile Telecom Industry has been one of the best examples of the success of the Indian Government's reforms programme. The sector has grown at a scorching pace over the past few years aided by enabling regulations, heightened competition resulting in across-the-board lowering of telecom tariffs, higher disposable income due to India's strong GDP growth rates and greater coverage of India's landscape by mobile service operators.

Earlier, the Telecom Sector was a government-controlled monopoly, wherein MTNL, VSNL and the Department of Telecommunications (DoT, now BSNL), provided telecom services in the country

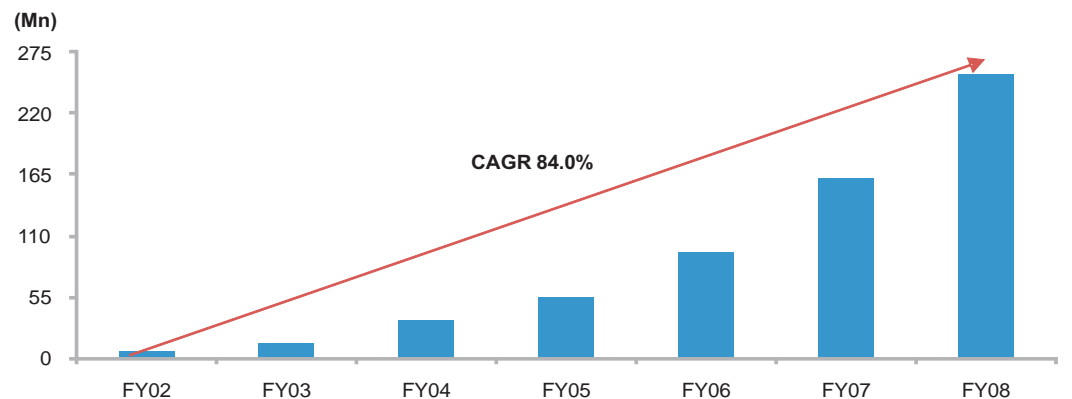
Earlier, the Telecom Sector was a government-controlled monopoly, wherein just three players viz., MTNL, VSNL and the Department of Telecommunications (DoT, now BSNL), provided telecom services in the country. MTNL was licensed to provide fixed basic telecom services in Mumbai and New Delhi, while BSNL was licensed to provide services to the rest of the country. BSNL also provided national long distance (NLD) services. VSNL, on the other hand, provided international long distance (ILD) services. However, in 1994, the sector was opened up to competition and cellular licenses were issued, as the government woke up to the need to develop robust telecom infrastructure in the country, necessary to aid higher GDP growth rates.

At the end of FY1998, there were a mere 880,000 cellular subscribers in the country

Telecom services were initially expensive due to the high cost of licenses and saw few additions to the mobile subscriber base. At the end of FY1998, there were a mere 880,000 cellular subscribers in the country, with over half of them being from the Mumbai and Delhi circles. However, things changed dramatically with the advent of the National Telecom Policy (NTP) 1999, which envisioned a shift in the license fee payment mechanism from a fixed regime to a revenue-sharing regime. Other initiatives such as allotment of the third and fourth cellular licenses, the unified access licensing regime, implementation of the calling party pays (CPP) regime, making incoming calls free and initiatives to reduce regulatory costs to telecom operators also resulted in a quantum jump in the cellular subscriber base.

Things changed dramatically with the advent of the National Telecom Policy (NTP) 1999

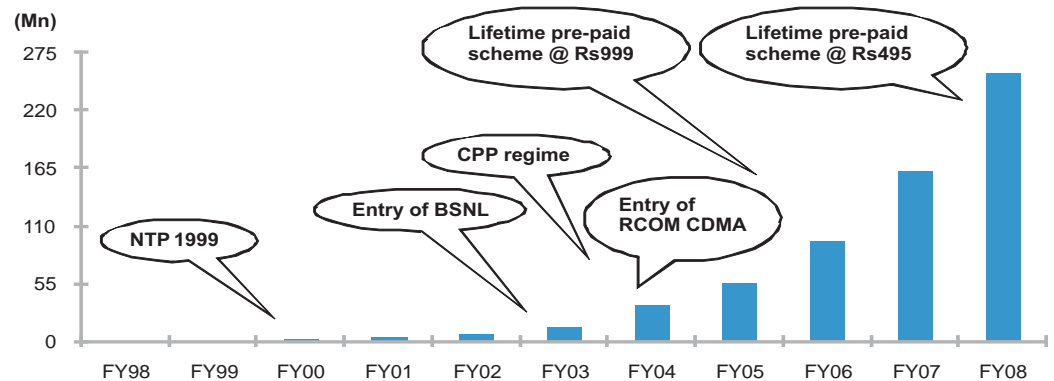
Exhibit 1: Mobile subscriber base - India calling!



Source: COAI, AUSPI, Angel Research; figures include fixed wireless phones (FWP)

The first landmark step taken by the government in terms of regulation was the NTP 1999, which lowered the high entry barriers in the business and made it easier for new players to enter and tap the latent potential, and in turn lower the cost of telecom services. The entry of BSNL in FY2003 and Reliance in FY2004 were other turning points in the history of the industry. Both these entrants ensured that the momentum in mobile subscriber additions was not lost through further lowering of tariffs, even as other incumbent players continued to grow at a fast pace. The entry of the fourth operator in the telecom circles of India led to continuing growth in the sector, along with a further reduction in telecom tariffs amidst intense competition. The implementation of the CPP regime resulted in a continuing surge in mobile subscriber additions. In FY2005, owing to all these initiatives, for the first time ever, India's total mobile subscriber base crossed the fixed line subscriber base.

Exhibit 2: Key drivers of the rapidly growing mobile subscriber base



Source: TRAI, Angel Research

A major initiative included launch of the pre-paid 'lifetime validity' scheme, the first of which was launched in December 2005 at Rs999

The phenomenal growth in the sector has continued on account of no let-up in the fall in call costs owing to high competitive intensity, and greater scale of operators enabling them to cut tariffs and drive greater usage. One of the major initiatives included the launch of the pre-paid 'lifetime validity' scheme. The first of these schemes was launched in December 2005 at Rs999. These schemes, according to a study carried out by the Telecom Industry regulator, the Telecommunications Regulatory Authority of India (TRAI), added as many as 16mn subscribers in the period between January to June 2006. According to the study, despite having the facility to recharge only once in six months, around 72% of the 'lifetime' subscribers were reported to have recharged every month. Even on the average revenue per user (ARPU) front, despite concerns that such schemes might be unviable for telecom operators, being primarily targeted at low-usage customers, these schemes showed an ARPU of Rs218 per subscriber per month as compared with Rs268 for the overall pre-paid segment of the market at the time.

In May 2007, to take the battle to the next level and further penetrate the market, mobile operators launched the 'Lifetime Pre-paid Scheme - Part 2', reducing costs by 50% to just Rs495

In May 2007, to take the battle to the next level and further penetrate the market, mobile operators launched the 'Lifetime Pre-paid Scheme - Part 2', reducing costs by 50% to just Rs495. A slew of other initiatives were also launched by operators including reducing ILD call costs to the US and Canada to just Rs1.99/minute, reducing call costs to the Gulf region by 36% and slashing roaming charges in India by as much as 70%. Major operators also launched black-and-white handsets retailing at just Rs777 and colour handsets at Rs1,234. Some other major operators are also launching handsets priced at just Rs666, significantly reducing minimum subscription costs and bringing a greater number of people into the mobile telephony fold. In fact, a top mobile operator, post the launch of the Rs777 handset, added over 1mn subscribers in just one week, possibly a global record.

In FY2009 thus far, we have already seen operators effect a drastic 43% cut in STD rates and incoming roaming charges

In FY2009 thus far, we have already seen operators effect a drastic 43% cut in STD rates to Rs1.50 per minute from Rs2.65, while incoming roaming charges have also been slashed by 43% to Re1 a minute from Rs1.75. Another operator has also launched unlimited STD at Rs440 a month for post-paid users, while pre-paid customers can make unlimited STD calls at Rs496 a month for calls within the network (on-net calls). Further, with TRAI permitting the entry of Mobile Virtual Network Operators (MVNOs), internet telephony (Voice over Internet Protocol, VoIP) and long-distance carrier selection by consumers through issuing pre-paid calling cards by long distance operators, it is clear that tariffs have not as yet hit rock-bottom.

Sops by the government for telecom gear manufacturing, lower handset costs, infrastructure sharing between operators, both passive and active and the release of funds from the Universal Services Obligation (USO) Fund for telecom operators to tap and expand into the rural areas of the country are also expected to maintain the growth momentum in the sector. The much-awaited 3G and Broadband Wireless Access (BWA) Policy by the government is also likely to provide newer revenue streams to players, enabling them to restrict the fall in their ARPUs. Nonetheless, we believe that 3G will not be a major growth driver over the next few years.

Going ahead, there exists good scope for mobile companies to increase their subscriber base, with mobile tele-density at 26% (July 2008)

Going ahead, there exists scope for mobile companies to increase their subscriber base. The mobile tele-density of the country stands at around 26% as of July 2008. China, on the other hand, has a mobile tele-density of over 45% and has around 600mn mobile subscribers. Even on this huge base, the country is still adding 7.5-8mn subscribers each month. Thus, there exists significant scope for further growth of the Indian Telecom Industry.

On the regulatory front, TRAI has taken consistent initiatives to reduce regulatory costs

On the regulatory front, TRAI has taken consistent initiatives to reduce regulatory costs, such as license fees and access deficit charge (ADC) for telecom companies. TRAI has brought down ADC charges to NIL with effect from April 1, 2008 as per its schedule, with the only exception being the ADC on international long distance calls, which has been cut to 50 paise from Re1 earlier. This could also be cut to NIL shortly, which augurs well for the industry. It should be noted that the Indian Telecom Sector is one of the most heavily taxed industries in the world and such initiatives could have a positive impact on margins and industry profitability in the near future.

Urban tele-density levels stand at over 60%, whereas rural tele-density has barely touched double digits

The next phase of growth will undoubtedly be led by rural India. It should be noted that a majority of the Indian population still does not have access to mobile services and has largely remained untouched by the 'mobile revolution' that has swept the country. This has led to a huge 'digital divide', which is reflected in the urban tele-density levels, which stand at over 60%, whereas rural tele-density has barely touched double digits. As many as 800mn people in the country do not own a mobile phone and connection, in spite of the rapid expansion that has been witnessed over the past many years by all mobile operators. Thus, this is clearly the next bastion of growth for mobile operators.

There is immense scope for growth in the Telecom Infrastructure business

Growth of the Telecom Sector has a direct impact on job creation in areas like network planning, co-ordination, marketing, sales and finance, while its indirect impact can also be significant in the form of setting up of towers, laying cables and running the towers on a regular basis. Overall, there is immense scope for growth in the Telecom Infrastructure business, with massive build outs planned by operators over the next few years. The number of telecom towers in the country is estimated to be around 3.4 lakh by FY2011 as compared with 1.8 lakh at the end of FY2008. Thus, this will lead to significant job creation given the number of skilled personnel required to operate and maintain these towers. In fact, the Telecom Sector is the cornerstone of India's growth strategy as it is estimated to generate around 8.2mn jobs totally.

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Despite the strong growth prospects of the sector, the biggest concern remains that of spectrum

Nonetheless, despite the strong growth prospects of the sector, the biggest concern remains that of spectrum. Spectrum is the lifeblood of the Telecom business, without which growth is likely to get severely restricted. Even though in the short term, the issue does seem to have been resolved, going ahead, with the Defence Forces scheduled to release more spectrum for 3G services, any delays on this front could have adverse implications for the sector. Increasing competitive intensity, with licences and spectrum in several circles allotted to newer operators like Loop Telecom, Swan Telecom, Datacom and Unitech Wireless, is also a concern and could lead to unrealistic pricing levels to grab subscribers.

India to have 541.3mn mobile subscribers by FY2011

We estimate the Indian mobile market to more than double in size in terms of subscriber base by FY2011, with 541.3mn mobile subscribers estimated by then compared with 256.2mn mobile subscribers at the end of FY2008

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We expect a majority of this growth to be driven by the 'A' and 'B' circle categories

We expect a majority of this growth to be driven by the 'A' and 'B' circle categories, which have been rapidly growing over the past few years and where tele-density is still relatively low. With the Metros reaching saturation point at over 80-85% tele-density levels, these ('A' and 'B') are the major circle categories that are likely to drive growth over the next 2-3 years. At the end of

July 2008, mobile tele-density in the 'A' circles (Andhra Pradesh, Gujarat, Karnataka, Maharashtra and Tamil Nadu excluding Chennai) stood at 29.2%, while in the 'B' circles (Kerala, Punjab, Haryana, UP West, UP East, Rajasthan, Madhya Pradesh, and West Bengal and A&N), it stood at 21.3%.

In the 'C' circle category also, there is significant scope for growth, with mobile tele-density levels under 15%

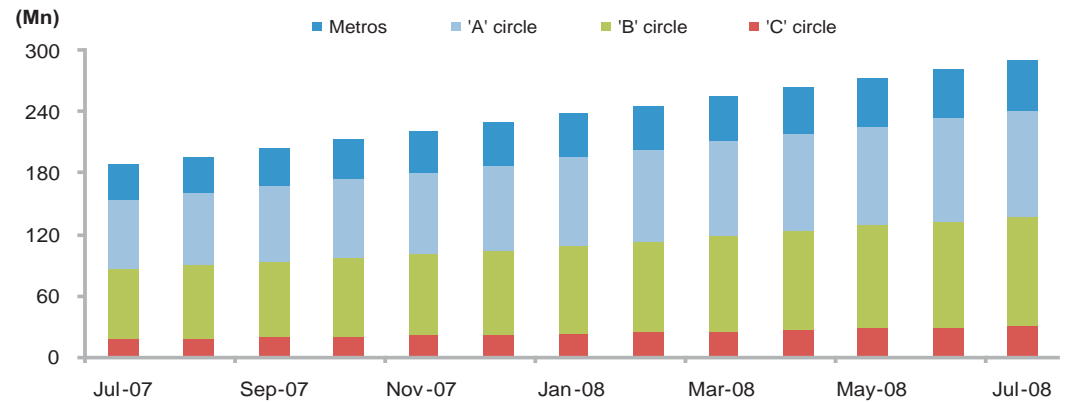
We expect these two circle categories to account for over 80% of the all-India incremental subscribers added over FY2008-11E. In the 'C' circle category also, there is significant scope for growth, with mobile tele-density levels of under 15%. We expect net subscriber adds in this category to overtake the Metros in FY2009.

Exhibit 3: Circle-wise mobile subscriber projections - FY2008-11E

Particulars (Mn)	FY2008	FY2009E	FY2010E	FY2011E	CAGR (%)
Metros					
Mobile subscribers	44.4	54.9	62.7	66.9	14.6
<i>% chg</i>	41.2	23.4	14.2	6.8	
% of all-India mobile subscriber base	17.3	15.5	13.7	12.4	
'A' circle					
Mobile subscribers	92.4	129.3	168.1	198.1	28.9
<i>% chg</i>	60.1	39.9	30.1	17.8	
% of all-India mobile subscriber base	36.1	36.5	36.8	36.6	
'B' circle					
Mobile subscribers	92.9	135.7	183.1	222.2	33.7
<i>% chg</i>	61.5	46.0	34.9	21.3	
% of all-India mobile subscriber base	36.3	38.3	40.0	41.0	
'C' circle					
Mobile subscribers	26.4	34.7	43.4	54.1	27.0
<i>% chg</i>	69.8	31.5	25.0	24.5	
% of all-India mobile subscriber base	10.3	9.8	9.5	10.0	
All-India					
Mobile subscribers	256.2	354.6	457.3	541.3	28.3
<i>% chg</i>	58.8	38.4	29.0	18.4	

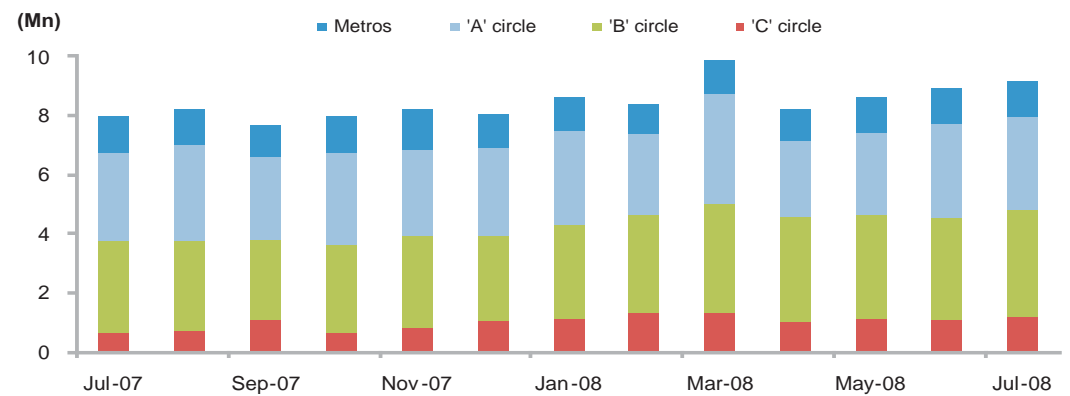
Source: COAI, AUSPI, Angel Research

Exhibit 4: Circle-wise subscriber break-up over the past year



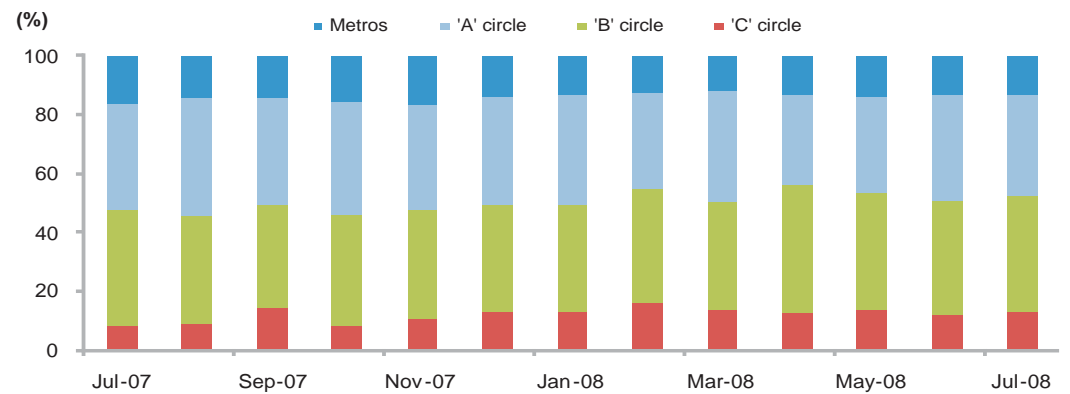
Source: COAI, AUSPI, Angel Research

Exhibit 5: Circle-wise monthly net adds over the past year - 'A', 'B' circles shine



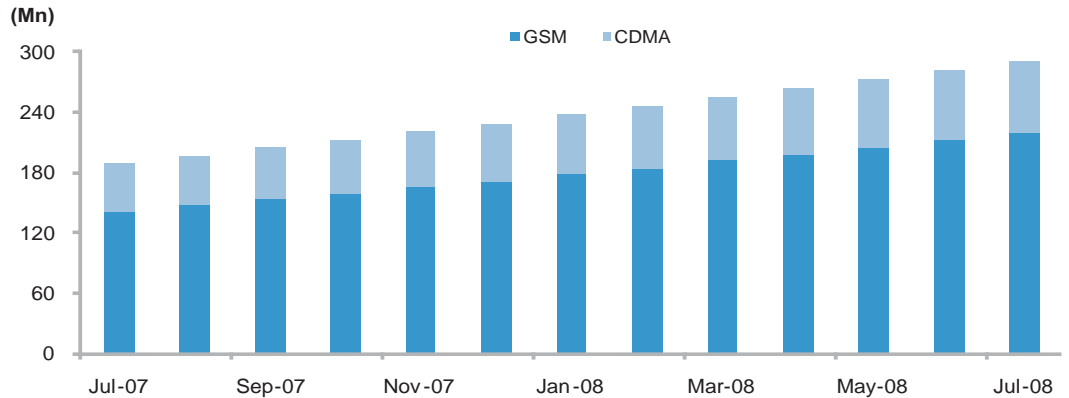
Source: COAI, AUSPI, Angel Research

Exhibit 6: Circle-wise incr. monthly subscriber market-share over the past year



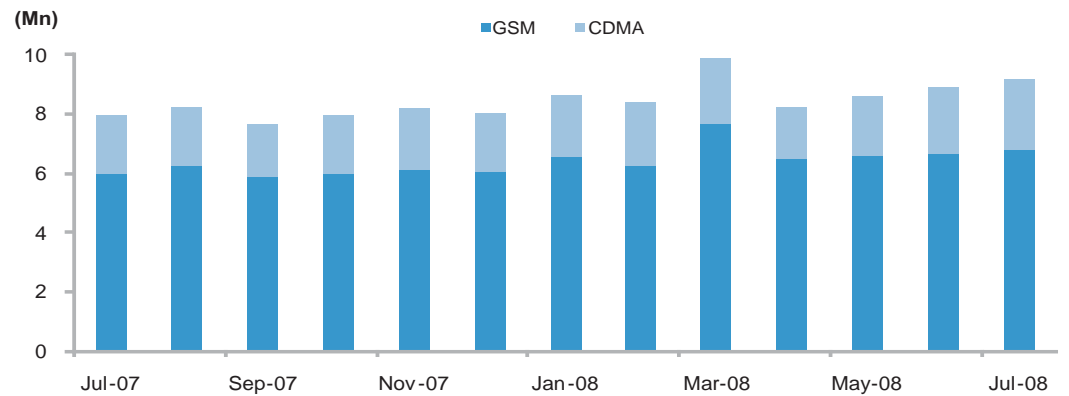
Source: COAI, AUSPI, Angel Research

Exhibit 7: Technology-wise subscriber break-up over the past year - GSM, the leader



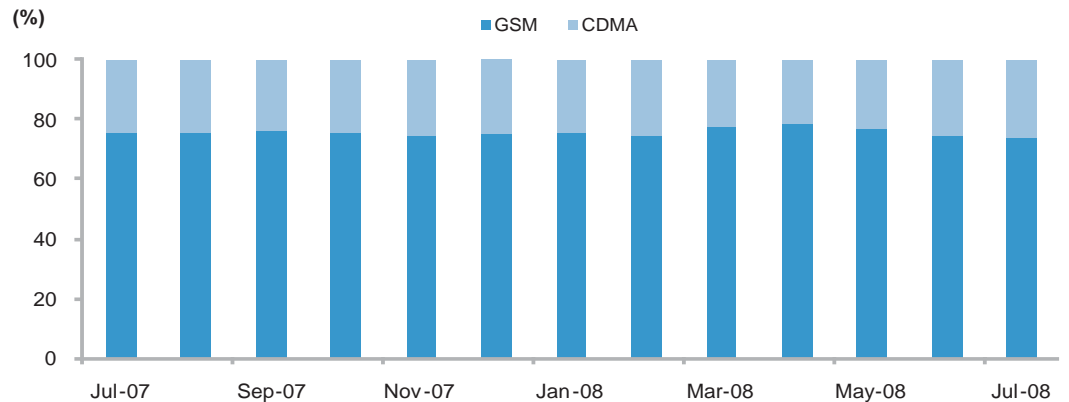
Source: COAI, AUSPI, Angel Research

Exhibit 8: Technology-wise monthly net adds over the past year



Source: COAI, AUSPI, Angel Research

Exhibit 9: Technology-wise monthly net adds market-share over the past year

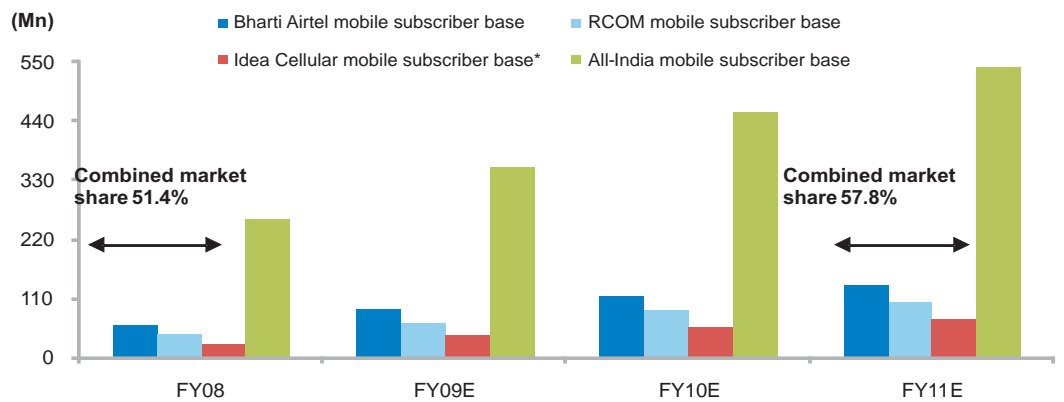


Source: COAI, AUSPI, Angel Research

Incumbent operators to lord over newer entrants

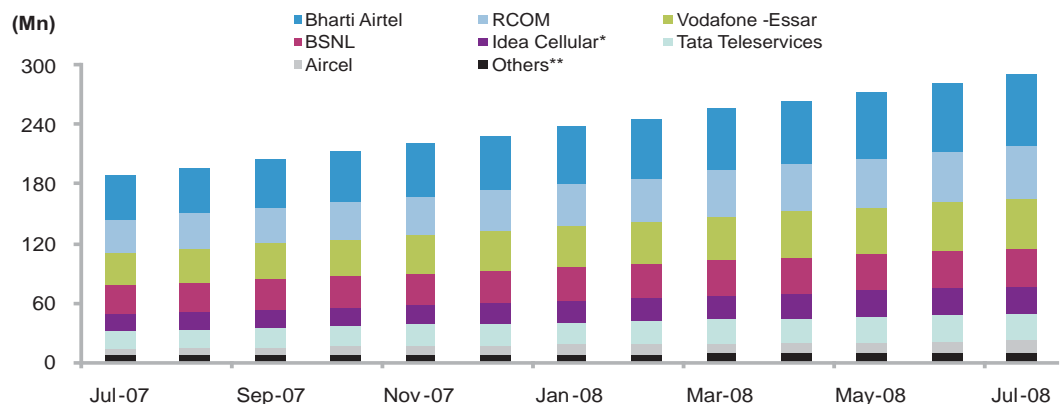
We expect the incumbent operators to comfortably maintain a big gap between themselves and newer operators like Unitech Wireless, Datacom, Loop Telecom and Swan Telecom. The considerably larger network of incumbent operators and their established and proven execution skills will be the major factors that will enable them to steal a march over the 'new kids on the block'. We estimate the major companies under our coverage viz., Bharti Airtel, RCOM and Idea Cellular, to improve their respective subscriber market shares over FY2008-11E, from 24.2%, 17.9% and 9.4% respectively, in FY2008 to 24.8%, 19.6% and 13.3% respectively, in FY2011E. We have included subscriber numbers of Spice Communications in our projections for Idea.

Exhibit 10: Bharti Airtel, RCOM and Idea Cellular mobile subscriber base projections



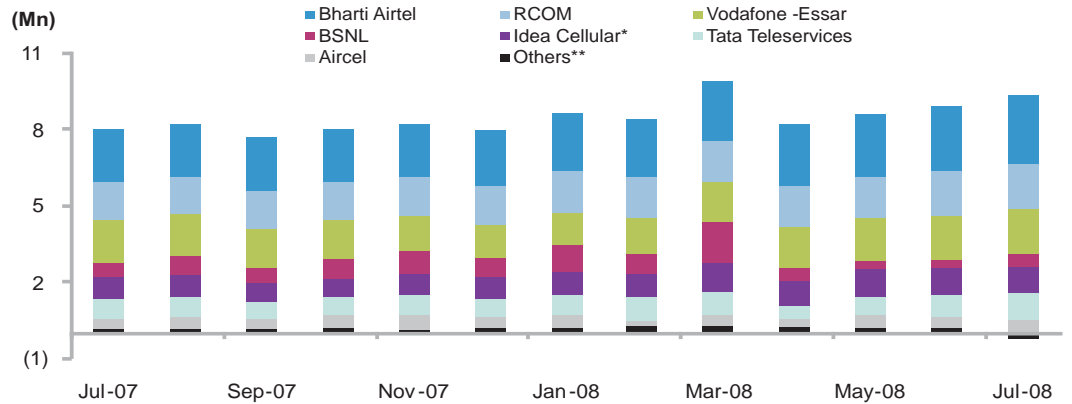
Source: COAI, AUSPI, Respective companies, Angel Research; * Idea Cellular projections made including Spice Communications' subscriber base

Exhibit 11: Operator-wise subscriber break-up over the past year - Bharti's king!



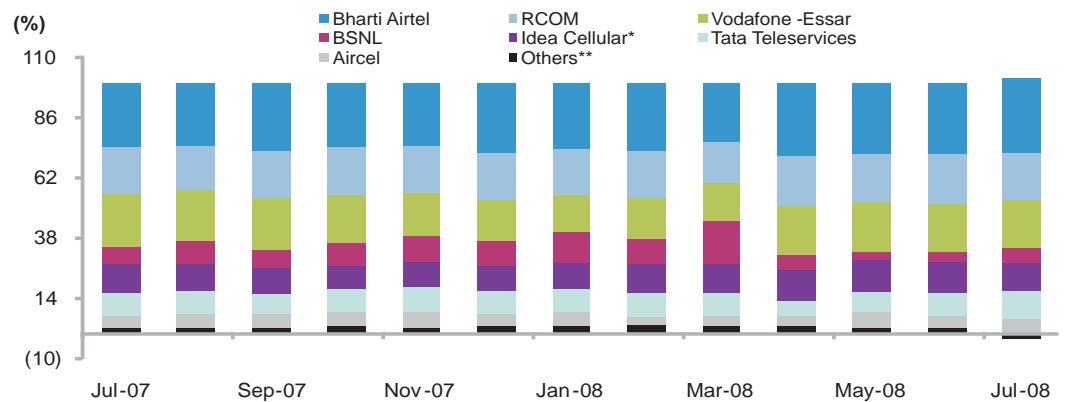
Source: COAI, AUSPI, Angel Research; * Idea Cellular's subscriber base calculated excluding Spice Communications; ** Others include Spice Communications, MTNL, BPL Mobile, HFCL Infotel and Shyam Telelink

Exhibit 12: Operator-wise incremental subs addition over the past year



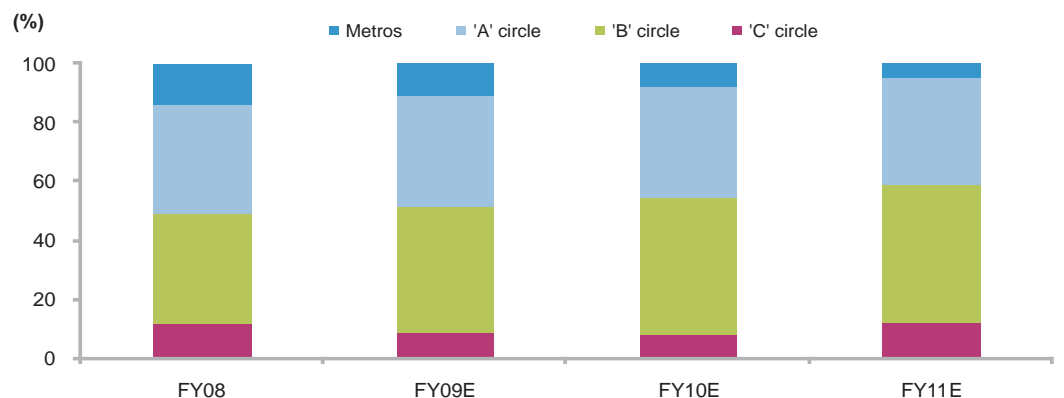
Source: COAI, AUSPI, Angel Research; * Idea Cellular's subscriber adds calculated excluding Spice Communications; ** Others' incremental subscriber adds negative in July 2008 due to loss of subscribers for Spice Communications

Exhibit 13: Operator-wise incremental subscriber market-share over the past year



Source: COAI, AUSPI, Angel Research; * Idea Cellular's incremental subscriber market-share calculated excluding Spice Communications; ** Others' incremental subscriber market-share negative in July 2008 due to loss of subscribers for Spice Communications

Exhibit 14: Circle-wise incremental subscriber contribution till FY2011



Source: COAI, AUSPI, Angel Research

Over 50% of the incremental users added to market leader, Bharti Airtel's network in 1QFY2009 were rural

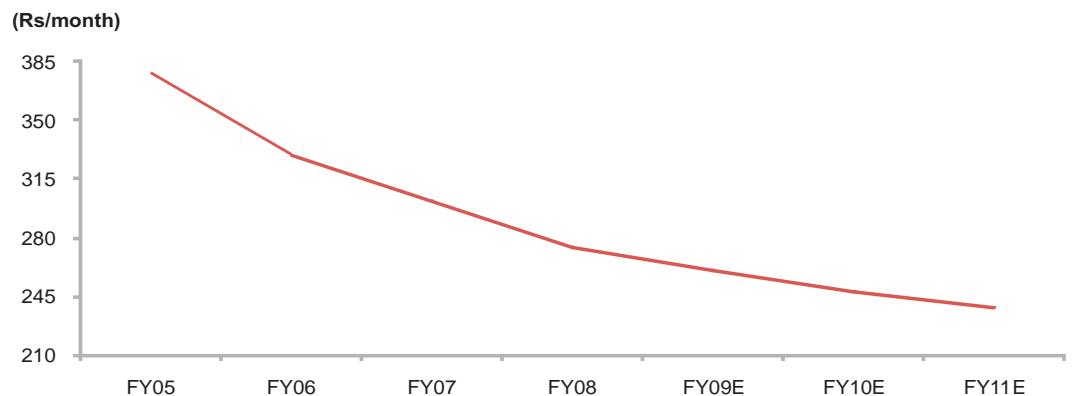
We estimate industry ARPUs to fall from Rs275 in FY2008 to Rs238 in FY2011E, a CAGR decline of 4.7%

ARPUs, RPMs to continue to fall...

Industry-wide ARPUs and Revenues per Minute (RPMs) have been on a downward trail over the past several years now. This has been on account of a greater number of 'lower-end' subscribers getting added to the network. It may be noted that over 50% of the incremental users added to market leader, Bharti Airtel's network in 1QFY2009 were rural. Most of these users would never have used a mobile phone before and would thus take time to understand its features and functionality. Consequently, this leads to these users taking some time before ramping up usage patterns and revenues for operators. Further, competitive intensity in the sector is arguably the highest in the world leading to a consistent fall in realisations. Scale benefits with the increasing size of mobile operators have also enabled them to cut costs to drive greater usage and add more subscribers to their networks. With regulatory costs such as access deficit charge (ADC) also having been cut to NIL in FY2009, operators have passed on the benefits of these cuts to users, thus again fueling growth in minutes of usage (MoUs).

Industry ARPUs have fallen at a CAGR of around 10% over FY2005-08 from Rs378 per user per month to Rs275 (Source: CRIS INFAC). We estimate industry ARPUs to fall from Rs275 in FY2008 to Rs238 in FY2011E, a CAGR decline of 4.7%. Thus, we estimate overall industry revenues to grow from Rs68,896cr (US \$17.2bn) in FY2008 to Rs1,42,761cr (US \$34bn, assuming a Rupee rate of 42 to a Dollar) in FY2011E, a CAGR growth of 27.5% over the period, led by strong subscriber accretion.

Exhibit 15: Industry ARPU trends



Source: CRIS INFAC, Angel Research

...justified by higher usage

Demand elasticity has been high, thus enabling operators to enjoy the benefits of higher usage with every cut in tariffs

Even though ARPUs and RPMs have fallen over the past few years, these have been more than justified by strong subscriber growth and higher usage in terms of MoUs by mobile subscribers. Demand elasticity has been high, thus enabling operators to enjoy the benefits of higher usage with every cut in tariffs. In fact, market leader Bharti Airtel reported an industry-high 534 MoUs in 1QFY2009, up 12% yoy even as RPMs fell to 66 paise, lower by 20% yoy.

Exhibit 16: Bharti Airtel - Lower RPMs drive higher MoUs

Particulars	1QFY08	2QFY08	3QFY08	4QFY08	1QFY09
MoUs per month	478	469	474	507	534
Revenues per minute (Rs)	0.82	0.79	0.76	0.72	0.66

Source: Company, Angel Research

We do not expect demand elasticity to sustain, as users become agnostic to pricing beyond a point

However, going forward, we do not expect demand elasticity to sustain, as users do become agnostic to pricing beyond a point. With deteriorating quality of subscribers being added to the network, it is unlikely that MoUs will keep on increasing at the pace seen over the past few years. Thus, we expect industry revenue growth to continue to lag subscriber growth.

Spectrum issue resolved for now, but...

Allotment of spectrum has been one of the most contentious issues in the sector

Spectrum is by far the most important raw material for the Mobile Telephony Sector, the lack of which could lead to growth getting severely hampered. Allotment of spectrum has been one of the most contentious issues in the sector, with CDMA operators accusing GSM players of hoarding more spectrum than what they were contractually entitled to (6.2 MHz) and demanding higher spectrum charges for all such spectrum held in excess of entitlement. The GSM lobby, on the other hand, has argued that its members have increased their subscriber base manifold over the past few years, which is now a multiple of what the original subscriber-linked spectrum allocation criteria required, thus justifying higher spectrum allotment and denying any charges of hoarding the scarce resource. Nonetheless, this issue has seemingly been resolved, with CDMA operators under the aegis of their industry association, AUSPI, taking back their appeal from the Telecom Disputes Settlement and Appellate Tribunal (TDSAT).

Spectrum remains a scarce resource, more specifically in the high traffic density Metro circles like Mumbai and Delhi

On the ground, spectrum remains a scarce resource, more specifically in the high traffic density Metro circles like Mumbai and Delhi, with the Quality of Service (QoS) in these areas getting negatively impacted as call drops and inability to reach subscribers due to poor network become more frequent. The Defence Forces have yet to release more spectrum for both 2G and 3G mobile services. This reflects how critical a resource spectrum is for all operators.

It is likely that most of these newer operators are just '100 metre sprinters' rather than 'marathoners'

The possibilities of higher valuations on account of spectrum allotment and a likely sell-out to an incumbent or foreign player in future were the factors that in our view explain the mad rush for new telecom licences in August 2007 after more competition was allowed in the sector. Newer operators like Unitech Wireless, Datacom, Loop Telecom and Swan Telecom were given licences. However, they have not been allotted spectrum in all circles where they have received the licences for due to scarcity and significant demand. It is likely that most of these newer operators are just '100 metre sprinters' rather than 'marathoners', who are just looking at this as a financial investment and selling out in future on the basis of their spectrum holdings.

Exhibit 17: Recent allotments of start-up spectrum to operators

Operator	Type of spectrum	Circles
Aircel	GSM start-up	Andhra Pradesh, Delhi, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Mumbai, Punjab, Rajasthan, UP (East), UP (West)
Vodafone-Essar	GSM start-up	Madhya Pradesh, Bihar, Orissa, Himachal Pradesh, North East, Assam, Jammu & Kashmir
Idea Cellular	GSM start-up	Mumbai, Bihar, Tamil Nadu (incl. Chennai), Orissa
RCOM	GSM start-up	Mumbai, Delhi, Tamil Nadu (including Chennai), Maharashtra, Andhra Pradesh, Karnataka, Gujarat, Kerala, Punjab, Haryana, UP (East), UP (West), Rajasthan, Jammu & Kashmir
Tata Teleservices	GSM start-up	Tamil Nadu (incl. Chennai), Orissa, Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh, Mumbai, UP (East)
Datacom	GSM start-up	Tamil Nadu (incl. Chennai), Orissa, Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Mumbai, UP (East)
Unitech Wireless	GSM start-up	Tamil Nadu (incl. Chennai), Orissa, Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Punjab, Mumbai, UP (East)
Loop Telecom	GSM start-up	Tamil Nadu (incl. Chennai), Orissa, Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh
Swan Telecom	GSM start-up	Delhi, Mumbai, UP (East)
HFCL Infotel	GSM start-up	Punjab
Tata Teleservices	CDMA start-up	North East, Assam and Jammu & Kashmir
Shyam Telelink	CDMA start-up	North East, Jammu & Kashmir, Assam, Maharashtra, Andhra Pradesh, Kerala, Tamil Nadu (incl. Chennai), West Bengal, UP (East), UP (West), Himachal Pradesh, Madhya Pradesh, Bihar, Haryana, Delhi, Mumbai, Kolkata, Karnataka, Gujarat, Orissa, Punjab
RCOM	CDMA start-up	North East

Source: Industry, Angel Research

We do not expect a 12-13 operator market to sustain; eventually, 5-6 operators at the most will be able to hold their own

Nonetheless, this allotment of spectrum in several circles to operators does give hope that the government will, from time-to-time, be able to allot more spectrum to operators as and when it becomes available. Given increased demand for the scarce resource from newer operators, it is likely that going forward, incumbent operators will look to buy out some of the newer operators as and when consolidation activity kicks in. We certainly do not believe that a 12-13 operator market is likely to sustain and eventually, 5-6 operators at the most will be able to hold their own going forward. Of course, no prizes for guessing who these operators are 'likely' to be - Bharti Airtel, RCOM, Vodafone-Essar and BSNL are almost surely expected to survive the

consolidation activity in the sector, whereas companies like Idea Cellular, Tata Teleservices and Aircel could witness an interesting battle amongst themselves. The remaining operators, with the exception of MTNL, are likely to get taken over, either by incumbent operators or possibly foreign operators who would not win 3G spectrum and are looking to get a foothold into the Indian market.

TRAI subscriber-linked spectrum allocation criteria

In August 2007, the TRAI came out with its recommendations on policies that should govern the licensing frame-work for access service provision. Among its key recommendations were the following:

- No cap should be placed on the number of service providers in an area and let market forces determine this factor
- In order to address the crucial issue of spectrum allocation, TRAI has suggested enhancing the present subscriber-based allocation norms to ensure that the process is not stalled
- Any licensee wishing to get additional spectrum beyond 10 megahertz (MHz) in the existing bands where 2G spectrum is allocated (800, 900 and 1,800 MHz) after reaching the specified subscriber numbers will have to pay a one-time charge of Rs16cr, Rs 8cr or Rs3cr per MHz beyond 10 MHz depending on the service area / circle category
- All spectrum excluding that in the existing 2G bands (800, 900 and 1,800 MHz) should be auctioned in future so as to ensure efficient utilisation of this scarce resource
- Annual spectrum usage charges should be revised upwards by 1% of gross revenues for all spectrum beyond 8 MHz
- As regards mergers and acquisitions (M&A), market dominance has been defined to be 40%
- Thus, if the combined share of the two entities after merging exceeds 40%, either in terms of subscriber base or in terms of revenue, then such mergers will not be allowed
- No M&A activity will be allowed in case the number of service providers in an area dips below four
- Firms wishing to provide services under both GSM and CDMA technologies will be allowed to do so, subject to spectrum availability
- Acquisition of equity capital up to 10% of the target company's equity shall be permitted by automatic route and anything beyond that and up to 20% shall be approved on a case by case basis

The revised criteria envisaged a hike of 1.7-7x the existing criteria, thus requiring mobile operators to pack in a significantly greater number of subscribers to be eligible for the same quantity of spectrum

In October 2007, the DoT accepted most of these recommendations made by TRAI. Of particular importance to the sector were the enhanced subscriber-linked spectrum allocation criteria. The revised criteria envisaged a significant hike of 1.7-7x the existing subscriber-linked criteria, thus requiring mobile operators to pack in a significantly greater number of subscribers to be eligible for the same quantity of spectrum. This has a major impact in terms of higher capex required per subscriber and investments in improving spectral efficiency. Going forward, a hike in spectrum charges and renewal licence fee is also on the cards, thus leading to a further increase in costs for operators.

Exhibit 18: Earlier subscriber-linked spectrum allocation criteria - GSM operators (Mn)

Service Area	2x6.2 MHz	2x8 MHz	2x10 MHz	2x12.4 MHz	2x15 MHz
Delhi/Mumbai	0.3	0.6	1.0	1.6	2.1
Chennai/Kolkata	0.2	0.4	0.6	1.0	1.3
'A' circle	0.4	0.8	1.4	2.0	2.6
'B' circle	0.3	0.6	1.0	1.6	2.1
'C' circle	0.2	0.4	0.6	0.9	1.2

Source: TRAI

Exhibit 19: Earlier subscriber-linked spectrum allocation criteria - CDMA optrs. (Mn)

Service Area	3rd carrier (2x3.75 MHz)	4th carrier (2x5 MHz)	5th carrier (2x6.25 MHz)	6th carrier (2x7.5 MHz)
Delhi/Mumbai	0.3	1.0	1.6	2.1
Chennai/Kolkata	0.2	0.6	1.0	1.3
'A' circle	0.4	1.2	2.0	2.6
'B' circle	0.3	1.0	1.6	2.1
'C' circle	0.15	0.5	0.9	1.2

Source: TRAI

Exhibit 20: Earlier subscriber-linked spectrum allocation criteria - GSM operators (Mn)

Service Area	2x6.2 MHz	2x8 MHz	2x10 MHz	2x12.4 MHz	2x15 MHz
Delhi/Mumbai	0.5	1.5	2.0	3.0	5.0
Chennai/Kolkata	0.5	1.5	2.0	3.0	5.0
'A' circle	0.8	3.0	5.0	8.0	10.0
'B' circle	0.8	3.0	5.0	8.0	10.0
'C' circle	0.6	2.0	4.0	6.0	8.0

Source: TRAI

Exhibit 21: Earlier subscriber-linked spectrum allocation criteria - CDMA optrs. (Mn)

Service Area	3rd carrier (2x3.75 MHz)	4th carrier (2x5 MHz)	5th carrier (2x6.25 MHz)	6th carrier (2x7.5 MHz)
Delhi/Mumbai	0.5	2.0	3.0	5.0
Chennai/Kolkata	0.5	2.0	3.0	5.0
'A' circle	0.8	5.0	8.0	10.0
'B' circle	0.8	5.0	8.0	10.0
'C' circle	0.6	4.0	6.0	8.0

Source: TRAI

Infrastructure Sharing - Gaining ground
Moving from cost centre to profit centre

A significant part (around 60%) of wireless capex consists of passive infrastructure, that is, real estate space, the telecommunication towers and associated infrastructure

Running and maintaining the network is not a core task of a telecom services company

The tower business can become a profit centre by itself, rather than just leading to cost savings for telcos

The business is characterised by a steady stream of cash flows, a good client base, long-term revenue visibility through signing of long-term master service agreements (MSAs), a high level of fixed costs and operating leverage

Telecom is a capex-intensive business that needs significant investments year-on-year to expand and grow. A significant part (around 60%) of wireless capex consists of passive infrastructure, that is, real estate space, the telecommunication towers and associated infrastructure such as DG sets for power back-up, generators, air-conditioning and security. This capex intensity results in large fund requirements and time spent on running and maintaining the network, which is not a core task of a telecom services company. Given India's huge coverage requirements, the need for funds stretches into several years. Erecting towers along with the active infrastructure component (spectrum, radio antenna, fibre optic cable/backhaul/microwave equipment, BTS) carries with it significant execution risks, and as many as 40 clearances are needed before the tower and active infrastructure comes up and gets started. Against this background, the concept of infrastructure sharing has assumed importance. Such an arrangement works well for both partners, as the tenant paying lease rentals to the towerco accelerates the time-to-market process, while the towerco earns revenues. The inhibitions of 'co-operating at the back end and competing at the front-end' seem to be rapidly fading away, with even a company like BSNL, which has always been opposed to sharing, now showing greater willingness to do so.

Overall, given the current low mobile penetration rate in India (around 26%) and huge expansion plans of major mobile operators, it becomes clear that the tower business can become a profit centre by itself, rather than just leading to cost savings for telcos. The Mobile Telecom Industry structure is also favourable to infrastructure sharing, as the competitive intensity is high and coverage requirements are massive. The current spectrum constraints and increasing MoUs are also favourable for the tower business. The business is characterised by a steady stream of cash flows, a good client base, long-term revenue visibility through signing of long-term master service agreements (MSAs), a high level of fixed costs and operating leverage. It should be understood that the key metric that any towerco would look at is the tenancy ratio. Each tower has a certain number of slots and is capable of hosting the passive infrastructure of a certain number of tenants. Thus, higher the tenancy ratio (the total occupied tenancy slots divided by the number of towers) more profitable the company is likely to be, since the incremental costs of adding tenants is fairly low. Higher tenancy ratios lead to better margins.

The business is highly capital-intensive and leveraged

With increased tenancy ratios, these companies are likely to report better margins and due to operating leverage, higher margins are likely to flow through to the PAT level

We believe that going forward, operator-owned towercos will dominate the industry

If we take below-EBITDA level items, the business is highly capital-intensive and leveraged. Therefore, depreciation charges and interest costs are typically the major cost items of any towerco and as a result, it is likely that in the initial years of operations, when tenancy ratios are lower, towercos are likely to incur losses at the PAT level. However, going ahead, with increased tenancy ratios, these companies are likely to report better margins and due to operating leverage, higher margins are likely to flow through to the PAT level. We believe that towercos with tenancy ratios of under 2x are unlikely to be very profitable. It should be noted that there are two types of towercos in India, namely operator-owned, such as Bharti Infratel (BITL) and Reliance Infratel (RITL), and independent towercos such as GTL Infrastructure and Quippo Telecom Infrastructure.

We believe that going forward, operator-owned towercos will dominate the industry, given their significantly larger scale, strong parent support, deep pockets and the presence of an 'anchor tenant' (the parent), leading to a tenancy ratio of at least 1x right at the start, while independent towercos have to start with a tenancy ratio of zero. We have valued the major operator-owned towercos (BITL, RITL and Indus Towers) on a discounted cash flow (DCF) basis and **the value of these companies adds 20-42% to the value of the core businesses of the telcos under our coverage, i.e. Bharti Airtel, RCOM and Idea Cellular.**

Exhibit 22: DCF valuations for major towercos - Indus Towers, BITL, RITL
(A) Indus Towers

Present value of free cash flows from FY2009-18E (Rs cr)	13,563
Present value of terminal value (Rs cr)	57,804
Total Enterprise Value (EV, Rs cr)	71,367
Less: Net debt (Rs cr)	8,304
Total Equity Value (Rs cr)	63,063
Total Equity Value (US\$ mn)	15,015

Bharti Airtel share

Equity value @ 42% (Rs cr)	26,486
Equity Value (US\$ mn)	6,306
Bharti Airtel number of shares (Cr)	190
Value per Bharti Airtel share (Rs)	140

Idea Cellular share

Equity value @ 16% (Rs cr)	10,090
Equity Value (US\$ mn)	2,402
Idea Cellular number of shares (Cr)*	323
Value per Idea Cellular share (Rs)	31

(B) Bharti Infratel (BITL) standalone

Present value of free cash flows from FY2009-18E (Rs cr)	1,177
Present value of terminal value (Rs cr)	7,690
Total Enterprise Value (EV, Rs cr)	8,867
Less: Net debt (Rs cr)	1,017
Total Equity Value (Rs cr)	7,850
Total Equity Value (US\$ mn)	1,869
Bharti Airtel number of shares (Cr)	190
Value per Bharti Airtel share (Rs)	41
Total value of tower business per Bharti Airtel share - Indus share + standalone (Rs)	181

(C) Reliance Infratel (RITL)

Present value of free cash flows from FY2009-18E (Rs cr)	3,598
Present value of terminal value (Rs cr)	27,230
Total Enterprise Value (EV, Rs cr)	30,828
Less: Net debt (Rs cr)	5,867
Total Equity Value (Rs cr)	24,961
Total Equity Value (US\$ mn)	5,943
RCOM number of shares (Cr)	216
Value per RCOM share (Rs)	116

Source: Respective companies, Industry, Angel Research; Note: We have assumed a Rupee-Dollar rate of Rs42 per Dollar for conversion into US Dollars; * After dilution on account of the Spice deal

Indian Broadband Sector - A sorry tale

Over the past 12 months, the sector has added over 102mn mobile subscribers, implying an average of over 8.5mn monthly net adds, a truly outstanding performance by any yardstick

The total number of broadband subscribers at the end of July 2008 stood at a mere 4.57mn, implying a broadband penetration of an abysmal 0.4%

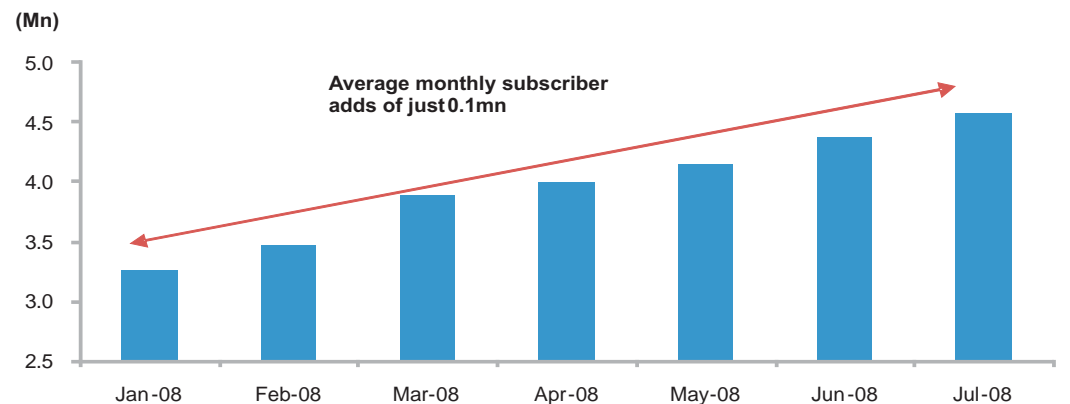
The total number of monthly subscriber additions recorded by the Mobile Sector in July alone is over double the entire broadband subscriber base

The story of the phenomenal growth of India's Mobile Telecommunications Sector is well known. Mobile subscribers, at the end of July 2008, stood at over 291mn, with monthly net additions crossing the 9mn-mark, an unprecedented achievement. Over the past 12 months, the sector has added over 102mn mobile subscribers, implying an average of over 8.5mn monthly net adds, a truly outstanding performance by any yardstick. The total subscriber base has grown by a superb 54% yoy. As mentioned earlier, heightened competition, expansion of coverage area, a continuous fall in minimum subscription costs and tariffs, and ever-increasing affordability have been the key factors driving this phenomenal growth.

However, in complete contrast to the Mobile Telephony Sector is the Broadband Sector. The growth of broadband internet access connections (access speeds in excess of 256kbps) has been pathetic, to say the least. The total number of broadband subscribers at the end of July 2008 stood at a mere 4.57mn, implying a broadband penetration of an abysmal 0.4%. In contrast, the two major Chinese telcos, China Telecom and China Netcom, have a combined broadband subscriber base of nearly 65mn, implying a broadband penetration of around 5%.

The annual growth rate of Indian broadband subscribers in July, while seemingly impressive at 85% yoy, masks the fact that the absolute numbers are miniscule, at just 2.1mn subscriber additions over the past 12 months, implying average monthly net adds of just 175,000. In fact, the total number of monthly subscriber additions recorded by the Mobile Sector in July alone is over double the entire broadband subscriber base, reflecting the disappointing progress reported on this front.

Exhibit 23: Indian broadband subscriber base - Slothful growth



Source: TRAI

This poor growth has been on account of a number of reasons including the slow growth of personal computers (PCs) in the country leading to abysmally low PC penetration (under 5%), greater affordability issues as compared with mobile phones and the reluctance of state-owned telcos to un-bundle their last-mile access infrastructure and share it with private telcos. To get an idea about how much India is lagging on the broadband front, it should be noted that the targeted

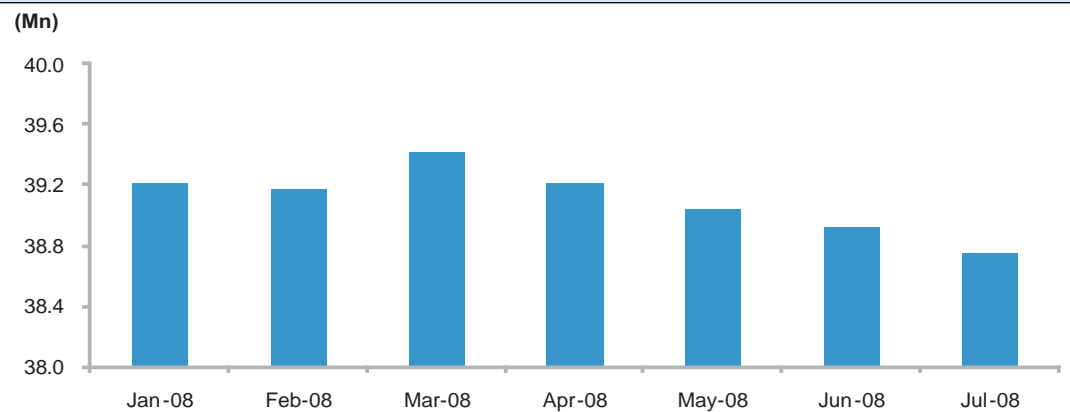
The current monthly net adds will need to increase by a factor of nearly three to achieve the government's ambitious target of 20mn broadband subscribers by 2010

number of broadband subscribers by the end of 2007 was 9mn, and the figure achieved at the end of July 2008 was barely over half of this target. The target for 2010 is 20mn, implying monthly net adds of 0.53mn from August 2008 till end-2010. However, rather than achieving these figures on a monthly basis, the current quarterly rate of broadband net adds is in the range of 0.5-0.6mn. Thus, the current monthly net adds will need to increase by a factor of nearly three to achieve the government's ambitious target of 20mn broadband subscribers by 2010.

Fixed Line subscriber base - The 'substitution effect'...

India's fixed line subscriber base has dwindled. With mobile telephony proving to be a considerably superior technology, there has been de-growth in the fixed line base, with many people surrendering their landlines in favour of mobile phones, given their greater convenience and affordability. In July 2008, the total number of fixed line subscribers in the country stood at just 38.76mn, implying a meagre penetration of 3.4%. In comparison, the combined fixed line subscriber base of the two major Chinese telcos, China Telecom and China Netcom, is over 322mn, implying a fixed line tele-density of close to 25%. On a yoy basis, de-growth of 2.8% was witnessed in the Indian fixed line subscriber base. This trend is likely to continue in the near future as well.

Exhibit 24: Indian fixed line subscriber base - The 'substitution effect' by mobile



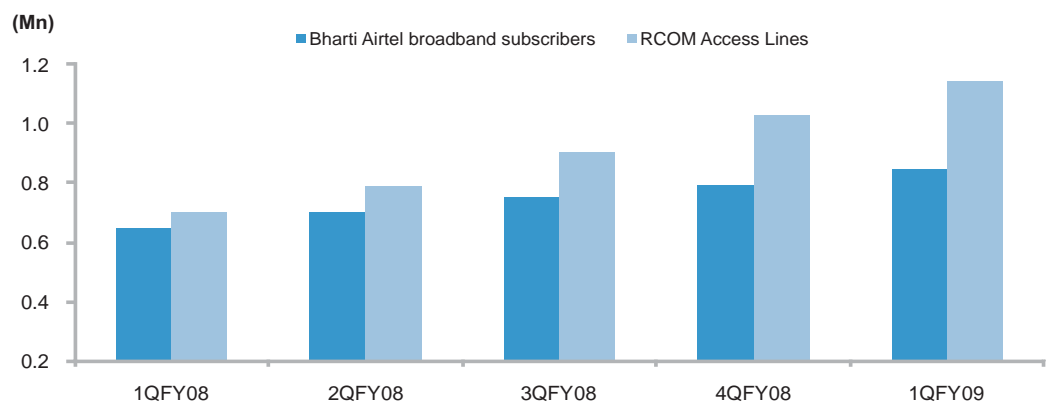
Source: TRAI

...but 'triple-play', value-added services provide hope

Going forward, to grow the fixed line subscriber base, it is necessary for telcos to introduce a greater number of value-added services such as broadband and 'triple play', that is, voice, data and video connectivity through a single line, also known as Internet Protocol Television (IPTV). Providing a greater number of broadband connections has the potential to reduce the 'digital divide' and drive higher GDP growth rates. If these issues are properly addressed, it will likely result in the fixed line subscriber base showing signs of decent growth.

As witnessed in the case of Bharti Airtel and RCOM, these private telcos have witnessed good growth in their respective fixed line subscriber bases driven partly by greater value-added services like broadband. Even as their respective mobile subscriber bases continue to grow, their focused strategies in the fixed line and broadband space have enabled them to grow these subscriber bases also at a decent rate. Pertinently, Bharti and RCOM are the largest private sector fixed line operators and were ranked third and fourth overall at the end of July 2008, with market-shares of 6.3% and 2.5%, respectively.

Exhibit 25: Bharti, RCOM broadband subscriber bases - Strong growth



Source: Respective companies, Angel Research

The move towards fully integrated entertainment companies

Major telecom companies are taking numerous initiatives to expand their suite of services and become 'fully integrated entertainment players'

While the Indian Mobile Sector continues to record impressive growth rates, major telecom companies are taking numerous initiatives to expand their suite of services and become 'fully integrated entertainment players' rather than remain merely telephone companies. Bharti Airtel, for example, targets to have a presence across the three 'screens of contact' with the customer, namely mobile, personal computer and television. This would consequently enable the company to tap a greater share of the entertainment spend of consumers. Similar is the case with RCOM.

Going ahead, services like DTH and IPTV are likely to be growth drivers for telcos like Bharti and RCOM, even as we do not expect them to account for a major portion of these companies' businesses at least over the next 2-3 years. Of the estimated 225mn households in India, there are 120mn TV homes. Of this, 75mn homes are cable and satellite (C&S) homes, implying that they are paying customers, while the balance 45mn homes are only Doordarshan (DD) homes, where cable does not reach.

Just 5% of TV viewing households in India (6mn) are served on digital cable (5mn through DTH, 1mn through CAS)

These 45mn homes can be tapped through DTH, a satellite-based medium, contingent upon the establishment of a distribution network in these areas. Apart from this, it is estimated that just 5% of the total TV viewing households in India (6mn) are served on digital cable, with around 5mn being served through DTH and 1mn through the Conditional Access System (CAS). Thus, 95% of households are currently served by Analog cable systems. The industry expects the

The industry size gets pegged at Rs27,000cr at the upper end, if all C&S households were assumed to go for DTH connections

total share of DTH households to touch 40% by FY2015 v/s 36% for analog cable systems, reflecting the significant growth potential ahead.

In terms of a total industry size, if we were to assume Rs250-300 per household per month as cable expenditure (ARPU), the industry size gets pegged at Rs27,000cr at the upper end, if all C&S households were assumed to go for DTH connections. Thus, the market size is significant and companies like Bharti and RCOM are in a good position to tap this opportunity by leveraging their vast distribution networks to reach a vast population base and also leverage on their existing mobile subscriber bases. These companies have greater variety in terms of the number of channels, superior MPEG-4 compression technology and greater flexibility. RCOM has already launched its DTH service under the BIG TV banner, while Bharti is scheduled to do so shortly. The DTH strategy will be a 'mass-market strategy' to be rolled out across the country.

IPTV (voice, data and video connectivity through one wire) meanwhile will be targeted at a niche market. ARPU in these services should be on the higher side. Thus, with the launch of these services, telcos will be able to further expand the solutions in their business portfolios and become truly integrated entertainment companies.

Recent Industry Developments

Announcement of 3G and BWA Policies

The government in August 2008 finally announced the much-awaited 3G and Broadband Wireless Access (BWA) Policies

The government in August 2008 finally announced the much-awaited 3G and Broadband Wireless Access (BWA) Policies. The Telecom Minister, Mr. A. Raja has said that the auction for 3G wireless spectrum will be completed very shortly before the end of this calendar year. The DoT is in the process of appointing an independent agency to carry out the global online auction. The agency will work out the modalities of the auction. 3G mobile services are expected to facilitate higher speeds and data throughputs, which enable the delivery of a wide range of multimedia services, including video telephony, e-commerce and television on mobile devices like handsets, smart phones and palm tops.

The main features of the policy are as follows:

3G Policy

- Any person holding a Unified Access Service license (UASL) can bid for 3G spectrum
- Further, a person who fulfills the eligibility criteria for obtaining UAS license can also bid for spectrum provided it has previous experience of running 3G telecom services
- Minimum base price of Rs2,020cr for pan-India 3G spectrum
- GSM 3G spectrum to be allotted in the 2,100 MHz band, while for CDMA services, the 1,900 MHz band is likely to be opened up for 3G spectrum auction
- CDMA players to be allotted 3G spectrum in the 450 MHz and 800 MHz bands, subject to availability and will be auctioned
- Successful bidders to get spectrum allotment for a period of 20 years

- 4-5 3G operators per circle likely, to be selected from the auction process
- 2-3 CDMA operators to be allotted 3G spectrum
- Operators per circle likely to go up to 10 in future, depending on spectrum availability
- However, the Delhi and Mumbai circles will have only 2-3 3G operators due to spectrum scarcity, of which one slot has been given to state-owned MTNL
- Each operator will get 2x5 MHz of 3G spectrum for W-CDMA (GSM 3G) services
- For CDMA2000 1xEV-DO (CDMA 3G) services, winning bidder will be allotted 2x1.25 MHz of spectrum and will have to match the price paid by the highest bidder for W-CDMA spectrum on a proportionate basis
- BSNL and MTNL have already been given 3G spectrum, MTNL in Mumbai and Delhi and BSNL in the rest of the country, but both companies will have to match the price offered by the highest bidder in the respective circles
- Foreign players will be allowed to bid, subject to prior 3G experience
- Foreign players will also have to pay Rs1,651cr for a UAS licence, apart from the auction amount
- Strict roll-out obligations for 3G services similar to 2G services - Minimum 90% in Metro areas and 50% in other categories (including 15% in rural areas) to be covered within 5 years from the date of allocation of spectrum
- No spectrum charges for 3G operators in the first year of operations and from the second year onwards, spectrum charges to be 1% of adjusted gross revenues
- Earnest money - 25% of the reserve price

Exhibit 26: Circle-wise reserve price for 3G spectrum

Telecom Circle	Reserve Price (Rs cr)	Number of circles	Total (Rs cr)
Mumbai, Delhi & Category 'A'	160	7	1,120
Kolkata & Category 'B'	80	9	720
Category 'C'	30	6	180
Total			2,020

Source: TRAI

BWA Policy

- Any person holding a UAS license or who fulfills the eligibility criteria or who holds a category 'A' or 'B' Internet Service Provider (ISP) license, can bid for spectrum for offering BWA services (WiMAX services)
- Minimum base price for pan-India BWA (WiMAX) spectrum to be 50% of that for 3G spectrum*
- Spectrum to be auctioned in the 2.5 GHz and 2.3 GHz bands for data services
- Spectrum in the 700 MHz and 3.3-3.6 GHz bands to be auctioned, subject to availability
- BWA spectrum auction winner to get 20 MHz spectrum
- Successful bidders to get spectrum allotment for a period of 15 years

- No spectrum charges for WiMAX operators in the first year of operations and from the second year onwards, spectrum charges to be 1% of adjusted gross revenues
- Earnest money - 25% of the reserve price

* Revised from 25% of 3G base price to 50% in September; both voice and data services allowed through WiMAX

Exhibit 27: Circle-wise reserve price for BWA spectrum

Telecom Circle	Reserve Price (Rs cr)	Number of circles	Total (Rs cr)
Mumbai, Delhi & Category 'A'	80	7	560
Kolkata & Category 'B'	40	9	360
Category 'C'	15	6	90
Total			1,010

Source: TRAI

Auction process

The auction would be conducted through a 'controlled, simultaneous, ascending e-auction process'. The guidelines have laid down the broad stipulations for e-auction process.

- If the number of bids is less than or equal to the number of spectrum blocks available, spectrum will then be allocated to all the bidders at the highest bid price
- If the number of bidders is equal to the number of spectrum blocks available, all the bidders would have to match the bid of the highest bidder
- If the number of bids is greater than the number of spectrum blocks available, spectrum allocation will then proceed further as per e-auction rules
- If any block is left vacant, it will be re-auctioned
- The auction process will be conducted service area-wise (circle-wise)

The Government hopes to rake in close to Rs30,000cr from the auction process

The successful bidders will be required to deposit 25% of the bid amount as deposit within 5 days of the close of the auction, failing which the earnest money will stand forfeited, with the balance to be deposited within 15 days. The Government hopes to rake in close to Rs30,000cr from the auction process. The launch of 3G services will enable operators to stem the fall in average revenues per user (ARPU), given that 3G services typically command higher ARPUs. However, a key negative is the limited slots available in Delhi and Mumbai, the most lucrative circles for 3G mobile services. This is likely to lead to aggressive bidding for these circles, given that even global operators will be participating in the 3G spectrum auction, which could lead to a high cost of service for end-users in case of over-bidding. It could be a negative for MTNL, which will have to match the price offered by the highest bidder.

A key negative is the limited slots available in Delhi and Mumbai, the most lucrative circles for 3G mobile services

The policy seems favourable for existing operators, as foreign operators will have to pay US \$393mn (Rs1,651cr) for the UAS licence apart from the auction amount

Apart from this, the policy also seems favourable for existing operators, as foreign operators will have to pay an additional US \$393mn (Rs1,651cr) for the UAS licence apart from the auction amount to be eligible to commence services. This seems discriminatory, given that if a player wanting to commence 2G services pays this amount, that player will be given a UAS licence and also 4.4 MHz of start-up GSM spectrum bundled with it, whereas foreign operators commencing 3G services will not be allotted this bundled 2G spectrum.

In a revision to the 3G Policy, the DoT has said that successful foreign bidders for 3G spectrum can acquire existing licence holders without waiting for the mandatory three years

It seems likely that by mid-2009 (1Q-2QFY2010), 3G mobile services would finally be available to the Indian populace

The BWA Policy will hopefully give a boost to the broadband subscriber base in the country

This move if accepted by the DoT, will likely intensify competition in the long distance segment and lower tariffs

Nonetheless, it is unlikely to put a significant strain on the latter's revenues, given the low PC penetration in the country

The move to allow unrestricted Internet Telephony is a positive for heavy users of telecom services and bandwidth, such as BPOs and ITES companies

In a revision to the 3G Policy earlier this month, the DoT has said that successful foreign bidders for 3G spectrum can acquire existing licence holders without waiting for the mandatory three years. This implies that foreign telcos who are successful in their 3G bids can now buy Indian operators without having to wait for 3 years, thus enabling them to offer both 2G and 3G mobile services. Apart from this, if a foreign player bags 3G spectrum and also acquires an existing operator, the telco would not have to pay the additional Rs1,651cr for the UAS licence.

Given the time-frame indicated by the government, it does seem likely that by mid-2009 (1Q-2QFY2010), 3G mobile services would finally be available to the Indian populace. Major mobile operators have indicated that their networks are GPRS/EDGE-enabled and thus, they will be able to launch 3G services within 2-3 quarters of receipt of spectrum.

The much-awaited BWA Policy will also hopefully give a boost to the growth of broadband subscribers in the country, which currently stand at a mere 4.57mn. It could also give a boost to applications like telemedicine and e-governance, so important for the faster growth and development of rural India.

Internet Telephony and Carrier Selection - To result in a further fall in long distance tariffs

The TRAI, with a view to ushering in reforms favouring technology neutrality, greater competition and technological advancements in the Indian Telecom Sector, came out with its recommendations permitting unrestricted internet telephony, or Voice over Internet Protocol (VoIP). This move, we believe if accepted by the DoT, will intensify competition in the long distance segment and lower long distance tariffs. As per the TRAI recommendations, the national long distance operators would be connected to ISPs through public internet and the two service providers would have a mutual agreement for the same. The move will permit calls from personal computers to fixed lines and mobile phones within the country. Currently, a voice call can only travel between two computers (PC-to-PC). This is expected to open up more revenue streams for ISPs. The Telecom Engineering Centre (TEC), the technical arm of the DoT, will work out the number plan for the ISPs to enable them to offer telephone services.

This could lead to a further fall in long distance tariffs, as ISPs can now give stiffer competition to telcos. Nonetheless, it is unlikely to put a significant strain on the latter's revenues, given the low penetration of PCs in the country. Thus, a relatively small proportion of their revenues are likely to get impacted in the event of some part of long distance traffic moving to PCs. It should also be noted that telcos like Bharti Airtel and RCOM themselves are allowed to offer VoIP services as part of their UASL. It can also open up newer revenue streams for these companies, such as increased carriage and termination revenues.

The move to allow unrestricted Internet Telephony is also a positive for heavy users of telecom services and bandwidth, such as BPOs and ITES companies, for whom telecom and bandwidth costs could further decline. Overall, this move is a step in the right direction, to introduce greater competition, drive down tariffs further, facilitate technological advancements in the Indian Telecom Sector and, eventually, would be pro-consumer.

TRAI has also recommended introduction of operator-specific calling cards for domestic and international long-distance calls

Apart from Internet Telephony, TRAI has also recommended the introduction of operator-specific calling cards for both domestic and international long-distance calls. In its recommendations to the DoT, the regulator has said that this move would allow subscribers to choose their service providers for both national and international calls. Thus, if accepted by the DoT, this move would effectively usher in an era of 'carrier selection', where the consumer will be able to choose his or her long distance operator irrespective of the telecom service provider/access provider.

This move would permit all NLD and ILD carriers such as Tulip Telecom and also non-telcos like GAIL to market their products directly to the consumer in the form of pre-paid package or through calling cards

This move would thus permit all national and international long-distance carriers such as Tulip Telecom, AT&T, British Telecom, France Telecom and Verizon, and also non-telcos like GAIL, Powergrid and RailTel to market their products directly to the consumer in the form of pre-paid package or through calling cards. After the 'Carrier Access Code' (CAC) has been put on the back-burner, as telcos have cited high implementation costs, this move seems a viable and consumer-friendly alternative method of carrier selection, as the costs are considerably lower and would just require a software on the Intelligent Networks (IN) of the telcos.

Both these initiatives, if accepted by the DoT, will lead to a fall in long-distance tariffs for consumers, who will certainly be the biggest beneficiaries

Both these initiatives, if accepted by the DoT, will lead to a fall in long-distance tariffs for consumers, who will certainly be the biggest beneficiaries. Thus, quite clearly, tariffs are far from 'rock-bottom' levels on the long distance side of the business. In fact, these moves could lead to some tariff innovations, such as flat rates or bundled offerings with a certain number of free minutes of use. The eventual impact of this could truly be 'the death of distance'.

Mobile Number Portability - A 'contingent liability'

The DoT in August 2008 issued guidelines for the introduction of MNP in India

The DoT in August 2008 issued guidelines for the introduction of Mobile Number Portability (MNP) in India. MNP is a service that allows customers to change their mobile service operators without having to go through the tedious process of changing their numbers. The Telecom Minister had mentioned that MNP would first start in the four metros in the next two months and would subsequently roll out in the rest of the country over the next 6-12 months.

The country will be divided into two MNP zones consisting of 11 service areas with two metros in each zone

As per the guidelines, the country will be divided into two MNP zones consisting of 11 service areas with two metros in each zone. The MNP service provider and telecom operators (Basic Service Operators, UAS licencees, Cellular Mobile Service Providers, NLD or ILD operators) would not be allowed to have equity (direct or indirect) stake in each other's operations. The government expects to distribute MNP licences shortly, which would cost Rs1cr and the eligible applicant would be required to have experience of operating successfully, a number portability solution for a mobile subscriber base of not less than 25mn in one or more countries for at least two years. According to the guidelines, the applicant company should have a minimum paid-up capital of Rs10cr on the date of application and a net worth of Rs100cr.

We believe implementation of MNP would be a negative for the sector

We believe the implementation of MNP would be a negative for the sector. Churn rates, already in the region of 4-5% monthly (pre-paid subscribers), are likely to increase further. Given the spectrum crunch in the key Metro service areas, on account of which call drops are frequent and QoS is poor, leading to low customer satisfaction rates, these areas in particular could witness higher churn rates. This is a negative, given the higher ARPUs and revenues that subscribers in these circles provide to operators. For example, while the Metro service areas

(excluding Chennai) accounted for just over 12% of Bharti Airtel's total mobile subscriber base at the end of June 30, 2008, these circles accounted for nearly 20% of the Adjusted Gross Revenues (AGRs) of the Mobile segment in 1QFY2009.

MNP introduction is also likely to result in higher subscriber acquisition and retention costs for operators. The likelihood of high-end post-paid subscribers and heavy users porting to other operators' networks is certainly not desirable for telecom operators and thus, in order to ensure that they stay connected to their networks, they will have to likely slash rates, offer more freebies and resort to large-scale bundled offerings and value-added services to retain their subscribers. Thus, the end-impact of this scenario is likely to be a fall in margins.

Global Examples of MNP implementation - A mixed experience

Globally, the introduction of MNP across different markets has witnessed a mixed response from customers

Globally, the introduction of MNP across different markets has witnessed a mixed response from customers. The push for MNP implementation has always been led by market regulators in an effort to provide mobile customers with the freedom to move between service providers and drive healthier competition. India is no different. In fact, operators have in the past opposed MNP on the grounds that there is already enough competition in the market place and that penetration is still at low levels. Nonetheless, in the interests of customers, this has been brushed aside. Globally also, mobile service providers have been opposed to MNP, fearing higher customer churn rates.

Exhibit 28: MNP implementation across different countries

Country	Implementation Date	Mobile penetration at the time of implementation (%)
Singapore	Apr-97	16
Hong Kong	Mar-99	48
Australia	Sep-01	61
Germany	Sep-02	71
USA	Mar-03	51
France	Jun-03	64
South Korea	Jan-04	70
Taiwan	Oct-05	92
Japan	Oct-06	74
Canada	Mar-07	58
India*	Dec-09	37

Source: Frost & Sullivan, Angel Research; * Assuming MNP is implemented in India by December 2009

Singapore was the first country to implement MNP in 1997

Globally, among the major countries, Singapore was the first to implement MNP in the year 1997, followed by Hong Kong in 1999, Australia in 2001, Germany in 2002, the US and France in 2003, South Korea in 2004, Taiwan in 2005, Japan in 2006 and Canada in 2007 (Refer Exhibit 28). These markets had already achieved, or were near, the 50% mobile penetration rate (with the exception of Singapore) during the implementation phase. In contrast, assuming that MNP is implemented in India by the end of CY2009, the estimated penetration rate for the country will be 37% (around 432mn mobile subscribers).

We take a couple of examples of MNP implementation to outline its contrasting impact.

In the Hong Kong market, MNP implementation led to increased competition and 32-33% of the total subscriber base at the time successfully ported their numbers

Hong Kong: In the Hong Kong market, MNP implementation may be considered successful as it managed to spur an extremely competitive mobile market, with as many as 6 operators competing for a market size of just 7mn. MNP came into effect in Hong Kong in March 1999. The number of successful porting applications rose sharply in the first three years of implementation, with around 32-33% of the total subscriber base at the time successfully porting their numbers. After these initial three years, the percentage stabilised. Service providers in this market experience fairly high churn rates, with monthly blended rates between 4-5%. In contrast, churn rates in the Indian market are already at similar levels even without the introduction of MNP, reflecting increased customer dissatisfaction levels and the inability of incumbent operators' networks to take the load of over 9mn monthly subscriber additions. This signifies a bleak scenario for operators going ahead, as MNP does get implemented.

In stark contrast to Hong Kong, Taiwanese service providers did not see a large increase in churn rates due to MNP implementation

Taiwan: In stark contrast to Hong Kong, Taiwanese service providers did not see a large increase in churn rates due to MNP implementation. Since MNP was implemented, the monthly number of successful porting applications for the first nine months post the implementation of MNP in October 2005 was below 0.3% of the total mobile subscriber base, which is fairly insignificant. On the contrary, the Taiwanese incumbent, Chunghwa Telecom (Chunghwa) actually managed to reduce its churn rate after the introduction of MNP. Chunghwa's 2G monthly churn rate was 1.25% October 2005 and was stable at 1.27%, 1.08% and 1.12% respectively, for the next three months. The other two established service providers, Taiwan Mobile and Far EasTone Telecommunications also did not experience major issues in retaining customer loyalty. This was on account of the fact that they already offered a vast range of products and services similar to competition. Thus, customers saw little incentive to change their service providers. Apart from this, there is a long waiting period of up to four working days for number porting to become effective from the date of activation of the process. Besides, many subscribers are on long-term service contracts, and this helps in preventing large-scale porting.

Conclusion

We believe Bharti Airtel and RCOM would be less impacted, given larger scale and country-wide networks

We expect the introduction of MNP to be a negative for the Indian Telecom Sector and for the stocks as well, while it would be beneficial for customers. In terms of a company-specific impact, we believe Bharti Airtel and RCOM would be less impacted, given their larger scale and country-wide networks. RCOM, in particular, has an advantage over competition, given that it has a 'near-captive' CDMA subscriber base. Companies like Idea Cellular, given their lower scale as compared with Bharti and RCOM, are likely to be impacted more. Overall, we believe that MNP will only be an additional 'pressure point' for Telecom companies. It should be noted that we have not factored in the impact of MNP implementation in our estimates, given that the time-frame of implementation of the system is still unclear. Nonetheless, based on global experience and examples, as and when MNP does get implemented, ball-park estimates suggest a potential 200-300bp negative impact on the Margins of Indian Telecom companies, which would consequently lead to EPS declines to the tune of 7-10%.

As and when MNP is implemented, ball-park estimates suggest a 200-300bp negative impact on Margins, which would reduce EPS by around 7-10%

Outlook

The Indian Mobile Telecom Sector has grown at a robust rate over the past few years, clocking an excellent 84% CAGR over FY2002-08. Going ahead, we expect good growth in the Indian mobile subscriber base over the next 2-3 years. However, the business environment, which in any case has never been benign in the Telecom Sector, is likely to become even more challenging. The key factors that are likely to lead to this in our view include a secular fall in ARPUs and slowing subscriber growth, leading to slowing Top-line growth, increasing competition, which could further queer the pitch for tariffs, higher network expansion costs, all leading to margin pressure and regulatory risks.

In light of more challenging times ahead, any chances of a major re-rating of the sector appear slim, in our view

On account of these concerns, Telecom stocks have been de-rated over the past year in spite of robust growth in their financials. In light of the current scenario and more challenging times going ahead, any chances of a major re-rating of the sector appear slim, in our view. Nonetheless, we believe at these levels, with stocks trading at close to the bottom-end of historical valuations, and continuing decent growth expected in earnings, good RoEs and capital productivity, downside risks appear limited. Apart from this, there is strong embedded value in the form of towerco valuations for the companies under our coverage, which provides some cushion.

Bharti Airtel - Sector Top Pick

Bharti Airtel is our top pick in the Telecom sector

Bharti Airtel is our top pick in the Telecom sector, given its flawless execution track record, market leadership position in the fastest-growing telecom market in the world, rapidly growing other business segments like long distance and enterprise, and strong embedded value in the form of its tower business, Bharti Infratel, through both its stake in Indus Towers and the stand-alone tower portfolio. **We maintain a Buy on Bharti Airtel, with a Target Price of Rs1,105**, including Rs924 as the value of the core business and Rs181 as the value of its towerco, Bharti Infratel (standalone + value of its 42% stake in Indus Towers).

Idea Cellular is rapidly moving towards becoming a pan-India player following the acquisition of Spice Communications and roll out in Mumbai, with Bihar, Tamil Nadu (including Chennai) and Orissa scheduled to follow. Its execution track record is enthusing in spite of not being a pan-India player and having a much smaller balance sheet. Apart from this, there is strong embedded value in the form of its stake in Indus Towers. **We maintain a Buy on Idea Cellular, with a Target Price of Rs104**, including Rs73 as the core business value and Rs31 as the value of its 16% stake in Indus Towers.

RCOM also stands to benefit from the strong growth in the mobile space, being the second-largest player and on account of its forthcoming pan-India GSM roll-out. Its strong position in the enterprise and global businesses also holds it in good stead, apart from the embedded value of its towerco, Reliance Infratel. **We maintain a Buy on RCOM, with a Target Price of Rs595**, including Rs479 as the core business value and Rs116 as the value of its towerco, Reliance Infratel.

Exhibit 29: Comparative Valuations - The market leader comes out on top

Particulars	Bharti Airtel	RCOM	Idea Cellular
Operating Ratios			
Sales (FY2010E, Rs cr)	48,522	29,085	14,856
PAT (FY2010E, Rs cr)	10,965	7,383	1,814
Sales CAGR (FY2008-10E, %)	34.0	24.3	48.7
PAT CAGR (FY2008-10E, %)	27.9	16.9	31.9
EBITDA Margins (FY2010E, %)	40.9	42.0	31.0
Market share (FY2010E, %)	25.2	19.5	12.8
ARPU (FY2010E, Rs/month)	310	263	244
Return Ratios (FY2010E, %)			
RoE	31.0	21.2	13.7
RoCE	23.1	12.6	21.7
Valuation Ratios (FY2010E, x)			
P/E	13.8	10.9	14.5
EV/EBITDA	7.2	8.3	5.0
Sales/GFA	0.8	0.3	0.7

Source: Respective companies, Angel Research

In terms of comparative valuations, Bharti Airtel clearly comes out on top across most metrics, either operating or financial ratios. The company is comfortably the market leader with a fair distance separating it from the second-largest player, RCOM. This is in spite of the fact that the Indian Mobile market is arguably the most competitive in the world. It also enjoys the highest ARPUs among the lot. Its EBITDA Margins are also robust.

The market leader is the most capital-efficient company of the lot, with the highest RoE and RoCE versus both RCOM and Idea and its Sales-to-Gross Fixed Asset (Sales-GFA) ratio is the best, implying a higher asset turnover ratio. Going ahead also, the company is expected to witness robust growth rates even on a fairly high base, implying impressive execution skills. We expect Bharti to maintain its consistently best-in-class execution skills going forward as well.

Overall, given the superior operating and financial metrics of Bharti versus its competitors, and the valuation profile of the company, we believe the stock offers the best value for potential investors. Thus, we would stick with the market leader in the sector, leading to the stock being our Top Pick.

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Companies

BUY

Price	Rs799
Target Price	Rs1,105
Investment Period	12 Months

Stock Info

Sector	Telecom
Market Cap (Rs cr)	1,51,677
Beta	0.76
52 Week High / Low	1,149 / 688
Avg Daily Volume	677895
Face Value (Rs)	10

BSE Sensex	14,042
Nifty	4,245

BSE Code	532454
NSE Code	BHARTIARTL
Reuters Code	BRTI.BO
Bloomberg Code	BHARTI IN

Shareholding Pattern (%)

Promoters	66.5
MF / Banks / Indian FIs	5.7
FII / NRIs / OCBs	24.2
Indian Public / Others	3.6

Abs.	3m	1yr	3yr
Sensex (%)	(6.9)	(14.0)	66.3
Bharti (%)	(0.7)	(9.8)	121.6

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Moving into the next orbit

Bharti Airtel has moved to a new trajectory over the past few years. As the Indian Mobile Telephony story has played out, the market leader has strengthened its position. Apart from Mobile, the company has also grown its other businesses, namely Fixed Line, Telemedia, Enterprise and Long Distance. Bharti has also hived off its passive telecom infrastructure assets into Bharti Infratel, which has strong scope for growth leading to strong embedded value. At the CMP, the stock trades at a P/E of 13.8x FY2010E EPS, EV/EBITDA of 7.2x FY2010E EBITDA and an EV/subscriber of US \$213.4 on our FY2010E subscriber base. We maintain a Buy on the stock, with a Target Price of Rs1,105, including Rs924 as the value of the core business and Rs181 as the towerco valuation.

■ **Definitive play on the Indian Mobile Telephony story:** Bharti Airtel has been a key beneficiary of the Indian Mobile Telephony story. The company has maintained its market leadership after regaining the top position from the then top player in May 2006 and had as many as 35% more subscribers than the second-ranked player at the end of FY2008. Over FY2006-08, Bharti cornered 26.5% of the all-India incremental mobile subscriber additions, with its subscriber base growing 3.2x over this period.

■ **Strong embedded value through Infratel and Indus:** Bharti has hived off its passive telecom infrastructure into a subsidiary, Bharti Infratel, which also holds a 42% stake in Indus Towers, a joint venture between itself, Vodafone-Essar and Idea Cellular. The Telecom Infrastructure Business in India seems primed for good growth going ahead, with key drivers in place for increasing infrastructure sharing between operators. Bharti, with the largest tower portfolio in India through Infratel, is likely to be a prime beneficiary.

■ **Good progress being made on the Spectrum issue:** The critical Spectrum issue has seemingly been resolved at least in the short-term, with Bharti and other operators receiving spectrum in a few circles. This will take care of the medium-term growth requirements of the telco. With the Department of Telecommunications also announcing the 3G and Broadband Wireless Access (BWA) Policies, we believe Bharti is best-positioned to offer pan-India 3G/mobile broadband services, opening up newer revenue generation streams that can stem ARPU decline.

Key Financials (Consolidated)

Y/E March (Rs cr)	FY2007	FY2008	FY2009E	FY2010E
Net Sales	18,520	27,025	37,809	48,522
% chg	59.4	45.9	39.9	28.3
Net Profits	4,257	6,701	8,705	10,965
% chg	88.6	57.4	29.9	26.0
EPS (Rs)*	22.4	35.3	45.9	57.8
EBITDA Margin (%)	40.2	42.1	40.7	40.9
P/E (x)	35.6	22.6	17.4	13.8
RoE (%)	37.4	37.4	33.0	31.0
RoCE (%)	23.6	22.0	22.7	23.1
Sales/GFA (x)	0.7	0.7	0.7	0.8
EV/EBITDA (x)	20.9	13.7	9.8	7.2
Mobile ARPUs (Rs/user/month)	416	366	330	310

Source: Company, Angel Research; * Fully diluted EPS

Company Background

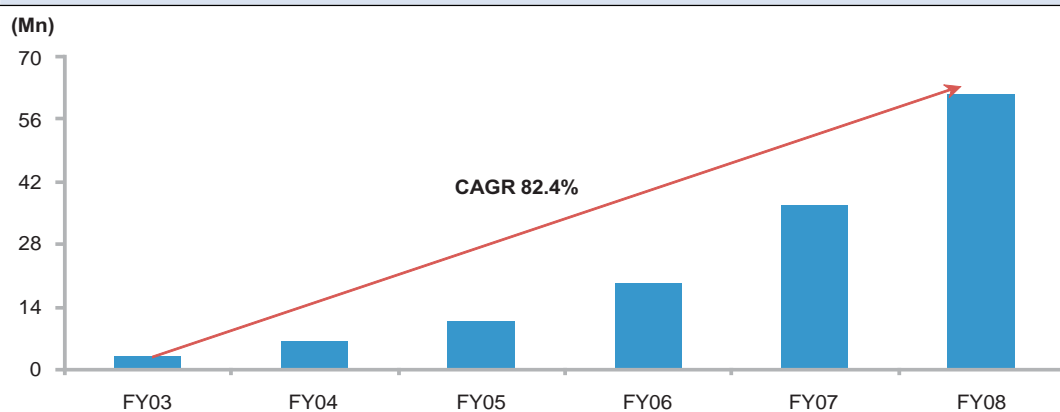
Bharti Airtel is India's leading private integrated telecom solutions provider

Bharti Airtel is India's leading private integrated telecom solutions provider offering mobile, landline, broadband internet (Telemedia), enterprise voice and data, national and international long distance services. The company is the largest provider of GSM-based mobile services in India, with 72.1mn subscribers at the end of July 31, 2008. Bharti is also in the process of launching DTH and IPTV services shortly in its attempts to become an integrated entertainment company with a presence across all three 'screens of contact' with the consumer namely mobile, personal computer and television. The company also provides passive infrastructure services to telecom operators across the country through its recently hived off subsidiary, Bharti Infratel. Bharti has divided its operations into the following strategic business units:

The Mobile Services Business accounted for 70% of Gross Revenues in FY2008

- Mobile Services** - This business accounts for the largest share of Bharti's revenues (approximately 70% of Gross Revenues in FY2008, 64% in 1QFY2009). The company provides cellular mobile services through this business unit and is the market leader in the Indian Telecom Industry, with a total mobile subscriber base of 72.1mn at the end of July 2008 and overall market-share of 24.8% (excluding BSNL and MTNL CDMA-WLL subscribers).

Exhibit 1: Bharti Airtel - Mobile subscriber base soaring ahead



Source: Company, COAI, Angel Research

Bharti's mobile subscriber base has grown at a CAGR of 82% over FY2003-08

Bharti's mobile subscriber base has grown at a scorching CAGR of over 82% over FY2003-08, which has been the highlight of the company's performance over the past few years. Gross Revenues of the Mobile Services Business, on the other hand, have grown at a CAGR of 73% over the mentioned period. The fact that Revenue growth has lagged subscriber growth clearly implies falling ARPUs and these have witnessed a CAGR decline of 7% over the mentioned period. The company has arguably the widest network coverage in the country, with a presence in 5,048 census towns and 364,287 non-census towns at the end of June 30, 2008, covering 74% of India's total population.

At the end of FY2008, Bharti had 2.28mn customers in its Telemedia business

- Telemedia Services:** Bharti provides broadband and telephone services in 94 cities across India. At the end of FY2008, Bharti had 2.28mn customers in this business, of which 34.8% were broadband subscribers (2.39mn and 35.6% respectively, at the end of 1QFY2009).

Bharti has grown its Telemedia Gross Revenues at a CAGR of over 52% over FY2003-08

Bharti has grown its Telemedia subscriber base at a CAGR of around 44% over FY2003-08, while Gross Revenues clocked a CAGR of over 52% over the same period. This denotes improving average revenues per line (ARPLs), which have grown at a CAGR of over 1% over the mentioned period. Bharti is also in the process of launching two new businesses - DTH and IPTV - with a view to becoming an integrated entertainment company. Bharti targets to have a presence across all three 'screens of contact' with the consumer namely mobile, personal computers and television. This would further enhance ARPUs.

- **Enterprise Services** - This business unit has two sub-units - Carriers (long-distance services) and Corporates. The Carriers sub-unit provides national and international long-distance services (NLD and ILD). Bharti has a 78,540 km-long optical fibre network across the country connected with its two international submarine cable landing stations in Chennai for Network i2i and SEA-ME-WE-4 (owned by a consortium of telecom operators including Bharti). Bharti has also made investments in cable systems like Unity Cable System, Asia America Gateway and more recently, Europe India Gateway, which will provide alternative routes for voice and data traffic in eventualities like the recent cable cut on SEA-ME-WE-4.

Gross Revenues of the Carriers segment grew at a CAGR of 42.5% during FY2003-08

Overall Gross Revenues of the Carriers segment grew at a CAGR of 42.5% over FY2003-08 primarily driven by strong volume growth (MoUs). In FY2008, MoUs increased by 81% yoy (74.2% yoy in 1QFY2009). However, Gross Revenues grew by a slower 24% yoy (70.4% yoy in 1QFY2009) due to a 32% yoy fall in Revenues per Minute (RPMs) (2.2% yoy fall in 1QFY2009).

Gross Revenues of the Corporate segment grew at a CAGR of over 60% during FY2003-08

The Corporate sub-unit provides integrated voice and data communication solutions to major corporates and small and medium enterprises (SMEs). The company's portfolio of solutions includes mobile, fixed line, broadband & internet, long distance services, IPLC, access services (last mile connectivity), managed services, MPLS-VPN, E-business and VSAT. Gross Revenues of the unit grew at an impressive CAGR of over 60% during FY2003-08.

Bharti Airtel hived off its passive telecom infrastructure assets into Bharti Infratel wef. January 31, 2008

- **Passive Infrastructure Services:** Bharti Airtel hived off its passive telecom infrastructure assets into Bharti Infratel, with effect from January 31, 2008. The rationale was to lighten capex load on Bharti Airtel's balance sheet and improve efficiencies. This is an extension of the telco's strategy to remain focused on branding and marketing of telecom services. Bharti Infratel holds the entire tower portfolio of Bharti Airtel.

Bharti Infratel had 58,013 towers as on June 30, 2008

Bharti Infratel had 58,013 towers as on June 30, 2008. Of this, 30,000 towers would be transferred to Indus Towers, a joint venture between itself, Vodafone-Essar and Idea Cellular. Bharti Airtel holds 42% stake in Indus through Bharti Infratel and Indus will undertake network expansion for all the three telcos across 15 of the 22 telecom circles in the country (Tamil Nadu and Chennai counted as one circle). These circles exclude Madhya Pradesh and the 6 'C' category circles. As for the 7 circles in which Indus will not operate, Bharti will drive its network expansion process through Bharti Infratel (ex-Indus). For the quarter ended June 30, 2008, the second quarter when Bharti released segment-wise details of Infratel, the towerco recorded Gross Revenues of Rs1,056.3cr and EBITDA Margins of around 36.6%.

Investment Argument

The definitive play on the Indian Mobile Telephony story

Bharti Airtel continues to impress and out-perform the mobile sector with its performance on the subscriber additions front. The company has shown no let-up whatsoever in terms of its monthly subscriber additions. Through outstanding execution excellence and focused network roll-outs into the deepest nooks and corners of India, Bharti has been able to sustain its market leadership comfortably, even in the face of significant competitive intensity from strong and reputed players like Reliance Communications (RCOM), Vodafone-Essar and BSNL. The company's impressive performance reflects the 'first-mover advantage' that it enjoys over competition, given its network coverage, which is arguably the vastest in the country, covering 5,048 census towns and 364,287 non-census towns at the end of June 30, 2008, with a total coverage of 74% of India's population.

India's Telecom sector is divided into 22 telecom circles, of which New Delhi, Mumbai and Kolkata are classified under the 'Metro' category. These cities are high-potential telecom circles. The second circle category is the 'A' circle, which comprises states where industrialisation and per capita income levels are high, namely Maharashtra, Gujarat, Andhra Pradesh, Karnataka and Tamil Nadu (including Chennai). Tamil Nadu and Chennai are now one circle, but for reporting purposes, subscribers are shown separately. The 'B' category of circles comprise states where there still exists good growth potential like Punjab, West Bengal, Uttar Pradesh and Rajasthan, among others. The 'C' category states include the ones with the least per capita income such as Assam, the North-East, Jammu & Kashmir, Bihar, Orissa and Himachal Pradesh.

Exhibit 2: Bharti Airtel - Expanding presence across the country

Particulars	FY2001	FY2002	FY2003	FY2004*	FY2005	FY2006
Metros						
Circle	4	4	4	4	4	4
Present in	2	3	4	4	4	4
'A' circle						
Circle	5	5	5	5	5	5
Present in	2	2	5	5	5	5
'B' circle						
Circle	8	8	8	8	8	8
Present in	None	1	5	5	8	8
'C' circle						
Circle	5	5	5	6	6	6
Present in	1	1	1	1	6	6
All-India						
Circle	22	22	22	23	23	23
Present in	5	7	15	15	23	23

Source: Company, Angel Research; Note: Chennai and Tamil Nadu are now one circle, but for reporting purposes, are shown separately; * In FY2004, Jammu & Kashmir was opened up to private cellular players

Bharti has expanded its network across the country in an organised manner. The company's network roll-outs have been highly consistent and have always moved according to plan. After tapping the high-potential metros first, the company has moved further down the pyramid into the other circles of the country, through organic as well as inorganic means. Thus, Bharti's execution has been excellent, which has enabled it to grow at a faster rate than peers and resulted in it retaining its market leadership position.

Consistent performance on the market-share front

Bharti Airtel has consistently gained market-share over the years on account of its superior execution skills. On account of its ability to manage the high levels of execution risk associated with the Telecom Sector, it has been able to outpace the industry growth rate. The company was the first to achieve the unprecedented 2mn-mark in monthly net mobile subscriber additions and has not looked back since.

Over the last four fiscals, Bharti has gained 533bp in marketshare

Over the last four fiscals, Bharti has gained an impressive 533bp in market-share from 18.9% in FY2004 to 24.2% in FY2008 (24.6% in 1QFY2009). This is all the more commendable given the fact that it was in FY2004 that RCOM launched its full-fledged mobile services and became the market leader in a mere seven months of the launch. In FY2004, Bharti had lost 443bp in market-share owing to RCOM's launch blitzkrieg. However, since then, the telco has consistently gained share each fiscal and in May 2006 overtook RCOM to regain the market leadership position. Thereon, Bharti has consistently gained ground over RCOM and other rivals like Vodafone-Essar and BSNL.

Exhibit 3: Bharti Airtel - Steadily gaining the lead across circles

Particulars	FY2004	FY2005	FY2006	FY2007	FY2008
Metros					
Circle leader	Hutch*	Hutch*	Hutch*	Bharti	Bharti
Market share (%)	27.7	24.5	22.6	22.1	22.1
'A' circle					
Circle leader	RCOM	BSNL	Bharti	Bharti	Bharti
Market share (%)	19.8	19.5	20.7	24.3	25.7
'B' circle					
Circle leader	RCOM	RCOM	BSNL	BSNL	Bharti
Market share (%)	23.3	22.7	23.3	22.0	20.6
'C' circle					
Circle leader	Reliance Telecom#	BSNL	BSNL	Bharti	Bharti
Market share (%)	49.6	41.3	38.5	33.3	35.3
All-India					
Market leader	RCOM	RCOM	RCOM	Bharti	Bharti
Market share (%)	22.5	21.2	21.0	23.0	24.2

Source: COAI, AUSPI, Angel Research; Note: Market-share is calculated excluding BSNL and MTNL CDMA-WLL subscribers; * Now known as Vodafone-Essar; # The GSM arm of RCOM

On a circle-wise basis, at the end of FY2008, Bharti Airtel was the market leader across all four circle categories

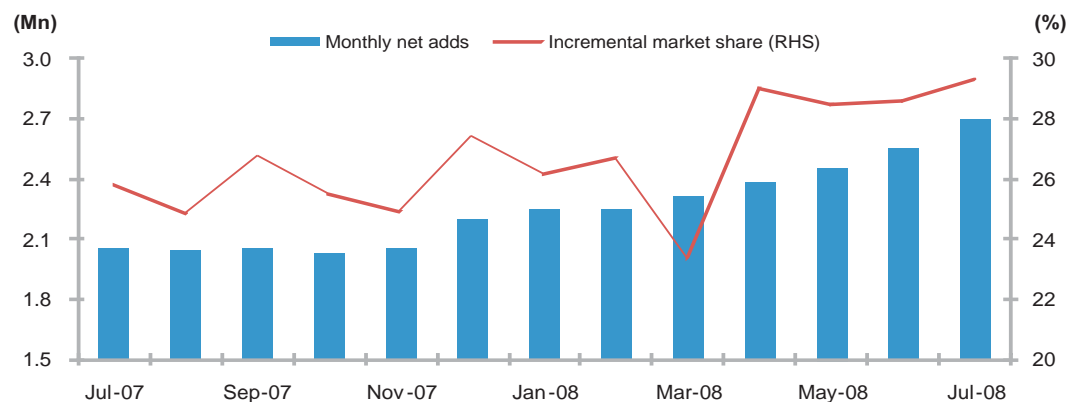
On a circle-wise basis, at the end of FY2008, Bharti Airtel was the market leader across all four circle categories, viz. Metros, 'A' circle, 'B' circle and 'C' circle (Refer Exhibit 3). This is the first time when the company has become a leader across all circle categories. As a matter of fact, it was only in FY2006 that Bharti actually became a circle category leader in any circle category ('A' circle). Since then, the company has slowly and steadily gained share across all circles through planned network roll-outs across the length and breadth of the country. Bharti was the first company to have a pan-India presence by the end of FY2005 and since then, deeper network roll-outs have enabled the company to become the market leader and widen the gap over its competitors.

This is no mean task and should be seen in context of the fact that the roll-out requirements in a country as large and diverse as India are very significant indeed. Apart from the sheer size of the network roll-out required, multiple challenges are faced by telecom operators, such as poor quality of infrastructure (bad roads, irregular and erratic power supply, lack of sanitation facilities) in rural India, which is the future bastion of growth, and the time taken for network roll-out, with as many as 40 different approvals required for setting up telecommunication towers. Thus, in spite of such significant challenges faced, as well as increasing levels of competitive intensity from other telecom majors, Bharti has managed to soar ahead of the rest of the pack and retain market leadership in the Indian Telecom Market, the fastest-growing in the world.

Monthly subscriber adds continue to power ahead

Bharti Airtel has consistently recorded rising monthly mobile subscriber additions over the past many months now. Thus, its strong focus on network expansion has led to impressive monthly net adds. In fact, since July 2007, when Bharti hit the 2mn-mark in net adds for the first time, the company has not looked back. In 2QFY2008, the company crossed the 6mn quarterly net adds mark, which has steadily risen even further and crossed 7mn (7.4mn) in 1QFY2009.

Exhibit 4: Monthly subscriber adds, incremental market-share over the past year



Source: COAI, AUSPI, Angel Research

Thus, due to its outstanding execution capabilities, Bharti now records a monthly net adds run rate of nearly 2.7mn (July 2008), by far the highest in the industry. This is 31% higher than the figure achieved a year ago in July 2007, reflecting the phenomenal growth achieved by Bharti in this time-frame. Year-on-year, Bharti's subscriber base is higher by an impressive 61%.

Exhibit 5: Bharti Airtel - Mobility Operating Metrics - Improving by the quarter

Particulars	1QFY08	2QFY08	3QFY08	4QFY08	1QFY09	CQGR (%)
Census towns (Nos.)	4,855	4,876	4,902	5,023	5,048	-
Non-census towns & villages (Nos.)	243,854	290,000	320,623	342,623	364,287	-
Population Coverage (%)	62	65	68	71	74	-
Mobility Revenues (Rs cr)	4,697.6	5,057.9	5,610.5	6,420.1	6,915.0	10.1
EBITDA Margins (%)	40.6	41.0	40.8	35.5	30.7	-
Subscriber base (Mn)	42.7	48.9	55.2	62.0	69.4	12.9
Quarterly net adds (Mn)	5.6	6.2	6.3	6.8	7.4	-
Avg. monthly net adds (Mn)	1.9	2.1	2.1	2.3	2.5	-
Gross ARPUs (Rs/month)	392.2	368.2	359.5	365.4	350.9	(2.7)
Market share (%)	23.6	23.8	24.1	24.2	24.6	

Source: Company, COAI, AUSPI, Angel Research; Note: Market-share calculated excluding BSNL and MTNL CDMA-WLL subscribers

Mobile Revenues have clocked a 10% CQGR over the past four quarters

Bharti Airtel's performance has been superlative in its Mobile Services Business, with Revenues posting a compounded quarterly growth rate (CQGR) of over 10% over the past four quarters. If we take a longer time frame of eight quarters, the CQGR improves to 11.8%. This has been driven by the excellent growth in the subscriber base, which has averaged nearly 13% CQGR over the past four quarters and around 15% CQGR over the past eight quarters.

Over the past four quarters, Bharti's population coverage has risen from 62% to 74%

The consistent and well thought-out network expansion plan has been chiefly responsible for Bharti's consistently improving performance on this front. Over the past four quarters, Bharti's population coverage has risen from 62% to 74%. Eight quarters ago, the company covered just 46% of the country's population. In terms of presence, the company's presence in non-census towns and villages has increased by nearly 50% over the past four quarters (from 243,854 to 364,287) and by a substantial 258.5% over the past eight quarters, reflecting its deepening reach into rural India.

Bharti has increased its market-share by 103bp over the past four quarters and by 348bp over the past eight quarters

Revenue growth has trailed subscriber growth on account of falling ARPUs. However, these have fallen at an acceptable rate of 2.7% CQGR over the past four quarters and at 2.9% CQGR over the past eight quarters, reflecting the company's ability to restrict a major fall in this metric in spite of a significant portion of its incremental subscribers being rural. In terms of market-share, Bharti has increased its share by 103bp over the past four quarters and by an even more impressive 348bp over the past eight quarters, reflecting top quality execution skills amid fierce competition.

Scale benefits, higher MoUs justify falling RPMs

The Indian Telecom Industry, arguably the most competitive in the world, has witnessed consistently falling tariffs, as mobile operators attempt to garner maximum users and usage. Given such incredibly high levels of competition, with 6-7 operators per circle competing for a piece of the pie and with newer operators also waiting to enter, which is likely to further queer the pitch, pricing completely ceases to become a differentiator of any kind whatsoever. As and when one operator makes a move to cut tariffs, within a very short period of time, virtually all other operators follow suit.

Pricing is not a differentiator in the Telecom Sector

A recent example of this is the 43% cut in long distance tariffs by Bharti Airtel from Rs2.65 per minute to Rs1.50 per minute. The market leader also cut incoming roaming charges by nearly 43% from Rs1.75 per minute to Re1 per minute. Within a few days, Vodafone-Essar did likewise, cutting STD rates even further to Rs1.30 per minute, while cutting incoming roaming charges to similar levels as Bharti. RCOM had also launched unlimited STD at Rs440 a month for post-paid users, while prepaid customers can make unlimited STD calls at Rs496 a month for calls within the network (on-net calls). Thus, it is apparent that pricing is not a differentiator in the sector.

Bharti has justified a secular fall in tariffs by higher usage, with its MoUs per user per month seeing a steady rise

Consequently, with such a competitive scenario leading to constant pressure in realisations, such a fall must be justified by higher usage and scale benefits. Bharti has clearly witnessed a positive trend on this front, with its Minutes of Usage (MoUs) per user per month seeing a steady rise albeit with some quarterly aberrations. But, in general, the company has seen an upward trend. Revenues per Minute (RPMs) have fallen steadily with each quarter, which is justified by increasing usage and greater scale of operations.

Exhibit 6: Increasing MoUs reflect strong demand elasticity

Particulars	1QFY08	2QFY08	3QFY08	4QFY08	1QFY09
Mobility Revenues (Rs cr)	4,697.6	5,057.9	5,610.5	6,420.1	6,915.0
Subscriber base (Mn)	42.7	48.9	55.2	62.0	69.4
Gross ARPUs (Rs/month)	392.2	368.2	359.5	365.4	350.9
Total Minutes of Usage (MoUs, Mn)	57,125	64,375	73,840	89,058	105,217
Average MoUs per user per month	477	469	473	507	534
Revenues per Minute (RPMs, Rs)	0.82	0.79	0.76	0.72	0.66

Source: Company, COAI, Angel Research

Bharti believes that elasticity of demand will still be greater than 1x

Overall, Bharti has witnessed strong demand elasticity through increasing MoUs. Going ahead, the company is of the view that elasticity of demand will still be greater than 1x (i.e., for every 1% fall in tariffs, usage will increase by more than 1%). This has been attributed to a number of factors. Bharti believes there is still significant pent-up urban demand that can be tapped through simplicity of tariff plans. In fact, simplicity is the third 'plank' on which Bharti's business model is based, the first two being 'Availability' (presence through network expansion) and 'Affordability' (falling tariffs through scale benefits and passing on cost savings to the consumer).

The fixed line tele-density of India stood at an abysmal 3.5% at the end of July 2008

Apart from this, fixed line tele-density of India stood at an abysmal 3.5% at the end of July 2008 (just 38.8mn subscribers as per TRAI data). As a result, it is apparent that large swathes of the country have still to be connected and have absolutely no means of communication whatsoever. Thus, for these crores of people, mobile is the only means of communication available and as and when they get connected, 100% of their telecommunication expenses would be towards mobile services, leading to tremendous pent-up demand in such regions.

With urbanization fast becoming a reality in India and significant levels of migration being witnessed from villages to cities, the need arises for local and long distance calling from migrant labourers, as these people, who are in the cities, would need to contact their kith and kin who are in the villages. With strong GDP growth being witnessed, the per capita GDP would also see a rise, leading to ever-increasing spending on telecom services, particularly mobile, given its inherent technological superiority over fixed line. Thus, these are some of the major reasons that lead to the confidence that Bharti has in the demand elasticity being greater than 1x.

Refer Annexure 1, Exhibit 1 for Herfindahl-Hirschman Index - Circle-wise analysis.

Unlocking of Towerco business leads to strong embedded value

Bharti Airtel, on January 31, 2008, hived off its passive telecom infrastructure assets into a company called Bharti Infratel, which holds the entire tower portfolio of the telco. It has also formed a joint venture with Vodafone-Essar and Idea Cellular called Indus Towers in which it owns 42%. Indus will drive the network expansion process for these three cellular majors in 15 telecom circles excluding Madhya Pradesh and all the six 'C' category circles. Meanwhile, Bharti Infratel (ex-Indus) will drive Bharti's network expansion process in the circles where Indus does not have operations viz., Madhya Pradesh and the six 'C' category circles.

With incremental expansion focused towards rural India, a host of problems crop up, such as poor quality of infrastructure and erratic power supply

The concept of infrastructure sharing is taking off in India. There are several pressing factors that have led to the ever-increasing urgency for telcos to share infrastructure. India is a vast country that has significant coverage requirements, with each state almost like a separate country by itself. With most of the incremental expansion focused towards rural India, a host of problems crop up. These include, among others, poor quality of infrastructure, unapproachable areas on account of bad roads (sometimes no roads at all), erratic or non-existent power supply, non-availability of personnel to man cell sites and logistical issues with these areas situated in the deep interiors. Hence, substantial capex to cover vast areas of the country is required. With mobile penetration levels at around 26%, there still exists strong growth potential and mobile

With mobile penetration at 26%, there exists tremendous scope for growth

operators are reporting impressive subscriber additions month-on-month (mom). Due to the low levels of penetration, there exists tremendous latent demand leading to strong growth in volumes too in terms of MoUs.

The competitive intensity in the Indian market is significant, leading to declining ARPUs

However, the competitive intensity in the Indian market is arguably the maximum in the world (Refer Annexure 1, Exhibit 1), with most circles having 6-7 operators vying for a piece of the pie. This has led to consistently falling tariffs and RPMs. Newer operators like Unitech Wireless, Datacom, Swan Telecom, Loop Telecom and Shyam Telelink are also getting ready to launch their services in circles where they have been allocated spectrum. This factor, apart from the fact that most of the incremental subscribers are coming from rural areas that would be characterised at least initially by lower usage, is driving a secular fall in ARPUs.

Operators are facing spectrum shortages, specially in the Central Business Districts

Apart from this, operators are facing some amount of spectrum shortages, specially in the high traffic density Central Business Districts (CBDs), where on account of the high levels of traffic volumes and need for greater spectrum, Quality of Service (QoS) is suffering, with increased frequency of call drops, lack of clarity on the network, etc. Going ahead, with newer services like 3G and WiMAX also expected to be launched, there will be a further need for tower capacity and spectrum.

Given the issues being faced by Indian telecom operators, the need for sharing infrastructure is apparent

Given the above issues confronting Indian telecom operators, the need for sharing infrastructure is apparent. Key benefits that operators get from sharing infrastructure include a substantial reduction in capex costs (passive infrastructure accounts for around 60% of the total capex for mobile) enabling them to focus on their core businesses of branding and marketing of telecom services to give users a better experience (co-operating at the 'back-end' and competing at the 'front-end'), improving capex and opex efficiencies, faster network roll-outs and time-to-market, a reduction in duplication of infrastructure investments and freeing up capital for expansion of the business and introduction of newer complimentary services like 3G, WiMAX, DTH and IPTV.

Bharti Infratel is the largest single operator-owned towerco in India

These factors are clearly a positive for the telecom infrastructure business in India. Bharti Infratel, along with its 42% stake in Indus, is the largest single operator-owned towerco in the country. At the end of 1QFY2009, Infratel owned 58,013 towers, of which around 30,000 towers will be transferred to Indus. To value Bharti's tower business, we have done discounted cash flow (DCF) projections for Bharti Infratel and Indus. We believe DCF is the most appropriate way to value towercos given their strong cash generation ability, especially beyond three to four years with increasing tenancy ratios. The key factor in the tower business is undoubtedly the tenancy ratio, i.e., average number of tenants per tower. Thus, to drive higher tenancies, towers must be of high quality in terms of shareability. It is not just the number of towers, but the tenancy ratios that determine break-even for a towerco.

We have forecast a total value of Rs181 per Bharti Airtel share for Bharti Infratel, including Rs41 per share being the value of the standalone entity (ex-Indus) and Rs140 per share value being the value of its stake in Indus Towers. Thus, Bharti's tower business is significantly value-accretive, adding 20% to the value of its core business. We have taken WACC of 11.2% for Indus and 13.2% for the standalone entity, with the terminal growth rate assumed at 5%.

A pioneer in outsourcing non-core operations to focus on core business

A major part of Bharti Airtel's business strategy is to focus on its core competencies and outsource non-core operational activities to global leaders. In this respect, the company has been a pioneer in outsourcing its operations to players that are better equipped to carry out such operations. British Telecommunications (BT), at a global level, has been a mature outsourcer, and has numerous vendors servicing it, notably Tech Mahindra (formerly Mahindra-British Telecom) and Infosys Technologies. Bharti, on the other hand, is an excellent example of a domestic company utilising outsourcing to its fullest.

To give specific examples, Bharti has in the past entered into a US \$1bn, three-year services agreement with Ericsson, which will design, supply, install and operate the company's network in 15 telecom circles. Bharti also entered into a contract worth US \$400mn with Nokia to expand its network in 8 circles. More recently, the company entered into a three-year outsourcing partnership with Firstsource Solutions, a BPO services provider, where the latter will provide Bharti with a suite of BPO solutions covering both voice and back-office in areas such as customer accounting, VAS provisioning, fraud & credit monitoring, customer service, collections, customer retention and the like.

In fact, hiving off of Bharti Infratel is another example of Bharti utilising outsourcing to its fullest, as the former will operate independently and focus on the shared passive infrastructure services business, while Bharti Airtel will continue to focus on branding and marketing of telecom services and solutions. Thus, virtually every area of Bharti's business except its core activities has been outsourced to third party service providers.

These initiatives have enabled Bharti to focus on its core business, save costs and improve efficiency

These initiatives have enabled Bharti to focus on its core business, save costs and improve efficiency. Going forward, these initiatives would enable the company to prune its capital expenditure (capex) and operating expenditure (opex) per subscriber, enabling better Margins and more effective utilisation of cash. Overall, with an ever-expanding mobile subscriber base, operating leverage is also expected to kick in and reduce expenses over a period of time.

Exhibit 7: Outsourcing enables lower capex, opex per subscriber

Particulars	FY05	FY06	FY07	FY08	FY09E	FY10E
Mobile subscribers (Mn)	11.0	19.6	37.1	62.0	89.8	115.1
Ann. Avg. capex per sub. (US\$)	104.5	98.6	78.2	67.3	32.5	22.5
Ann. Avg. opex per sub. (US\$)	137.3	113.7	92.9	75.2	70.2	66.5

Source: COAI, Company, Angel Research; Note: We have taken a Rupee rate of 42 to a Dollar for conversion.

Telemedia and long distance businesses - Strong growth potential

Apart from its highly visible Mobile business, Bharti Airtel also has a strong presence in its other business segments viz., Telemedia and long distance (Carriers). The company's Telemedia subscriber base (broadband and fixed line) stood at nearly 2.4mn at the end of June 2008. Bharti is India's largest private fixed line company by subscribers, and the third-largest after PSU telecom majors, BSNL and MTNL, with a market-share of 6.2%. Bharti's strategy in this

Bharti intends to have a presence across all three 'screens of contact' with the consumer, viz., mobile, PC and television

business has been one of 'cherry picking', where it has a presence in the top-94 cities in India with high revenue generating potential. This is compared with the 'mass market strategy' that is a feature of its Mobile Business.

Bharti plans to become a fully integrated entertainment company, rather than be known as purely a telecom company. It intends to have a presence across all the three 'screens of contact' with the consumer, viz., mobile, PC and television. Bharti's Telemedia Business will enable it to be present through PC and television. The company, apart from fixed line telephone services, also offers broadband services to its customers. At the end of 1QFY2009, of the 2.39mn Telemedia customers, around 0.85mn, or 35.6%, were also broadband subscribers. This business aims to maximise ARPLs through cross-selling of services to customers. While the broadband subscriber base in India stood at just 4.57mn at the end of July 2008, implying a pitiable and laughable penetration rate of 0.4%, there is scope for growth.

Exhibit 8: All-India fixed line subscriber base

(July 2008)	Fixed line subscriber base (Mn)	Market share (%)
BSNL	30.66	79.1
MTNL	3.61	9.3
Bharti Airtel	2.43	6.3
RCOM	0.98	2.5
Tata Teleservices	0.79	2.0
Shyam Telelink	0.15	0.4
HFCL Infotel	0.15	0.4
Total	38.76	100.0

Source: TRAI

Exhibit 9: Telemedia Business Operating metrics

Particulars	FY2006	FY2007	FY2008	FY2009E	FY2010E
Telemedia subscribers (Mn)	1.3	1.9	2.3	2.6	2.9
Gross Revenues (Rs cr)	1,502	2,245	2,848	3,467	4,049
ARPLs per month (Rs)	1,135.5	1,162.9	1,142.6	1,176.9	1,212.2
Minutes of Usage (MoUs, Mn)	12,935	16,156	18,390	20,723	23,052
Revenues per Minute (RPMs, Rs)	1.16	1.39	1.55	1.67	1.76

Source: Company, Angel Research

There are around 120mn TV homes in India, of which 75mn homes are cable and satellite (C&S) homes

Bharti plans to commence Direct-to-home (DTH) and Internet Protocol Television (IPTV) services as well in FY2009. There are around 120mn TV homes in India, of which 75mn homes are cable and satellite (C&S) homes, implying that they are paying customers, while the balance 45mn homes are only Doordarshan (DD) homes, where cable does not reach. Through DTH, a satellite-based medium, these 45mn homes can be tapped contingent upon the establishment of a distribution network in these areas. Bharti can leverage the vast distribution network of its Mobile Business to effectively get a deeper reach in these areas. Assuming Rs250-300 per household per month as cable expenditure, the total industry size would be

Rs27,000cr at the upper end if we were to assume that all C&S households were to go for DTH connections. Thus, the market size is significant and the DTH business will be a 'mass market strategy' much like the Mobile Business, whereas IPTV (voice, data and video connectivity through one wire) will be targeted at a niche market.

Bharti also has a strong presence in the long distance segment

Bharti also has a strong presence in the long distance segment. It has been witnessing strong growth in segment MoUs, driven by increasing usage and expansion of its mobile and national long distance (NLD) network across the country. Being an integrated player, Bharti captures significant captive traffic flows (traffic within the network, eg. a Bharti mobile user in Mumbai calling a Bharti mobile user in Kolkata). At the end of 1QFY2009, Bharti's total NLD infrastructure comprised of 78,540km of optical fibre.

The company's international long distance infrastructure includes ownership of the i2i submarine cable system connecting Chennai to Singapore, consortium ownership of the SMW4 submarine cable system and investments in capacities across diverse submarine cable systems across trans-Atlantic and trans-Pacific routes. Bharti has also announced investments in new cable systems such as Asia America Gateway (AAG), India Middle East and Western Europe (IMEWE) and Unity North. With expansion of the mobile network, this will get a further boost, as more people start using long distance services in a big way.

Exhibit 10: Enterprise Services - Carriers Business Operating metrics

Particulars	FY2006	FY2007	FY2008	FY2009E	FY2010E
Gross Revenues (Rs cr)	2,452	3,489	4,317	6,562	8,268
Minutes of Usage (MoUs, Mn)	8,936	19,831	35,955	57,528	80,539
Revenues per Minute (RPMs, Rs)	2.74	1.76	1.20	1.14	1.03

Source: Company, Angel Research

Going ahead, with long distance tariffs and roaming charges also witnessing an across-the-board drop, with more cuts likely to follow, volume growth is expected to remain strong. The TRAI has allowed internet service providers (ISPs) to offer internet telephony services (Voice over Internet Protocol, VoIP). This is likely to lead to a further fall in long distance tariffs resulting in stronger volume growth and a pick-up in broadband services. However, given the low penetration of personal computers (PCs) in the country, we feel this will not have any major impact on the segment.

Good progress on the Spectrum issue

The Spectrum issue, so critical to the sustained growth of the Telecom Sector, has seemingly been resolved at least in the short term. Bharti and several other existing and newer operators have received spectrum in a few circles. This will take care of the medium-term growth requirements of Bharti. With the DoT also announcing the much-awaited 3G and Broadband Wireless Access (BWA) Policies, we believe Bharti is best-positioned to offer pan-India 3G/mobile broadband services, thus opening up newer revenue generation streams that can stem the fall in ARPUs.

Exhibit 11: Bharti Airtel - Spectrum holdings across circles

Service Area	Subscriber base (Mn)*	Spectrum allotted (MHz)	Eligibility as per TRAI norms (MHz)	Exc./ (Def.), MHz
Metros				
Delhi	4.1	10.00	12.40	(2.40)
Mumbai	2.5	9.20	10.00	(0.80)
Chennai	1.9	8.60	8.00	0.60
Kolkata	1.9	8.00	8.00	0.00
'A' circle				
Maharashtra	4.5	6.20	8.00	(1.80)
Gujarat	3.3	6.20	8.00	(1.80)
Andhra Pradesh	7.0	7.80	10.00	(2.20)
Karnataka	7.9	9.80	10.00	(0.20)
Tamil Nadu	4.6	8.20	8.00	0.20
'B' circle				
Kerala	1.8	6.20	6.20	0.00
Punjab	3.3	7.80	8.00	(0.20)
Haryana	1.1	6.20	6.20	0.00
Uttar Pradesh (East)	4.4	6.20	8.00	(1.80)
Uttar Pradesh (West)	1.8	6.20	6.20	0.00
Rajasthan	4.8	6.20	8.00	(1.80)
Madhya Pradesh	3.5	6.20	8.00	(1.80)
West Bengal and A&N	2.4	6.20	6.20	0.00
'C' circle				
Himachal Pradesh	0.8	6.20	6.20	0.00
Bihar	5.4	8.00	10.00	(2.00)
Orissa	2.1	8.00	8.00	0.00
Assam	1.0	6.20	6.20	0.00
North East	0.6	4.40	6.20	(1.80)
Jammu and Kashmir	1.2	6.20	6.20	0.00

Source: TRAI; * Subscriber base at the end of July 31, 2008

Concerns

Issues on the Spectrum front

Spectrum is the key raw material for mobile telecom services, shortage of which leads to deterioration in the quality of service (QoS). Over the past several months, the industry has witnessed issues on this front, with there being low or no availability in many circles and the lack of transparency of the DoT on the issue not helping matters either. The reluctance of the Defence Forces to vacate spectrum for commercial use has also been a stumbling block to further progress on this front. Apart from this, a slew of newer operators like Unitech Wireless, Loop, Swan and Datacom are also in the fray for spectrum allocation in most of the circles in the country, even as they have been allotted spectrum in several circles. Thus, further delays in the allotment of spectrum would certainly be a negative for the entire industry including Bharti.

Heightened competition

A number of newer operators have entered the market, which is likely to result in heightened competition in many circles, immediately in the ones where they have already been allotted start-up spectrum. Pertinently, existing operators like Idea and Aircel are also 'newer operators' in circles where they have not yet commenced operations. Idea, in particular, has a good track record of execution in spite of constraints like the lack of a pan-India presence and a smaller balance sheet size, and the telco has already commenced operations in the lucrative Mumbai circle, taking the number of operators here to seven. Thus, in the medium-term, competition in the Indian Telecom Market is only likely to increase. Nonetheless, we believe that the market is overly concerned about this factor, which has been one of the reasons for the de-rating of telecom stocks.

Apart from the Mobile segment, competition is likely to increase even in other segments like long distance. Apart from incumbent long distance operators like British Telecom, Tulip Telecom, HCL Ininet and AT&T, companies like Idea Cellular are also in the process of setting up their own national long distance networks. Other companies like Unitech Wireless and Cable & Wireless are also waiting in the wings to get a long distance licence. With the TRAI favouring a system of offering pre-paid calling card services to consumers by long distance operators thereby ushering in an era of 'carrier selection', this could further queer the pitch for long distance tariffs. Thus, these tariffs are far from 'rock-bottom' levels and such heightened competition could adversely impact this segment.

Mobile Number Portability

The implementation of Mobile Number Portability (MNP) is likely to be a negative for the industry. With QoS issues in the high traffic density metro areas, there exists some level of disenchantment with service levels given the frequency of call drops being witnessed in these areas. The service providers have themselves maintained that they are facing a shortage of spectrum in these areas, which is the reason they have attributed for the frequency of call drops and lower levels of customer satisfaction. Nonetheless, with the advent of MNP, consumers can change their service providers without having to go through the tedious process of changing their numbers. This could lead to an increase in churn rates, which are already at 4-5% on a monthly basis, thus leading to higher customer retention costs and Margin pressures.

Execution risks

The expansion and roll out of cellular networks across the country has tremendous execution risks associated with it. With most of the expansion coming from the untapped rural areas, there are logistical risks, with many areas being unapproachable on account of poor quality of roads and in many cases, no roads at all, erratic (or non-existent) power supply, poor infrastructure, lack of trained personnel to operate cellular towers and significant levels of risk associated with putting up cellular towers, with as many as 40 different approvals required. Thus, execution and network roll-out is a daunting task and managing these risks calls for significant skill requirements.

Outlook and Valuation

With the strong growth in the Indian economy expected to continue going forward, along with rapid expansion of coverage area, a continuing fall in tariffs, heightened competitive intensity and greater infrastructure sharing between operators, the Indian mobile subscriber base is expected to grow rapidly going ahead. We estimate the all-India mobile subscriber base to hit 457.3mn by FY2010 (256.2mn in FY2008), implying a CAGR growth of 33.6% over FY2008-10E. We expect this to be primarily driven by the 'A' and 'B' circle categories. We expect these two circle categories to contribute over 82% of the incremental subscriber additions of the country over FY2008-10E.

We expect Bharti Airtel to maintain its market leadership and estimate the company to grow its mobile subscriber base at a CAGR of 36.3% over FY2008-10E to hit 115.1mn (62.0mn in FY2008). This implies a subscriber market-share of 25.2% in FY2010E. On the other hand, we expect ARPUs to decline at a CAGR of around 8% over FY2008-10E to hit Rs309.9 in FY2010E (Rs366.3 in FY2008). Consequently, we estimate Gross Revenues of the Mobile Services Business to grow at a CAGR of 32.3% over FY2008-10E. We also expect the other business segments of the company, viz. Telemedia, Long-distance and Enterprise to grow at robust CAGR growth rates between 19-38%. The company's Passive Infrastructure Services Business is expected to grow at a decent rate as well. We have factored in Bharti hiving off 30,000 towers from Infratel and transferring them to Indus Towers in FY2009.

Exhibit 12: All-India, Bharti mobile subscriber projections

(Subscribers in mn)	FY2007	FY2008	FY2009E	FY2010E	CAGR (%)*
Metros					
Bharti Airtel	7.0	9.8	12.3	14.1	19.9
Industry (incl. CDMA)	31.5	44.4	54.9	62.7	18.7
<i>Market share (%)</i>	22.1	22.1	22.4	22.6	
'A' circle					
Bharti Airtel	14.0	23.7	34.4	44.8	37.3
Industry (incl. CDMA)	57.7	92.4	129.3	168.1	34.9
<i>Market share (%)</i>	24.3	25.7	26.6	26.6	
'B' circle					
Bharti Airtel	11.0	19.2	29.7	39.5	43.6
Industry (incl. CDMA)	57.5	92.9	135.7	183.1	40.4
<i>Market share (%)</i>	19.1	20.6	21.9	21.6	
'C' circle					
Bharti Airtel	5.2	9.2	13.4	16.7	34.6
Industry (incl. CDMA)	15.6	26.4	34.7	43.4	28.2
<i>Market share (%)</i>	33.3	35.0	38.5	38.5	
All-India					
Bharti Airtel	37.1	62.0	89.8	115.1	36.3
Industry (incl. CDMA)	162.3	256.2	354.6	457.3	33.6
<i>Market share (%)</i>	22.9	24.2	25.3	25.2	

Source: COAI, AUSPI, Company, Angel Research; * CAGR over FY2008-10E

Overall, this is likely to lead to a 34.0% CAGR growth in Top-line for Bharti Airtel over FY2008-10E. On the other hand, we expect a 27.9% CAGR growth to be clocked in Bottom-line over the same period. We expect a 120bp fall in EBITDA Margins over this period, primarily on account of higher network expansion costs.

At Rs799, the stock trades at a P/E of 13.8x FY2010E EPS, EV/EBITDA of 7.2x FY2010E EBITDA and an EV/subscriber of US \$213.4 on our FY2010E subscriber base. Going forward, we do not expect any major valuation re-rating for telecom stocks, given the margin pressures likely to be faced by these companies due to falling ARPUs, intensifying competition, network expansion costs, slowing subscriber growth leading to lower Top-line growth and regulatory risks. Consequently, we have been conservative in our valuations for the core business.

We maintain a Buy on Bharti Airtel and the stock is our Top Pick in the Telecom Sector. We arrive at a Target Price of Rs1,105 for the stock, with Rs924 as the value of the core business and Rs181 as the value of the towerco, Bharti Infratel.

Annexure - I

Herfindahl-Hirschman Index - Circle-wise analysis

The HHI is a measure of the size of individual firms in an industry in relationship to the overall industry

The Herfindahl-Hirschman Index (HHI) is a measure of the size of individual firms in an industry in relationship to the overall industry. It is an indicator of the competitive intensity in the industry. In simple terms, it is defined as the sum of the squares of the market shares of each individual firm. Thus, the maximum value that this index can have is 10,000 (the square of 100), given a situation of a single firm operating in the industry with a market share of 100%.

The lowest possible value that the HHI can have is 1/N ('N' being the number of firms competing in the industry)

The lowest possible value that the HHI can have for any industry is $1/N$, where 'N' is the number of firms competing in the industry. Thus, in the case of the Indian Telecom Industry, there are 11 competitors of varying sizes (Bharti Airtel, RCOM, Vodafone-Essar, BSNL, Idea Cellular + Spice, Tata Teleservices, Aircel, MTNL, BPL Mobile, HFCL Infotel and Shyam Telelink). Consequently, the lowest value that the HHI can have is 0.0909 (or 909). However, a circle-by-circle comparison would be more relevant.

The Antitrust Department of the US Department of Justice considers an HHI below 1,000 as indicative of low market concentration

The Antitrust Department of the US Department of Justice (DOJ) considers an HHI below 1,000 as indicative of low market concentration and thereby, a very competitive market. On the other hand, it considers an HHI between 1,000 and 1,800 to indicate moderate concentration and competitive intensity, while an HHI above 1,800 is considered as indicating high concentration and low competitive intensity. The US uses this index to determine whether mergers between firms in an industry could cause a disproportionate concentration of market power in the hands of one or a few players. An increase of over 100 points generally invites scrutiny, although it varies from case to case.

Taking the case of the Indian Telecom Industry, it can be seen that if we take the US DOJ standards, the market concentration levels in most circles are fairly high, in spite of the fact that as many as 6-7 operators compete in most circles. However, we believe judging the competitive intensity in the Indian Telecom Sector just on the basis of the US DOJ's criteria may not be entirely correct. The US DOJ criteria indicate that there should be over 11 companies competing in any given sector, given its level of below 1,000 as indicative of a highly competitive market. In such a case, the minimum value that the HHI can have in an 11-player market is 0.0909 (or 909), and that is assuming each company has identical market shares, which is almost never the case. Thus, taking a more realistic scenario, the US DOJ criteria imply that more than 11 companies would have to be present in any given market for it to be genuinely competitive.

If we take TRAI's norm of 40% being 'market dominance' and a minimum of four players in a circle, then in almost no circle can it be said that competition levels are low and market concentration high

We attempt to use slightly different criteria to judge the competitive intensity of the Indian Mobile Sector, just to get a better sense on a case-by-case basis. We take a circle-by-circle comparison for judging market dominance, given its relevance in the context of the Indian Telecom Sector. If we take TRAI's norm of 40% being 'market dominance' and a minimum of four players in a circle, then clearly, in almost no circle can it be claimed that competition levels are low and market concentration high, with the exceptions being two circles, the first being Karnataka, where Bharti enjoys over 42% market-share (July 2008). In the second circle of Jammu &

Kashmir (J&K), where four operators are present, Bharti enjoys nearly 50% share and the fourth operator, RCOM has a negligible subscriber base in that region.

Thus, taking TRAI's criteria, in only two circles can it be said that there are significant levels of market concentration in the hands of one player. It should be noted that the regulator's criteria of four players in a circle are satisfied in all circles with the exception of J&K, where although there are four operators, since RCOM, the smallest operator, has a negligible subscriber base, possibly on account of delayed or slow network roll-out, consumers do not strictly have the choice of buying an RCOM connection and thus, in reality, the ground situation clearly shows just three major operators in this circle.

Another way of judging competitive intensity is taking the minimum possible HHI in a circle and comparing it with the actual HHI

Another way of judging the competitive intensity is taking the minimum possible HHI in a particular circle and comparing it with the actual HHI for that circle. For example, in a circle like the North East, where four operators are present, the lowest possible HHI is 1/4 (0.25, or 2,500). The actual HHI is 2,620, which is just 5% higher than the lowest possible value. This clearly indicates a fairly competitive market and is borne out by the market shares of the respective players. The market leader, Dishnet Wireless (Aircel), has a share of 31.1%, the second-ranked player, Bharti, has a share of 28.2%, the third player, BSNL has a share of 24.3%, while the player with the lowest share, RCOM (GSM) has a market-share of 16.5%.

Thus, the respective market shares of the operators in the North East circle are not far apart, implying a competitive market. Taken on the basis of the US DOJ criteria, the market concentration in the North East circle is actually high. This can be explained by the fact that there are four players in the market, which by default makes it a highly concentrated market. This is because the DOJ criteria imply over 11 players competing to have any chance of it being a competitive industry. This is precisely the reason we attempt to do a case-by-case circle-wise analysis to judge competitive intensity, rather than merely going by the US DOJ criteria. We believe that as per this particular method of judging the actual HHI v/s the lowest possible HHI, an actual HHI value over 125-130% of the lowest possible HHI in a circle would imply relatively higher levels of market concentration in that circle.

Another factor should be considered here. In circles like J&K as we mentioned above, as also Punjab and Rajasthan, the last-ranked operators have negligible shares. For example, in Rajasthan, Shyam Telelink has a marketshare of just 0.7% (July). Thus, on account of this, consumers in these circles may not strictly have a choice of taking these connections, since these players would not have a vast network presence. We believe the effect of this should be stripped off to calculate the actual HHI. If we do this exercise, then in Punjab and Rajasthan, the ratios of the actual HHI v/s minimum possible HHI fall to 108.7% and 121.1% v/s 126.8% and 141.3%, respectively (July). This makes them fairly competitive markets, rather than the 'High' concentration markets as judged by the US DOJ criteria.

Exhibit 1: Indian Telecom Market HHI - Circle-wise analysis

Circle	Number of operators	July 2008 HHI	Concentration level*	Lowest possible HHI	Bharti market share (%)	Bharti Market Position
Metros						
Delhi	6	1,817	High	1,667	23.1	1
Mumbai#	6	1,840	High	1,667	17.2	3
Chennai	6	1,967	High	1,667	24.3	2
Kolkata**	5	2,061	High	2,000	21.9	3
'A' circle						
Andhra Pradesh	6	1,944	High	1,667	30.3	1
Gujarat	6	2,162	High	1,667	35.2	2
Karnataka	6	2,541	High	1,667	42.4	1
Maharashtra	6	1,762	Moderate	1,667	19.5	2
Tamil Nadu	6	2,051	High	1,667	23.0	2
'B' circle						
Kerala	6	1,895	High	1,667	14.3	5
Punjab	7	1,812	High	1,429	26.7	1
Haryana	6	1,704	Moderate	1,667	15.2	4
UP (West)	6	1,778	Moderate	1,667	12.3	5
UP (East)	6	2,006	High	1,667	23.1	3
Rajasthan	7	2,019	High	1,429	30.6	1
Madhya Pradesh**	5	2,393	High	2,000	23.6	3
West Bengal, A&N**	6	2,104	High	1,667	21.9	2
'C' circle						
Himachal Pradesh**	6	2,711	High	1,667	34.6	1
Bihar**	5	2,898	High	2,000	39.9	1
Orissa**	5	2,565	High	2,000	36.2	1
Assam	4	2,539	High	2,500	23.6	3
North East	4	2,620	High	2,500	28.2	2
Jammu & Kashmir	4	3,878	High	2,500	49.5	1

Source: COAI, AUSPI, Angel Research; Note: For the purpose of HHI calculation in circles where RCOM operates dual networks (CDMA and GSM), we have considered the company's CDMA and GSM operations as one company and consequently, the HHI is higher than if we were to take them as separate companies; * On the basis of the US DOJ criteria; ** Circles where RCOM currently operates dual networks; # Idea Cellular commenced services in Mumbai in August 2008, thus taking the total number of operators in the circle to 7 currently.

Another way of judging competitive intensity would be to see whether the top-2 operators corner a significant part of the market

Yet another way of judging competitive intensity in a circle would be to see whether the top-2 operators in a circle corner a significant part of the market. The circles of Karnataka, Himachal Pradesh, Bihar and J&K qualify here, with the top-2 operators cornering 59.1%, 57.2%, 71.8% and 83.6% market-share, respectively in July. As per the US DOJ criteria, all these circles have high market concentration. Even as per our relatively simplistic method, the ratios of the actual HHIs in these circles v/s the lowest possible HHIs are 152.5%, 162.7%, 144.9% and 155.1%, respectively. Thus, going by any method of judging competitive intensity, market concentration in all these circles is fairly high and consumers do not truly have a wide choice of operators.

The difference in market-share between the first and second-ranked players can also be used as a rough estimate of market dominance

The difference in market-share between the first and second-ranked players can also be used as a rough estimate of the market dominance enjoyed by a particular operator. Taking the example of Karnataka, Bharti enjoys a market-share of 42.4%, while the second-ranked operator, Vodafone-Essar, has a share of just 16.7%, reflecting the leadership position enjoyed by Bharti in this circle. But, if we take Maharashtra, Idea Cellular, the market leader, enjoys a share of 24.4%, while the second-ranked player, Bharti, has a share of 19.5%, which points at the considerably higher competitive intensity in this circle. The third, fourth and fifth-ranked players viz., Tata Teleservices, RCOM (CDMA) and Vodafone-Essar, enjoy market shares of 14.5%, 13.9% and 13.9% respectively, implying that this is one of the most competitive circles in India. Even if we judge this on the US DOJ criteria, the concentration level is 'Moderate'.

If we were to judge the competitive intensity in a circle based on the number of players, going by TRAI's recommendation of a minimum of four players in a circle, all the circles have four or more operators. However, as mentioned earlier, in J&K, RCOM has a negligible presence and an actual ground scenario would reflect just three operators in that circle, implying high concentration. Nonetheless, in all other circles, four to seven operators compete for a piece of the pie. We can say that if a lesser number of operators are present in a circle, even if they all enjoy similar market shares, market concentration will still be high and competitive intensity low owing to the fact that consumers have lesser choices.

In 20 out of 23 circles (taking Tamil Nadu and Chennai as separate circles), Bharti ranks among the top-3 players, reflecting its outstanding consistency

Overall, competitive intensity in most of the telecom circles in India is fairly high. In spite of such intense competition, Bharti has managed to out-perform the industry and retain the top slot in terms of market-share. Analysing the company's circle-wise positions, in 9 out of 23 circles (if we take Tamil Nadu and Chennai as two separate circles), it is the number one operator, while in 6 circles, Bharti is the second-largest operator. In another 5 circles, the company is the third largest operator. Thus, in 20 out of 23 circles, Bharti ranks among the top-3 players. In many of these circles, the company has moved up the rankings, reflecting its outstanding consistency.

Going ahead, the HHI is likely to only fall, given the impending launch of services by newer operators in several circles shortly. Notably, spectrum has been allotted to a number of new operators like Unitech Wireless, Loop Telecom (BPL), Datacom (Videocon) and Swan Telecom in circles like Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu (including Chennai) and UP (East), which will result in heightened competition in these circles. Shyam Telelink, in partnership with Russia-based Sistema, has received pan-India CDMA start-up spectrum apart from the Rajasthan circle where it already has operations. Idea Cellular has also commenced operations in the lucrative circle of Mumbai. Nonetheless, we believe the market is overly concerned about and is over-estimating the potential impact of newer entrants on well-established incumbents like Bharti and expect the latter to continue to execute well on its expansion plans.

Profit & Loss Statement

Rs crore

Y/E March	FY2007	FY2008	FY2009E	FY2010E
Net Sales	18,520	27,025	37,809	48,522
% chg	59.4	45.9	39.9	28.3
Total Expenditure	11,070	15,653	22,433	28,686
EBITDA	7,450	11,372	15,376	19,836
% of Net Sales	40.2	42.1	40.7	40.9
Other Income	106	274	265	243
Depreciation	2,521	3,726	4,660	5,532
Interest	144	234	652	914
Non-operating Expenses	5	32	32	32
Share of Prof./(Loss.) in JVs	(0)	(0)	(0)	(0)
PBT	4,886	7,654	10,296	13,601
% of Net Sales	26.4	28.3	27.2	28.0
Tax	582	838	1,441	2,448
Effective Tax Rate (%)	11.9	10.9	14.0	18.0
Min. int./loss in ass. company	47	115	149	188
PAT	4,257	6,701	8,705	10,965
% chg	50.7	56.9	53.1	37.7

Balance Sheet

Rs crore

Y/E March	FY2007	FY2008	FY2009E	FY2010E
SOURCES OF FUNDS				
Equity Share Capital	1,896	1,898	1,898	1,898
Reserves & Surplus	11,659	20,361	28,623	38,305
Shareholders' Funds	13,555	22,259	30,521	40,203
Total Loans	5,246	9,706	10,874	11,419
Deferred Tax Liability	362	530	530	530
Minority Interest	180	301	451	639
Other Liabilities	873	989	989	989
Total Liabilities	20,216	33,786	43,365	53,780
APPLICATION OF FUNDS				
Goodwill	2,368	2,704	947	474
Gross Block	27,472	41,478	51,875	61,580
Less: Acc. Depreciation	6,411	10,137	14,797	20,329
Net Block	21,060	31,341	37,078	41,251
Investments	50	0	0	0
Current Assets	4,484	11,378	19,765	28,619
Less: Current Liabilities	9,572	13,479	15,794	17,648
Net Current Assets	(5,088)	(2,101)	3,972	10,971
Deferred Tax Asset	2	0	0	0
Acq. Intangible Assets	1,412	1,320	847	565
Other Assets	412	521	521	521
Total Assets	20,216	33,786	43,365	53,780

Cash Flow Statement

Rs crore

Y/E March	FY2007	FY2008	FY2009E	FY2010E
Profit before tax	4,886	7,654	10,296	13,601
Depreciation	2,521	3,726	4,660	5,532
Change in working capital	2,292	(3,056)	761	1,061
Income taxes paid	582	838	1,441	2,448
Cash from operations	9,116	7,486	14,275	17,746
Change in Fixed assets	9,317	14,006	10,397	9,704
Free cash flows	(200)	(6,521)	3,878	8,042
Change in Investments	0	(50)	0	0
Cash from invstg. act.	0	(50)	0	0
Change in Share capital	2	2	0	0
Change in Debt	507	4,460	1,167	546
Dividend and dividend tax paid	0	0	443	1,283
Cash from fincg. act.	509	4,462	724	(737)
Other adjustments	173	2,040	2,230	756
Net inc./(dec.) in cash	481	(69)	6,833	8,060
Opening cash balance	265	746	678	7,510
Closing cash balance	746	678	7,510	15,571

Key Ratios

Y/E March	FY2007	FY2008	FY2009E	FY2010E
Per Share Data(Rs)				
EPS	22.4	35.3	45.9	57.8
Cash EPS	35.7	55.0	70.4	87.0
DPS	-	-	2.0	5.8
Book value per share	71.4	117.3	160.8	211.8
Operating Ratios				
Sales growth (%)	59.4	45.9	39.9	28.3
EBITDA margins (%)	40.2	42.1	40.7	40.9
Net profit margins (%)	23.0	24.8	23.0	22.6
ARPU's (Blended, Rs/month)	415.6	366.3	329.7	309.9
Return ratios (%)				
RoE	37.4	37.4	33.0	31.0
RoCE	23.6	22.0	22.7	23.1
Dividend payout	-	-	4.4	10.0
Valuation ratios (x)				
P/E	35.6	22.6	17.4	13.8
P/BV	11.2	6.8	5.0	3.8
Sales/GFA	0.7	0.7	0.7	0.8
EV/EBITDA	20.9	13.7	9.8	7.2

Note: All figures are given on a consolidated basis.

BUY

Price	Rs82
Target Price	Rs104
Investment Period	12 Months

Stock Info	
Sector	Telecom
Market Cap (Rs cr)	25,297
Beta	0.78
52 Week High / Low	161 / 70
Avg Daily Volume	2022173
Face Value (Rs)	10
<hr/>	
BSE Sensex	14,042
Nifty	4,245
<hr/>	
BSE Code	532822
NSE Code	IDEA
Reuters Code	IDEA.BO
Bloomberg Code	IDEA IN

Shareholding Pattern (%)	
Promoters	57.7
MF / Banks / Indian FIs	5.4
FII/NRIs/OCBs	32.0
Indian Public / Others	4.9

Abs.	3m	1yr	3yr*
Sensex (%)	(6.9)	(14.0)	9.0
Idea Cell. (%)	(24.6)	(33.1)	(4.6)

* Since listing on March 9, 2007

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Going pan-India!

Idea Cellular has made rapid strides towards becoming a pan-India mobile operator. The company is growing in its existing circles of operations, has launched services in the Mumbai circle and is scheduled to commence services in three new circles - Bihar, Tamil Nadu (including Chennai) and Orissa. Idea's acquisition of Spice also gives it a good position in Punjab and Karnataka, (nearly 14% market-share). We remain enthused by Idea's growth prospects. At the CMP, the stock trades at a P/E of 14.5x FY2010E EPS, EV/EBITDA of 3.9x FY2010E EBITDA and an EV/subscriber of US \$88.1 on our FY2010E subscriber base. **We maintain a Buy on the stock with a Target Price of Rs104, including Rs73 as the value of the core business and Rs31 as the towerco value (16% stake in Indus).**

■ **Spice acquisition adds 'spice':** Idea Cellular in June 2008 acquired Spice Communications, a regional operator present in Punjab and Karnataka. The acquisition gives Idea a reasonably strong position in these two circles (combined market-share of 13.6%), access to spectrum in the 900 MHz band, a faster route to becoming a pan-India player, Telecom Malaysia International (TMI) as a strategic partner and implies buying the 'gestation period' in terms of profitability of newer circles, which would otherwise have taken over 2-3 years to become profitable on a greenfield basis. The Idea-Spice combine makes it a strong fifth-ranked player with a top-3 rank in 8 of its 14 circles of operations.

■ **Continuing strong focus on Execution:** Idea in its earlier days, faced several challenges in terms of disputes over its shareholding. However, in mid-2006, the company finally went into the hands of the Aditya Birla Group with the exit of the Tata Group. Thereafter, Idea has focused strongly on execution, reflected in its steadily rising market-share, which has risen from 7.8% in June 2006 to 9.7% in July 2008 (11.1% including Spice). In its circles of operations, Idea's market-share stands at 16.7% (July 2008).

■ **Towerco hive-off to improve operational efficiencies:** Idea has hived off its passive telecom infrastructure into a separate company, Indus Towers, a JV between itself, Bharti and Vodafone. This will enable opex and capex efficiencies. We arrive at a DCF-based valuation of Rs31 per Idea share as the value of the telco's stake in Indus.

Key Financials

Y/E March (Rs cr)	FY2007	FY2008	FY2009E	FY2010E
Net Sales	4,366	6,720	11,176	14,856
% chg	47.2	53.9	66.3	32.9
Net Profits	502	1,042	1,325	1,814
% chg	148.2	107.6	27.2	36.9
EPS (Rs)*	1.6	3.2	4.1	5.6
EBITDA Margin (%)	33.6	33.5	31.4	31.0
P/E (x)	52.5	25.3	19.9	14.5
RoE (%)	30.3	36.4	16.7	13.7
RoCE (%)	18.4	19.8	16.5	21.7
Sales/GFA (x)	0.6	0.6	0.7	0.7
EV/EBITDA (x)	16.3	12.2	6.3	5.0
Mobile ARPUs (Rs/user/month)	340	295	277	244

Source: Company, Angel Research; * Fully diluted EPS after considering the Spice deal

Company Background

Idea is present in 12 of the 22 telecom circles in India

Idea Cellular is India's fifth-largest cellular operator having a presence in 12 of the 22 telecom circles in the country (including Mumbai, excluding Spice, Tamil Nadu and Chennai circles being one). The company commenced business in 1995 as Birla Communications. Since then, it has been re-christened several times, with the name Idea Cellular accorded in May 2002.

Idea is a pure-play mobile services operator and is also rolling out its own national long distance (NLD) network. Circle-wise, the company has a presence in two metros (Delhi and Mumbai), three Category 'A' circles (Maharashtra, Gujarat and Andhra Pradesh), six Category 'B' circles (Kerala, Haryana, UP East, UP West, Rajasthan and Madhya Pradesh) and one Category 'C' circle (Himachal Pradesh). Idea is the original licensee in seven of these circles - Gujarat, Maharashtra, Andhra Pradesh, Kerala, Haryana, UP West and Madhya Pradesh.

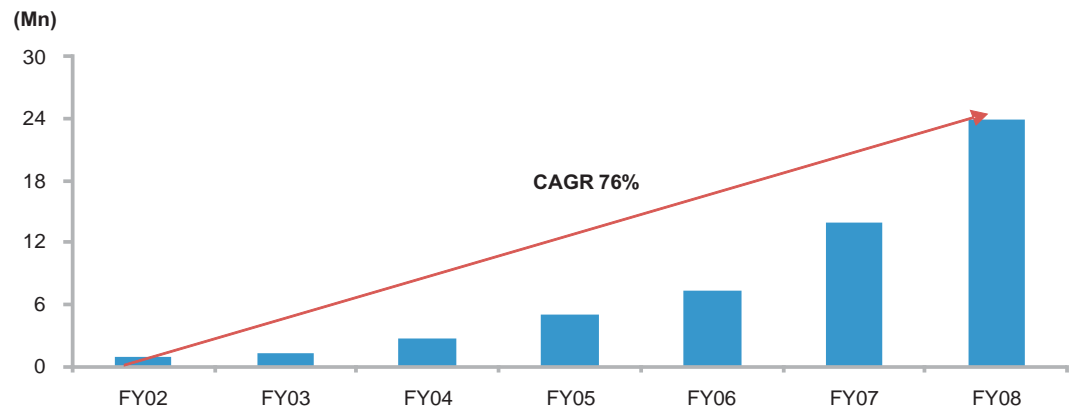
To accelerate the process of becoming a pan-India operator, Idea acquired Spice Communications in June 2008, improving its market-share from 9.6% to 11.2%

Idea, in its attempt to accelerate the process of becoming a pan-India mobile operator, acquired Spice Communications in June 2008, a regional operator with a presence in the Punjab and Karnataka circles, with a combined market-share of 13.6% (July 2008). Through this acquisition, Idea gets an immediate presence in these two circles. It also gets spectrum in the 900 MHz band and TMI as a strategic partner. Along with Spice, Idea's mobile subscriber base stands at 32.4mn and all-India marketshare rises to 11.1%, with the share in its circles of operations being 16.2%. Idea has received spectrum and commenced operations in the Mumbai circle and going ahead, is scheduled to do so in Bihar, Tamil Nadu (including Chennai) and Orissa, taking its total presence to 17 out of 22 circles by end-FY2009.

Idea's mobile subscriber base has grown at a CAGR of 76% over FY2002-08

Idea has grown its mobile subscriber base at an impressive CAGR of 76% over FY2002-08. ARPUs have, however, fallen at a CAGR of over 19%. Over FY2002-08, Idea Cellular's Revenues have grown at a CAGR of 45.1%, while EBITDA has maintained an impressive CAGR growth of 52.6%. In FY2005, Idea clocked its maiden Net Profit, which has since grown at a CAGR of 148.1% over FY2005-08.

Exhibit 1: Idea's Mobile subscriber base - Soaring ahead



Source: COAI, Company, Angel Research

Investment Argument

Spice acquisition to accelerate pan-India roll-out

Idea Cellular has ambitions to expand beyond the 12 circles it is currently present in to become a pan-India mobile operator. The company has rolled out operations in Mumbai and is set to do so in Bihar very shortly. It has also received spectrum in the Tamil Nadu (including Chennai) and Orissa circles, where services will be rolled out in the second half of FY2009. This will entail significant capex, even if infrastructure sharing is taken into consideration. Typically, it takes around six months after receipt of spectrum to roll out services on a full-fledged basis and newer circles take at least 2-3 years before they break-even at the operating (EBITDA) level (*Refer Exhibit 2*). Thus, rolling out operations and gaining scale in newer circles is a long drawn-out process.

Exhibit 2: Idea Cellular newer circles - Operating metrics

Particulars	FY2007	FY2008	FY2009E	FY2010E
Revenues (Rs cr)	59	367	695	1,075
Subscriber base (Mn)	0.7	1.9	3.4	5.7
ARPU (Rs/user/month)	302.4	242.7	218.4	196.6
EBITDA Margins (%)	(145.0)	(19.7)	5.0	8.0

Source: Company, COAI, Angel Research; Note: Newer circles include UP (East), Rajasthan and Himachal Pradesh.

The combined entity will be the fifth-largest mobile operator in India with over 32mn mobile subscribers and a market-share of 11.1%

In a clear bid to accelerate its network roll-out process, Idea acquired Spice Communications, a regional telecom operator with a presence in the Punjab and Karnataka circles, in June this year. Spice has a total of around 4.2mn mobile subscribers in these two circles and is ranked second in Punjab, with a market-share of 20.1% at the end of July 2008. In Karnataka, it is the fifth-ranked operator out of six (9.2% marketshare). It is rapidly catching up with the fourth-ranked operator, BSNL. The combined entity will be the fifth-largest mobile operator in India with over 32mn mobile subscribers and a market-share of 11.1% (July 2008).

Idea has acquired the promoter, the Modi Group's 40.8% stake in Spice and along with TMI and its affiliates and associates, will make an open offer for a further 20% stake in Spice, as required by Indian securities regulations, pending comments from the securities market regulator, SEBI. Idea has paid the Modis Rs77.30 per share for their stake and also made a payment of Rs544cr as non-compete fee. The Boards of Idea and Spice also approved the merger of Spice into Idea, with the swap ratio pegged at 49 shares of Idea for every 100 shares of Spice. Idea has made a preferential allotment to TMI of 46.473cr equity shares at Rs156.96 per share, representing 14.99% of its equity capital post allotment, and after the merger, TMI will hold 18-20% stake in Idea.

The deal does seem expensive as it values Spice at an EV/EBITDA of nearly 30x CY2007 EBITDA and around 14x CY2009E EBITDA and the company is still loss-making (registered net loss of Rs59.2cr in CY2007). However, it should be noted that in such deals, an acquisition

premium is involved and often, valuation ratios like P/E or EV/EBITDA take a backseat in light of the longer-term quantitative, qualitative and strategic benefits. We believe Idea in the long-term will benefit in several ways from the deal.

Deal benefits to Idea

If Idea were to start operations on a green-field basis in these circles, it would take several months to roll out operations post spectrum allotment and 2-3 years for EBITDA break-even

- Immediate accretion to subscriber base, marketshare gains and operating profitability** - Through Spice, Idea's mobile subscriber base increases by 15% to 32.4mn and its market-share stands increased by 144bp to 11.1%. The company gets an immediate subscriber base in the circles of Punjab and Karnataka along with operating profits (EBITDA) of 23.3% (CY2007). It should be noted that if the company were to start operations on a green-field basis in these circles, it would have taken several months to roll out operations post the receipt of spectrum and most likely in excess of 2-3 years at least before the circles would break-even at the EBITDA level. Thus, in a way, Idea is 'buying the gestation period' in terms of better profitability of newer circles (Punjab and Karnataka), which would otherwise take several years.

Exhibit 3: Idea + Spice - The combined entity, a stronger Number 5

Operator	Subscriber base (Mn)	Marketshare (%)	Rank
Bharti Airtel	72.1	24.8	1
RCOM	52.5	18.0	2
Vodafone-Essar	51.0	17.5	3
BSNL	37.9	13.0	4
Idea Cellular	28.2	9.7	5
Idea + Spice	32.4	11.1	5
Change	4.2	1.4	-
Tata Teleservices	27.3	9.4	6

Source: COAI, AUSPI, Angel Research; Note: Subscriber data and market-share as on July 31, 2008

In its circles of operations of Punjab and Karnataka, Spice has a combined market-share of 13.6%, reflecting its fairly competitive positioning

- A well-entrenched operator in its circles of operations** - Spice Communications is fairly well-placed in its two circles of operations, namely Punjab and Karnataka. In Punjab, one of India's richest states and having amongst the highest per capita incomes, Spice enjoys a 20.1% market-share and is the second-largest player after Bharti Airtel. In Karnataka, even though Spice is only the fifth-ranked operator out of six (9.2% market-share), it has grown at a faster pace than the overall market and has gained 39bp in marketshare over the past year. In fact, the difference between BSNL, the fourth-ranked operator and Spice is not significant and the latter could overtake the PSU telecom major going ahead. In both these circles combined, Spice has an overall market-share of 13.6%, thus reflecting its fairly competitive positioning.

Exhibit 4: Spice circle-wise details

(Sub. base, mn)	Feb.	Mar.	Apr.	May	June	July	Chg *
Punjab							
Spice Comm.	2.5	2.6	2.6	2.7	2.8	2.5	(0.0)
Circle	11.3	11.6	11.9	12.1	12.4	12.3	1.0
Marketshare (%)	22.1	22.1	22.3	22.5	22.3	20.1	(2.0)
Karnataka							
Spice Comm.	1.6	1.6	1.7	1.8	1.8	1.7	0.1
Circle	16.3	16.7	17.1	17.7	18.2	18.7	2.4
Marketshare (%)	9.7	9.8	10.0	10.0	9.9	9.2	(0.5)
Total							
Spice Comm.	4.1	4.2	4.4	4.5	4.5	4.2	0.1
Circles	27.6	28.4	29.0	29.8	30.6	31.0	3.4
Marketshare (%)	14.8	14.8	15.1	15.1	14.9	13.6	(1.3)

Source: COAI, AUSPI, Angel Research; * Change of July 2008 over February 2008

Spice, being amongst the first two operators in both its circles, has spectrum in the 900 MHz band in both these circles, leading to better capex and opex efficiency

- **Gaining access to spectrum in 900 MHz band, enabling lower capex and opex** - Spice, being amongst the first two operators in both Punjab and Karnataka, has spectrum in the 900 MHz frequency band in both these circles. The 900 MHz band has greater propagation characteristics, thereby enabling lower capex costs for expansion of coverage area, as the number of towers and base stations required would be lesser than in the 1,800 MHz band. Thus, this is a positive for Idea, as after completion of the transaction, it will have 900 MHz spectrum allotment in 9 circles out of the 14 that it would operate in (including commencement of operations in the Mumbai circle in August 2008).

A major benefit for Idea Cellular would be gaining TMI as a strategic investor

- **TMI as a strategic investor** - Arguably one of the biggest benefits for Idea Cellular on account of this deal would be getting on-board TMI as a strategic investor and thereby gaining access to its expertise. TMI would get a board seat and will bring in significant experience owing to its operations in emerging markets like Sri Lanka, Pakistan, Malaysia, Indonesia and Bangladesh. TMI also has good experience in operating 3G networks in other markets, which would help Idea when it bids for 3G licences in India. Further, TMI's senior management has said that all its telecom-related initiatives in India will be routed through Idea Cellular.

Idea Cellular, on account of this deal, will witness strong cash infusion to the tune of over Rs3,500cr

- **Strong cash infusion to result in well-funded Balance Sheet** - Idea Cellular, on account of this deal, will witness strong cash infusion to the tune of over Rs3,500cr (US \$835mn) after paying for a further 20% stake in Spice through the open offer (assuming the response to the open offer is strong). Idea has paid the Spice promoters Rs77.30 per share for their 40.8% stake in Spice, as well as a non-compete fee of Rs544cr. Thus, the total inflow for the Modi Group has been Rs2,720cr, translating into an effective per-share value of Rs96.63, which is at a whopping 126% premium to the last six-month average share price of Spice at the time of stake sale. Thus, the deal is clearly a winning proposition for the Modi Group.

TMI has paid Idea Rs156.96 per share for a preferential issue of 46.473cr shares to it, giving it effectively 14.99% of the post-issue share capital, thus not requiring TMI to make an open offer.

The price paid by TMI is at a significant 58% premium to the closing share price prior to the announcement of the deal and at a 41% premium to the last six-month average share price of Idea at the time. The total cash inflow for Idea was a significant Rs7,294cr.

It may also be recalled that Idea had entered into a deal to sell 20% stake in its subsidiary, Aditya Birla Telecom (ABTL) to Providence Equity Partners for a consideration of US \$640mn, thereby monetising its stake in Indus Towers, the joint venture telecom infrastructure company formed between Idea Cellular, Bharti Infratel and Vodafone-Essar. It should be noted that Idea through ABTL holds 16% stake in Indus Towers, apart from owning the telecom universal access service (UAS) licence for the Bihar service area. Thus, after these two deals, Idea will not only become debt-free but will also become well-capitalised to invest to achieve growth and expansion in its existing and newer service areas. Notably, Idea has earmarked Rs10,000cr for expansion over the next two years.

Exhibit 5: Cash flow for Idea from the deal		(Rs cr)
Cash Outflow		
Share purchase from Modis @ Rs 77.30 per share		2,175.9
Non-compete fee		544.0
Open offer for 20% of Spice @ Rs 77.30 per share		1,066.6
Total Cash Outflow	(A)	3,786.5
Cash Inflow		
Preferential share issue to TMI @ Rs156.96 per share	(B)	7,294.4
Net Cash Inflow	(C) = (B) - (A)	3,507.9

Source: Company, C-line, Angel Research

Overall, there are numerous benefits that Idea Cellular derives from this deal. Even though the deal valuations seem expensive, given Spice's lack of scale in operations, net losses still being recorded and below-par Balance Sheet quality, we believe the benefits far outweigh the concerns over the longer-term.

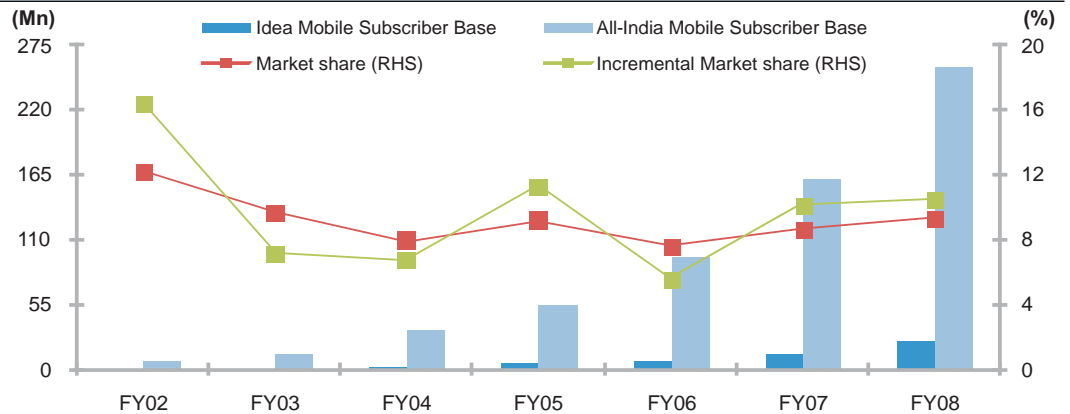
Continuing focus on Execution seen in consistently improving market-share

Idea, over the past couple of years, has consistently improved its market-share; its all-India share has increased from 7.8% in June 2006 to 9.7% at the end of July 2008, a rise of 189bp

Over the past couple of years, Idea Cellular, post the transfer of management control to the Aditya Birla Group has been consistently improving its market-share. In June 2006, the company's all-India market-share stood at 7.8%, which has risen consistently and stood at 9.7% at the end of July 2008, a rise of 189bp over the mentioned time-period. This is despite the company not being a pan-India operator. In its circles of presence, the company's market-share increased from 13.8% in June 2006 to 16.7% in July 2008, a rise of 286bp. If we segregate based on the 'Established Circles' and 'Newer Circles', Idea's market-share in the established circles (excluding UP East, Rajasthan and Himachal Pradesh) has risen from 16.9% in June 2006 to 19.6% in July 2008, a rise of 269bp. In the newer circles (UP East, Rajasthan and Himachal Pradesh), Idea's market-share has risen from NIL to 6.3% over the period, reflecting a steady up-tick. This performance has been achieved on the back of a strong focus on execution,

consistent network roll outs and expansion of coverage area to include the interiors of its circles leading to deeper penetration in these areas. This is adequately reflected in the company's monthly net additions, which crossed the 1mn-mark in March 2008 and have sustained above this level since then.

Exhibit 6: Idea Cellular - Market-share performance



Source: COAI, AUSPI, Company, Angel Research

Idea gained 171bp in market-share over FY2006-08

Idea's performance on the market-share front was fairly inconsistent until FY2006 (Refer Exhibit 6), as issues concerning its ownership hampered any effective focus on network roll-outs into existing and newer circles. The company was initially a three-way partnership between the Tata Group, the AV Birla Group and the US telecom major, AT&T. However, AT&T exited by selling its stake in the venture and the Tatas and Birlas continued to run the company, a none-too-comforting arrangement. Eventually, the AV Birla Group took control of the company after the Tata Group sold its 48% stake for Rs4,406cr. On account of these issues, Idea lost 457bp in market-share over FY2002-06. However, with its focus regained, the telco gained a strong 171bp in market-share during FY2006-08.

Exhibit 7: Subscribers and market-share

(Sub. base in mn)	Feb.	Mar.	Apr.	May	June	July
Idea total mobile sub. base	22.9	24.0	25.0	26.1	27.2	28.2
All-India mobile sub. base	246.3	256.2	264.4	273.1	282.0	291.2
All-India market share (%)	9.3	9.4	9.5	9.6	9.6	9.7
Total sub. base in COP*	142.2	148.2	153.2	158.2	163.5	169.1
COP market share (%)	16.1	16.2	16.3	16.5	16.6	16.7
Idea est. circles sub. base**	21.1	22.1	23.1	24.0	24.9	25.9
Total sub. base in est. circles	112.0	116.8	120.4	124.0	127.9	131.9
Est. circles market share (%)	18.8	18.9	19.1	19.4	19.5	19.6

Source: COAI, AUSPI, Company, Angel Research; *COP = Idea's circles of presence; ** Idea's established circles excluding UP (East), Rajasthan and Himachal Pradesh

Idea improved its market-share both at an all-India level and in its circles of presence (*Refer Exhibit 7*). This is no mean achievement, given that the Indian Telecom Sector is arguably the most competitive in the world, with 6-7 operators competing for a piece of the pie in each circle. With well-established players like Bharti Airtel, Reliance Communications (RCOM), Vodafone-Essar and BSNL present across virtually all Idea's circles of operations, the fact that the company managed to perform well on the market-share front speaks volumes about its impressive execution skills.

Competitive positioning in its key circles

Idea Cellular is the market leader in two of its 11 circles (excluding Mumbai and Spice circles), ranks second in two circles and third in three circles

Idea Cellular commands a decent market-share in its existing circles. It commands 16.7% share in these circles (July 2008) and is the market leader in two circles (Maharashtra and Kerala), ranks second in two circles (UP West and Madhya Pradesh) and third in three circles (Andhra Pradesh, Gujarat and Haryana). Thus, in seven out of its eleven circles of presence (excluding Mumbai and Spice circles), Idea is ranked among the top-three operators by subscribers. These seven circles account for 68% of the total subscriber base of Idea's circles of operations and Idea's subscriber base in these circles forms around 84% of its total base (excluding Mumbai and Spice circles). The company has been able to improve its market-share despite the ever-increasing competition in the sector, which is a heartening feature.

Exhibit 8: Idea's key circles of presence

Circle	Population (Mn)	Mobile subscriber base (Mn)*	Mobile teledensity (%)*	Idea's subscriber base (Mn)*	Market-share (%)*	Position
Kerala	35.3	12.6	35.5	3.3	26.1	1
Maharashtra	107.5	23.3	21.6	5.7	24.4	1
Madhya Pradesh#	90.1	14.7	16.3	3.7	25.3	2
UP (West)\$	64.6	14.4	22.2	3.0	21.0	2
Andhra Pradesh	84.6	23.2	27.4	3.9	16.8	3
Haryana	23.5	7.1	30.3	1.2	16.7	3
Gujarat	56.2	19.0	33.7	3.1	16.1	3
Total	461.8	114.2	24.7	23.8	20.9	
All-India	1,139.8	291.2	25.5	28.2	9.7	5
% of all-India	40.5	39.2		84.3		

Source: COAI, AUSPI, Company, Census 2001, Angel Research; Note: We have assumed a nominal 1.5% annual population growth rate since 2001 to derive the latest figures, * All-India mobile subscriber base, Idea's mobile subscriber base (excluding Spice), all-India mobile teledensity and Idea's market-share (excluding Spice) are as at the end of July 31, 2008; # The population of Madhya Pradesh includes Chattisgarh; \$ The population of UP (West) is derived assuming that 35% of the total population of Uttar Pradesh is accounted for by this circle.

Despite the presence of Bharti Airtel, RCOM, Vodafone-Essar and BSNL in its circles of operations, Idea has managed to improve its competitive positioning

Idea's combined market-share in these circles is 20.9% (Refer Exhibit 8). Despite the presence of biggies like Bharti Airtel, RCOM, Vodafone-Essar and BSNL in all these circles (with the exception of Vodafone-Essar in Madhya Pradesh, where it is not present), Idea has managed to improve its competitive positioning. If we include the Punjab circle (acquired from Spice), Idea's combined market-share remains relatively flat at 20.8%. This is in spite of circles like Maharashtra and Haryana being amongst the most competitive in India, when measured on the basis of the Herfindahl-Hirschman Index (HHI). The HHI is a measure of the size of individual firms in an industry in relation to the overall industry. It is an indicator of the competitive intensity in the industry. In simple terms, it is defined as the sum of the squares of the market-share of each individual firm. Thus, the maximum value that this index can have is 10,000 (the square of 100) given a situation of a single firm operating in the industry with a market-share of 100%.

The lowest possible value that the HHI can have for any industry is $1/N$, where 'N' is the number of firms competing in the industry. Thus, in the Indian Telecom Industry, after taking into account the recent acquisition of Spice Communications by Idea Cellular, there are 11 competitors of varying sizes (Bharti Airtel, RCOM, Vodafone-Essar, BSNL, Idea Cellular, Tata Teleservices, Aircel Cellular, MTNL, BPL Mobile, HFCL Infotel and Shyam Telelink). Consequently, the lowest value that the HHI can have is 0.0909 (or 909).

Exhibit 9: Idea's circles of presence (including Spice) - HHI circle-wise analysis

Circle	Number of operators	July 2008 HHI	Concentration level*	Lowest possible HHI	Idea market share (%)	Idea market Position
Delhi	6	1,817	High	1,667	11.7	5
Andhra Pradesh	6	1,944	High	1,667	16.8	3
Gujarat	6	2,162	High	1,667	16.1	3
Karnataka**	6	2,541	High	1,667	9.2	5
Maharashtra	6	1,762	Moderate	1,667	24.4	1
Kerala	6	1,895	High	1,667	26.1	1
Punjab**	7	1,812	High	1,429	20.1	2
Haryana	6	1,704	Moderate	1,667	16.7	3
UP (West)	6	1,778	Moderate	1,667	21.0	2
UP (East)	6	2,006	High	1,667	6.8	5
Rajasthan	7	2,019	High	1,429	6.2	6
Madhya Pradesh#	5	2,393	High	2,000	25.3	2
Himachal Pradesh#	6	2,711	High	1,667	4.1	6

Source: COAI, AUSPI, Angel Research; Note: For the purpose of HHI calculation in circles where RCOM operates dual networks (CDMA and GSM), we have considered the company's CDMA and GSM operations as one company and consequently, the HHI is higher than if we were to take them as separate companies; * On the basis of the US Department of Justice criteria; ** Circles where Spice operates; # Circles where RCOM currently operates dual networks

Towerco hive-off to improve operational efficiencies

The concept of infrastructure sharing has taken off in India and in line with Bharti Airtel and RCOM, Idea has also hived off its passive telecom infrastructure into a separate company, Indus Towers, which is a joint venture between itself, Bharti Infratel and Vodafone-Essar, with Idea effectively holding around 12.8%. We believe this move by the company will enable it to improve its operational and capex efficiencies, and aid faster network roll out.

Indus Towers will drive the network expansion process for all three cellular majors in 15 telecom circles (Chennai and Tamil Nadu counted as one circle) excluding Madhya Pradesh and all the six 'C' category circles. Idea is present in 12 of the 15 circles that Indus operates in (including Mumbai and Spice circles) excluding Tamil Nadu (including Chennai), Kolkata, and West Bengal and A&N where it does not have a presence. Idea's expansion plans in these three circles will be done through Indus, enabling quicker network expansion. Considering that Bharti and Vodafone both have a strong presence in these circles, Idea should be able to fast-track its expansion process as and when it rolls out operations.

We have done discounted cash flow (DCF) projections for Indus and believe this is the most appropriate way to value towercos, given their strong cash generation ability, especially beyond three to four years with increasing tenancy ratios. The key factor in the tower business is undoubtedly the tenancy ratio, i.e., average number of tenants per tower. Thus, to drive higher tenancies, towers must be of high quality in terms of shareability. It is not just the number of towers, but the tenancy ratios that determine break-even for a towerco.

We have forecast a total value of Rs31 per Idea Cellular share for its 16% stake in Indus Towers. Thus, the tower business of Idea is significantly value-accretive, adding 42% to the value of the core business. We have taken a WACC of 11.2% for Indus, with a terminal growth rate of 5% assumed.

Monetisation of Indus stake through Providence deal

Idea monetised its 16% stake in Indus by selling 20% in its subsidiary, Aditya Birla Telecom, which holds the stake, to Providence Equity Partners, for a consideration of US \$640mn

Idea Cellular recently sold 20% stake in its subsidiary, Aditya Birla Telecom (ABTL) to Providence Equity Partners, for a consideration of US \$640mn. ABTL holds the universal access service (UAS) licence for the Bihar circle and a 16% stake in Indus Towers prior to the deal. Thus, Idea holds its stake in Indus through ABTL. The company had paid Rs10cr as licence fee for Bihar. However, the majority value of ABTL is on account of its stake in Indus. The transaction values ABTL at US \$3.2bn and Indus at US \$20bn (Rs84,000cr, at Rs42 to a Dollar). On a per-share basis, the value works out to Rs42, which is at a significant 33% premium to our calculated value of Idea's stake in Indus. Thus, Idea has monetised its stake in Indus through this deal. With a possible listing of Indus going ahead, there is likely to be strong value unlocking for Idea Cellular, which we believe has taken smart steps to fund its ambitious pan-India network expansion plans.

Apart from the monetisation of its Indus stake, Idea has also issued 46.473cr equity shares to TMI as part of the Spice deal, which led to an inflow of Rs7,294.4cr for Idea. After taking into

account the net cash inflow from the Spice and Providence transactions, Idea's net debt becomes negative and the company is now fully funded until at least FY2010.

Good progress on the Spectrum front

The spectrum issue, so critical to the sustained growth of the Telecom Sector, has seemingly been resolved at least in the short-term

The spectrum issue, so critical to the sustained growth of the Telecom Sector, has seemingly been resolved at least in the short-term. Several existing and newer operators have received spectrum in a few circles. Idea has commenced operations in the Mumbai circle and has received spectrum to do so in three more circles, namely Bihar, Tamil Nadu (including Chennai) and Orissa. This will take care of the medium-term growth requirements of the sector in general and of Idea Cellular in particular. With the Department of Telecommunications (DoT) also announcing the 3G and Broadband Wireless Access (BWA) Policies, it will open up newer revenue generation streams that can stem the fall in ARPUs and Idea, in partnership with TMI, can launch pan-India 3G services.

Spectrum allocation in 900 MHz band in 7 circles; 9 including Spice circles

In seven of its 11 circles of operations, Idea has spectrum in the 900 MHz frequency band, leading to lower capital costs

In seven of its 11 circles of operations, Idea has been allocated spectrum in the 900 MHz frequency band, being the original licensee in these circles. Spectrum allocation in this band supports lower capital costs for operators as compared with the 1,800 MHz band, as the density of cell sites required is lower for this band. Idea, being among the first to commence mobile services in these circles got access to the early subscribers with high ARPU capacity and has managed to gain critical mass in these circles, which serves as an entry barrier to potential new entrants. The acquisition of Spice also adds two more circles with spectrum in this band, taking the total to 9 out of 13 circles (14 including Mumbai).

Concerns

Further issues on the Spectrum front

As is well-known, spectrum is the key raw material for mobile services. Any shortage in the same will lead to deterioration in the quality of services (QoS). Already, over the past many months, the industry has witnessed issues on this front, with there being low or no availability in many circles and the lack of transparency of the DoT on the issue not helping matters either. The reluctance of the Defence Forces to vacate spectrum for commercial use has also been a stumbling block on this front. Further, with a slew of newer operators like Unitech Wireless, Loop Telecom (BPL), Swan Telecom and Datacom (Videocon) all in the fray for spectrum allocation, this could lead to even more scrambling despite these operators already having been allotted spectrum in several circles. Thus, further delays in the allotment of spectrum could prove to be a negative for the industry, Idea included.

Dilution effect of the Spice deal

On account of the three-way deal struck with Spice Communications and TMI, Idea's equity capital will witness about 23% dilution. Idea has already made a preferential allotment of 46.473cr

equity shares to TMI, giving it a 14.99% stake in the post-issue equity capital. After this, TMI will swap its 39.2% stake in Spice for further shares in Idea in the determined swap ratio of 49 Idea shares for every 100 Spice shares held. This will lead to a further 13.25cr shares being issued and will take TMI's stake in Idea to 18.5%. TMI's eventual stake will be in the range of 18-20%, depending on how many shares it purchases in the open offer along with Idea. However, this will not lead to an open offer for Idea shareholders, given that the stake is increasing beyond 15% through a share-swap and not through an open market purchase of Idea's shares. The promoter's stake in Idea Cellular will fall to around 47% from 57.7% currently.

Exhibit 10: Idea Cellular - Equity dilution		(Rs cr)
Equity Share Capital pre-Spice deal		2,635.4
Preferential issue to TMI		464.7
Sub-total		3,100.1
Issue to TMI for its stake in Spice through share swap (swap ratio 49:100)		132.5
Fully Diluted Equity Share Capital		3,232.6
Dilution (%)		22.7

Source: Company, C-line, Angel Research; Note: The shares issued to TMI through the share swap are assuming it does not purchase any of the shares tendered by minority shareholders in the open offer.

As for the impact on Idea's Earnings Per Share (EPS), we do not expect the transaction to turn EPS-accretive until at least FY2011. Our revised FY2010 EPS estimate is lower by around 21% as against the estimated EPS before the Spice deal. We have been fairly conservative in our estimates and expect Spice as a separate entity to report Net Losses even in FY2010E, albeit very marginal. Thus, to the extent that Idea is able to effectively turn around Spice quicker than what we have anticipated, there is an upside risk to our estimates.

Exhibit 11: Financial impact of the Spice merger on Idea Cellular		
(Rs cr)	FY2009E	FY2010E
Revenues pre-Spice deal	9,772	13,101
Revised Revenues	11,176	14,856
% chg	14.4	13.4
EBITDA Margins pre-Spice deal (%)	32.4	31.9
Revised EBITDA Margins (%)	31.4	31.0
% chg	(1.0)	(0.9)
Net Profit pre-Spice deal	1,386	1,864
Revised Net Profit	1,325	1,814
% chg	(4.4)	(2.6)
EPS pre-Spice deal (Rs)	5.3	7.1
Revised EPS (Rs)	4.1	5.6
% chg	(22.0)	(20.6)

Source: Companies, Angel Research; Note: The significant difference between the changes in Net Profit and EPS is on account of the equity dilution post the Spice deal.

Weak business case for new circles

We believe it will not be easy for Idea to penetrate deep into its newer circles, at least in the medium-term. Circles like Mumbai, Bihar, Tamil Nadu and Orissa have well-entrenched operators like Bharti, RCOM (both operators present in all these circles), Vodafone-Essar (present in Mumbai and Tamil Nadu) and BSNL (present in Bihar, Tamil Nadu and Orissa) and it will be a none-too-easy task to acquire scale in these circles. Also, all the 'low hanging fruit' in these circles would have been taken by the established operators and thus, ARPUs will be further pressurised, as will profitability, given the time taken for newer circles to break-even. Newer operators like Unitech Wireless, Loop and Datacom are also scheduled to commence services shortly in some circles like Tamil Nadu (including Chennai), Orissa, Karnataka, Kerala, Andhra Pradesh and Madhya Pradesh. Thus, there remains a question mark on the business case for green-field roll outs in newer circles.

Heightened competition

A number of newer operators have entered the market, which is likely to lead to heightened competition in many circles, immediately in the ones where they have already been allotted start-up spectrum. In circles like Tamil Nadu and Orissa, as many as 11 operators will crowd the market once newer operators commence services. Thus, in the medium-term at least, competition in the Indian Telecom Market is only likely to increase.

Mobile Number Portability

The implementation of Mobile Number Portability (MNP) is likely to be a negative for the industry. With QoS issues in the high traffic density metro service areas, there exists some disenchantment with service levels, given the frequency of call drops being witnessed in these areas. The service providers themselves have maintained that they are facing a shortage of spectrum in these areas, which is the reason they have attributed for the frequency of call drops and lower levels of customer satisfaction. Nonetheless, with the advent of MNP, customers can change their service providers without having to go through the tedious process of changing their numbers. This could lead to an increase in churn rates, which are already at 4-5% on a monthly basis, thus leading to higher customer retention costs and Margin pressures.

Execution risks

The expansion and roll-out of cellular networks across the country carries with it tremendous execution risks. With most of the expansion coming from the untapped rural areas, there are logistical risks, with many areas being unapproachable on account of poor roads and in many cases, no roads at all, erratic (or non-existent) power supply, poor infrastructure, lack of trained personnel to operate cellular towers and the significant risks associated with putting up cellular towers, with as many as 40 different approvals required. Thus, execution and network roll out is a daunting task and managing such risks requires significant skill-sets.

Outlook and Valuation

We expect Idea Cellular to continue to record strong growth in its mobile subscriber base going forward and estimate a CAGR growth of 56.1% over FY2008-10E, which will enable the subscriber base to hit 58.5mn by FY2010E (24.0mn in FY2008). This includes the subscriber base of Spice Communications, acquired recently by Idea. Thus, this implies a subscriber market-share of 12.8% in FY2010E. On the other hand, we expect the company's gross mobile ARPUs (including Spice) to decline at a CAGR of 9.1% over FY2008-10E to hit Rs243.6 in FY2010E (Rs294.6 in FY2008). Consequently, we estimate Gross Revenues of the Wireless Business to grow at a CAGR of 48.7% over FY2008-10E.

Overall, we estimate a 48.7% CAGR growth in Top-line for Idea Cellular over FY2008-10E, assuming that 100% of the company's NLD revenues are captive. On the other hand, we expect a 31.9% CAGR growth to be clocked in Bottom-line over the same period. We expect a 247bp fall in margins over this period, owing to higher network expansion costs, lower profitability of Spice and lower profitability in the newer circles initially.

At Rs82, the stock trades at a P/E of 14.5x FY2010E EPS, EV/EBITDA of 3.9x FY2010E EBITDA and an EV/subscriber of US \$88.1 on our FY2010E subscriber base. **We maintain a Buy on Idea Cellular with a Target Price of Rs104 for the stock, with Rs73 as the value of the core business and Rs31 as the value of its stake in Indus Towers.**

Profit & Loss Statement
Rs crore

Y/E March	FY2007	FY2008	FY2009E	FY2010E
Net Sales	4,366	6,720	11,176	14,856
% chg	47.2	53.9	66.3	32.9
Total Expenditure	2,901	4,468	7,668	10,245
EBITDA	1,465	2,252	3,508	4,611
% of Net Sales	33.6	33.5	31.4	31.0
Other Income	21	17	123	132
Depreciation & Amortisation	672	877	1,527	1,942
Interest (Net)	305	278	579	627
PBT	509	1,115	1,526	2,174
% of Net Sales	11.7	16.6	13.7	14.6
Tax	7	73	200	359
Effective Tax Rate (%)	1.4	6.5	13.1	16.5
PAT	502	1,042	1,325	1,814
% chg	148.2	107.6	27.2	36.9

Balance Sheet
Rs crore

Y/E March	FY2007	FY2008	FY2009E	FY2010E
SOURCES OF FUNDS				
Equity Share Capital	2,593	2,635	3,233	3,233
Reserves & Surplus	2,037	2,317	5,557	4,816
Profit and Loss Account	(2,450)	(1,408)	(82)	1,732
Shareholders' Funds	2,180	3,545	8,707	9,781
Loan Funds	4,251	6,515	6,201	4,898
Deferred Tax Liability	82	166	166	166
Total Liabilities	6,512	10,226	15,075	14,845
APPLICATION OF FUNDS				
Goodwill on consolidation	6	6	6	6
Gross Block	7,047	11,014	16,389	21,629
Less: Acc. Depreciation	2,631	3,124	4,651	6,593
Net Block	4,417	7,890	11,738	15,037
Capital Work-in-progress	507	1,037	1,037	1,037
Intangible Assets (Net)	1,186	1,789	1,789	1,789
Investments	1	556	556	556
Net Current Assets	314	(1,152)	(152)	(3,680)
Deferred Tax Asset	81	100	100	100
Total Assets	6,512	10,226	15,075	14,845

Cash Flow Statement
Rs crore

Y/E March	FY2007	FY2008	FY2009E	FY2010E
Profit before tax	509	1,115	1,526	2,174
Depreciation	672	877	1,527	1,942
Change in working capital	719	144	608	371
Income taxes paid	7	73	200	359
Cash from operations	1,893	2,063	3,460	4,127
Change in Fixed assets	2,780	5,100	5,375	5,240
Free cash flows	(887)	(3,037)	(1,914)	(1,113)
Change in Investments	1	555	0	0
Cash from invstg. act.	(1)	(555)	0	0
Change in Share capital*	2,017	43	7,427	0
Change in Debt	965	2,265	(314)	(1,303)
Dividend and dividend tax paid	0	0	0	0
Cash from fincg. act.	2,982	2,307	7,113	(1,303)
Other adjustments	(423)	(38)	0	(0)
Net inc./(dec.) in cash	1,671	(1,322)	5,199	(2,416)
Opening cash balance	149	1,820	498	5,696
Closing cash balance	1,820	498	5,696	3,280

* In FY2009, this figures includes share premium on a preferential issue of 46.473cr equity shares made to Telecom Malaysia International.

Key Ratios

Y/E March	FY2007	FY2008	FY2009E	FY2010E
Per Share Data(Rs)				
Diluted EPS	1.6	3.2	4.1	5.6
Cash EPS	4.5	7.3	10.8	14.3
DPS	0.0	0.0	0.0	0.0
Book value per share	8.3	13.5	46.7	53.5
Operating Ratios (%)				
Sales growth	47.2	53.9	66.3	32.9
EBITDA Margins	33.6	33.5	31.4	31.0
Net Profit Margins	11.5	15.5	11.9	12.2
ARPU's (Blended, Rs/month)	340.4	294.6	277.2	243.6
Return ratios (%)				
RoE	30.3	36.4	16.7	13.7
RoCE	18.4	19.8	16.5	21.7
Dividend payout	0.0	0.0	0.0	0.0
Valuation ratios (x)				
P/E	52.5	25.3	19.9	14.5
P/BV	9.9	6.1	1.7	1.5
Sales/GFA	0.6	0.6	0.7	0.7
EV/EBITDA	16.3	12.2	6.3	5.0

Note: All figures are given on a consolidated basis.

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BUY

Price	Rs374
Target Price	Rs595
Investment Period	12 Months

Stock Info	
Sector	Telecom
Market Cap (Rs cr)	77,205
Beta	1.1
52 Week High / Low	844 / 325
Avg Daily Volume	14042
Face Value (Rs)	5
<hr/>	
BSE Sensex	14,042
Nifty	4,245
<hr/>	
BSE Code	532712
NSE Code	RCOM
Reuters Code	RLCM.BO
Bloomberg Code	RCOMIN

Shareholding Pattern (%)	
Promoters	66.1
MF / Banks / Indian FIs	8.9
FII / NRIs / OCBs	13.2
Indian Public / Others	11.8

Abs.	3m	1yr	3yr*
Sensex (%)	(6.9)	(14.0)	30.8
RCOM (%)	(28.9)	(33.7)	28.6

* Since listing on March 6, 2006

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'Integrated' growth!

Reliance Communications (RCOM), India's second-largest private integrated telco, has rapidly expanded across its key segments such as Mobile, Broadband and Global. The company seems set to further leverage the Indian Telecom growth story through full-fledged roll-out of its GSM-based cellular services. Apart from this, it is rapidly expanding its solution portfolio in the Enterprise Business, a potential US \$275bn opportunity globally. RCOM is also set to unlock value through listing its Tower business and global arm. At the CMP, the stock trades at a P/E of 10.9x FY2010E EPS. **We maintain a Buy on RCOM with a Target Price of Rs595 for the stock, with Rs479 as the core business value and Rs116 as the towerco value.**

■ **Leveraging the Indian Mobile Telephony story:** RCOM is the second-largest wireless operator in the Indian Mobile Market. The company continues to witness strong growth in net adds in its Wireless Business segment, aided by the rapid roll-out of its network in the rural areas of the country. Notably, from the date of commercial launch, RCOM leapfrogged to the top position within just seven months. The company, at the end of July 2008, had 52.5mn mobile subscribers and enjoyed an all-India marketshare of 18.0%. We expect the company to remain a key beneficiary of the Indian Mobile Telephony story, with Wireless Revenues estimated to clock a CAGR of 26% over FY2008-10E.

■ **GSM roll-out to strengthen net adds:** RCOM has received 4.4 MHz of start-up GSM spectrum in all the 14 circles where it hitherto did not have a presence through its GSM-based cellular services. The company expects to commence commercial operations in these circles by December 2008. This is likely to further strengthen its monthly net adds and will make it the only telco with a countrywide CDMA and GSM network presence. RCOM has access to a potential customer base of nearly 9mn, given that there are over 219mn GSM subscribers in India, assuming a monthly churn rate of 4-5%.

■ **Value-unlocking opportunities ahead:** Apart from the Wireless Business, RCOM also has strong value-unlocking opportunities on the horizon, with the potential listing of its towerco, Reliance Infratel (the draft RHP has already been filed with SEBI) and global arm, Reliance Globalcom.

Key Financials

Y/E March (Rs cr)	FY2007	FY2008	FY2009E	FY2010E
Net Sales	14,262	18,827	23,616	29,085
% chg	34.2	32.0	25.4	23.2
Net Profits	3,168	5,401	6,280	7,383
% chg	613.0	70.5	16.3	17.6
EPS (Rs)*	14.7	25.0	29.1	34.2
EBITDA Margin (%)	38.7	42.3	41.5	42.0
P/E (x)	25.5	14.9	12.9	10.9
RoE (%)	19.7	23.5	22.0	21.2
RoCE (%)	9.0	14.1	11.0	12.6
Sales/GFA (x)	0.4	0.4	0.3	0.3
EV/EBITDA (x)	14.3	11.0	10.0	8.3
Mobile ARPUs (Rs/user/month)	371	344	292	263

Source: Company, Angel Research; * Fully diluted EPS

Company Background

Reliance Communications is India's second-largest integrated telecom solutions provider and offers the full portfolio of telecom and telephony solutions

Reliance Communications (RCOM) is India's second-largest private integrated telecom solutions provider. The company offers the full portfolio of telecom and telephony solutions, including mobile services (both CDMA and GSM technologies with a pan-India presence), wire-line services, national and international long distance services, enterprise broadband, global voice and data services, provision of bandwidth to global corporates, infrastructure and managed network services. RCOM provides bandwidth and connectivity solutions to global corporates through its wholesale business, FLAG and FALCON, which operate global submarine cable systems, while the company provides enterprise business connectivity solutions and managed network solutions through its enterprise business. The wholesale and enterprise units work under the umbrella brand for all global communication initiatives of RCOM, Reliance Globalcom. RCOM has also hived off its telecom infrastructure arm, Reliance Infratel, with a view to maintaining an independent focus on this space, which is likely to lead to value unlocking opportunities as and when Infratel is listed.

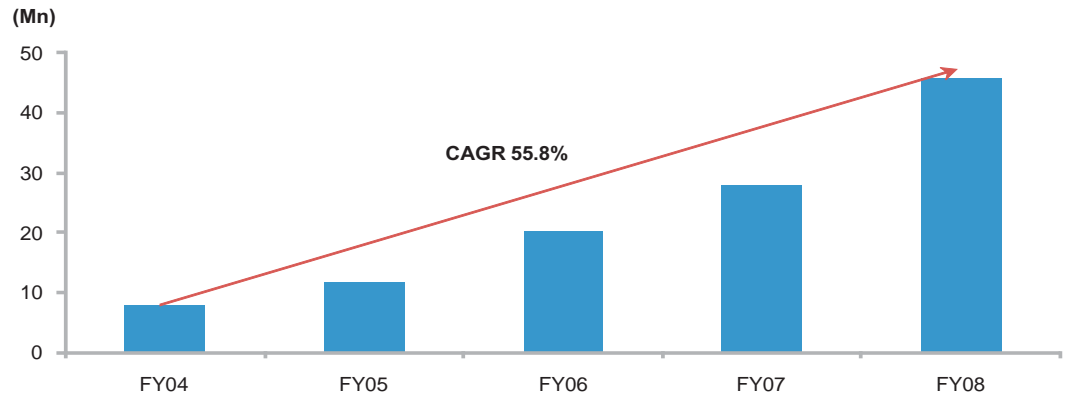
The Wireless Business accounted for 67% of Gross Revenues in FY2008

- **Wireless** - This business accounts for the largest share of RCOM's revenues (~ 67% of gross revenues in FY2008, 65.8% in 1QFY2009). The company provides cellular services through this business unit and is currently the second-largest player in the Indian telecom market, the fastest-growing in the world. At the end of July 2008, RCOM had a total mobile subscriber base of 52.5mn, of which over 44mn subscribers were CDMA subscribers, while the balance 8.5mn subscribers were GSM users. The company's all-India market-share (GSM + CDMA) currently stands at 18.0%. RCOM's mobile subscriber base (GSM + CDMA) has grown at a CAGR of 55.8% from FY2004 to FY2008. Of this, the company's CDMA subscribers have clocked a CAGR of 53.5% in the mentioned period. RCOM's GSM subscribers have grown at an impressive CAGR of 72.6% over the same period. The all-India mobile subscriber base (GSM + CDMA), on the other hand, has clocked a CAGR of 65.1% from FY2004 to FY2008.

At the end of FY2008, RCOM's network was spread across all 22 telecom circles in India, giving it one of the widest network coverage areas in the country

At the end of FY2008, RCOM's network spread across all 22 telecom circles in India (considering Chennai and Tamil Nadu as one circle) giving it one of the widest network coverage areas in the country. The company has received start-up GSM spectrum in the remaining 14 circles where it was hitherto not present through its GSM arm, thus giving it a pan-India GSM presence. RCOM will roll out pan-India GSM services towards the latter half of FY2009, leveraging on its existing CDMA network. The company also recently acquired a Uganda-based corporation holding a public infrastructure provider license and a public service provider license. Uganda is a country with low telecom penetration, offering strong growth potential. Further, RCOM has nearly 65% marketshare in the data card and USB modem market for laptops and PCs. The company is also the largest private sector PCO operator, with over 50% market-share.

Exhibit 1: RCOM mobile subscriber base - Impressive growth



Source: COAI, AUSPI, Company, Angel Research

RCOM offers national and international long distance calling services through this business unit

- **Global** - Through this business unit, RCOM offers national and international long distance calling services, wholesale connectivity solutions, carriage and termination to other carriers as well as on an inter-segment basis to its other business units. RCOM entered the long distance market in India in mid-2003, and has become one of the largest carriers of international voice minutes. RCOM owns and operates FLAG, the largest private submarine cable system in the world, connecting countries from the East coast of the US to Europe, the Middle East, India, South and East Asia to Japan through its 52,000km global optic fibre network. On account of its global submarine cable systems, FLAG and FALCON, RCOM is the largest provider of international bandwidth in Asia and the Middle East.

RCOM is undertaking an ambitious expansion plan, initiating implementation of the FLAG Next Generation Network (NGN, a packet-based network that has greater bandwidth capacity to carry voice and data minutes through fibre-optic cables), which when complete, will provide seamless connectivity to countries in East Africa, the Eastern Mediterranean, South and East Asia, and the Trans-Pacific and will span 110,000km of undersea fibre optic cable, connecting 80% of the world's population and 90% of global GDP.

RCOM offers enterprise connectivity solutions like voice, data, MPLS-VPN and WiMAX services through this business unit

- **Broadband** - RCOM offers a range of enterprise connectivity solutions, namely voice, data, video, internet and IT infrastructure services, including national and international private leased circuits, broadband internet access, audio and video conferencing, MPLS-VPN, Office Centrex, managed Internet Data Centre (IDC) services and WiMAX and Wi-Fi services through this business unit. The company's enterprise customer base includes 850 of the top-1,000 Indian enterprises and MNCs. In the consumer segment, RCOM offers fixed line phone services and broadband internet access services.

RCOM has made focused acquisitions in the enterprise connectivity space, enhancing its service portfolio

The company has made some focussed acquisitions in the Enterprise Connectivity space through its umbrella company, Reliance Globalcom, which have enhanced its service portfolio and enabled it to focus on fast-growing and higher-Margin services and solutions. The first such acquisition was that of Yipes for US \$300mn. Yipes is a leading provider of managed ethernet services based in San Francisco, California, which owns over 22,000 route-km of fibre across 14

US metros, covering 40% of the US data communications market. Yipes is also present in London, Hong Kong and Tokyo.

The second acquisition was that of eWave World, a UK-headquartered telco focused on the rapidly developing market for wireless telephony services using WiMAX technology. Over the next 2-3 years, Reliance Globalcom, through eWave, will invest around US \$500mn to build and acquire WiMAX networks in emerging markets in Asia, Europe, Latin America and Africa. Recently, eWave World had entered into a joint venture in China to invest in nation-wide broadband operations. The company holds WiMAX licenses and has received spectrum to commence WiMAX services in several countries.

RCOM made its third acquisition through Reliance Globalcom, acquiring the UK-based Vanco Group for US \$76.9mn, which is recognised by Gartner to be amongst the world's top-5 managed global network players with over 220 MNC customers across 163 countries. Its blue chip customer base includes AVIS, British Airways, Siemens and Virgin Megastores. Vanco's acquisition increases Reliance Globalcom's tally of enterprise customers to over 1,400. The company, through this acquisition, would add 9 network management centers to its global service systems and processes. Vanco would add US \$365mn to Reliance Globalcom's revenues through secure, long-term contracts with its customers.

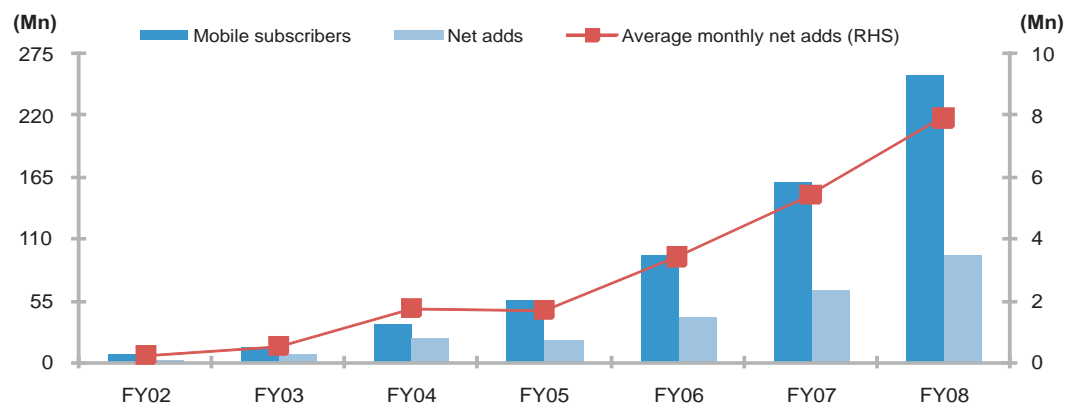
RCOM also plans to list Reliance Globalcom as and when market conditions improve. Reliance Infratel, its telecom infrastructure subsidiary, is also likely to get listed. The company has filed a draft RHP with the securities market regulator, the Securities and Exchange Board of India (SEBI). However, on account of unfavourable market conditions, the IPO has been deferred for the time being. Nonetheless, these initiatives are likely to lead to value-unlocking for the company. RCOM has also launched its DTH services (BIG TV) and is scheduled to launch IPTV services shortly.

Investment Argument

Leveraging the Indian Mobile Telephony story

India is the world's second-largest telecom market, with 291.2mn mobile subscribers at the end of July 2008 (excluding BSNL and MTNL CDMA-WLL subscribers). On a monthly net additions basis, India is the largest telecom market in the world, with over 9mn subscribers added in July. The Telecom Sector has been the showpiece of the success of India's economic reforms programme, despite all the legal and regulatory problems that have impacted it. The industry added nearly 95mn mobile subscribers in FY2008 to hit 256.2mn, implying 59% yoy growth and average monthly net additions of just under 8mn over the fiscal, a truly outstanding performance by any standards. Thus far in FY2009, each month has witnessed industry net adds crossing 8mn comfortably, reflecting the fact that the growth momentum has been sustained.

Exhibit 2: All-India mobile subscriber base - Powering ahead by leaps and bounds



Source: COAI, AUSPI, Company, Angel Research

Major factors responsible for this phenomenal growth include rapid expansion of coverage area by telecom operators, a continuous fall in minimum subscription costs and tariffs, increasing affordability due to strong GDP growth rates and the most competitive mobile market in the world leading to a consistent drop in tariffs. The steady drop in revenues per minute (RPMs) has been the key factor that has led to increased adoption and usage of mobile services. Going ahead, this is likely to sustain growth momentum and subscriber additions.

Exhibit 3: Falling tariffs drive subscriber base, usage

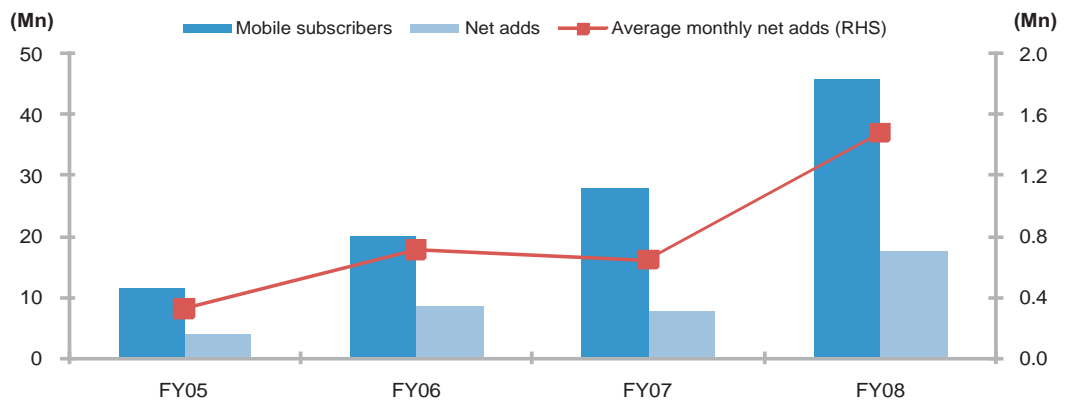
Particulars	FY2006	FY2007	FY2008
Mobile Subscriber Base (Mn)			
Bharti Airtel	19.6	37.1	62.0
RCOM	20.2	28.0	45.8
Idea Cellular	7.4	14.0	24.0
Wireless/Mobile Revenues (Rs cr)			
Bharti Airtel	8,239.2	14,144.2	21,786.1
RCOM	7,364.0	10,727.6	15,213.5
Idea Cellular	2,948.9	4,366.4	6,720.0
Total MoUs (Mn)			
Bharti Airtel	70,426	152,583	284,398
RCOM	97,815	145,540	205,500
Idea Cellular	20,921	45,931	86,212
RPMs (Rs)			
Bharti Airtel	1.17	0.93	0.77
RCOM	0.75	0.74	0.74
Idea Cellular	1.41	0.95	0.78

Source: Companies, COAI, AUSPI, Angel Research

RCOM was the second-largest Indian telecom operator with 52.5mn mobile subscribers at the end of July 2008, commanding a market-share of 18.0%

RCOM has certainly not missed out on India's phenomenally successful Mobile Telephony story. The company, despite starting operations fairly late compared to peers, with 52.5mn mobile subscribers was the second-largest Indian telecom operator at the end of July 2008, with a market-share of 18.0%. The company has been able to maintain this position through strengthening monthly net additions, reflecting strong execution skills. Going ahead, with its ambitious GSM expansion plans in full swing, the company expects to maintain and strengthen the current rate of net additions.

Exhibit 4: RCOM - Leveraging strongly on the Indian Mobile growth story



Source: Company, COAI, AUSPI, Angel Research

The 'transformational impact' of the new entrant

RCOM entered the Indian Telecom Market in FY2004, which was considerably later than other incumbent operators who had entered in the mid-1990s when the sector had been opened up to private competition. It should be noted that RCOM already had a presence in the market through its GSM-based mobile services (Reliance Telecom), which had entered the market and were launched considerably before the CDMA-based services were launched.

RCOM's big foray came with the launch of its CDMA-based mobile services, wherein it set up a pan-India network at one stretch with a view to tap the high-potential Indian telecom market

The big foray by RCOM however, came with the launch of its CDMA-based mobile services. The company set up a pan-India state-of-the-art network with a view to effectively tapping the high-potential Indian telecom market and transforming the industry through this 'disruptive competitive pressure'. At the time, India's mobile teledensity was barely over 1% (FY2003), which rose to around 3% in FY2004. At one go, RCOM had built a presence across nearly all circles in India and had rivaled and even improved upon the presence of incumbent operators, which had been operating in the market for eight years. Apart from events such as NTP 1999, the entry of PSU telecom major BSNL into the market, the entry of the fourth operator in each telecom circle and the implementation of the CPP regime, RCOM's pan-India launch of its CDMA-based mobile services into the market was another major landmark that transformed the sector and resulted in better affordability of telecom services for a greater number of people.

Within just seven months of its commercial launch, RCOM became the largest mobile services provider in India

Notably, within seven months of the commercial launch of its CDMA-based mobile services, RCOM became the largest mobile services provider in India, upstaging its major competitor, Bharti Airtel. Such a performance undoubtedly inspires confidence in the execution abilities of RCOM and leads us to believe that the company will continue to execute well on its expansion plans to cover the length and breadth of the country.

Exhibit 5: RCOM - Transforming the sector

Particulars	FY2001	FY2002	FY2003	FY2004*	FY2005	FY2006
Metros						
Circle leader	Hutch	Hutch	Hutch	Hutch	Hutch	Hutch
'A' circle						
Circle leader	Birla Tata AT&T**	Idea Cellular	BSNL	Reliance#	BSNL	Bharti
'B' circle						
Circle leader	Escotel	Escotel	BSNL	Reliance#	Reliance#	BSNL
'C' circle						
Circle leader	Reliance Telecom	Reliance Telecom	Reliance Telecom	Reliance#	BSNL	BSNL
All-India						
Market leader All-India presence	Bharti	Bharti	Bharti	Reliance#	Reliance#	Reliance#
	5 circles	7 circles	15 circles	22 circles	22 circles	23 circles

Source: COAI, AUSPI, Company, Angel Research; Note: The circles of Tamil Nadu and Chennai are considered separately here; * In FY2004, RCOM commercially launched its CDMA-based mobile services. The Jammu & Kashmir circle was also opened up to private cellular players; ** Birla Tata AT&T's name was changed to Idea Cellular in FY2002; # Figures for RCOM here include both CDMA and GSM subscribers.

RCOM's entry resulted in a quantum shift in the competitive dynamics of the Indian mobile market place (Refer Exhibit 5). The incumbent potential was already huge, with room for all operators to grow. Even if we were to exclude RCOM's CDMA-based mobile business when it was commercially launched in FY2004, the other operators were already growing at rates in excess of 100%. The company's entry provided a further boost to the sector and powered the mobile subscriber base higher significantly.

Exhibit 6: The 'Reliance' effect!

Particulars	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
CDMA sub. base (Mn)	0.5	8.3	14.1	26.9	40.9	63.5
% growth	180.0	1,563.9	69.1	91.1	51.7	55.4
Net additions (Mn)	0.3	7.8	5.8	12.8	13.9	22.6
CDMA sub. base excl. RCOM						
CDMA subs. (Mn)	0.4	1.4	3.5	8.6	16.2	24.7
% growth	125.7	236.4	159.8	144.6	88.2	52.2
Net additions (Mn)	0.2	1.0	2.2	5.1	7.6	8.5
GSM sub. base (Mn)	12.7	26.2	41.0	69.2	120.5	192.7
% growth	97.3	106.1	56.9	68.7	74.1	60.0
Net additions (Mn)	6.3	13.5	14.9	28.2	51.3	72.2
All-India mobile sub. base (Mn)	13.2	34.5	55.1	96.1	161.3	256.2
% growth	99.5	161.5	59.8	74.4	67.8	58.8
Net additions (Mn)	6.6	21.3	20.6	41.0	65.2	94.9
All-India mobile sub. base excl.						
RCOM CDMA subs. (Mn)	13.1	27.5	44.6	77.8	136.7	217.4
% growth	98.1	110.2	61.9	74.7	75.7	59.0
Net additions (Mn)	6.5	14.4	17.0	33.3	58.9	80.7

Source: COAI, AUSPI, Angel Research

Net adds for the mobile industry stood at 21.3mn in FY2004; excluding RCOM's CDMA subscribers, the figure fell to just 14.4mn, a decline of 32.4%

The entry of RCOM in FY2004 powered the mobile subscriber additions ahead quite dramatically (Refer Exhibit 6). In a sector that was already growing at 100%-plus rates, RCOM's foray led to an even greater surge in net subscriber additions for the industry and net additions for industry stood at 21.3mn. However, excluding RCOM's CDMA subscribers from this figure, net additions fell to just 14.4mn, a fall of 32.4%. Thus, clearly the entry of RCOM in the Indian telecom market led to a significant disruption in competitive dynamics and going forward, we expect the company to remain one of the prime beneficiaries of the Indian mobile growth story.

Presence across the Telecom value chain enabling bundling of offerings

RCOM's handset distribution network covers 600 cities through over 2,000 exclusive retail showrooms, 1.1mn sq. feet area, 3,000 distributors and 500,000 retailers

RCOM has a presence across the telecom value chain, right from distribution of mobile handsets to after-sales service. Its strong handset distribution network covers 600 cities through over 2,000 exclusive retail showrooms, 1.1mn square feet area, 3,000 distributors and 500,000 retailers (handset outlets), with a total estimated selling capacity of 25-30mn annual sales transactions. Post the current expansion process, the company will have 5,000 exclusive retail

showrooms with a presence in 1,100 cities through 2.5mn square feet area. In fact, RCOM is the second-largest handset retailer in the country after Nokia. The company, through its subsidiary, Reliance Communications Infrastructure, started selling Reliance-branded handsets under the 'Classic' brand name as a result of which it has been able to reduce the entry-level cost of handsets. 'Classic' is the second-largest selling handset brand in India and RCOM is the largest electronics retailer in India. Higher sales of its own handsets ensure greater control over the cost of the handsets, which are made by Korean and Taiwanese manufacturers.

RCOM started selling CDMA handsets under its own brand name to reduce the quantum of handset subsidies paid to Qualcomm, the innovator of CDMA technology

The reason why RCOM has started selling CDMA handsets under its own brand name is the fact that it pays handset subsidies to Qualcomm, the innovator of CDMA mobile communication technology, for each handset that it sells. This comes to around US \$10 per handset, of which US \$4 per handset is paid out in cash, while the balance is paid through free minutes of use (MoUs) offered to consumers. Thus, selling handsets under its own name reduces the subsidy pay-outs to Qualcomm, apart from having greater control over the cost of handsets, thus enabling lowering of entry-level handset costs. Taking into consideration the company's financials in the last few quarters, it is clear that the fall in MoUs is partly a result of the phasing out of free MoUs by the company, which has been on account of lower subsidies being paid out to Qualcomm due to higher sales of its own-branded handsets. This is a positive and has resulted in relatively stable RPMs.

Exhibit 7: Own-branded handset sales reduce free MoUs, lead to stable RPMs

Particulars	1QFY08	2QFY08	3QFY08	4QFY08	1QFY09
Wireless Business Revenues (Rs cr)	3,373.0	3,723.1	3,956.7	4,160.8	4,118.7
Mobile subscriber base (Mn)	31.9	36.3	41.0	45.8	50.8
ARPU (Rs/user/month)	375.5	363.9	341.3	319.7	284.3
Total MoUs (Mn)	45,800	50,700	52,500	56,500	62,000
MoUs per user per month	510	490	449	430	424
RPMs (Rs)	0.74	0.73	0.75	0.74	0.66

Source: Company, COAI, AUSPI, Angel Research

The company's monthly churn rate is significantly lower than that of its peers at around 1.4% (3.8% for Bharti Airtel pre-paid users)

One of the features of CDMA technology is the fact that handsets are not compatible with those of other service providers, leading to high switching costs for consumers. Consequently, the company's monthly churn rate is significantly lower than that of its peers, at around 1.4% (3.8% for Bharti Airtel pre-paid users). As a result, when buying a CDMA connection, the customer will also have to ensure that he or she buys a compatible handset. With its integrated presence across the telecom value chain, RCOM has the ability to bundle both the handset and the mobile connection together, with attractive value-added offerings. This leads to the company becoming a 'One-stop shop' for customers and thus tying subscribers up for a greater period of time, leading to lower churn rates.

Even as 'dual-mode' handsets become available in the market, with companies like Spice Mobiles having launched such handsets, RCOM, with the upcoming roll-out of its GSM-based

cellular services, is unlikely to be significantly impacted by this. Majority of the company's existing CDMA customers are in any case unlikely to shift, given high switching costs, while network quality and greater features are likely to enable it to grab a decent share of net additions going forward.

Exhibit 8: Churn rate - High switching costs give RCOM the edge				(%)
Company	2QFY2008	3QFY2008	4QFY2008	1QFY2009
RCOM	1.5	1.4	1.4	1.4
Bharti Airtel*	3.8	3.9	4.3	3.8
Idea Cellular*	4.5	4.9	4.8	4.1

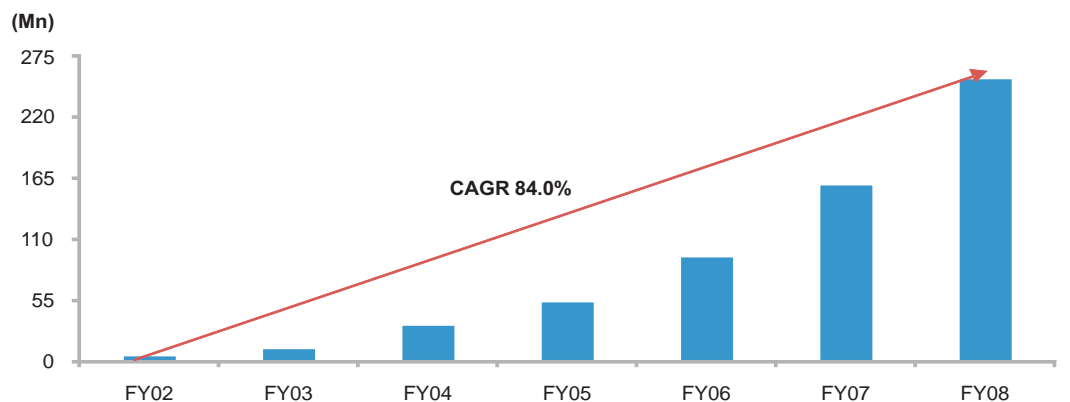
Source: Companies, Angel Research; * For pre-paid subscribers

The potential is still significant

From just 6.6mn subscribers in FY2002, the mobile subscriber base touched 256.2mn at the end of FY2008

The Indian Telecom Sector has grown at a scorching pace over the past few years in terms of mobile subscriber additions. From a mere 6.6mn subscribers in FY2002 (GSM + CDMA), the mobile subscriber base touched 256.2mn at the end of FY2008 (including fixed wireless phones) and at the end of July 2008, has hit 291.2mn. This gives it an outstanding compounded growth rate (CAGR) of 84% over the period FY2002 to FY2008 and at the current rate, appears set to grow by an impressive 40% in FY2009 even on this significantly enlarged base.

Exhibit 9: Mobile subscriber base - India calling!



Source: COAI, AUSPI, Angel Research

Subscriber additions remain robust, with the latest quarter, 1QFY2009, reflecting outstanding net additions of 25.8mn for the industry

At current levels of mobile subscribers, the cellular teledensity stands at nearly 26%. Subscriber additions continue to be robust, with the latest quarter, 1QFY2009, reflecting outstanding net additions of 25.8mn for the industry. Even in July 2008, GSM operators added 6.8mn subscribers and CDMA operators added 2.4mn subscribers leading to a total addition of 9.2mn subscribers, reflecting the fact that the momentum continues to be sustained. In spite of such scorching growth, India's cellular teledensity is still amongst the lowest in the world, indicating that there is yet significant untapped potential, with over 800mn Indians yet to be connected.

We believe that, given favourable government policies with respect to regulation, FDI, infrastructure sharing and aid to operators to roll out services in rural areas, the mobile subscriber base is likely to continue to grow at a robust pace. There is room for growth for all players and given that RCOM is the second-largest player, it would be a major beneficiary of this growth. We do not expect the roll-out of operations by newer licencees like Unitech Wireless, Datacom, Loop Telecom and Swan Telecom to queer the pitch in a major manner and believe the market is over-estimating their potential impact on pricing and competition.

To gauge India's potential for growth in mobile subscribers, it should be noted that the total population of the country currently stands at around 1.1bn. This gives a mobile teledensity of around 25.5% (291.2mn subscribers at the end of July 2008). If we do a circle-wise break-up, it would be evident that significant potential still remains to be tapped. While the metros are coming ever-closer to saturation point, with 88% teledensity, there still exists scope for growth in the other circles (refer Exhibit 10). This is the case, even as mobile operators are adding subscribers at an annual rate of 35-50% in these circles.

Exhibit 10: Miles to go before the last ring!

Circle category	Population (Mn)	Cellular subscribers (Mn)*	Teledensity (%)
Metros	55.8	49.1	88.0
'A' circle	357.1	104.2	29.2
'B' circle	502.7	107.0	21.3
'C' circle	224.3	31.0	13.8
All-India	1,139.8	291.2	25.5

Source: COAI, AUSPI, Census 2001, Angel Research; Note: We have assumed a nominal 1.5% annual population growth rate since 2001 to derive the latest figures; * Subscriber figures at the end of July 31, 2008

Spreading its wings 'globally'

RCOM is a play on the global demand for bandwidth, voice and data solutions, WiMAX services and managed services

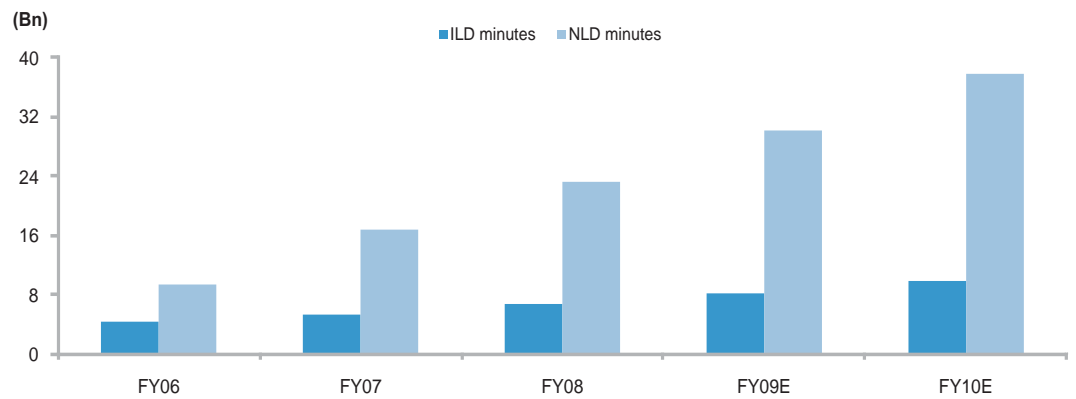
RCOM, apart from being a play on the explosive growth of the Indian domestic communications story, is also a play on the global demand for bandwidth, voice and data solutions, WiMAX services, managed services and integrated telecom solutions. Through its global business unit, Reliance Globalcom, the telco offers national and international long distance (NLD, ILD - wholesale and retail) services, carriage and termination to other carriers as well as on an inter-segment basis to its other business units, viz., enterprise data services, internet services, managed services and provision of bandwidth.

The company delivers these solutions through its global submarine cable system, FLAG Telecom, which is the largest private submarine cable system in the world, connecting countries from the US to Europe, the Middle East, India, South and East Asia, through to Japan through its 52,000 km. global optic fibre network. The company's FALCON cable system connects countries in the Middle East, Africa and the Mediterranean region to the rest of the world through the FLAG Global Network. Thus, RCOM is called a 'carrier's carrier' as it provides global connectivity solutions to carriers and internet communities across the globe through its global submarine cable system. Among its clients are over 180 global carriers including the top-10.

RCOM is undertaking an ambitious expansion plan, initiating implementation of the FLAG Next Generation Network (NGN, a packet-based network that has greater bandwidth capacity to carry voice and data minutes through fibre-optic cables), which when complete, will provide seamless connectivity to countries in East Africa, the Eastern Mediterranean, South and East Asia, and the Trans-Pacific and will span 110,000km of undersea fibre optic cable, connecting 80% of the world's population and 90% of global GDP.

RCOM has a strong position in the ILD voice market, which is poised for strong growth going forward. In FY2008, the company's ILD minutes stood at around 6.8bn and we expect this to grow at a CAGR of around 21% through to FY2010 to touch nearly 10bn minutes. In the NLD market, the company's minutes of use stood at around 23.3bn in FY2008. We expect this to grow at a CAGR of 27.5% to hit 37.8bn minutes by FY2010.

Exhibit 11: Global Business - ILD, NLD to register strong growth



Source: Company, Angel Research

FLAG Telecom was conceived in 1990 as an alternative transmission system for international voice and data traffic to and from the Middle East

The data market also offers tremendous scope for growth. It should be noted that FLAG Telecom was initially conceived in 1990 as an alternative transmission system for international voice and data traffic to and from the Middle East. However, applications at the time did not fully support largescale data usage, while the primary method of communication was voice-based. As a result, it can be said that this was a business model ahead of its time. However, today, with the ever-increasing usage of IT and the internet in Asia, as well as strong demand for data and international bandwidth, particularly in the Middle East region, the potential for growth is significant.

The overall addressable market globally stood at an estimated US \$275bn in 2007

The overall addressable market globally stood at an estimated US \$275bn in 2007, with Wholesale at US \$5bn, Enterprise at US \$90bn, Consumer at US \$95bn and Managed Services at US \$85bn. In terms of Margins, it is the higher-end high value-added services like Managed Services that typically enjoy greater profitability, with Margins estimated at 45-65%. The Enterprise segment enjoys Margins of 30-55%, Consumer 15-30% and Wholesale 15-35%.

Since the acquisition of FLAG, RCOM has significantly scaled up its capabilities (*Refer Exhibit 12*). The company now has enhanced strengths, which enables it to cross-sell a higher number of services and drive growth and profitability. Going ahead, with a focus on higher value-added services like Managed Services, Margins should witness some upside.

Exhibit 12: FLAG - Capabilities pre and post-acquisition - Impressive transformation

Capabilities	FLAG pre-acquisition	Rel. Globalcom post-acquisition
Large Network	Yes	Yes
Global Connectivity	No	Yes
Emerging Market Strength	No	Yes
Infrastructure & Capacity Services	Yes	Yes
Channel Partner Strategy	No	Yes
Managed Connectivity & Cons. Svcs.	No	Yes
Experienced Operations Team	Yes	Yes
Scalable Low Cost Operations	No	Yes
Conservative Balance Sheet	No	Yes

Source: Company

Focused acquisitions broaden the Service portfolio

The first acquisition made by RCOM was Yipes, a provider of Managed Ethernet Services based in San Francisco, California, which owns over 22,000 r-kms of fiber across 14 US metros

RCOM has made some focused acquisitions in the Enterprise Connectivity space through Reliance Globalcom to enhance its service portfolio. These acquisitions have enabled it to focus on fast-growing and higher-Margin services and solutions. The first acquisition was that of Yipes for US \$300mn. Yipes is a leading provider of Managed Ethernet Services based in San Francisco, California, which owns over 22,000 route kilometers (r-kms) of fiber across 14 US metros namely Seattle, San Francisco, San Jose, Los Angeles, San Diego, Denver, Dallas, Houston, Chicago, Boston, New York, Philadelphia, Washington DC and Miami. The company, through its presence, covers approximately 40% of US GDP, at around US \$4.6trillion. Yipes is also present in London, Hong Kong and Tokyo. The addressable market for Managed Ethernet is expected to be US \$25bn globally by 2010, including US \$7bn in the US.

The second acquisition was that of eWave World, a UK-headquartered telco focused on the market for wireless telephony services using WiMAX

The second acquisition made by RCOM was that of eWave World, a UK-headquartered telco focused on the rapidly developing wireless telephony services market using the WiMAX technology standard. Over the next 2-3 years, Reliance Globalcom, through eWave World, will invest around US \$500mn to build and acquire WiMAX networks in emerging markets in Asia, Europe, Latin America and Africa. Recently, eWave World had entered into a joint venture in China to invest in nation-wide broadband operations. The company holds WiMAX licenses and has received spectrum to commence WiMAX services in several countries. RCOM is clearly betting big on WiMAX as a fourth-generation wireless communication technology standard (4G).

The third acquisition made by RCOM through Reliance Globalcom was that of the UK-based Vanco Group for US \$76.9mn, which is recognised by Gartner to be amongst the world's Top-5 Managed Global Network players with over 220 MNC customers across 163 countries. Its blue chip customer base includes AVIS, British Airways, Siemens and Virgin Megastores. Vanco's

The third acquisition was that of Vanco Group for US \$76.9mn, which is recognised by Gartner to be amongst the world's Top-5 Managed Global Network players

acquisition increases Reliance Globalcom's tally of enterprise customers to over 1,400. The company, through this acquisition, would add 9 Network Management Centers to its global service systems and processes. Vanco would add US \$365mn to Reliance Globalcom's revenues through secure, long-term contracts with its customers. Thus, through these acquisitions, RCOM is looking to move higher up the value chain in terms of service capabilities, a strategy that should enable a more vast range of solution capabilities, faster growth rates, better margins and long-term revenue visibility.

RCOM has received 4.4 MHz of start-up GSM spectrum in all 14 circles where it hitherto did not have a presence through its GSM-based cellular services

GSM roll-out to boost net adds, make RCOM only pan-India CDMA and GSM operator

RCOM has received 4.4 MHz of start-up GSM spectrum in all the 14 circles where it hitherto did not have a presence through its GSM-based cellular services. The company expects to commence commercial operations in these circles by December 2008, with full-fledged launch expected towards mid-2009. This is likely to further strengthen its monthly net adds and make it the only telco with a countrywide CDMA and GSM network presence. Given that monthly churn rates are at 4-5% for the GSM Industry, RCOM has access to a potential customer base of nearly 9mn, given that there are over 219mn GSM subscribers in India.

We expect the GSM subscriber base to account for over 45% of net adds in FY2010 after the roll-out

We estimate RCOM's GSM mobile subscriber base to grow at a CAGR of around 79% over FY2008-10E driven by the new GSM roll-out. We expect the company to start recording and strengthening its monthly net adds FY2010 onwards, given that it expects to commence commercial services by end-CY2008 and full-fledged launch by mid-CY2009 (1QFY2010). We expect the GSM subscriber base to account for over 45% of total net adds in FY2010 after the full-fledged roll-out, as compared with 20-22% in previous years.

Exhibit 13: GSM net adds - To strengthen on full-fledged GSM roll-out

Particulars	FY2008	FY2009E	FY2010E
GSM Mobile Subscriber Base (Mn)	7.0	11.2	22.4
Net Adds (Mn)	3.6	4.1	11.2
% growth	107.1	59.1	100.7
CDMA Mobile Subscriber Base (Mn)	38.8	53.3	66.9
Net Adds (Mn)	14.2	14.5	13.6
% growth	57.5	37.4	25.5
Total Mobile Subscriber Base (Mn)	45.8	64.4	89.3
Total Net Adds (Mn)	17.8	18.7	24.8
% growth	63.5	40.7	38.5
GSM Net Adds as % of Total	20.4	22.2	45.2
CDMA Net Adds as % of Total	79.6	77.8	54.8

Source: Company, COAI, AUSPI, Angel Research

RCOM will use the services of Reliance Infratel, its towerco, to rapidly roll out its GSM services

We believe that the company's strong brand name created through the CDMA platform will stand it in good stead for its GSM roll-out. As regards the additional investments required in building a pan-India GSM network, it may be noted that RCOM already operates dual networks in six telecom circles. This could result in the risk of duplication. However, the company is leveraging its CDMA network for rolling out its GSM network and expects capex for this initiative to be around US \$1.3bn, as compared with a significantly higher US \$10bn estimated for newer operators like Datacom and Loop who have recently been awarded licences and spectrum in some circles. Thus, RCOM will leverage the passive infrastructure of Reliance Infratel, its towerco, to enable rapid roll-out of its GSM-based cellular services and will incur only the active electronics costs.

Value-unlocking opportunities through listing of towerco and global arm

Going ahead, RCOM is on a strong footing in its key Wireless Business unit, with monthly net adds strengthening each month. This is expected to drive a CAGR of 24% in Top-line over FY2008-10E. Apart from strength in its core businesses of Wireless, Global and Broadband, the company also has strong value-unlocking opportunities on the horizon, with the potential listings of its towerco, Reliance Infratel (the draft RHP has been filed with SEBI) and global arm, Reliance Globalcom.

Reliance Infratel seems well-placed to tap the significant opportunity for tower sharing in India. As per RCOM's projections, its towers will have around four tenancy slots each, with an estimated 280,000 slots by FY2010 (70,000 towers). Given the impending roll-out plans of newer operators as well as incumbent regional operators like Aircel who have plans to become all-India mobile operators, companies like Reliance Infratel have strong potential for growth.

We have done discounted cash flow (DCF) projections for Reliance Infratel. We believe DCF is the most appropriate way to value towercos, given their strong cash generation ability, especially beyond three to four years with increasing tenancy ratios. The key factor in the Tower business is the tenancy ratio, i.e., average number of tenants per tower. Thus, to drive higher tenancies, towers must be of high quality in terms of shareability. It is not just the number of towers, but the tenancy ratios that determine break-even for a towerco.

We have forecast a total value of Rs116 per RCOM share for Reliance Infratel. Thus, RCOM's tower business adds strong value for RCOM shareholders, providing an upside of 24% to the value of the core business. We have taken a WACC of 11.1% for Reliance Infratel, assuming a terminal growth rate of 5%.

DTH and IPTV launches to add complementary solutions to business portfolio

There are around 120mn TV homes in India, of which 75mn homes are cable and satellite (C&S) homes

RCOM, apart from its existing business portfolio, plans to add complementary services to its solution offerings. In line with this, it has already launched direct-to-home (DTH) services under the BIG TV banner. It also plans to launch Internet Protocol Television (IPTV) services shortly. There are estimated to be around 225mn households in India, of which there are 120mn TV homes. Of this, 75mn homes are cable and satellite (C&S) homes, implying that they are

Just 4% of total TV viewing households in India (5mn) are served through DTH and industry expects the total share of DTH households to touch 40% by FY2015

The industry size gets pegged at Rs27,000cr if we were to assume that all C&S households were to go for DTH connections

paying customers, while the balance 45mn homes are only Doordarshan (DD) homes, where cable does not reach.

These 45mn homes can be tapped through DTH, a satellite-based medium, contingent on the establishment of a distribution network in these areas. RCOM's vast distribution and mobile network that extends into the interiors of the country can be effectively leveraged to get a deeper reach into these areas. Apart from this, it is estimated that just 5% of the total TV viewing households in India (6mn) are served on digital cable, with around 5mn served through DTH and 1mn through the conditional access system (CAS). Thus, 95% of households are currently served by analog cable systems. The industry expects the total share of DTH households to touch 40% by FY2015 v/s 36% for analog cable systems, thus reflecting the significant growth potential ahead.

In terms of total industry size, if we were to assume Rs250-300 per household per month as cable expenditure (ARPU), the industry size gets pegged at Rs27,000cr at the upper end, assuming that all C&S households go for DTH connections. Thus, the market size is significant. RCOM is well-placed to tap this opportunity through access to content from group companies like Adlabs, Zapak and Big FM, a higher number of channels being offered to consumers, superior MPEG-4 technology and greater flexibility to viewers. Very clearly, the company's DTH strategy will be a 'mass-market strategy' to be rolled out across the country.

As for IPTV (voice, data and video connectivity through one wire), the company expects to target a niche market. The company plans to leverage the 'last-mile connectivity' that it has in over 1.1mn buildings and will provide these services using its Metro Ethernet network. ARPUs in these services should be higher. Thus, with the launch of these services, RCOM will further expand the solutions in its business portfolio and that too, at minimal capex of just US \$100mn.

Concerns

Managing dual networks - A challenge

As RCOM rolls out country-wide GSM-based cellular services, managing dual networks would be a complex challenge. In the event of the company being unable to manage this increased complexity, it would run the risk of slowdown in subscriber additions, leading to a downside risk to our projections.

Execution risks

The roll out of cellular networks entails high execution risks. Further, with most of the expansion coming from rural areas, logistical issues would come up, with many areas being unapproachable on account of poor roads, erratic power supply, inadequate infrastructure, lack of trained personnel to operate cellular towers and significant levels of risk associated with erecting cellular towers, with as many as 40 different approvals required from different authorities. Thus, execution and network roll out would be a daunting task and would require skilful management.

Heightened competition

As a number of new operators have entered the market, competition in many of the circles has intensified particularly in the ones where spectrum has been allotted. Apart from this, existing operators like Idea and Aircel are also 'newer operators' in circles where they have not yet commenced operations. Idea, in particular, has a good execution track record despite constraints like the lack of a pan-India presence and a smaller Balance Sheet size, and the telco has already commenced services in the lucrative Mumbai circle. Thus, in the medium-term at least, the competitive intensity in the Indian Telecom Market is likely to increase. Nonetheless, we believe the market is over-estimating the potential impact of newer entrants on competition.

Mobile Number Portability

The implementation of Mobile Number Portability (MNP) is likely to be a negative for the industry. With QoS issues in the Metros, there exist some levels of disenchantment with service levels, given the frequency of call drops being witnessed in these areas. The service providers themselves have maintained that they are facing a shortage of spectrum in these areas. Nonetheless, with the advent of MNP, consumers can change their service providers without having to change their numbers. This could lead to an increase in churn rates, thus leading to higher customer retention costs and Margin pressures. However, we believe RCOM is well-placed to ride out any impact of MNP, given its 'near-captive' CDMA subscriber base and opportunity for it on full-fledged roll-out of its GSM-based cellular services with 4-5% churn rates being witnessed in the pre-paid GSM space.

Risks to submarine cables

RCOM, owner of the world's largest submarine cable system, faces risks in terms of its cables being subject to various damaging influences, such as earthquakes. Early this year, the FLAG and FALCON telecom cables were damaged when they snapped, being among several fibre optic cable systems to snap. This led to significant disruptions to internet and phone services in several countries including India and adversely impacted RCOM, especially since it was unable to restore services quickly through redundancy plans. Such risks are inherent in this business and regular occurrences of such events could result in financial and other damages to RCOM.

Outlook and Valuation

We expect RCOM to continue to record strong growth in its mobile subscriber base going forward and estimate a CAGR growth of 39.6% over FY2008-10E, which will enable the subscriber base to hit 89.3mn by FY2010E (45.8mn in FY2008). This implies a subscriber market-share of 19.5% in FY2010E. This will be driven by strong incremental subscriber growth from the company's GSM launch. On the other hand, we expect the company's gross mobile ARPU to decline at a CAGR of around 12.5% over FY2008-10E to hit Rs262.8 in FY2010E (Rs343.6 in FY2008). Consequently, we estimate Gross Revenues of the Wireless Business to

grow at a CAGR of 26.2% over FY2008-10E. This is the case, even as we expect the other business segments of the company, viz. Global, Broadband and Enterprise, to grow at robust CAGR growth rates between 15-40%.

Exhibit 12: All-India, RCOM mobile subscriber projections

(Subscribers in mn)	FY2007	FY2008	FY2009E	FY2010E	CAGR (%)*
Metros					
RCOM (CDMA + GSM)	5.4	7.9	9.9	11.8	22.2
Industry (incl. CDMA)	31.5	44.4	54.9	62.7	18.7
<i>Market share (%)</i>	<i>17.1</i>	<i>17.7</i>	<i>18.0</i>	<i>18.8</i>	
'A' circle					
RCOM (CDMA + GSM)	9.5	14.3	19.4	27.8	39.2
Industry (incl. CDMA)	57.7	92.4	129.3	168.1	34.9
<i>Market share (%)</i>	<i>16.5</i>	<i>15.5</i>	<i>15.0</i>	<i>16.5</i>	
'B' circle					
RCOM (CDMA + GSM)	10.2	16.6	24.9	35.7	46.5
Industry (incl. CDMA)	57.5	92.9	135.7	183.1	40.4
<i>Market share (%)</i>	<i>17.8</i>	<i>17.9</i>	<i>18.3</i>	<i>19.5</i>	
'C' circle					
RCOM (CDMA + GSM)	3.8	7.0	10.3	14.1	42.1
Industry (incl. CDMA)	15.6	26.4	34.7	43.4	28.2
<i>Market share (%)</i>	<i>24.7</i>	<i>26.3</i>	<i>29.7</i>	<i>32.4</i>	
All-India					
RCOM (CDMA + GSM)	29.0	45.8	64.4	89.3	39.6
Industry (incl. CDMA)	162.3	256.2	354.6	457.3	33.6
<i>Market share (%)</i>	<i>17.8</i>	<i>17.9</i>	<i>18.2</i>	<i>19.5</i>	

Source: COAI, AUSPI, Company, Angel Research; * CAGR over FY2008-10E

Overall, this is likely to lead to a 24.3% CAGR growth in Top-line for RCOM over FY2008-10E. On the other hand, we expect a 16.9% CAGR growth to be clocked in Bottom-line over the same period. We expect a flat trend in margins over this period.

At Rs374, the stock trades at a P/E of 10.9x FY2010E EPS, EV/EBITDA of 8.3x FY2010E EBITDA and an EV/subscriber of US \$195.7 on our FY2010E subscriber base. **We maintain a Buy on RCOM with a Target Price of Rs595 for the stock, with Rs479 as the value of the core business and Rs116 as the value of the towerco, Reliance Infratel.**

Profit & Loss Statement
Rs crore

Y/E March	FY2007	FY2008	FY2009E	FY2010E
Net Sales	14,262	18,827	23,616	29,085
% chg	34.2	32.0	25.4	23.2
Total Expenditure	8,748	10,869	13,815	16,869
EBITDA	5,515	7,959	9,800	12,216
% of Net Sales	38.7	42.3	41.5	42.0
Other Income	206	240	283	291
Depreciation	2,465	2,805	3,849	4,226
Interest (Net)	0	(400)	(554)	(157)
Extraordinary Items	(30)	1,283	0	0
PBT*	3,225	7,076	6,789	8,438
% of Net Sales	22.6	37.6	28.7	29.0
Tax	62	284	509	1,055
Effective Tax Rate (%)	1.9	4.0	7.5	12.5
Min. Int./Share of Associates	4	(1,392)	0	0
PAT	3,168	5,401	6,280	7,383
% chg	613.0	70.5	16.3	17.6

* Includes profit on sale of stake in Reliance Infratel in FY2008

Cash Flow Statement
Rs crore

Y/E March	FY2007	FY2008	FY2009E	FY2010E
Profit before tax	3,225	5,794	6,789	8,438
Depreciation	2,465	2,805	3,849	4,226
Change in working capital	5,619	2,439	2,846	1,024
Income taxes paid	62	284	509	1,055
Cash from operations	11,248	10,754	12,974	12,633
Change in Fixed assets	12,453	22,560	23,616	14,542
Free cash flows	(1,205)	(11,806)	(10,641)	(1,910)
Change in Investments	1,180	(913)	0	0
Cash from invstg. act.	1,180	(913)	0	0
Change in Share capital	(0)	10	0	0
Change in Debt	6,246	6,024	3,728	2,237
Dividend and dividend tax paid	120	181	514	691
Cash from fincg. act.	6,126	5,853	3,213	1,545
Other adjustments	1,615	4,744	0	0
Net inc./(dec.) in cash	7,716	(2,122)	(7,428)	(364)
Opening cash balance	6,004	13,720	11,598	4,170
Closing cash balance	13,720	11,598	4,170	3,806

Balance Sheet
Rs crore

Y/E March	FY2007	FY2008	FY2009E	FY2010E
SOURCES OF FUNDS				
Equity Share Capital	1,022	1,032	1,032	1,032
Reserves & Surplus	19,371	24,611	30,376	37,068
Shareholders' Funds	20,393	25,643	31,408	38,100
Total Loans	15,544	21,568	25,296	27,532
Minority Interest	6	2,431	2,431	2,431
Total Liabilities	35,943	49,642	59,135	68,063
APPLICATION OF FUNDS				
Gross Block	34,946	46,364	69,980	84,522
Less: Acc. Depreciation	5,594	8,981	12,830	17,056
Net Block	29,352	37,383	57,149	67,466
Capital Work-in-progress	3,691	14,833	14,833	14,833
Investments	1,193	280	280	280
Current Assets	19,626	21,316	14,503	15,006
Less: Current Liabilities	17,919	24,169	27,630	29,521
Net Current Assets	1,708	(2,853)	(13,127)	(14,515)
Total Assets	35,943	49,642	59,135	68,063

Key Ratios

Y/E March	FY2007	FY2008	FY2009E	FY2010E
Per Share Data(Rs)				
EPS	14.7	25.0	29.1	34.2
Cash EPS	26.1	38.0	46.9	53.8
DPS	0.5	0.8	2.1	2.9
Book value per share	94.5	118.9	145.6	176.6
Operating Ratios				
Sales growth (%)	34.2	32.0	25.4	23.2
EBITDA margins (%)	38.7	42.3	41.5	42.0
Net profit margins (%)	22.2	28.7	26.6	25.4
ARPU (Blended, Rs/month)	370.8	343.6	292.0	262.8
Return ratios (%)				
RoE	19.7	23.5	22.0	21.2
RoCE	9.0	14.1	11.0	12.6
Dividend payout	3.2	2.9	7.0	8.0
Valuation ratios (x)				
PE	25.5	14.9	12.9	10.9
P/BV	4.0	3.1	2.6	2.1
Sales/GFA	0.4	0.4	0.3	0.3
EV/EBITDA	14.3	11.0	10.0	8.3

Note: All figures are given on a consolidated basis.

Infrastructure Sharing

A symbiotic relationship to drive connectivity and bridge the 'Digital Divide'

Executive Summary

Infrastructure Sharing - Co-operating at the back-end, competing at the front-end

Infrastructure sharing involves the sharing of elements of cellular operators' network infrastructure. Such arrangements lead to faster roll-out time frames for operators. There is an urgent need for rapid network roll-out across circles, especially by newer and regional operators in the country. Thus, it would be beneficial for new operators to share sites with existing operators who already have a presence in a particular service area. The concept of infrastructure sharing is gaining momentum in India, a country with significant coverage requirements.

The Business Case for Infrastructure Sharing

Telecom is a capex-intensive business that needs significant investments expand. This capex intensity results in significant fund requirements and time spent on running and maintaining the network, which is not a core task of a telecom services company. Erecting towers along with the active infrastructure component carries with it significant execution risks.

It is against this background that the concept of infrastructure sharing has assumed importance. Given as-yet low mobile penetration in India (around 26%) and huge expansion plans of major mobile operators, the tower business can become a profit centre by itself. The Mobile Telecom Industry structure is also favourable to infrastructure sharing, as competitive intensity is high and coverage requirements are massive. The current spectrum constraints are also favourable for the tower business. Apart from this, with operators like Bharti Airtel and Idea Cellular still witnessing some levels of demand elasticity, their minutes of usage are clocking a healthy increase with a consistent fall in tariffs. This puts greater strain on operators' networks.

Apart from this, the DoT announced the 3G and Broadband Wireless Access (BWA, WiMAX) Policies recently, with the auction process for the allocation of 3G mobile spectrum likely to be completed over the next few months and services expected to be rolled out by the winning bidders across the country in mid-2009. The roll-out of 3G and BWA/WiMAX services is likely to further drive infrastructure sharing in the country.

Business characteristics

The Telecom Infrastructure Business is characterised by a steady stream of cash flows, blue chip clients, long-term revenue visibility, a high level of fixed costs and operating leverage. The key metric that any towerco would look at is the tenancy ratio. Higher the tenancy ratio, more profitable the company is likely to be, since the incremental costs of adding tenants is fairly low.

If we take below-EBITDA level items, the business is highly capital-intensive and leveraged. Therefore, depreciation charges and interest costs are typically the major cost items of any towerco and as a result, it is likely that in the initial years of operations, when tenancy ratios are lower, towercos would incur losses at the PBT/PAT level. However, going ahead, with increased tenancy ratios, these companies are likely to report better margins and due to operating leverage, higher margins are likely to flow through to the PAT level.

Tower sharing models - Operator-owned and third-party

It should be noted that there are broadly two types of towercos in existence in India, namely operator-owned towercos, such as Reliance Infratel and Bharti Infratel, and independent (third-party infrastructure providers) towercos such as GTL Infrastructure, Quippo and TowerVision. In the first model, that is, operator-owned towercos, the telecom operators themselves set up the towers and lease out slots on their towers to other operators for a fee (lease rentals). This leads to newer revenue-generation streams for telcos. In India, Bharti Airtel and RCOM have hived off their telecommunication towers into separate subsidiaries. This leads to capex savings, improved cash flows and greater capex and opex efficiencies.

On the other hand, in the third-party model, an independent tower company, such as GTL Infrastructure sets up towers and leases them out to operators for a fee. In the third-party model, there are typically two types of models - built-to-suit and proactive. In the former, third-party infrastructure providers work together with telecom operators to assess their specific requirements and sharing potential in specific locations. On the other hand, in the proactive model, the infrastructure provider builds out towers without any specific requirements from any operator and then approaches operators to install their electronics on the towers.

India to have 3.4lakh towers by FY2011; to cater to over 541mn subscribers

We estimate India to have 3.4lakh towers by FY2011 to cater to a mobile subscriber base of 541.3mn. We expect a tenancy ratio of 1.82x by that time-frame, leading to 6.2lakh BTS required. The estimated number of towers implies an additional requirement of 1.6lakh over FY2008 (1.8lakh towers, 2.17lakh BTS), implying a CAGR growth of around 24% over the period.

We expect Bharti Airtel and RCOM to account for the maximum number of towers in the country (52% in FY2011) through their respective telecom infrastructure subsidiaries, Bharti Infratel (BITL) and Reliance Infratel (RITL). Indus Towers, BITL standalone and RITL are expected to account for over 75% of the all-India tower portfolio in FY2011.

BITL is expected to have over 1lakh towers by FY2011 (including Indus), while on a standalone basis, we estimate 41,583 towers. On the other hand, RITL is estimated to have over 75,000 towers by FY2011. As regards Indus, the joint venture towerco between Bharti Infratel, Vodafone-Essar and Idea Cellular, we estimate a total of nearly 1.4lakh towers by FY2011.

Strong embedded value; towercos to add 20-40% to telcos' core business values

We have valued the major towercos on a DCF basis and their value adds 20-40% to the value of the core businesses of the telcos under our coverage. We estimate the value of Indus Towers at Rs63,063cr (US \$15bn), BITL standalone at Rs7,850cr (US \$1.87bn) and RITL at Rs24,961cr (US \$5.94bn). The value of Indus on a per-share basis for Bharti Airtel works out to Rs140, while that of BITL standalone works out to Rs41, taking the total value of Bharti's tower business to Rs181 per share. On the other hand, the value of Indus for Idea Cellular shareholders works out to Rs31 per share. For RCOM, the value of RITL translates into a per-share value of Rs116.

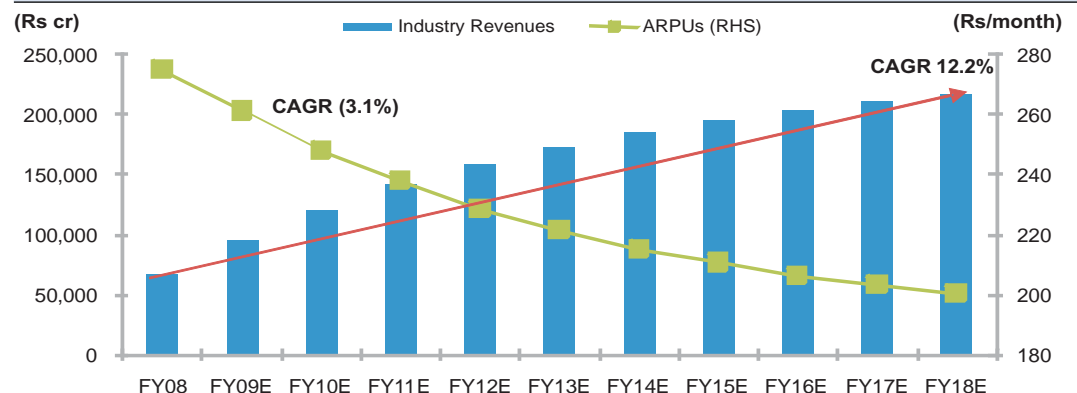
Robust growth in Indian mobile subscriber base...

The Indian Telecom Sector is the fastest-growing telecom market in the world, the second-largest overall and the largest in terms of monthly net additions at over 9mn in July 2008. The overall Indian mobile subscriber base has grown at an excellent CAGR of 84% over FY2002-08, from a mere 6.6mn subscribers in FY2002 to a high 256.2mn subscribers in FY2008. The amazing pace of this growth can be gauged by the fact that currently, the industry adds more subscribers in a month than the entire subscriber base in FY2002.

We expect Mobile Industry Revenues to grow at a CAGR of 12.2% over FY2008-18E to touch Rs2,17,834cr by FY2018E

Going ahead, we expect the industry to sustain strong growth over the next 2-3 years, after which growth rates are likely to taper down, as a higher base and greater saturation set in. We estimate the overall Indian mobile subscriber base to grow at a CAGR of 13.7% over FY2008-18E to 921.7mn. On the other hand, we expect Mobile Industry Revenues to grow at a CAGR of 12.2% over the same period. Industry Revenues are expected to touch Rs2,17,834cr by FY2018E (nearly US \$52bn at a conversion rate of Rs42 to the Dollar) vis-à-vis Rs68,896cr in FY2008 (US \$17.2bn at an average of Rs40 to the Dollar for the fiscal).

Exhibit 1: Mobile Telecom Industry - Revenues, ARPUs over FY2008-18E

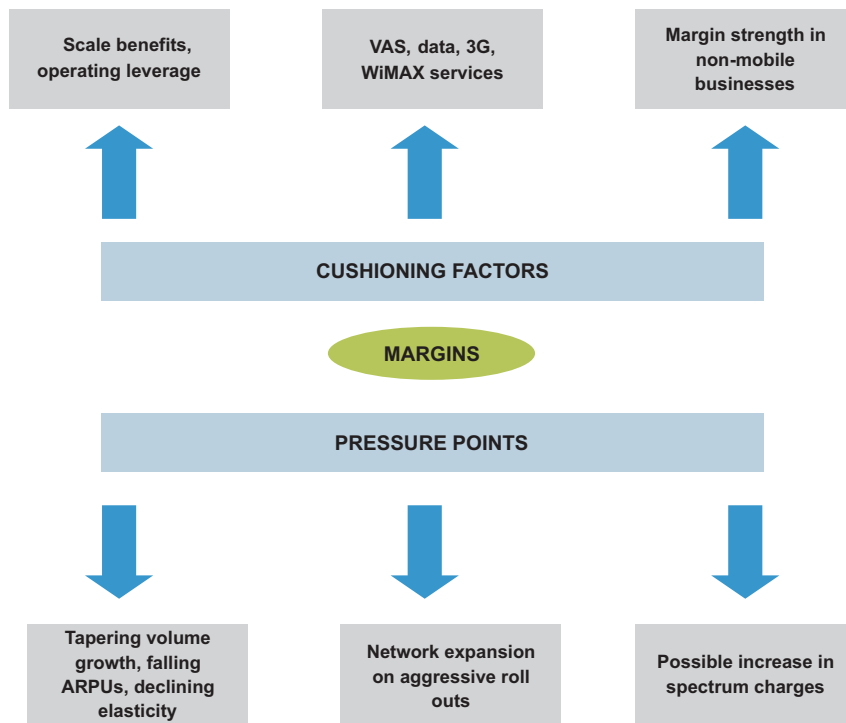


Source: CRIS INFAC, Angel Research

Falling ARPUs, intensifying competition to pressurise Margins

Even as the subscriber base clocked phenomenal growth, realisations per user (average revenues per user, ARPUs) have continuously declined on account of heightened competition and a highly price-sensitive market. Industry-wide ARPUs declined from Rs378 per user per month in FY2005 to Rs275 in FY2008 (Source: CRIS INFAC), declining at a CAGR of over 10% over the mentioned period, while mobile subscribers posted a CAGR growth of 66.9% in this time-frame. As a result, Revenue growth failed to keep pace with subscriber growth. Going ahead too, with an increasing proportion of incremental subscribers coming from rural areas (over 50% of Bharti Airtel's incremental users came from rural India in 1QF2009), we expect ARPUs to remain under pressure and decline by around 5% annually over FY2008-11E and 3% CAGR over FY2008-18E.

Exhibit 2: Factors impacting service provider margins



Source: Industry, Angel Research

We believe the potential impact of the 'pressure points' is likely to be greater than that of the 'cushioning factors' (Refer Exhibit 2). The Mobile Telephony Sector has limited size capped on account of the population base. In a country like India, where over 20-25% of the population lives 'Below Poverty Line' (BPL), the effective market size only shrinks further. Hence, in such a market, when 45-50% penetration is achieved, growth is likely to taper down sharply, which is reflected in our subscriber growth projections until FY2018.

Slowing subscriber growth as well as falling ARPUs and declining demand elasticity are all likely to combine to slow down Top-line growth significantly

Thus, slowing subscriber growth as well as falling ARPUs and declining demand elasticity are all likely to combine to slow down Top-line growth significantly. On the other hand, aggressive roll outs will also lead to higher network expansion costs going forward. The government is also considering a hike in spectrum charges. Apart from this, competitive intensity continues to rise across all segments - mobile, long distance and enterprise. The entry of newer mobile operators and the TRAI's recommendation to allow Internet Service Providers (ISPs) to offer Internet Telephony services (Voice over Internet Protocol, VoIP) are a couple of cases in point, with the former likely to push down tariffs even further, while the latter is also likely to lead to a decline in long distance calling tariffs.

Exhibit 3: Bharti and Idea - Revenue, Network expenses, Margin trends

Particulars	2QFY08	3QFY08	4QFY08	1QFY09	CQGR (%)
Bharti Airtel					
Total Revenues (Rs cr)	6,337.4	6,963.9	7,819.1	8,483.3	10.2
Network operating costs (Rs cr)	752.0	885.1	980.7	1,232.4	17.9
% of sales	11.9	12.7	12.5	14.5	-
EBITDA Margins (%)	42.8	42.6	41.6	41.5	-
Idea Cellular					
Total Revenues (Rs cr)	1,562.2	1,708.1	1,972.4	2,173.5	11.6
Network operating costs (Rs cr)	238.0	291.5	326.3	375.6	16.4
% of sales	15.2	17.1	16.5	17.3	-
EBITDA Margins (%)	32.7	33.2	33.5	32.9	-

Source: Companies, Angel Research

Apart from this, the TRAI has also suggested allowing consumers to buy calling cards directly from STD and ISD operators in the country, thus ushering in an era of 'long distance carrier selection'. Consequently, if this suggestion is implemented, companies like AT&T, British Telecom, France Telecom and Verizon, and even non-telcos like Powergrid Corporation, GAIL and Railtel, all of whom have long distance networks in the country, can market such products directly to consumers in the form of pre-paid calling cards. This is likely to further slash long distance calling rates. Thus, there are several pressure points likely to impact the margin profile of service providers going ahead.

On the other hand, considering the 'cushioning factors', 3G services are unlikely to account for a major share of telcos' revenues at least over the next 3-4 years. Given that there are just 2-3 slots available currently in Mumbai and Delhi, the main markets for 3G services, and that one slot is reserved for state-owned MTNL, most operators are unlikely to even commence services in these two metros, as there are not enough slots available to accommodate more players. Consequently, we believe all talk about ARPU pressure getting mitigated to an extent on account of the launch of 3G mobile services by operators is unlikely to translate into reality.

Scale benefits and operating leverage, to some extent, are levers of Margin defence. However, with slowing voice revenues and no major 'push' expected from VAS and 3G services, the extent to which this can hold margins remains to be seen. Strength in non-mobile business margins, such as Broadband and Enterprise are likely to aid the consolidated margin profile for integrated players only to an extent, given that Mobility still accounts for the lion's share of their revenues.

A key trend that has emerged in recent times is infrastructure sharing

Against this backdrop, a key trend that has emerged in recent times is infrastructure sharing. Infrastructure sharing involves the sharing of elements of operators' networks with a view to fast-track their expansion process and quicken the pace of service roll out. Such a symbiotic relationship leads to greater efficiencies in terms of capex and opex, enables operators to focus on their core business and leads to newer revenue streams for telcos. With telcos like Bharti hiving off their towers into separate companies, there is scope for value-unlocking going ahead, given the growth potential of this business in India.

Infrastructure Sharing

Co-operating at the 'back-end', competing at the 'front-end'

Infrastructure sharing involves sharing of few or several elements of cellular operators' network infrastructure

Infrastructure sharing involves the sharing of a few or several elements of cellular operators' network infrastructure. Such arrangements lead to faster roll-out time-frames for newer and regional operators. Given vast coverage requirements in a country like India, these operators thus have an urgent need for this. If these operators were to construct their own towers, there would be several negative consequences:

- It would lead to a significant loss of time and opportunity, given that it typically takes several months to erect one tower. Each tower often needs upto as many as 40 clearances from separate authorities like SACFA clearance on detailed technical evaluation, permission from local authorities, state electricity boards, land owners and so on.
- Such time taken to erect towers would lead to a loss of time and opportunity loss of subscribers and revenues.
- Apart from the time lost and opportunity loss of subscribers and revenues, the capex required would be significant, given that such an activity requires vast financial resources.
- The execution risks are significant and in the event of poor execution and roll-out, an operator would lose further time, money and potential subscribers and revenues, not to mention the 'sunk costs'.

Infrastructure sharing is gaining momentum in India

Thus, it would be hugely beneficial for new operators to share sites with existing operators who already have a presence in a particular service area. The concept of infrastructure sharing is gaining momentum in India, a country with significant coverage requirements.

Types of Infrastructure Sharing

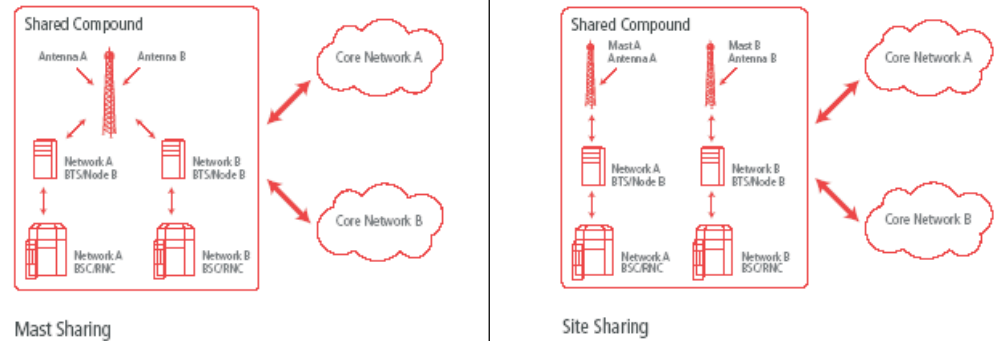
There can be broadly two types of infrastructure sharing - passive and active

It should be noted that cellular operators typically utilise a wide range of elements in their network infrastructure for operation. Such elements include backhaul, antenna, base stations, radio access network (RAN), spectrum, masts/towers and security. Depending on the elements of the cellular network shared between operators, there can be broadly two types of infrastructure sharing - passive and active.

Passive sharing refers to the sharing of the complementary elements of a cellular network that do not require operational co-ordination between network operators

Passive sharing refers to the sharing of the complementary elements of a cellular network that do not require operational co-ordination between network operators. Such elements include the physical site, where operators share the same physical space, mast sharing, where the telecommunication tower itself is shared, battery back-up, diesel generator, air conditioning, shelter and civil works.

Exhibit 4: Passive infrastructure sharing - Mast and site sharing

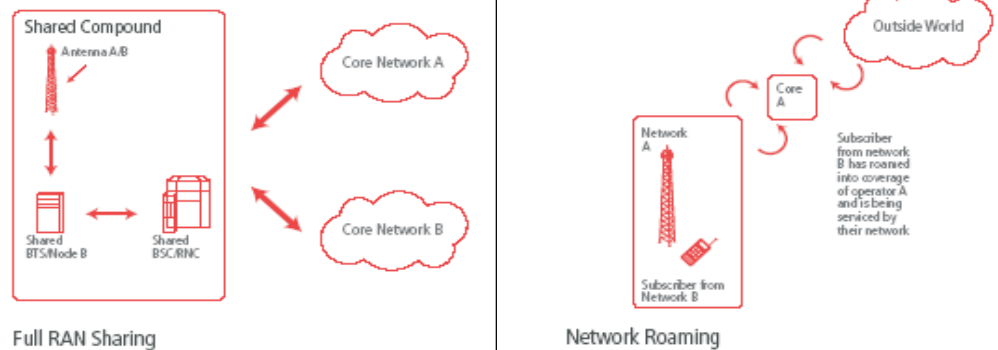


Source: GSM Association

Active sharing involves sharing of the active elements of a network, such as RAN

Active sharing on the other hand involves sharing of the active elements of a network, such as RAN including backhaul and antenna, cables, Node B, transmission equipment and allocated spectrum. Passive infrastructure sharing is the more common, especially in India. However, recently, the DoT has approved TRAI's recommendation to allow active infrastructure sharing among service providers, excluding the allocated spectrum. This is a positive and could further tone down the investments required by newer operators to expand their networks.

Exhibit 5: Active infrastructure sharing - RAN sharing and network roaming



Source: GSM Association

Typically, around 60% of the cost of setting up a network is accounted for by passive infrastructure, with 40% being the active element cost

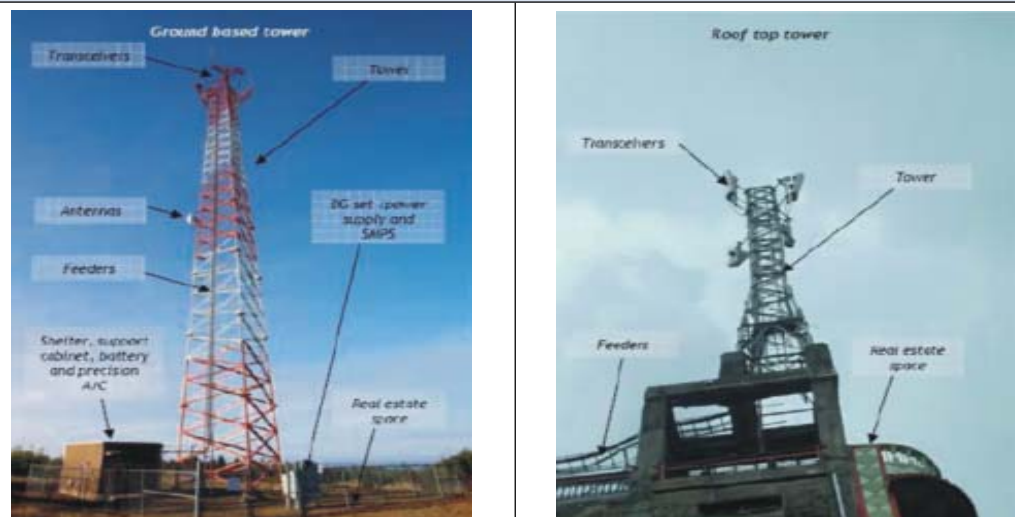
It should be noted that typically, around 60% of the cost of setting up a network is accounted for by passive infrastructure, with 40% being the active element cost. Thus, through passive infrastructure sharing, significant amounts of funds in the form of capex can be saved by operators, while at the same time, accelerating their time-to-market. These funds can be invested in more productive activities such as effective branding and marketing of telecom services and also in complementary business lines such as enterprise, broadband, DTH and IPTV services.

Exhibit 6: A few global examples of infrastructure sharing

Country	Passive sharing	Antennae sharing	Base station sharing	Base station controller	Backbone elements
Denmark	Yes	Yes	No	No	No
France	Yes	Yes	Yes	Yes	No
Germany	Yes	Yes	Yes	Yes	No
UK	Yes	Yes	Yes	Yes	Yes
Malaysia	Yes	Yes	Yes	Yes	Yes
Saudi Arabia	Yes	Yes	Yes	Yes	Yes

Source: Frost & Sullivan

Exhibit 7: Elements of a cellular network - Ground-based and roof-top towers



Source: Industry

Benefits of Infrastructure Sharing

India is one of the most competitive telecom markets in the world, with as many as 6-7 operators competing in each circle

Given the Telecom Industry dynamics, especially in a country like India, there are significant benefits to operators from sharing their infrastructure. India is one of the most competitive telecom markets in the world, with as many as 6-7 operators competing in each circle. Newer operators like Loop, Datacom and Shyam have received licences and spectrum in a few circles like Andhra Pradesh, Kerala, Maharashtra, Orissa and Tamil Nadu (including Chennai). Apart from this, existing operators like Idea Cellular have also commenced operations in Mumbai and is scheduled to do so in Bihar, Tamil Nadu and Orissa over the next 6 months. These developments will make the sector even more competitive and as many as 11-12 operators will be present in some circles like Tamil Nadu and Orissa.

The rolling out of cellular networks carries with it a tremendous amount of execution risk

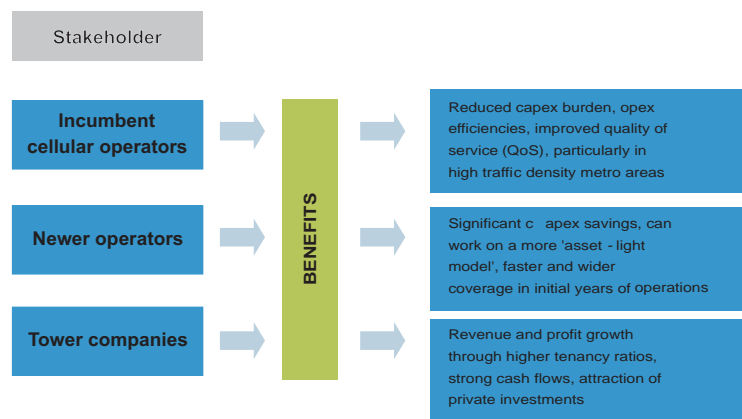
However, the rolling out of cellular networks carries with it a tremendous amount of execution risk. Setting up telecommunication towers requires as many as 40 different approvals, which results in significant time spent in constructing tower assets. Thus, if new operators roll out their own cellular network infrastructure, they will lose a lot of time and the opportunity loss in terms of subscribers and revenues will also be significant.

Apart from this, substantial capex is needed to set up a countrywide cellular network. A significant part of the network roll-out is likely to come in the as-yet untapped rural areas, where mobile teledensity is barely in double digits. Consequently, the cost of expansion will also be greater, given that many rural areas are typically far-flung, difficult to access, roads are generally not satisfactory, power supply is erratic (and often non-existent) and personnel are in scarce supply to operate telecommunication towers. A greater number of ground-based towers will also be needed in rural areas, thus further increasing the capex requirements. These towers, depending on their height, typically cost in the region of Rs40-45lakh, as against Rs20-22lakh for a roof-top tower.

Thus, sharing mitigates these risks to a significant extent. As mentioned before, passive infrastructure accounts for around 60% of the total cost of setting up a network. Consequently, massive amounts of funds can be saved and newer operators can work on a kind of 'asset-light model', where instead of capex to set up towers and other elements of cellular network infrastructure, they will be paying opex in the form of lease rentals to the tower companies. Sharing also significantly speeds up the time-to-market, as operators can dramatically reduce their site acquisition times and can just load their electronics and active network elements on to the passive infrastructure of incumbent operators in a passive sharing model.

On the other hand, for incumbent operators, it enables them to earn additional revenues from a new source, apart from improving capex and opex efficiencies, leading to freeing up of significant resources and management time to focus on their core business of branding and marketing of telecom services and solutions.

Exhibit 8: Benefits of infrastructure sharing for key stakeholders



Source: Industry, Angel Research

The Business Case for Infrastructure Sharing

Telecom is a capex-intensive business that needs significant investments to expand and grow

Telecom is a capex-intensive business that needs significant investments year-on-year to expand and grow. As mentioned earlier, a significant part of wireless capex consists of passive infrastructure (around 60%), that is, the site itself (real estate space), telecommunication towers and associated infrastructure such as DG sets for power back-up, generators, air-conditioning, shelters, civil works and security. This capex intensity results in significant fund requirements and time spent on running and maintaining the network, which is not a core task of a telecom services company. Given India's huge coverage requirements, the need for funds stretches into several years. Erecting towers along with the active infrastructure component (spectrum, Node B, radio antenna, fibre optic cable/backhaul/microwave equipment) carries with it significant execution risks, and as many as 40 clearances are needed before the tower and active infrastructure comes up and gets started.

It is against this background that the concept of infrastructure sharing has assumed importance

It is against this background that the concept of infrastructure sharing has assumed importance. For instance, Bharti has towers in a particular area in a circle while Vodafone Essar requires expanding its network there. In such a situation, instead of incurring huge capex and execution risks on its books through setting up the towers by itself, Vodafone would rather share Bharti's back-end infrastructure and expedite its network expansion process. Such a symbiotic arrangement works well for both partners, as Vodafone would pay rent to Bharti's towerco, while simultaneously fast-tracking its expansion process. Importantly, the inhibitions of 'co-operating at the back-end and competing at the front-end' seem to be rapidly fading away, with even a company like BSNL, which has always been opposed to sharing, now showing greater willingness to do so.

In April this year, the DoT approved regulator TRAI's recommendation to allow service providers to share their active infrastructure as well

Till recently, regulations permitted sharing of only passive infrastructure. However, in April this year, the DoT approved the telecom regulator TRAI's recommendation to allow service providers to share their active infrastructure as well and came out with its guidelines on the same. Active infrastructure components including antenna, feeder cable, Node B and RAN and transmission system are all shareable, while sharing of the allocated spectrum is not permitted. This will lead to a further fall in capex requirements for not just newer operators, but the entire industry.

Given the as-yet low mobile penetration rate in India (around 26%) and huge expansion plans of major mobile operators, it becomes clear that the tower business can become a profit centre by itself

Overall, given the as-yet low mobile penetration rate in India (around 26%) and huge expansion plans of major mobile operators, it becomes clear that the tower business can become a profit centre by itself, rather than just leading to cost savings for telcos. The Mobile Telecom Industry structure is also favourable to infrastructure sharing, as competitive intensity is high and coverage requirements are massive. The current spectrum constraints are also favourable for the tower business. A spectrum crunch would imply that telcos need to construct more towers in an area to improve coverage. Apart from this, with operators like Bharti Airtel and Idea Cellular still witnessing some levels of demand elasticity, their minutes of usage (MoUs) are clocking a healthy increase with the consistent fall in tariffs. This puts greater strain on operators' networks.

Exhibit 9: Strong demand elasticity leads to higher MoUs - Positive for towercos

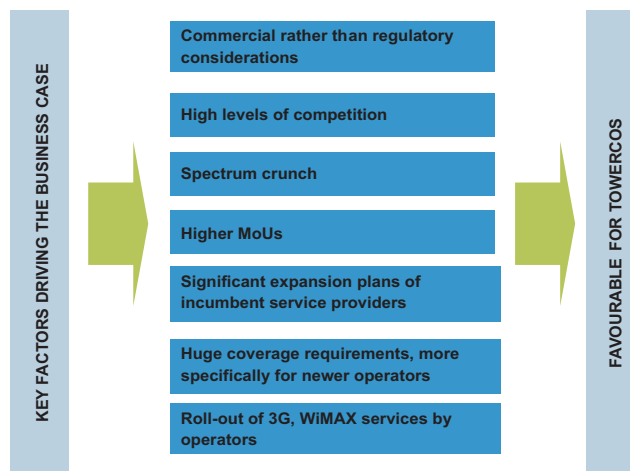
Particulars	2QFY08	3QFY08	4QFY08	1QFY09
Bharti Airtel				
MoUs per month	469	474	507	534
Revenues per minute (Rs)	0.79	0.76	0.72	0.66
Idea Cellular				
MoUs per month	360	377	411	428
Revenues per minute (Rs)	0.83	0.76	0.71	0.66

Source: Companies, Angel Research

The roll-out of 3G and BWA/WiMAX services is likely to further drive infrastructure sharing in the country

Apart from this, the DoT announced the 3G and Broadband Wireless Access (BWA, WiMAX) Policies recently, with the auction process for the allocation of 3G mobile spectrum likely to be completed over the next few months and services expected to be rolled out by the winning bidders across the country in mid-2009. BSNL and MTNL have already been allotted 3G spectrum, with one slot in each circle being reserved for these PSU telcos (Mumbai and Delhi for MTNL, the rest of the country for BSNL). However, these operators will have to match the price offered by the highest bidders. The roll-out of 3G and BWA/WiMAX services is likely to further drive infrastructure sharing in the country.

Exhibit 10: Favourable business case for the Telecom Infrastructure Sector in India



Source: Companies, Angel Research

Business characteristics

The key metric that any towerco would look at is the tenancy ratio

The Telecom Infrastructure Business is characterised by a strong and steady stream of cash flows, a reputed, blue-chip client base, such as Bharti Airtel, Vodafone-Essar, RCOM and Idea Cellular, long-term revenue visibility through signing of long-term master service agreements (MSAs), a high level of fixed costs and operating leverage. It should be understood that the key metric that any towerco would look at is the tenancy ratio. Each tower has a certain number of slots and is capable of hosting the active infrastructure of a certain number of tenants. Thus, higher the tenancy ratio (the total occupied tenancy slots divided by the number of towers) more

With increased tenancy ratios and operating leverage, these companies are likely to report better margins, which are likely to flow through to the PAT level

There are broadly two types of towercos in existence in India, namely operator-owned towercos and independent towercos (third-party infrastructure providers)

In the third-party model, there are typically two types of models - built-to-suit and proactive

profitable the company is likely to be, since the incremental costs of adding tenants is fairly low. Higher tenancy ratios lead to better margins.

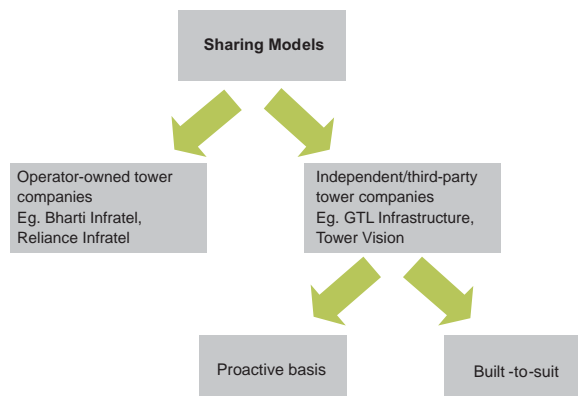
If we take below-EBITDA level items, the business is highly capital-intensive and leveraged. Therefore, depreciation charges and interest costs are typically the major cost items of any towerco and as a result, it is likely that in the initial years of operations, when tenancy ratios are lower, towercos are likely to incur losses at the PBT/PAT level. However, going ahead, with increased tenancy ratios and operating leverage, these companies are likely to report better margins, which are likely to flow through to the PAT level. We believe that towercos with tenancy ratios below 2x are unlikely to be very profitable.

Tower sharing models - Operator-owned and Third-party

It should be noted that there are broadly two types of towercos in existence in India, namely operator-owned towercos, such as Reliance Infratel and Bharti Infratel, and independent towercos (third-party infrastructure providers) such as GTL Infrastructure, Quippo and TowerVision. In the first model, that is, operator-owned towercos, the telecom operators themselves set up the towers and lease out slots on their towers to other operators for a fee (lease rentals). This leads to newer revenue-generation streams for telcos. In India, telcos like Bharti Airtel and RCOM have hived off their telecommunication towers into separate subsidiaries with independent management teams. Thus, this leads to significant capex savings and improved cash flows, as the telecom infrastructure is transferred to the towerco's books, also resulting in significant savings on depreciation charges. This leads to greater capex and opex efficiencies for telcos.

On the other hand, in the third-party model, an independent tower company, such as GTL Infrastructure sets up towers and leases them out to operators for a fee. In the third-party model, there are typically two types of models - built-to-suit and proactive. In the former, third-party infrastructure providers work together with telecom operators to assess their specific requirements and sharing potential in specific locations. On the other hand, in the proactive model, the infrastructure provider builds out towers without any specific requirements from any operator and then approaches operators to install their electronics on the towers.

Exhibit 11: Tower sharing models



Source: Industry, Angel Research

We believe that going forward, operator-owned towercos will dominate the industry

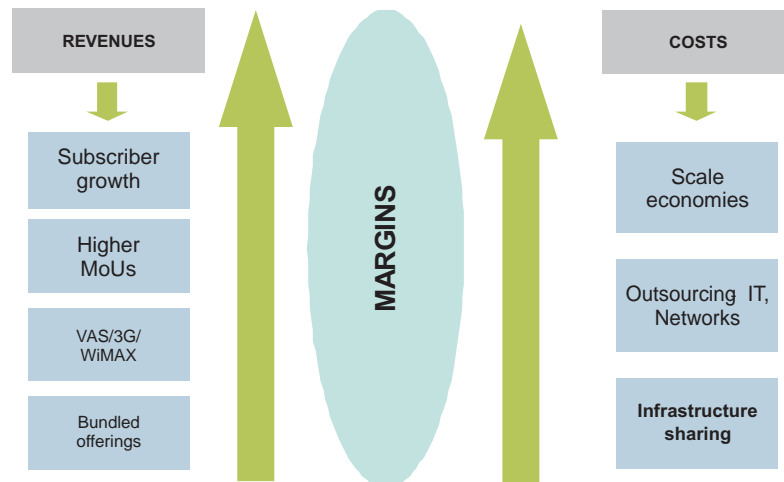
We believe that going forward, operator-owned towercos will dominate the industry, given their significantly larger scale, strong parent support, deep pockets and the presence of an 'anchor tenant' (the parent), leading to a tenancy ratio of at least 1x right at the start, while independent towercos have to start with a tenancy ratio of zero, particularly if they are more dependent on the proactive model of sharing.

Infrastructure Sharing in India - Driven by Cost dynamics, a PAT driver

Service provider margins are likely to come under significant pressure on account of multiple factors

As we have outlined in some detail earlier in this report, service provider margins are likely to come under significant pressure on account of multiple factors, including falling ARPUs due to rural expansion, declining elasticity of demand thus making MoUs less responsive to a change in tariffs, slowing revenue growth, heightened competitive intensity, higher network expansion costs and a possible hike in spectrum charges. Thus, factors on both the revenue and cost fronts are likely to adversely impact the margin profile.

Exhibit 12: A key cost dynamic in an increasingly difficult margin environment



Source: Industry, Angel Research

On the revenue front, growth is clearly slowing down, with a higher base and more importantly, a consistent fall in ARPUs. Thus, top-line growth has trailed subscriber growth and will continue to do so in the foreseeable future. With declining elasticity of demand, a rise in MoUs commensurate with falling tariffs is also unlikely to materialise. Further, competitive intensity shows no signs whatsoever of abating, rather it is only likely to get heightened with newer operators rolling out services and a further price war possible.

On the other hand, on the cost side, with aggressive roll-outs being undertaken by service providers, network expansion costs are likely to surge significantly in the medium-term, thus pressurising margins further. Also, with a hike planned in spectrum charges, the margin environment is likely to deteriorate even more.

In such a challenging margin environment, infrastructure sharing becomes a key strategic decision

Operators like Bharti and RCOM who have hived off their telecommunication towers into separate subsidiaries are set to experience a considerable decline in capex

In such a challenging margin environment, infrastructure sharing becomes a key strategic decision. Telcos need to ensure that in spite of the pressure being witnessed on the margin front, bottom-line growth is not compromised to a great extent. The hiving off of the tower business into a separate company with a separate management team and focus is a clear example of this. It should be noted that on account of this step, Mobile Business margins are likely to take a further hit, as the company will pay out lease rentals to its tower company.

However, operators like Bharti and RCOM who have hived off their telecommunication towers into separate subsidiaries are set to experience a considerable decline in capex, at least on the passive side. This will lead to significant savings in depreciation charges, leading to at least a partial mitigation of the adverse impact of the Margin pressure on the bottom-line. Apart from this, a separate focus on the telecom infrastructure business is likely to lead to strong growth in the business, leading to newer revenue generation streams, specially with higher tenancy ratios from 'non-anchor clients', apart from value-unlocking opportunities for shareholders.

Exhibit 13: Bharti Airtel - Hiving off towerco leads to margin fall, bottom-line growth

(Rs cr)	3QFY08	4QFY08	1QFY09
Network operations costs	885	981	1,232
% chg qoq	17.7	10.8	25.7
Depreciation charges	1,038	970	1,005
% chg qoq	14.5	(6.5)	3.5
Mobile Services Business EBITDA	2,289	2,278	2,122
% chg qoq	10.4	(0.5)	(6.9)
Mobile Services Business EBITDA Margins (%)	40.8	35.5	30.7
% chg qoq	(0.2)	(5.3)	(4.8)
Profit after tax	1,722	1,853	2,025
% chg qoq	6.7	7.6	9.3

Source: Company, Angel Research

Bharti Airtel's Mobile Services Business EBITDA Margins have fallen significantly owing to the payment of lease rentals to its towerco, Bharti Infratel, which was hived off with effect from January 31, 2008 (Refer Exhibit 13). Network operations costs have risen quite dramatically over these quarters by as much as 39.2% from 3QFY008-1QFY2009. However, owing to savings on depreciation, Bharti Airtel's Bottom-line has witnessed healthy sequential growth. Depreciation charges are down by over 3% over these two quarters.

It should be noted that since Bharti is an integrated telco, the overall impact of the tower hive-off will be minimal on consolidated EBITDA Margins. This is because the company records lease rental revenues at the Bharti Infratel level (reported as Passive Infrastructure Services on a segment-wise basis), while concurrently recording these as network expenses in the Mobile Services business segment (only the rentals paid by Bharti Airtel to Bharti Infratel, not third-party rental income). Thus, this neutralizes the overall impact at the EBITDA Margin level. Nonetheless, this gives an understanding of the impact of the tower business hive-off on bottom-line, reflecting the importance of giving a separate focus to the tower business.

Government support for Infrastructure Sharing - Subsidies through USO Fund

The phenomenal growth of the Indian Mobile Telecom Sector has attracted the largest and most well-known telecom companies in the world to the country

The phenomenal growth of the Indian Mobile Telecom Sector has attracted the largest and most well-known telecom companies in the world to the country, all hoping to get a slice of the action. Companies like AT&T, Verizon, Deutsche Telekom and MTN Group have all at some stage attempted to enter the Indian market and some of them are still hoping to enter the market through winning 3G spectrum through the auction process. The sector has consistently added over 8mn mobile subscribers each month, thus bringing crores of people into its fold.

In spite of such amazing growth, there still remains a significant 'digital divide' in the country

However, in spite of such amazing growth, there still remains a very significant 'digital divide' between the urban and rural areas of the country. Mobile teledensity in urban areas stands at over 60%, while in rural areas it has barely touched double digits. Thus, in spite of the amazing growth witnessed by the sector, vast areas of the country still remain untouched by the 'digital revolution' and have no access to any form of telecommunication whatsoever.

It may be noted that on account of the outstanding growth of the Mobile Telephony Sector, the country has crossed numerous Government targets well ahead of schedule. The Tenth Plan envisaged a teledensity of 9.9% by March 2007, whereas the actual mobile teledensity alone stood at around 15% by the time-frame. The National Telecom Policy 1999 (NTP 1999) envisaged a teledensity of 15% by 2010, whereas the total teledensity (including fixed line phones) has already crossed 26% currently. NTP 1999 also envisioned a rural teledensity of 4% by 2010, whereas at the end of February 2008, it stood at 9%.

To ensure that rural India is not left out of the strong growth of the sector and to bridge the 'digital divide', the Government has resorted to utilisation of the Universal Services Obligation Fund

Thus, with a view to ensuring that rural India is not left out of the strong growth that the sector is witnessing and to bridge the 'digital divide', the Government has resorted to effective utilisation of the Universal Services Obligation Fund (USOF). This fund is collected from telecom operators by charging them 5% of their adjusted gross revenues (AGRs) and its basic theme is that it is the social obligation of the government to provide access to telegraph services to people in rural and remote areas at affordable and reasonable prices. The fund is an attached office of the DoT and came into existence with effect from April 1, 2002.

Now, while this may seem like a noble and honourable intention, it should be noted that rural areas are often scattered, have low population density, are difficult to access on account of poor quality of roads (and in some cases, no roads at all), have difficult terrain, low telephone usage and sometimes are also witness to insurgency, such as some areas in Andhra Pradesh that are affected by the activities of Naxalites. Over and above this, such areas typically involve high capex and opex spends by operators and yield considerably lower ARPUs.

To ensure that telecom operators venture into rural areas, it is necessary to incentivise them

In such areas, even such concepts as liberalisation, competition and free market economics are not enough to ensure greater remote area penetration. Thus, to ensure that telecom operators venture into such rural areas to connect the unconnected, it is necessary to incentivise them and facilitate such rural roll outs, which can be achieved through optimum utilisation of the funds available through the USOF.

Till November 2006, the scope of activities of the USOF was restricted only to cover 'basic services'

The scope of the USOF includes support to cover public access, individual household lines and telecom infrastructure in identified net high cost rural and remote areas. It should be noted that till November 2006, the scope of activities of the USOF was restricted only to cover 'basic services', which involved two streams - the provision of public telephone services (village public telephones and rural community phones) and the provision of household telephones in net high cost rural/remote areas (rural household direct exchange lines - RDELS).

To ensure reach of mobile telephony to rural areas, in November 2006, rules governing the USOF were amended

Thus, to ensure the greater reach of mobile telephony to rural and remote areas, in November 2006, the rules governing the USOF were amended to allow the fund to support mobile services and broadband connectivity. Following this, four new streams were created, involving the creation of infrastructure for provision of mobile services in rural and remote areas, provision of broadband connectivity, creation of general infrastructure for development of telecom facilities and the induction of new technological developments in the telecom sector in these areas.

USOF - Mobile Infrastructure, a start to Public-Private Partnerships in rural telephony

The objective of this stream is to cover rural areas left uncovered by wireless telephony

The objective of this stream is to cover rural areas left uncovered by wireless telephony. Its scope involves providing subsidy for passive infrastructure including land, tower, boundary wall, security cabin, electric connection and power back-up, and active infrastructure including BTS, antenna and a portion of backhaul. There are two phases to this stream. In the first phase, 7,871 tower sites spread over 500 districts across 27 states are scheduled to come up in this calendar year. The phase will cover 212,304 villages, cover 26.9cr people and will result in an additional capacity creation of 24mn lines, with a subsidy outflow of around Rs588cr over five years. The telcos and infrastructure providers to set up the sites, share the towers and provide mobile services have been decided through bids (request for proposals, RFPs). In fact, so much interest was shown by players that in many cases, the winners of the bids actually paid the government rather than getting subsidised themselves to set up sites and provide services in remote areas.

BSNL won the lion's share of Phase 1, with 6,175 towers scheduled to be installed by the PSU telecom major

BSNL won the lion's share of Phase 1, with 6,175 towers scheduled to be installed by the PSU telecom major and around 5,755 BTS to be provided by it. It also has to provide mobile services from 70% of the sites. Apart from BSNL, the other service providers who have to set up towers and infrastructure include Vodafone (331 towers) and RCOM (472 towers), whereas the infrastructure providers who won bids include GTL Infrastructure (421 towers), Quippo Telecom Infrastructure (88 towers) and National Information Technologies (NITEL/KEC, 384 towers). BSNL, RCOM, Vodafone, Bharti and Dishnet will be providing mobile services through these towers. The infrastructure and towers constructed under Phase 1 have to be shared by three telecom service providers.

Phase 2 of the Mobile Infrastructure stream will involve an additional 11,049 towers to be set up and villages with a population of 500 are to be covered by mobile services. A total of 242,866 villages and around 27.6cr people will be covered under this phase. Phase 2 is expected to be launched shortly by the Government. A total of 60mn lines capacity will be created under USOF-assisted infrastructure schemes by 2010, covering 455,170 villages and 54.5cr people.

In some of the most amazing statistics, under Phase 1, (complete), the actual subsidy to be paid out for the passive infrastructure element amounted to a mere 30% of the benchmark

This clearly reflects the potential that private operators see even in the remote areas of the country

We estimate that India will require a total of 3.4lakh towers by FY2011 in order to cater to a mobile subscriber base of 541.3mn

At the end of FY2008, the country is estimated to have around 1.8lakh towers catering to the 256.2mn mobile subscriber base

We expect Bharti Airtel and RCOM to account for the maximum number of towers in the country through their respective telecom infrastructure subsidiaries

BITL is expected to have over 1lakh towers by FY2011 (including Indus)

It is well-understood that to ensure that private operators go to villages to provide mobile connectivity, they should be incentivised and an inducement should be there through subsidies provided from the USOF to share rural telecom infrastructure. However, in some of the most amazing statistics, under Phase 1, (complete), the actual subsidy to be paid out for the passive infrastructure element amounted to a mere 30% of the benchmark. On the other hand, the actual subsidy to be paid out for the active infrastructure element amounted to a miniscule 3% of the benchmark. It seems likely that a similar result may even be seen in Phase 2.

This clearly reflects the potential that private operators see even in remote areas of the country. Apart from the USOF-assisted schemes, private operators like Bharti Airtel, RCOM and Vodafone-Essar continue to roll out networks in rural areas through their regular business plans. Thus, there is hope that over the next few years, a significant part of rural India will also be connected and that the 'digital divide' will be significantly reduced.

India to have 3.4lakh towers by FY2011; to cater to over 541mn subscribers

We estimate that India will require a total of 3.4lakh towers by FY2011 in order to cater to a mobile subscriber base of 541.3mn. We anticipate a steady rise in infrastructure sharing by operators, both incumbent and newer operators and estimate a total tenancy ratio of 1.82x by that time-frame, leading to a total of around 6.2lakh BTS required in the country. The estimated number of towers by FY2011 implies an additional requirement of 1.6lakh over FY2008 (1.8lakh towers, 2.17lakh BTS), implying a CAGR growth of around 24% over the period.

At the end of FY2008, the country is estimated to have around 1.8lakh towers catering to the 256.2mn mobile subscriber base. These 1.8lakh towers housed a total of 2.17lakh BTS of different operators. This implies an all-India occupancy rate of 1.20x. This appears to be fairly low, especially given the hype that has been witnessed in recent months relating to infrastructure sharing, with telecom operators, third party infrastructure providers and the government all paying lip service to the concept. However, the low tenancy ratio should be looked at in context of the fact that sharing is only just starting to pick up in the Indian Telecom Sector and consequently, it will take time for the overall tenancy ratio to pick up. We have factored this into our projections, as reflected by the 1.82x estimated all-India tenancy ratio by FY2011.

We expect Bharti Airtel and RCOM to account for the maximum number of towers in the country through their respective telecom infrastructure subsidiaries, Bharti Infratel (BITL) and Reliance Infratel (RITL). These two companies accounted for around 50% of the total tower base in India in FY2008 (Bharti's tower base taken including its Indus tower portfolio) and are expected to account for around 52% in FY2011. Indus Towers, BITL standalone and RITL are expected to account for over 75% of the all-India tower portfolio in FY2011.

BITL is expected to have over 1lakh towers by FY2011 (including its Indus tower portfolio). This is from a tower base of 53,083 at the end of FY2008, implying a strong CAGR growth of 22% over this period. The 1lakh-odd tower base estimated at the end of FY2011 implies a market share of nearly 30%. On a standalone basis (ex-Indus), BITL is expected to have 41,583 towers

by FY2011, as compared with a tower base of 23,083 at the end of FY2008. This implies a CAGR growth of 22% over the period and a market share of 12% of the all-India tower base. BITL standalone is estimated to have a tenancy ratio of 1.82x by FY2011, as against 1.22x at the end of FY2008.

RITL is estimated to have a total of over 75,000 towers by FY2011

RITL is estimated to have a total of over 75,000 towers by FY2011, as compared with a tower base of nearly 37,000 at the end of FY2008, implying a CAGR growth of 27% over the period. The estimated tower market share is 22.2%. The towerco is estimated to have a tenancy ratio of 2.05x by FY2011, as against just 1.16x at the end of FY2008.

As regards Indus Towers, we estimate a total of nearly 1.4lakh towers by FY2011

As regards Indus Towers, the joint venture towerco formed between Bharti Infratel, Vodafone-Essar and Idea Cellular, we estimate a total of nearly 1.4lakh towers by FY2011, vis-à-vis a tower base of over 71,000 at the end of FY2008. This implies a CAGR growth of over 25% over this period and an all-India tower market share of over 41%, making it by far the largest towerco in the country. We estimate Indus to have a tenancy ratio of 2.19x by FY2011, as against 1.22x at the end of FY2008.

Exhibit 14: Major Towercos - Tower base, Market-share, Occupancy Ratio

Particulars	FY2008	FY2009E	FY2010E	FY2011E
All-India mobile subscriber base (Mn)	256.2	354.6	457.3	541.3
<i>% chg</i>	58.8	38.4	29.0	18.4
Bharti Airtel mobile subscriber base (Mn)	62.0	89.8	115.1	134.3
<i>% chg</i>	66.9	44.9	28.2	16.7
Market share (%)	24.2	25.3	25.2	24.8
RCOM mobile subscriber base (Mn)	45.8	64.4	89.3	106.1
<i>% chg</i>	63.5	40.7	38.5	18.8
Market share (%)	17.9	18.2	19.5	19.6
Vodafone-Essar mobile subscriber base (Mn)	44.1	63.3	83.7	100.5
<i>% chg</i>	66.8	43.5	32.2	20.1
Market share (%)	17.2	17.9	18.3	18.6
Idea Cellular mobile subscriber base (Mn)	24.0	43.2	58.5	72.3
<i>% chg</i>	71.3	80.1	35.2	23.6
Market share (%)	9.4	12.2	12.8	13.3
All-India telecommunication tower base (Nos.)	180,000	240,000	290,000	340,000
<i>% chg</i>		33.3	20.8	17.2
All-India occupancy ratio (x)	1.20	1.43	1.59	1.82
All-India BTS (Nos.)	216,867	342,857	460,317	618,182
Indus Towers tower base (Nos.)	71,429	96,429	118,929	139,929
<i>% chg</i>		35.0	23.3	17.7
Market share (%)	39.7	40.2	41.0	41.2
Indus Towers occupancy ratio (x)	1.22	1.67	1.92	2.19
Indus Towers BTS (Nos.)	87,215	161,001	227,799	306,966
Bharti Infratel standalone tower base (Nos.)	23,083	30,583	36,583	41,583
<i>% chg</i>		32.5	19.6	13.7
Market share (%)	12.8	12.7	12.6	12.2
Bharti Infratel standalone occupancy ratio (x)	1.22	1.34	1.60	1.82
Bharti Infratel BTS (Nos.)	28,161	40,833	58,421	75,709
Reliance Infratel tower base (Nos.)	36,849	54,349	65,349	75,349
<i>% chg</i>		47.5	20.2	15.3
Market share (%)	20.5	22.6	22.5	22.2
Reliance Infratel occupancy ratio (x)	1.16	1.48	1.85	2.05
Reliance Infratel BTS (Nos.)	42,646	80,355	120,747	154,755

Source: Companies, COAI, AUSPI, Angel Research

Sharing in India - Replicating the US market?

In developed telecom markets such as the US, the concept is mature and is one of the few markets globally where infrastructure sharing has succeeded

The US market has approximately 2.15lakh sites available for sharing and occupancy rates are upwards of 2x

There is reason to believe that sharing is likely to succeed in India as well

While in India, infrastructure sharing is still in its formative stages, in developed telecom markets such as the US, the concept is mature and is one of the few markets globally where infrastructure sharing has succeeded. In this market, a majority of the towers (around 60%) are owned by independent tower companies such as American Tower, whereas just 12% of the towers are still owned by wireless operators like AT&T, Verizon and T-Mobile USA. In complete contrast to this, in India, over 90% of the total telecommunication towers are owned by telecom operators. Thus, in this sense, the Indian Telecom Infrastructure Market is fairly unique.

The US market has approximately 2.15lakh sites available for sharing and occupancy rates are upwards of 2x in that market. Companies like American Tower have recorded strong growth rates in revenues and EBITDA, with margins at impressive levels of nearly 70% in 2QCY2008. This market has numerous similarities with the Indian market in terms of characteristics. Both markets are highly competitive, with the presence of multiple operators and with the top 4-5 operators commanding a majority of subscriber market share. Large coverage requirements are also there in the US market, thus necessitating a greater degree of site sharing between operators. Apart from this, pricing and margin pressure exist in both markets, with high MoUs also a feature. Thus, there is reason to believe that sharing is likely to succeed in India as well.

Exhibit 15: Global v/s Indian towercos - A Glance

Particulars	American Tower	Crown Castle	BITL (standalone)	RITL	Indus Towers
Revenues (US\$ mn)					
CY2008E / FY2009E*	1,584	1,520	403	824	1,590
CY2009E / FY2010E*	1,711	1,628	589	1,250	2,310
EBITDA Margins (%)					
CY2008E / FY2009E*	68.4	56.4	33.0	47.3	51.8
CY2009E / FY2010E*	69.2	58.4	40.7	52.3	52.7
Number of towers (Current, nos.)	22,200	23,500	23,083	36,849	71,429
Enterprise Value (Current, US\$ mn)**	19,809	15,992	2,111	7,340	16,992
Tower Business EV (Current, US\$ mn)#	18,026	14,849	2,111	7,340	16,992
Tower Business EV/Revenue (x)					
CY2008E / FY2009E	11.4	9.8	5.2	8.9	10.7
CY2009E / FY2010E	10.5	9.1	3.6	5.9	7.4
Tower Business EV/EBITDA (x)					
CY2008E / FY2009E	16.6	17.3	15.9	18.8	20.6
CY2009E / FY2010E	15.2	15.6	8.8	11.2	14.0

Source: Bloomberg, respective companies, Industry, Angel Research; Note: We have assumed a Rupee-Dollar rate of Rs42 per Dollar for conversion into US Dollars; * Revenues and EBITDA Margins for American Tower and Crown Castle are consensus estimates; ** EV for American Tower and Crown Castle calculated based on the respective closing share prices as on September 19, 2008, while for BITL standalone, RITL and Indus Towers, it is the calculated EV as per our DCF calculations; # Calculated based on the percentage of Revenues earned from wireless tower leasing services.

Better access to information on towercos; RITL draft prospectus filed with SEBI, Bharti Airtel disclosing segmental information on BITL

The phenomenal success story of the Indian Mobile segment is well-known and has been articulated across all media. From a stock market perspective, even though there are just three major telecom operators that are listed (Bharti Airtel, RCOM and Idea Cellular), along with two smaller players (MTNL and Spice Communications, which will be de-listed after the transaction with Idea, the Modi Group and Telecom Malaysia International is complete), the quality of disclosures available in terms of financial and operating metrics, particularly for the mobile space, is impressive, with Bharti Airtel clearly being the 'gold standard' in this context. Information on major metrics like revenues, margins, subscribers, ARPUs, MoUs, RPMs, cost dynamics and profitability is freely available, with all major companies showing fairly good quality of disclosures.

The segment is in a nascent stage in India, with little information available on major operating metrics

In recent times though, there has been a noticeable improvement on this front

However, the Telecom Infrastructure Business is a different story. The segment is in a nascent stage in India, with not a significant amount of information available on major operating metrics like tenancy ratios, monthly rentals per tenancy slot, operating costs, financial ratios like debt-equity ratio and profitability. In recent times though, there has been a noticeable improvement on this front. RITL, the towerco of RCOM, has filed its draft RHP with market regulator, SEBI for its proposed IPO. While the IPO has been postponed due to unfavourable market conditions, the quality of information and disclosures on the financial and operating fronts is impressive, with details such as ground-based and roof-top towers, tenancy ratios and future business plans all available in the RHP, apart from the Balance Sheet and P&L Account.

Apart from this, Bharti Airtel has also started releasing segmental details about its towerco, BITL's financials in its quarterly results. Key metrics like revenues, EBITDA and EBIT margins, number of towers, tenancy ratio and rentals are all disclosed by the company. Going ahead, as and when all procedures related to the formation of Indus Towers are complete, information about this towerco will also be available. These initiatives by the management to disclose more information on their respective towercos lend better credibility and give greater confidence about adding their potential value to our target prices.

Key Private Equity deals - Giving further credibility to the story

There have been a few major PE deals involving towercos that reflect the confidence global investors have in this space

As we have mentioned, the Indian Telecom Infrastructure segment is in a fairly nascent stage, with the first major step (the formation of RITL) having taken place barely over a year ago. In contrast, major telcos like Bharti Airtel have been in existence for well over a decade. Nonetheless, given the significant potential of this business in India, there have been a few major PE deals involving towercos that reflect the confidence global investors have in this space.

In what was the first transaction involving a stake sale in a tower company in India, RCOM sold a 5% stake in RITL in July 2007 to global investors for a consideration of US \$337.5mn (~ Rs1,417.5cr) implying a total equity valuation of US \$6.75bn (~ Rs28,350cr) and an enterprise value (EV) of US \$9bn (~ Rs37,800cr) for the towerco.

The next major transactions involved Bharti Airtel's towerco, BITL. The towerco has made two major equity placements, the first being a US \$1bn placement in December 2007 for an 8-10% stake to investors like Temasek, Goldman Sachs, Macquarie, Citigroup and India Equity Partners. The second placement was a US \$250mn deal in February 2008 for a 2-2.5% stake to reputed PE firm, Kohlberg Kravis Roberts & Co. This implies an EV for BITL in the range of US \$10-12.5bn. The eventual valuation would be decided based on its actual operating performance in FY2009. It should be noted that these placements include the buyers getting a proportionate stake in Indus Towers Towers. Thus, on account of its 42% stake in Indus, Bharti has sold around 4.2-5.25% stake in the towerco through these deals.

After this, another major transaction involved Idea Cellular selling a 20% stake in Aditya Birla Telecom (ABTL) to Providence Equity Partners for a consideration of US \$640mn. ABTL holds the universal access service (UAS) licence for the Bihar circle and held a 16% stake in Indus Towers prior to the deal. Thus, Idea holds its stake in Indus through ABTL. Clearly, the majority value of ABTL is on account of its stake in Indus. The transaction values ABTL at US \$3.2bn and Indus at US \$20bn. Through this deal, Idea has indirectly sold around 3.2% stake in Indus Towers. Thus, through the Infratel and ABTL deals, a total of around 7.4-8.45% stake has been sold in Indus for a total consideration of over US \$1.1bn.

We believe more such deals are likely in this space, considering the significant need for funds for these companies

Going ahead, we believe more such deals are likely in this space, particularly considering the significant need for funds for these companies to enable them to execute their ambitious expansion and roll out plans. The estimated capex plans for RITL, BITL (standalone) and Indus Towers combined over FY2009-11E are to the tune of over Rs39,000cr (~ US \$9.3bn). Thus, considering these huge fund requirements, a further equity dilution by these towercos for fund raising cannot be ruled out.

Conflicting issues arising in infrastructure sharing

One issue that could hamper the progress of sharing is the perception by towercos of losing their 'first-mover advantage' that they have in an area

While there has been much lip-service paid to the concept of infrastructure sharing by telcos, third-party infrastructure providers and the government itself, it should be noted that several issues do crop up in the course of taking a decision on this. One issue that could hamper the progress of sharing is the perception by towercos of losing their 'first-mover advantage' that they have in an area. This is a natural and reasonable concern to have.

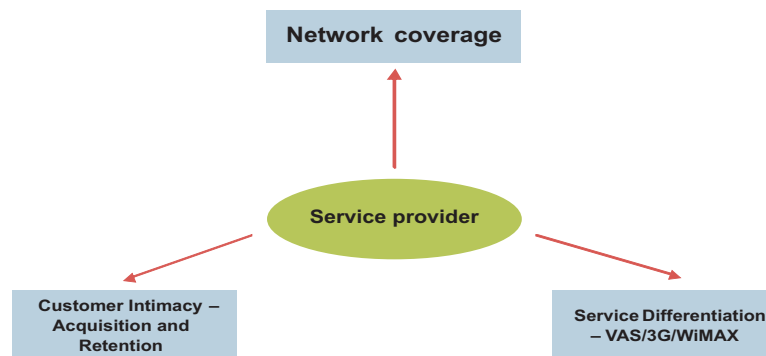
For example, if Bharti Airtel has a strong presence in major parts of Bihar, a large circle with significant growth potential, it would be natural for it to consider its major network presence in the state as a competitive advantage vis-à-vis other operators. Thus, if another operator approaches Bharti to share its infrastructure, the latter would then lose this 'first-mover advantage' over its rivals. However, talks with operators reveal that this mentality is something of the past and that they are now accepting that this is only a 'short-term advantage' and that over the long-term, they would lose more than they would gain by not sharing.

Another factor impacting this is competition. If, for example, Bharti refuses to share its infrastructure with the operator in our example, it is very likely that RCOM may then step in and agree to share its infrastructure, thus in any case leading to Bharti losing its 'first-mover advantage'. Apart from RCOM, large companies like BSNL have also begun to adopt a more liberal attitude to sharing, partly driven by the fact that the PSU itself has been rapidly losing ground in the marketshare sweepstakes on account of bureaucratic hurdles delaying its network expansion plans. Tata Teleservices also has its own tower portfolio available for sharing and the presence of third-party infrastructure providers like GTL Infrastructure, Essar Telecom Infrastructure, Quippo and TowerVision further intensifies the competition in this space.

One consequence of the increasing acceptance of sharing is the near-complete loss of 'network presence' as a competitive advantage

Therefore, one consequence of the increasing acceptance of sharing by operators is the near-complete loss of 'network presence' as a competitive advantage. Rather, given the greater importance of focussing more on their core business of branding and marketing of telecom services, their attention has now shifted to subscriber acquisition and retention, connecting more with customers, making their brands more relevant, their ability to differentiate their services through VAS/3G/WiMAX and concentrating on focussed segments of the market place.

Exhibit 16: Network coverage - Losing its prime slot as a key competitive advantage



Source: Frost & Sullivan

Another issue that could crop up is lack of transparency and 'arm's length relationships' between telcos and their subsidiary towercos

Another issue that could crop up is lack of transparency and 'arm's length relationships' between telcos and their subsidiary towercos. While all towercos claim that they offer infrastructure sharing on a non-discriminatory basis and operate on 'arm's length basis' with respect to their parent companies, there is an inherent conflict of interest in this case. While preference may be given to the parent telco in terms of offering it the first tenancy slot available on its towers, in terms of rentals charged from it and from other tenants, issues might crop up in future if the 'loss of first-mover advantage' mentality resurfaces, leading to discriminatory tariffs being charged. This could be an indirect method of avoiding greater sharing with other operators with a view to preserving their network and coverage advantages. However, we believe this is unlikely to happen and competition in this segment from both other operators' towercos and third-party infrastructure providers will likely ensure that such a scenario does not materialise.

We believe this is unlikely to happen and competition in this segment will likely ensure that such a scenario does not materialise

Key risks to our assumptions

- Re-emergence of the 'loss of first-mover advantage' mentality by operators leading to lower sharing, tenancy ratios and potential valuations commanded by the towercos
- Significant competitive intensity from other operators' towercos, third party infrastructure providers and global towercos like American Tower and Crown Castle, leading to a higher-than-expected fall in lease rentals in the industry
- Significant execution risks inherent in the roll-out of telecommunication towers, with as many as 40 different approvals required, leading to possible delays in network expansion
- Intra-circle roaming, leading to newer operators not requiring to set up their own BTS on the passive infrastructure of operators' towercos, thus resulting in a possible fall in expected tenancy ratios and potential valuations

Tower Companies

Bharti Infratel - 'Towering' above all else

India's largest single operator-owned towerco

BITL is India's largest single operator-owned tower company, with a total tower portfolio of over 58,000 towers at the end of 1QFY2009

Bharti Infratel (BITL) is India's largest single operator-owned tower company, with a total tower portfolio of over 58,000 towers at the end of 1QFY2009. BITL was created after parent, Bharti Airtel, hived off its passive telecom infrastructure on January 31, 2008 to improve capex and opex efficiencies, unlock value and separately focus on the high-growth potential telecom infrastructure space. BITL accounted for approximately 30% of the total estimated tower base in India at the end of FY2008.

BITL is the company that owns the entire passive telecom infrastructure portfolio of Bharti Airtel

It should be noted that BITL is the company that owns the entire passive telecom infrastructure portfolio of Bharti Airtel. This includes the 42% stake held in Indus Towers, the partnership formed between BITL, Vodafone-Essar and Idea Cellular. Indus Towers will drive the network expansion process for Bharti Airtel, Vodafone-Essar and Idea Cellular in 15 of the 22 circles in the country (Tamil Nadu and Chennai counted as one circle). Through its holding in Indus, BITL has around 30,000 towers, while the balance 23,080 towers are located in the ex-Indus circles (Madhya Pradesh and the 6 'C' category circles, namely Bihar, Orissa, Himachal Pradesh, Assam, the North East and Jammu & Kashmir).

Equity Deals - A strong vote of confidence from global investors

The towerco has made two major equity placements

The towerco has made two major equity placements, the first being a US \$1bn placement in December 2007 for an 8-10% stake to reputed global investors like the Singapore Government's investment arm Temasek, Goldman Sachs, Macquarie, Citigroup and India Equity Partners, among others. The second placement was a US \$250mn deal in February 2008 for a 2-2.5% stake to the reputed private equity (PE) firm, Kohlberg Kravis Roberts & Co (KKR). This implies an enterprise valuation for BITL in the range of US \$10-12.5bn. The eventual valuation would be decided based on BITL's actual operating performance in FY2009. It should be noted that these placements include the buyers getting a proportionate stake in Indus Towers. Thus, Bharti has sold around 4.2-5.25% stake in Indus Towers through these deals.

Recent Industry Developments

Recent industry developments suggest an increasingly favourable environment for infrastructure sharing

Recent industry developments suggest an increasingly favourable environment for infrastructure sharing, leading to a potential increase in valuations over and above the discovered figure in the two transactions. With the Department of Telecommunications (DoT) and the sector regulator, the Telecommunications Regulatory Authority of India (TRAI) in favour of allowing newer entrants into the Telecom Sector, a host of new licences have been issued to companies like Loop Telecom, Unitech, Swan Telecom and Shyam Telelink, apart from licences being issued to existing operators to commence operations in newer circles, like Aircel and Idea Cellular. Spectrum, on account of it being in short supply, has not been issued to all the new licencees in all circles. Nonetheless, in some circles like Andhra Pradesh, Delhi, Karnataka, Kerala, Madhya Pradesh, Mumbai, Orissa, Tamil Nadu (including Chennai) and UP (East), new licencees have received spectrum, necessitating rapid roll-out requirements of these players in the circles in which they have been allotted the scarce resource.

The DoT has also announced the 3G and Broadband Wireless Access (BWA) Policy, leading to greater visibility on this front. The 3G spectrum auction is expected to be completed within the next couple of months and spectrum is expected to be allocated by the end of the year, with a reserve price of Rs2,020cr for pan-India 3G spectrum and an average of 3-5 players competing in each circle, with the exception of Delhi and Mumbai, which will be able to accommodate just 2-3 operators on account of shortage of spectrum. One slot will be reserved for MTNL in Mumbai and Delhi and for BSNL in the remaining circles and these PSU telecom majors will have to match the price paid by the highest bidder for 5 MHz of 3G spectrum in the respective circles. These companies have received a head-start over other operators, as they have already been allotted 3G spectrum and can thus commence services six months ahead of competition. The BWA Policy envisages a reserve price of 50% of that for pan-India 3G spectrum, with 20 MHz of spectrum being available for the winning bidder, who can offer both voice and data services.

These developments are favourable for telecom infrastructure majors including BITL as it will create greater demand for tower space and rapid roll-out requirements. BITL (ex-Indus) is in a strong position to tap this demand, given its market leadership position in the 'C' circle category and strong position in Madhya Pradesh, apart from improving shareability, with an estimated 3.14 tenancy slots per tower by FY2011, translating into a total of over 1.3lakh tenancy slots available for leasing (over 41,500 towers estimated).

Financials

Our Revenue CAGR stands at an impressive 32.4% over FY2009-11E, while our EBITDA CAGR stands at a robust 54.3%, with impressive Margin expansion of 1,188bp (11.88%) expected over the period

On the financials front, we estimate Revenues of Rs2,354cr in FY2010 and Rs2,964cr in FY2011 (vis-à-vis Rs1,692cr in FY2009) for BITL standalone (ex-Indus), while we expect the company to record an EBITDA of Rs958cr in FY2010 and Rs1,331cr in FY2011 (vis-à-vis Rs559cr in FY2009), implying EBITDA Margins of 40.7% and 44.9% in FY2010 and FY2011 (vis-à-vis 33% Margins in FY2009), respectively. Our Revenue CAGR stands at an impressive 32.4% over FY2009-11E, while our EBITDA CAGR stands at a robust 54.3%, with impressive Margin expansion of 1,188bp (11.88%) expected over the period. This is on the back of significant roll-out demand from BITL's parent, Bharti Airtel itself as well as from its partners in Indus Towers (Vodafone-Essar and Idea Cellular) in the ex-Indus circles, apart from newer operators, leading to an increase in the tenancy ratio from 1.22x in FY2008 to 1.82x in FY2011, even as the number of towers are estimated to rise at a CAGR of 22% over FY2008-11E to hit 41,583.

Valuation

Our DCF analysis values BITL (standalone) at Rs7,850cr (around US \$1.87bn)

Our DCF analysis values the standalone BITL at Rs7,850cr (around US \$1.87bn). We have derived our DCF value using a weighted average cost of capital (WACC) of 13.2%, with the cost of equity taken at 15.6%, while cost of debt is taken as 8%. We have assumed a terminal growth rate of 5%. **Thus, the implied value of BITL (standalone) for Bharti Airtel shareholders works out to Rs41 per share.**

Exhibit 1: Discounted Cash Flow Model - BITL (Standalone)										(Rs cr)
Y/E March	FY09E	FY10E	FY11E	FY12E	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E
EBIT	115	422	769	1,011	1,217	1,471	1,667	1,810	2,177	2,450
<i>% growth</i>		265.0	82.5	31.4	20.4	20.9	13.3	8.6	20.3	12.5
Add: Depreciation	443	537	562	624	684	653	698	739	622	542
EBITDA	559	958	1,331	1,635	1,900	2,124	2,365	2,549	2,798	2,992
Less: Tax Expense	0	5	36	152	211	303	373	432	582	706
Operating Cash Flows	559	954	1,295	1,483	1,689	1,821	1,992	2,116	2,217	2,285
Add/(Less): Chg in working capital	261	235	228	236	245	272	275	314	323	361
Pre-capex Free Cash Flows	819	1,189	1,523	1,718	1,934	2,093	2,267	2,430	2,539	2,647
Less: Capex	2,344	1,875	1,740	1,392	1,321	1,133	1,117	1,022	659	588
Free Cash Flows	(1,524)	(686)	(217)	326	613	961	1,150	1,408	1,880	2,059
<i>% growth</i>					87.7	56.9	19.7	22.4	33.5	9.5
Discounting Multiple	1	2	3	4	5	6	7	8	9	10
Present Value of FCF	(1,347)	(536)	(150)	199	330	458	484	524	618	598

(A) Present Value (PV) of FCF till FY2018E (Rs cr)	1,177
(B) Terminal Value Calculation	
WACC (%)	13.2
Terminal Growth Rate (%)	5.0
FCF in FY2018E (Rs cr)	2,059
Terminal Value (TV, Rs cr)	26,482
PV of TV (Rs cr)	7,690
(C) Enterprise Value (EV)	
Total EV ((A) + (B), Rs cr)	8,867
Less: Net Debt (Rs cr)	1,017
Total Equity Value (Rs cr)	7,850
Total Equity Value (US\$ mn)	1,869
Number of shares (cr)	190
Value per Bharti Airtel share (Rs)	41

Source: Angel Research, Note: We have assumed a Rupee-Dollar rate of Rs42 per Dollar for conversion into US Dollars.

Exhibit 2: Sensitivity Analysis

WACC	Terminal Growth Rate				
	4.0%	4.5%	5.0%	5.5%	6.0%
12.0%	47	51	54	59	64
13.0%	38	40	43	46	49
13.2%	37	39	41	44	47
14.0%	30	32	34	36	39
15.0%	24	26	27	29	31

Source: Angel Research

As regards BITL's 42% stake in Indus Towers, we have arrived at an equity value of Rs63,063cr (around US \$15bn) for Indus on a DCF basis. Thus, taking into account the company's 42% stake, the implied equity value for Bharti Airtel shareholders works out to Rs26,486cr (around US \$6.3bn) or Rs140 per share. We have derived our DCF value for Indus Towers using a WACC of 11.2%, cost of equity of 15.6% and cost of debt of 8%. We have assumed a terminal growth rate of 5%. Thus, the total value of BITL for Bharti Airtel shareholders including its stake in Indus Towers works out to Rs181 per share, giving an upside of 20% over and above the core business value of Rs924 per share.

Exhibit 3: Discounted Cash Flow Model - Indus Towers
(Rs cr)

Y/E March	FY09E	FY10E	FY11E	FY12E	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E
EBIT	2,086	3,162	4,739	6,051	7,057	8,405	9,560	10,644	11,462	12,788
% growth		51.6	49.9	27.7	16.6	19.1	13.7	11.3	7.7	11.6
Add: Depreciation	1,371	1,706	1,849	2,162	2,417	2,341	2,505	2,654	2,787	2,349
EBITDA	3,458	4,868	6,588	8,213	9,474	10,746	12,066	13,298	14,248	15,137
Less: Tax Expense	77	571	793	1,057	1,361	1,852	2,292	2,742	3,139	3,750
Operating Cash Flows	3,381	4,298	5,795	7,157	8,114	8,894	9,774	10,555	11,109	11,386
Add/(Less): Chg in working capital	651	832	788	664	776	831	857	851	955	1,075
Pre-capex Free Cash Flows	4,031	5,129	6,583	7,821	8,890	9,725	10,631	11,407	12,064	12,461
Less: Capex	7,500	6,694	6,972	6,960	5,663	4,813	4,102	3,717	3,319	2,596
Free Cash Flows	(3,469)	(1,565)	(389)	861	3,227	4,912	6,529	7,690	8,745	9,865
% growth					274.7	52.2	32.9	17.8	13.7	12.8
Discounting Multiple	1	2	3	4	5	6	7	8	9	10
Present Value of FCF	(3,119)	(1,265)	(283)	563	1,898	2,598	3,105	3,289	3,364	3,413

(A) Present Value (PV) of FCF till FY2018E (Rs cr)	13,563
(B) Terminal Value Calculation	
WACC (%)	11.2
Terminal Growth Rate (%)	5.0
FCF in FY2018E (Rs cr)	9,865
Terminal Value (TV, Rs cr)	1,67,096
PV of TV (Rs cr)	57,804
(C) Enterprise Value (EV)	
Total EV ((A) + (B), Rs cr)	71,367
Less: Net Debt (Rs cr)	8,304
Total Equity Value (Rs cr)	63,063
Total Equity Value (US\$ mn)	15,015
Bharti Airtel share	
Equity Value @ 42% (Rs cr)	26,486
Equity Value @ 42% (US\$ mn)	6,306
Number of shares (Cr)	190
Value per Bharti Airtel share (Rs)	140

Source: Angel Research; Note: We have assumed a Rupee-Dollar rate of Rs42 per Dollar for conversion into US Dollars.

Exhibit 4: Sensitivity Analysis

WACC	Terminal Growth Rate				
	4.0%	4.5%	5.0%	5.5%	6.0%
10.0%	161	175	192	212	238
11.0%	126	136	147	160	175
11.2%	121	129	140	151	166
12.0%	101	108	115	124	134
13.0%	82	86	92	98	105

Source: Angel Research

'Three-pronged strategy'; Bharti, Vodafone, Idea to have over 500mn subs by FY2018E

We believe BITL's growth prospects will primarily be centred around the network expansion plans of the three major GSM players - Bharti Airtel, Vodafone-Essar and Idea Cellular

We believe BITL's growth prospects will primarily be centred around the network expansion plans of the three major GSM players - Bharti Airtel, Vodafone-Essar and Idea Cellular. We expect parent, Bharti Airtel, to be the primary growth driver for its business being the 'anchor tenant' and the country's number one wireless operator. The telco has been aggressively rolling out its networks resulting in substantially high growth in its wireless subscriber base. This crossed 72mn in July 2008 and the company added nearly 2.7mn new users that month, by far the highest-ever monthly net additions recorded by any Indian telco.

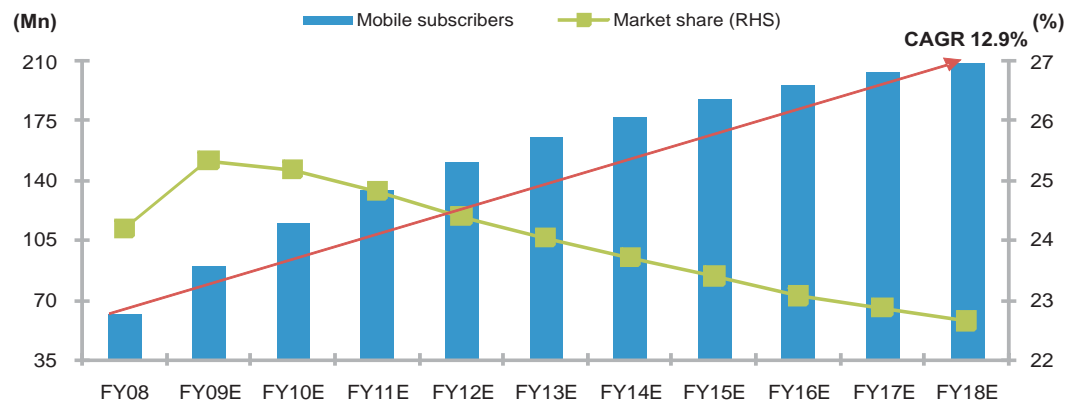
We estimate Bharti Airtel to have a total of 208.7mn mobile subscribers by FY2018E

We estimate Bharti Airtel to have a total of 208.7mn mobile subscribers by FY2018E, implying a CAGR growth of 12.9% over FY2008-18E (62.0mn subscribers in FY2008). As per our

We expect India to have a total of 921.7mn mobile subscribers by FY2018E

estimates, this will account for 22.6% of the all-India mobile subscriber base in FY2018E. We expect India to have a total of 921.7mn mobile subscribers by FY2018E, implying a CAGR growth of 13.7% over FY2008-18E (256.2mn subscribers in FY2008). This would translate into an approximate mobile teledensity of 73%, if we were to assume a 1.5% annual increase in population, which would lead to a total estimated population base of 1.27bn by that time-frame.

Exhibit 5: Bharti Airtel mobile subscriber base - 'Anchoring' growth for BITL

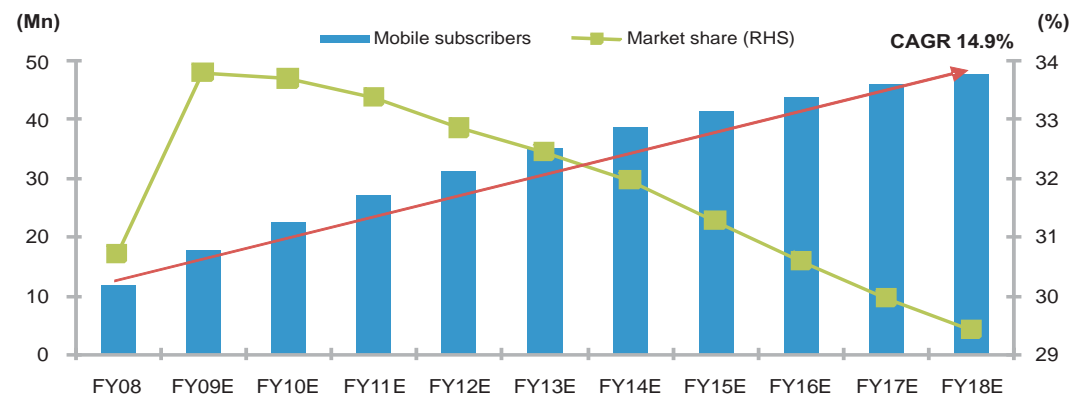


Source: COAI, AUSPI, Company, Angel Research

In the ex-Indus circles, we expect Bharti Airtel to record a subscriber base of 48.0mn by FY2018E

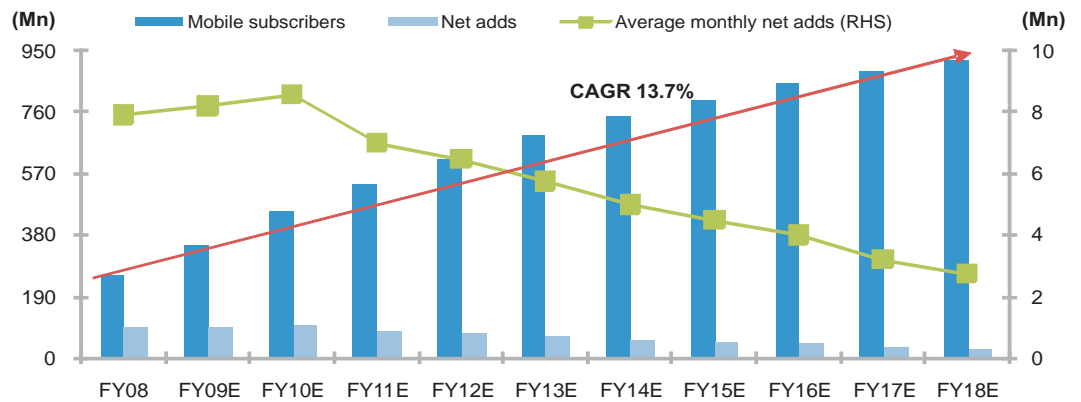
In the ex-Indus circles, that is, Madhya Pradesh and the 6 'C' category circles, we expect Bharti Airtel to record a subscriber base of 48.0mn by FY2018E, implying a market-share of 29.4%. This implies a CAGR growth of 14.9% for Bharti over FY2008-18E (12.0mn subscribers in FY2008). We estimate a total mobile subscriber base of 163.2mn in these 7 circles by FY2018E, implying a CAGR growth of 15.4% over FY2008-18E (39.1mn subscribers in FY2008). This implies a mobile teledensity of over 47% in these circles in FY2018E.

Exhibit 6: Bharti Airtel - Ex-Indus circles subscriber base, market-share



Source: COAI, AUSPI, Company, Angel Research

Exhibit 7: All-India mobile subscriber base - Onward to 1 billion!

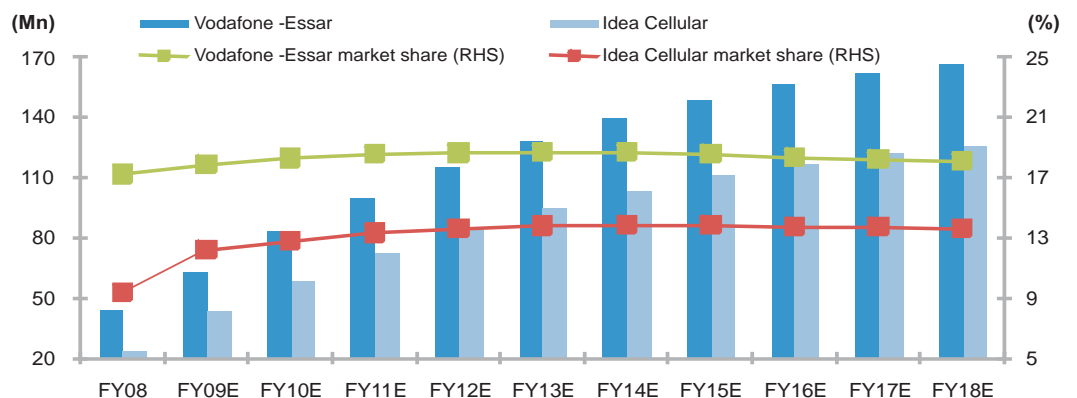


Source: COAI, AUSPI, Angel Research

We expect Vodafone-Essar and Idea Cellular to aggressively expand their networks

As regards Vodafone-Essar and Idea Cellular, we expect these telcos to aggressively expand their networks, both to get deeper coverage in their existing circles of operations as well as to gain quick coverage in newer circles, as and when they roll out operations. We expect these telcos to roll out operations primarily through Indus in its 15 circles of operations, while in the remaining circles, expect their network expansion process to be primarily driven through Bharti Infratel's towers, given the strong co-operation between these companies at the back-end and BITL's vast network presence and market leadership position in the ex-Indus circles.

Exhibit 8: Vodafone-Essar, Idea Cellular subscriber base - Supporting BITL's growth



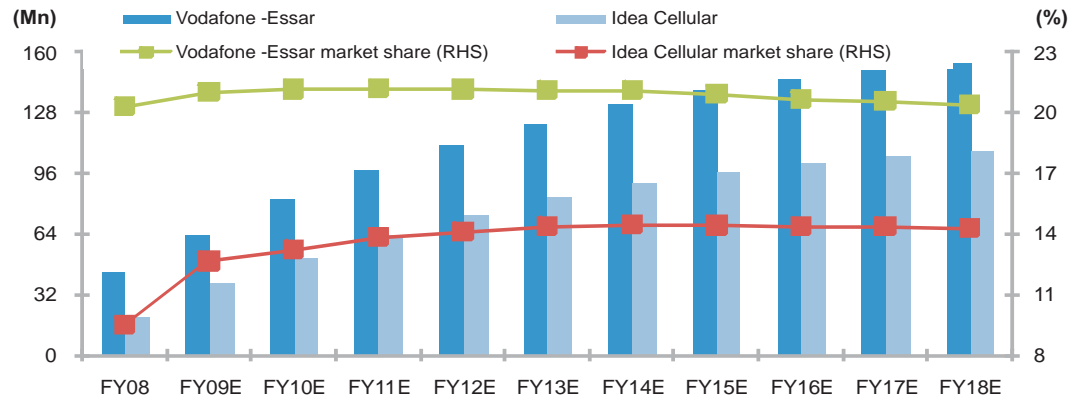
Source: Company, COAI, AUSPI, Angel Research

We expect Vodafone-Essar and Idea Cellular to have 166.8mn and 125.7mn mobile subscribers respectively, by FY2018E

We expect Vodafone-Essar and Idea Cellular to have 166.8mn and 125.7mn mobile subscribers respectively by FY2018E, implying market-shares of 18.1% and 13.6%, respectively. This implies CAGR growths of 14.2% and 18%, respectively over FY2008-18E. In the 15 circles of operations of Indus, we expect Vodafone-Essar and Idea Cellular to record subscriber bases of 154.6mn and 108.4mn respectively by FY2018E, implying market-shares of 20.4% and 14.3%, respectively. This implies CAGR growths of 13.4% and 18%, respectively over FY2008-18E. We estimate a total mobile subscriber base of 758.5mn in these 15 circles by FY2018E,

implying a CAGR growth of 13.3% over FY2008-18E (217.1mn subscribers in FY2008). This implies a mobile teledensity of over 82% in these circles in FY2018E.

Exhibit 9: Vodafone-Essar and Idea Cellular - Indus circles sub base, market-share

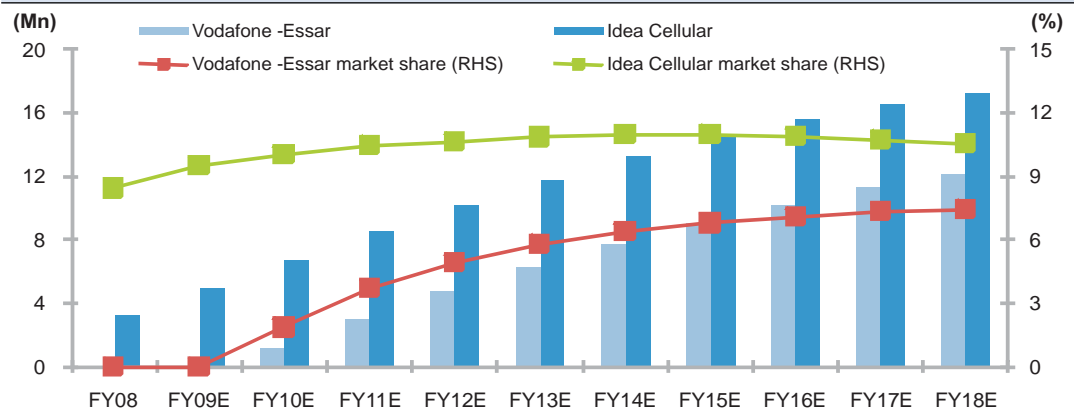


Source: Company, COAI, AUSPI, Angel Research

In the ex-Indus circles, we expect Vodafone-Essar and Idea Cellular to record subscriber base of 12.2mn and 17.2mn respectively, by FY2018E

In the ex-Indus circles, we expect Vodafone-Essar and Idea Cellular to record subscriber bases of 12.2mn and 17.2mn respectively by FY2018E, implying market-shares of 7.5% and 10.6%, respectively. This implies a CAGR growth of 32.8% for Vodafone-Essar over FY2010-18E (the telco is expected to start adding subscribers in these circles only from FY2010E). On the other hand, the CAGR growth for Idea Cellular stands at 18% over FY2008-18E in these circles.

Exhibit 10: Vodafone-Essar, Idea Cellular - Ex-Indus circles sub base, marketshare



Source: Company, COAI, AUSPI, Angel Research

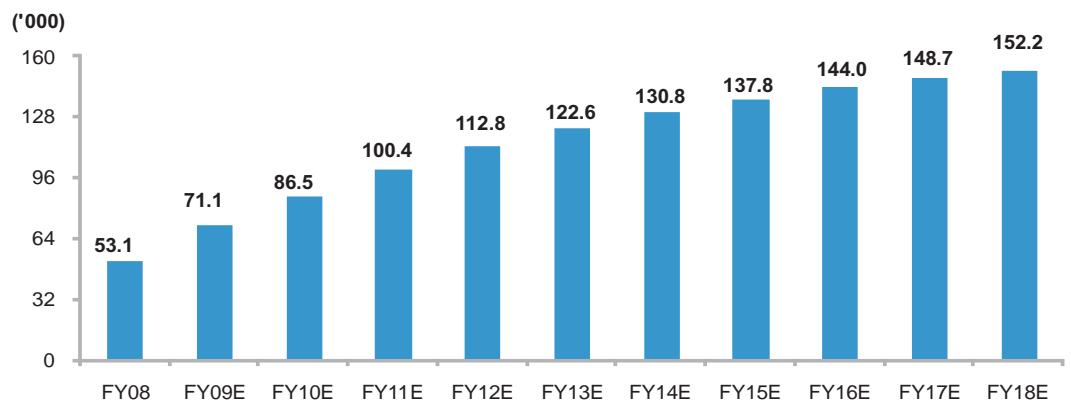
BITL to build over 1.5lakh (over 60,000 standalone) towers by FY2018E

We estimate BITL to build out a total of 1,52,243 towers by FY2018 (including Indus)

On a standalone basis, we expect BITL to roll out over 60,000 towers by FY2018E

To cater to the ever-increasing subscriber base of the parent company as well as Vodafone-Essar and Idea Cellular, and newer operators and across technologies like 2G, 3G and BWA, we estimate BITL to build out a total of 152,243 towers by FY2018 (including Indus). This implies a CAGR of 11% over FY2008-18E (53,083 towers in FY2008). BITL would have around 29% of the all-India tower base of 520,000 estimated by that time-frame including its Indus tower portfolio. These towers would be built based primarily on the 'three-pronged strategy' of leveraging on the network expansion plans of the three GSM cellular majors, namely Bharti Airtel, Vodafone-Essar and Idea Cellular, apart from catering to newer operators like Aircel (in circles where it will roll out greenfield operations), Loop Telecom, Swan Telecom and Datacom. On a standalone basis, we expect BITL to roll out over 60,000 towers by FY2018E, implying a CAGR of 10% over FY2008-18E (23,083 towers in FY2008).

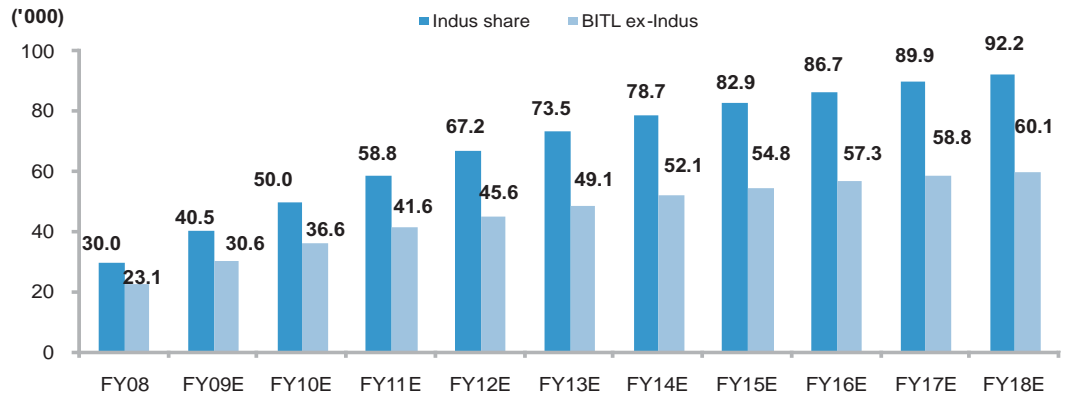
Exhibit 11: Vodafone-Essar, Idea Cellular - Ex-Indus circles sub base, marketshare



Source: Company, Angel Research

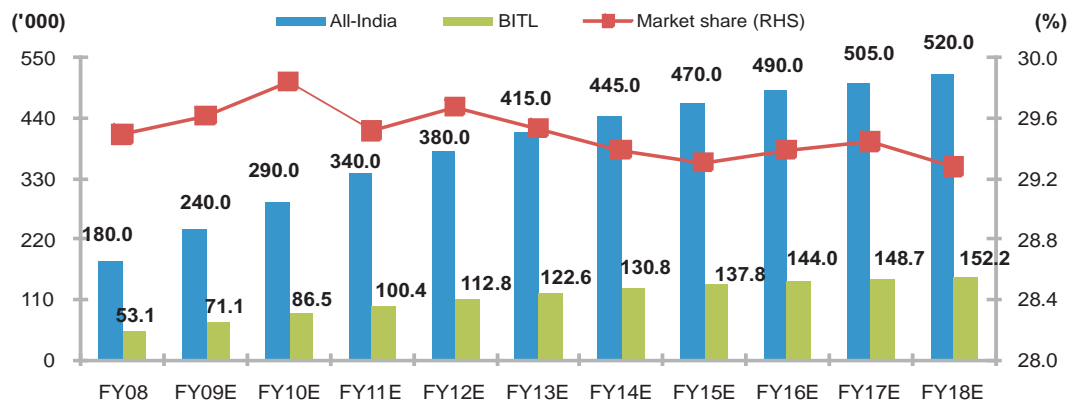
We expect most of the tower build out to come from the Indus circles, with the number of BITL towers in these circles expected to touch 92,160 by FY2018E, growing at a CAGR of 11.9% over FY2008-18E (30,000 towers in FY2008). On the other hand, we estimate the total number of towers in the ex-Indus circles to touch 60,083 by FY2018E, growing at a CAGR of 10% over FY2008-18E (23,083 towers in FY2008).

Exhibit 12: BITL tower portfolio break-up - Indus and ex-Indus



Source: Company, Angel Research

Exhibit 13: BITL (including Indus) v/s all-India tower portfolio, market-share till FY2018E

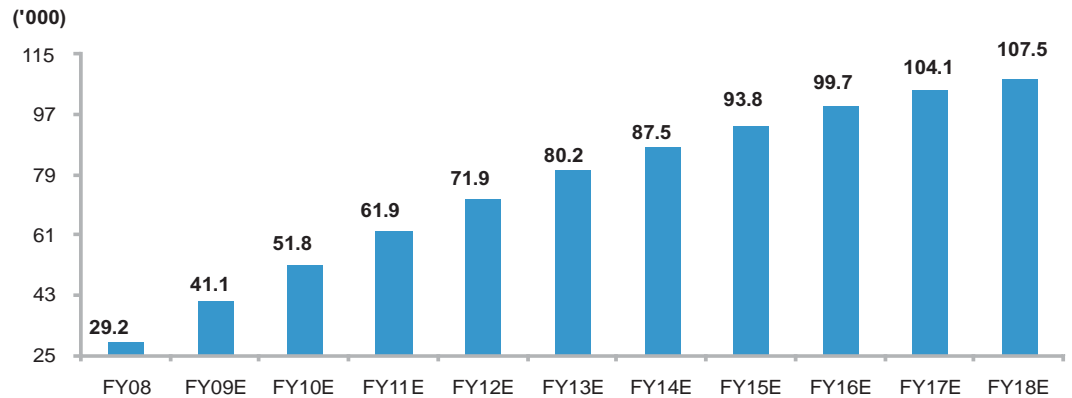


Source: Company, Angel Research

GBTs to drive tower growth

We estimate that the lion's share of BITL's tower build-out (including Indus) going ahead would be ground-based towers (GBT). Given that most of the incremental expansion for all telcos including Bharti Airtel, Vodafone-Essar and Idea Cellular would have to come from the semi-urban and rural areas of the country, which are relatively untapped vis-à-vis their urban counterparts, there would be a greater need for GBTs given that there are not too many high rises in these areas.

Exhibit 14: BITL (including Indus) GBT build-out till FY2018E



Source: Company, Angel Research

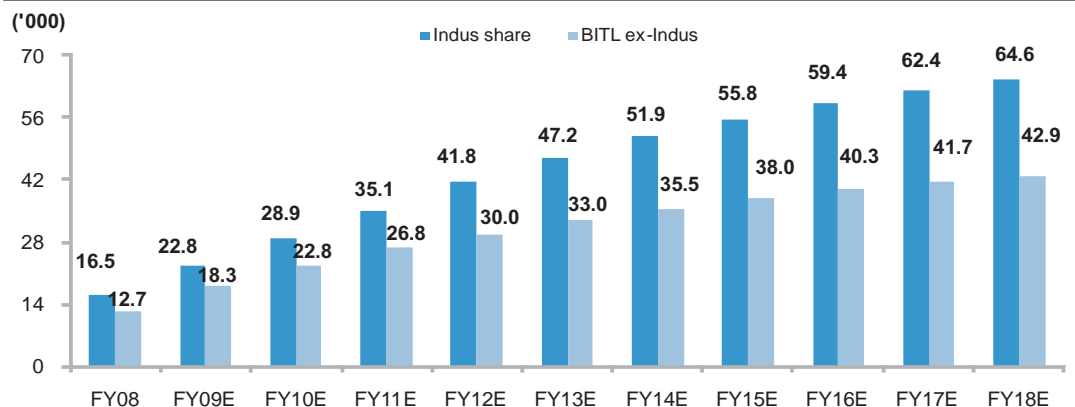
We estimate a total of 107,491 GBTs to be built by FY2018

We have estimated that around 79% of the incremental towers built by BITL over FY2008-18E will be GBTs. Further, given that GBTs typically have a greater degree of shareability given their greater height and potentially higher number of tenancy slots that can be loaded on to the towers, BITL will be focussing on these towers to drive tenancy ratios higher. We estimate a total of 107,491 GBTs to be built out by FY2018, implying a CAGR growth of 13.9% over FY2008-18E (29,196 GBTs in FY2008).

We estimate a 12.9% CAGR in BITL's ex-Indus GBT portfolio to hit 42,891 by FY2018E

We expect BITL's share in Indus GBTs to account for a majority of its total GBTs and estimate over 61% of the total incremental GBTs over FY2008-18E to be contributed through its tower share in Indus. These GBTs are expected to contribute 77.4% of the incremental tower base of BITL's Indus tower portfolio in this period. We estimate this tower portfolio to grow at a CAGR of 14.6% to hit 64,601 by FY2018E (16,500 in FY2008). We expect BITL's ex-Indus GBT portfolio (standalone) to contribute 81.6% of the incremental tower base of BITL's ex-Indus tower portfolio over FY2008-18E. We estimate a 12.9% CAGR growth in this tower portfolio to hit 42,891 by FY2018E (12,696 in FY2008).

Exhibit 15: BITL Indus, ex-Indus GBT build-out till FY2018E



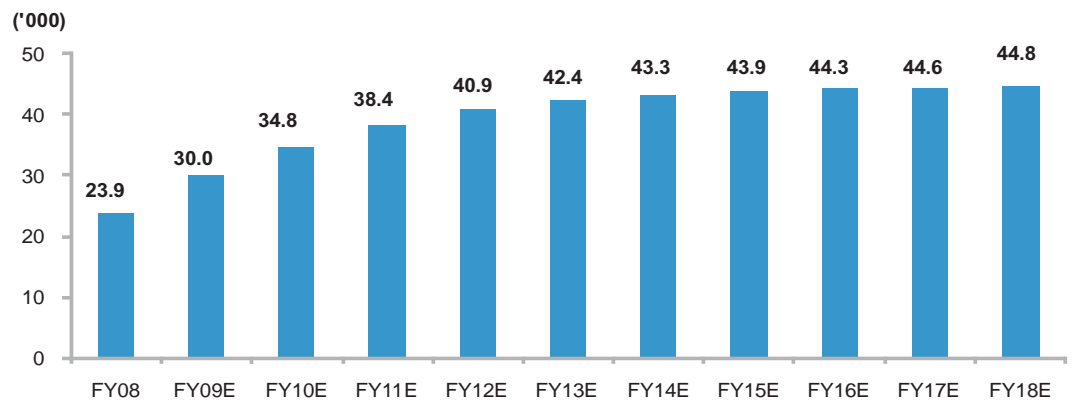
Source: Company, Angel Research

We estimate BITL to build out a total of 44,752 RTTs by end-FY2018E

RTTs to account for 21% of incremental tower additions over FY2008-18E

While we expect GBTs to account for the lion's share of tower additions going forward, we estimate BITL to build out a total of 44,752 roof-top towers (RTTs) by end-FY2018E, implying a CAGR of 6.5% over FY2008-18E (23,887 RTTs in FY2008). RTTs have a lower degree of shareability v/s GBTs given their lower heights. We do not expect the total number of tenancy slots on an average RTT for BITL to exceed three and estimate RTTs to account for around 21% of the incremental towers built by the company over FY2008-18E.

Exhibit 16: BITL (including Indus) RTT build-out till FY2018E

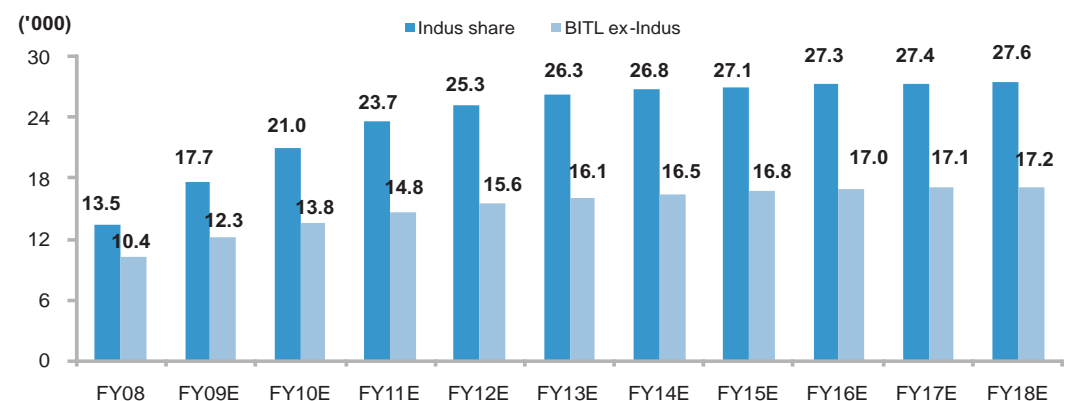


Source: Company, Angel Research

We estimate a CAGR of 5.2% in BITL's ex-Indus RTT portfolio to hit 17,192 by FY2018E

We expect BITL's share in Indus RTTs to account for a majority of its total RTTs and estimate over 67% of the total incremental RTTs over FY2008-18E to be contributed through its tower share in Indus. These RTTs are expected to contribute 22.6% of the incremental tower base of BITL's Indus tower portfolio in this period. We estimate a 7.4% CAGR growth in this tower portfolio, which is expected to touch 27,560 by FY2018E (13,500 in FY2008). On the other hand, we expect BITL's ex-Indus RTT portfolio (standalone) to contribute 18.4% of the incremental tower base of BITL's ex-Indus tower portfolio over FY2008-18E. We estimate a CAGR growth of 5.2% in this tower portfolio to hit 17,192 by FY2018E (10,387 in FY2008).

Exhibit 17: BITL Indus, ex-Indus RTT build-out till FY2018E



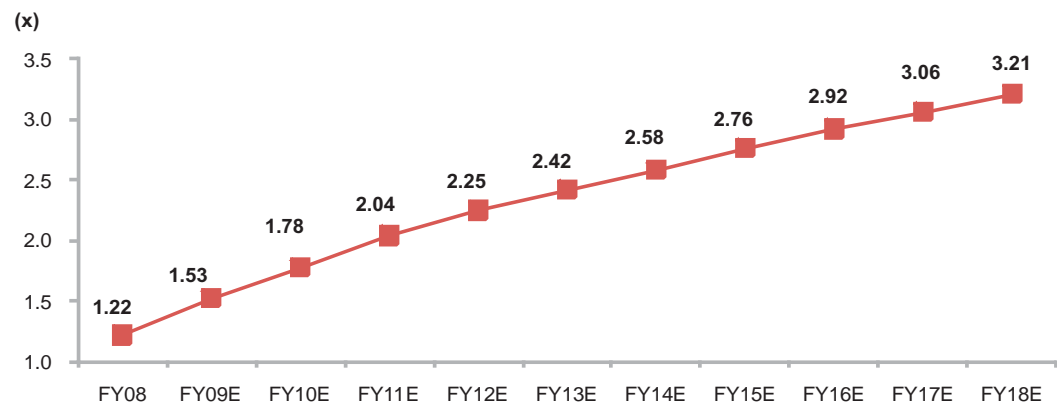
Source: Company, Angel Research

Tenancy ratios - To rise strongly on increased sharing

We expect increasing tenancy ratios to be the key growth driver for BITL and estimate the overall tenancy ratio to rise from 1.22x in FY2008 to 3.21x in FY2018E

In the Telecom Infrastructure Leasing Business, Revenue growth for any company is driven primarily by an increase in tenancy ratios. This is the key factor that renders the business model viable. We expect increasing tenancy ratios to be the key growth driver for BITL and estimate the overall tenancy ratio to rise from 1.22x in FY2008 to 3.21x in FY2018E (including Indus), led by increased occupancy levels especially in the company's GBTs. Aggressive network roll outs by Bharti Airtel, Vodafone-Essar and Idea Cellular are expected to be the key growth drivers for BITL, as also sharing with newer operators needing to quicken their time-to-market post the receipt of start-up spectrum in some circles.

Exhibit 18: BITL occupancy levels (including Indus) - Driven by multi-operator expansion

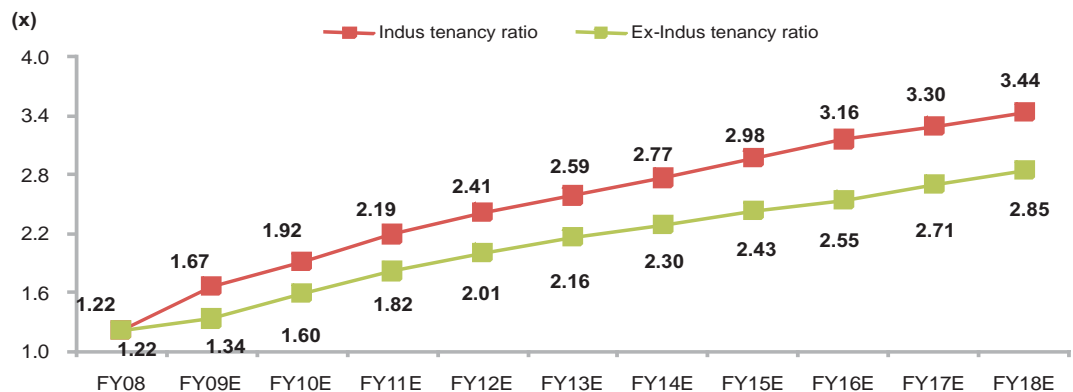


Source: Company, Angel Research

The ex-Indus tower portfolio is expected to see its tenancy ratios rise from 1.22x in FY2008 to 2.85x in FY2018E

We estimate BITL's Indus tower portfolio to witness higher tenancy ratios on account of the presence of three 'anchor tenants' (Bharti Airtel, Vodafone-Essar and Idea Cellular). We expect this tower portfolio to record a strong increase in tenancy ratios from 1.22x in FY2008 to 3.44x in FY2018E. On the other hand, the ex-Indus tower portfolio (standalone) is expected to see its tenancy ratios rise from 1.22x in FY2008 to 2.85x in FY2018E.

Exhibit 19: BITL Indus, ex-Indus occupancy levels



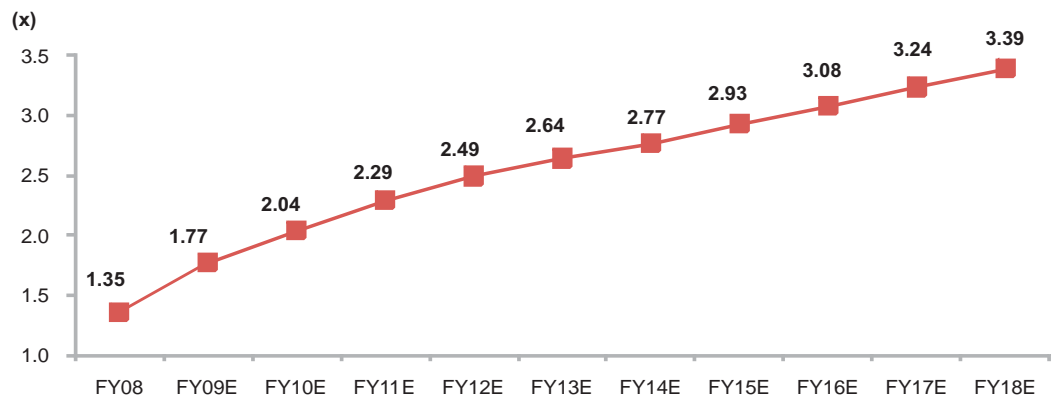
Source: Company, Angel Research

GBT tenancy ratio to rise to 3.39x in FY2018E

We expect the total tenancy ratio on BITL's GBTs (including Indus) to rise from 1.35x in FY2008 to 3.39x by FY2018E.

Given the greater sharing potential of GBTs vis-à-vis RTTs, apart from the fact that most of the incremental expansion is likely to come from rural areas, we expect BITL to build out a greater number of these towers going ahead. We expect the total tenancy ratio on BITL's GBTs (including Indus) to rise from 1.35x in FY2008 to 3.39x by FY2018E.

Exhibit 20: BITL GBT tenancy ratios (including Indus) till FY2018E

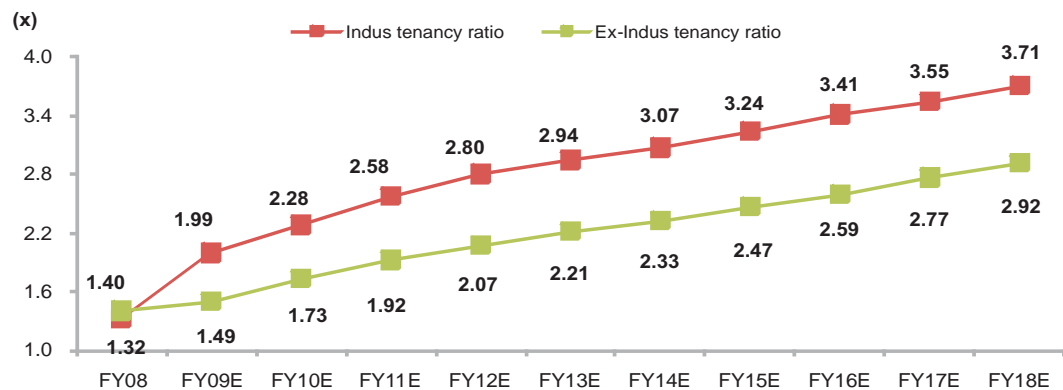


Source: Company, Angel Research

The ex-Indus GBT portfolio is expected to see its tenancy ratio rise from 1.40x in FY2008 to 2.92x in FY2018E

We expect BITL's Indus Towers GBT portfolio to witness higher tenancy ratios on account of the presence of three 'anchor tenants' (Bharti Airtel, Vodafone-Essar and Idea Cellular). We expect this tower portfolio to increase tenancy ratios from 1.32x in FY2008 to 3.71x in FY2018E. The ex-Indus GBT portfolio (standalone), on the other hand, is expected to see its tenancy ratio rise from 1.40x in FY2008 to 2.92x in FY2018E.

Exhibit 21: BITL Indus, ex-Indus GBT tenancy ratios till FY2018E



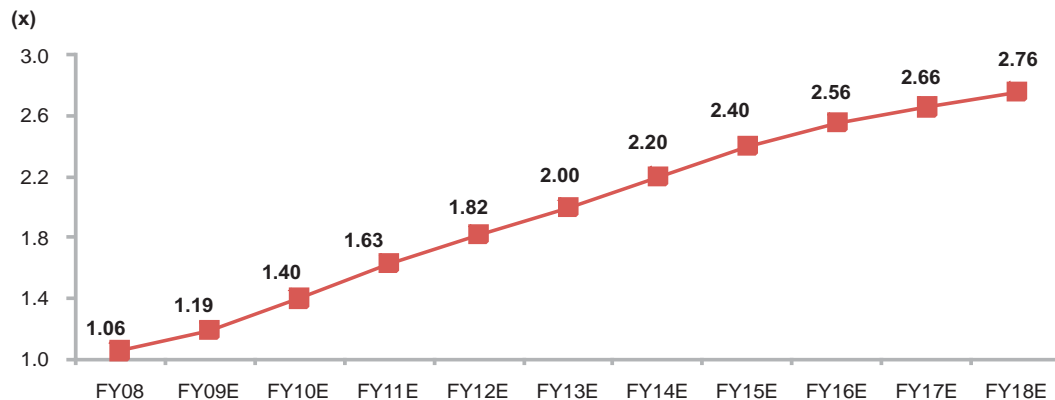
Source: Company, Angel Research

RTT tenancy ratio to touch 2.76x in FY2018E

We estimate the tenancy ratio for BITL's RTTs (including Indus) to rise from just 1x in FY2008 to 2.76x in FY2018E

We estimate the total tenancy ratio for BITL's RTTs (including Indus) to rise from just 1x in FY2008 to 2.76x in FY2018E. Given the more limited sharing potential of RTTs as compared with GBTs, we do not expect this to cross 3x even beyond FY2018E.

Exhibit 22: BITL RTT tenancy ratios (including Indus) till FY2018E

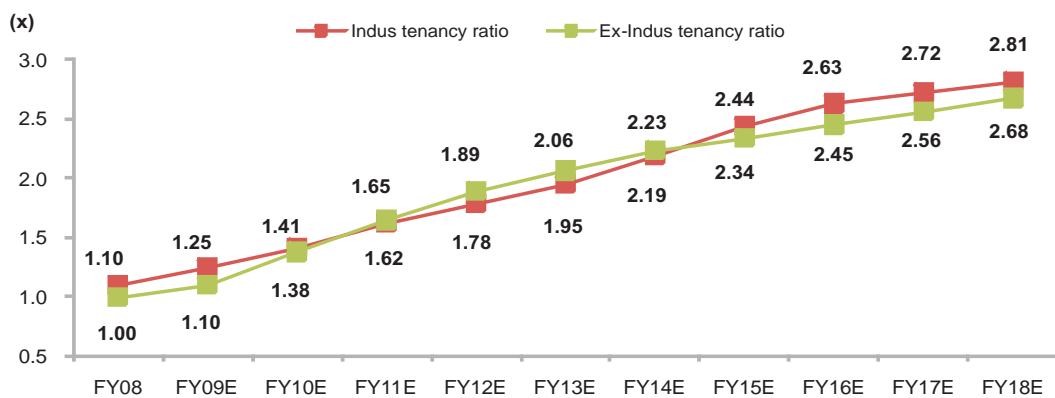


Source: Company, Angel Research

The ex-Indus RTT portfolio is expected to see its tenancy ratios rise from 1x in FY2008 to 2.68x in FY2018E

We expect BITL's Indus Towers RTT portfolio to record slightly higher tenancy ratios and estimate this tower portfolio to increase tenancy ratios from 1.10x in FY2008 to 2.81x in FY2018E. The ex-Indus RTT portfolio (standalone) is expected to see its tenancy ratios rise from 1x in FY2008 to 2.68x in FY2018E.

Exhibit 23: BITL Indus, ex-Indus RTT tenancy ratios till FY2018E



Source: Company, Angel Research

Revenue growth to be driven by higher tenancy ratios

We expect BITL (standalone) to grow its Revenues at a CAGR of 14.5% over FY2009-18E

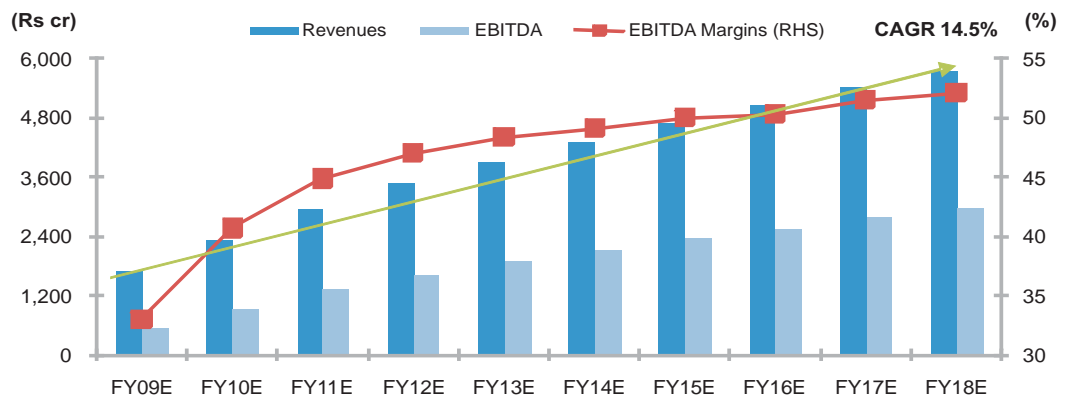
We expect BITL (standalone) to grow its Revenues at a CAGR of 14.5% over the period FY2009-18E to hit Rs5,743cr (Rs1,692cr in FY2009E). This will be led by ever-increasing tenancy ratios, with Bharti Airtel serving as the 'anchor client' and aggressive roll out plans of fellow GSM operators, Vodafone-Essar and Idea Cellular in their respective newer circles, apart

We have assumed rentals per tenancy slot per month at around Rs39,608 for GBTs and at Rs24,250 for RTTs in FY2009

from strong demand for tenancy leasing slots from newer operators.

In terms of pricing, assuming a capex recovery of 12-15%, we have assumed rentals per tenancy slot per month at around Rs39,608 for GBTs in FY2009. For RTTs, the figure stands at Rs24,250. We have factored in a 2.6% CAGR fall in lease rentals over FY2009-18E for both GBTs and RTTs, as increasing tenancy ratios lead to scale benefits. Apart from this, we expect competitive pressures to also cap any chances of an increase in rentals going forward.

Exhibit 24: BITL (standalone) Revenues, EBITDA, EBITDA Margins - Robust growth

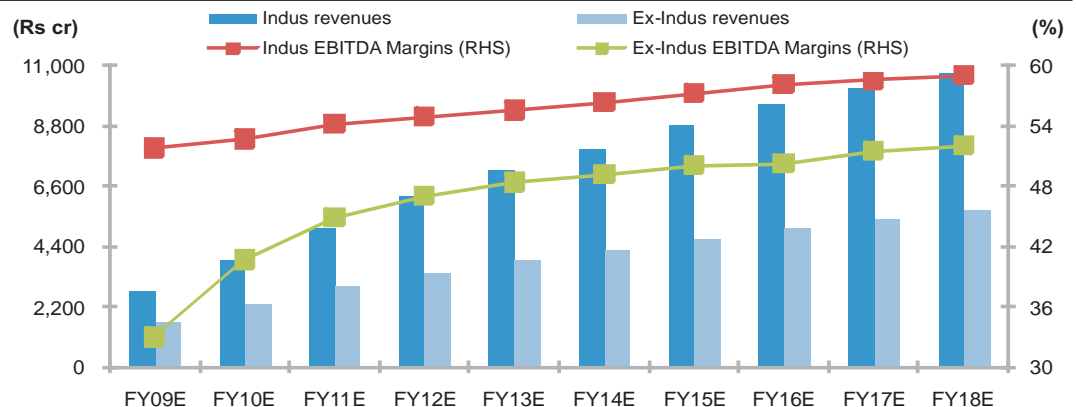


Source: Company, Angel Research

We estimate EBITDA Margins to cross 50% by FY2015E

In terms of the cost structure, key cost items for a towerco are Lease Rentals, which are paid out to the land owner, Power and Fuel Costs and Employee and Annual Maintenance Costs. Power and Fuel costs are variable in nature and are passed on to the tenant. Going ahead, we expect an escalation in Lease Rentals and Power and Fuel costs on account of the increasing costs of these items. However, increasing tenancy ratios are likely to result in strong operating leverage and scale benefits, as the cost of adding new tenants to a towerco's tower is minimal. This is likely to enable BITL to manage any escalation leading to robust EBITDA Margins. We estimate EBITDA Margins to cross 50% by FY2015E.

Exhibit 25: BITL Revenues, EBITDA Margins - Indus, ex-Indus (indicative)



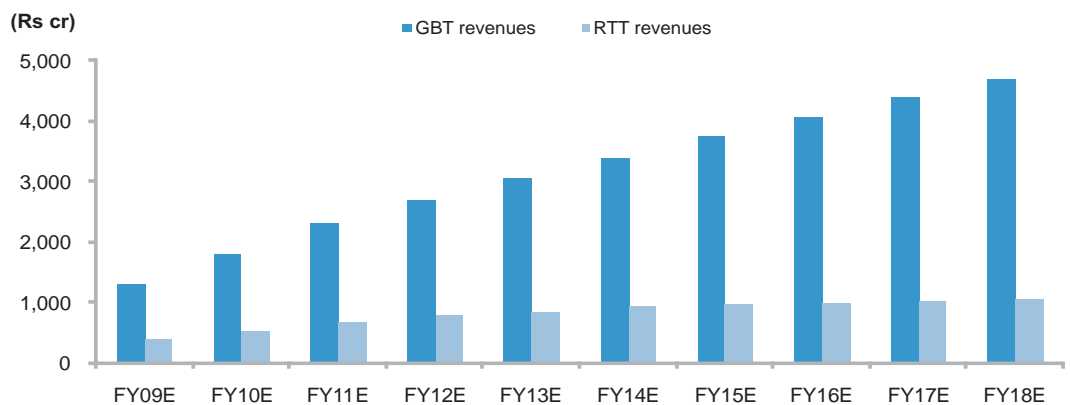
Source: Company, Angel Research

We estimate BITL's GBT Revenues to touch Rs4,687cr, while RTT Revenues are expected to touch Rs1,055cr by that time-frame

GBT Revenues to drive overall Revenue growth

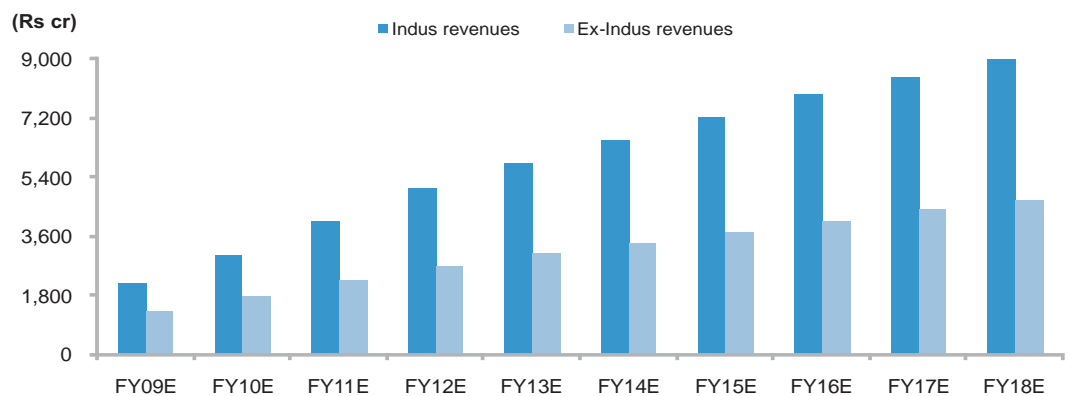
We estimate BITL's GBT Revenues to clock a 15.3% CAGR growth in Revenues over the period FY2009-18E to hit Rs4,687cr (Rs1,300cr in FY2009E). This is expected to be the main growth driver for Revenues over this period. Overall, GBT Revenues are expected to account for around 84% of total incremental Revenues over FY2009-18E. We estimate BITL's RTT Revenues to clock an 11.6% CAGR growth in Revenues over FY2009-18E to hit Rs1,055cr (Rs393cr in FY2009E), thus accounting for around 16% of total incremental Revenues over FY2009-18E.

Exhibit 26: BITL (standalone) - GBT, RTT Revenues



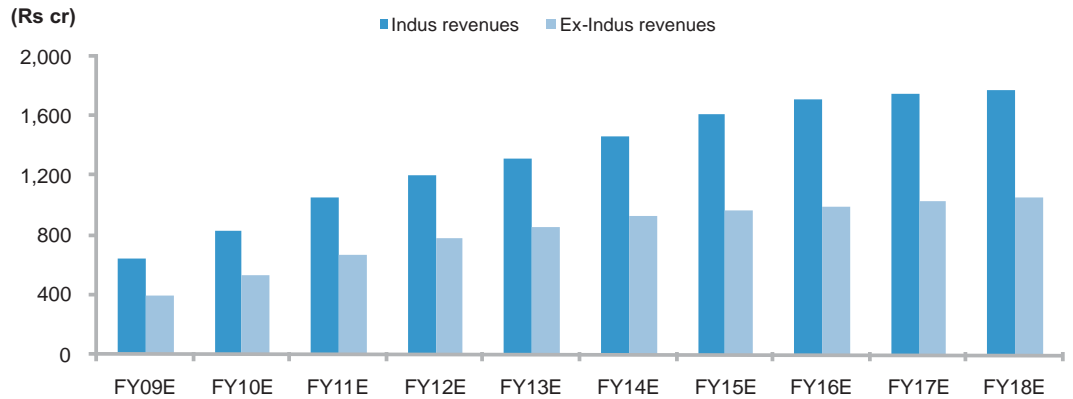
Source: Company, Angel Research

Exhibit 27: BITL GBT Revenues - Indus, ex-Indus (indicative)



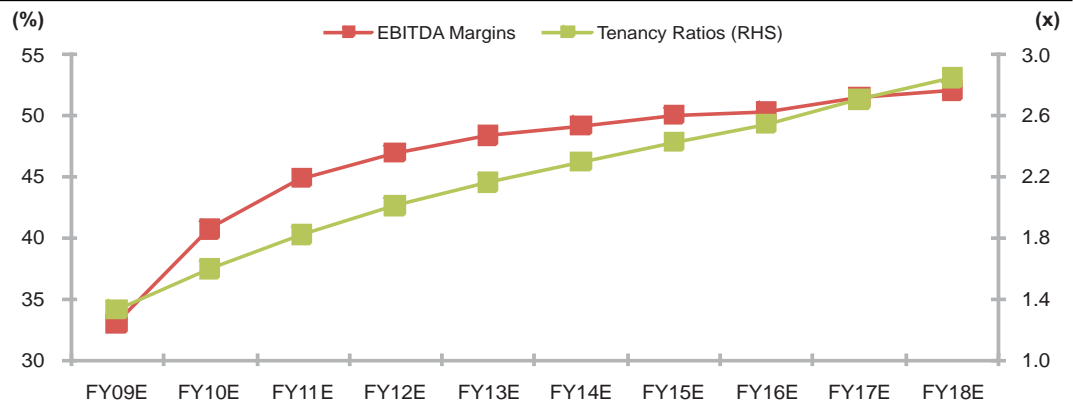
Source: Company, Angel Research

Exhibit 28: BITL RTT Revenues - Indus, ex-Indus (indicative)



Source: Company, Angel Research

Exhibit 29: EBITDA Margins, Tenancy Ratios (standalone) - Strong correlation



Source: Company, Angel Research

To invest over Rs35,000cr over the next 10 years

We expect BITL to spend Rs35,171cr towards capex until FY2018E (including Indus)

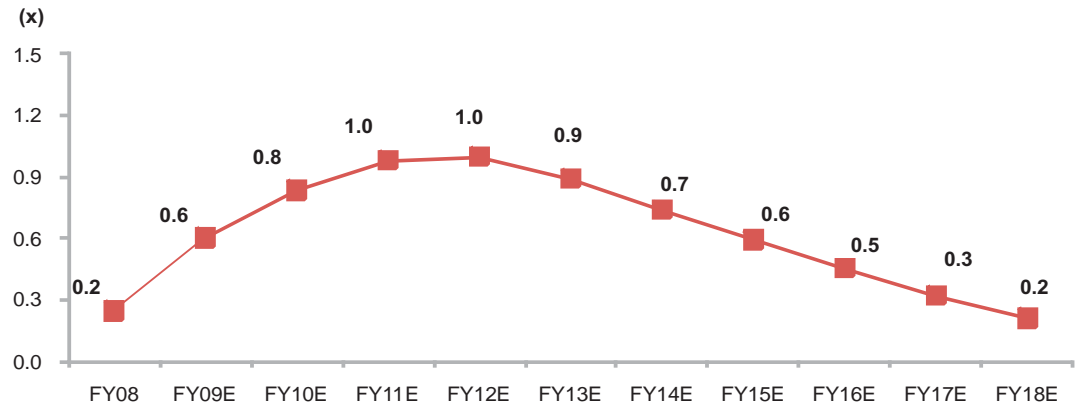
We expect BITL's ambitious growth plans over the next few years to be driven mainly by its parent, Bharti Airtel's network expansion plans, and its partners in Indus, namely Vodafone-Essar and Idea Cellular. We expect BITL to spend Rs35,171cr towards capex until FY2018E (including Indus) to expand the network of Bharti as well as Vodafone and Idea into the interiors of the country and cover nearly the entire Indian population. On a standalone basis, we expect BITL to invest Rs13,190cr towards network expansion. For this purpose, we expect the company to leverage on its Balance Sheet given that the Telecom Infrastructure Leasing Business tends to be highly leveraged and companies can raise high levels of debt, which also reduces the overall cost of capital.

On a standalone basis, we expect BITL to invest Rs13,190cr towards network expansion

On a standalone basis, we estimate a peak debt-equity ratio of 1.0x in FY2012E

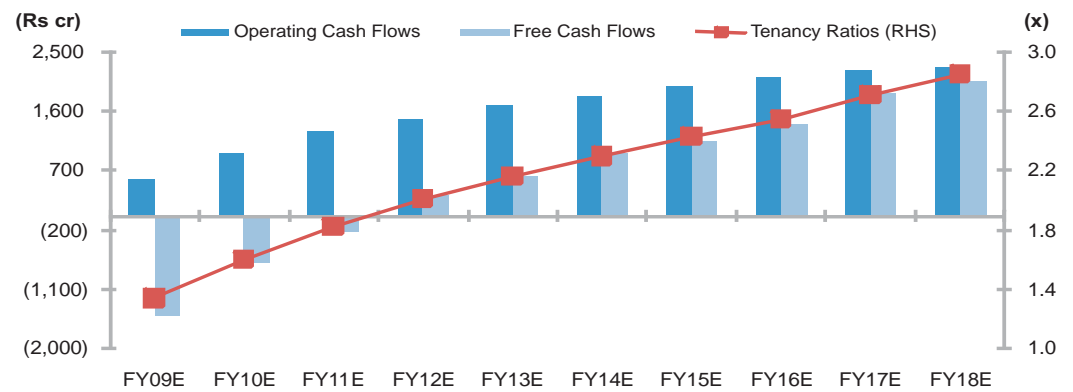
On a standalone basis, we estimate a peak debt-equity ratio of 1.0x in FY2012E excluding share of associate profits (Indus) in Shareholders' Equity (0.9x including Indus profits). With higher tenancy ratios going forward, its cash flows are expected to rise substantially. Post-FY2012, we estimate the company's debt-equity ratio to fall steadily.

Exhibit 30: BITL (Standalone) Debt-Equity ratio - Peaking in FY2012E



Source: Company, Angel Research

Exhibit 31: BITL (standalone) Cash flows, Tenancy ratios - Direct correlation



Source: Company, Angel Research

Exhibit 32: Profit and Loss Account										(Rs cr)
Y/E March	FY09E	FY10E	FY11E	FY12E	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E
Sales	1,692	2,354	2,964	3,479	3,927	4,319	4,724	5,067	5,437	5,743
% chg		39.1	25.9	17.3	12.9	10.0	9.4	7.3	7.3	5.6
Cost structure										
Lease Rentals	397	489	573	646	710	768	825	880	921	960
% chg		23.2	17.1	12.9	9.8	8.2	7.4	6.7	4.7	4.2
% of sales	23.5	20.8	19.3	18.6	18.1	17.8	17.5	17.4	16.9	16.7
Power and Fuel Costs	456	564	664	753	831	904	976	1,046	1,100	1,151
% chg		23.8	17.6	13.5	10.4	8.8	7.9	7.2	5.2	4.7
% of sales	26.9	24.0	22.4	21.7	21.2	20.9	20.7	20.6	20.2	20.0
Employee, AMC and Other Costs	281	343	397	444	485	523	559	593	617	640
% chg		22.0	15.9	11.8	9.3	7.7	6.9	6.1	4.2	3.7
% of sales	16.6	14.5	13.4	12.8	12.4	12.1	11.8	11.7	11.4	11.1
Total Operating Costs	1,133	1,396	1,634	1,844	2,027	2,195	2,360	2,519	2,639	2,751
% chg		23.2	17.0	12.9	9.9	8.3	7.5	6.7	4.8	4.3
% of sales	67.0	59.3	55.1	53.0	51.6	50.8	49.9	49.7	48.5	47.9
EBITDA	559	958	1,331	1,635	1,900	2,124	2,365	2,549	2,798	2,992
% chg		71.5	38.9	22.8	16.2	11.8	11.3	7.8	9.8	6.9
EBITDA margin (%)	33.0	40.7	44.9	47.0	48.4	49.2	50.1	50.3	51.5	52.1
Depreciation	443	537	562	624	684	653	698	739	622	542
% chg		21.2	4.6	11.2	9.5	(4.5)	6.8	5.9	(15.8)	(12.8)
% of sales	26.2	22.8	18.9	17.9	17.4	15.1	14.8	14.6	11.4	9.4
EBIT	115	422	769	1,011	1,217	1,471	1,667	1,810	2,177	2,450
% chg		265.0	82.5	31.4	20.4	20.9	13.3	8.6	20.3	12.5
EBIT margin (%)	6.8	17.9	26.0	29.1	31.0	34.1	35.3	35.7	40.0	42.7
Interest Costs	260	380	476	562	596	581	571	539	465	372
% chg		45.9	25.4	18.1	5.9	(2.5)	(1.7)	(5.6)	(13.6)	(20.0)
% of sales	15.4	16.1	16.1	16.2	15.2	13.4	12.1	10.6	8.6	6.5
Profit Before Tax	(145)	42	293	448	621	890	1,097	1,271	1,712	2,077
% chg		(128.8)	602.6	53.0	38.6	43.4	23.2	15.9	34.6	21.4
PBT margin (%)	(8.6)	1.8	9.9	12.9	15.8	20.6	23.2	25.1	31.5	36.2
Tax	0	5	36	152	211	303	373	432	582	706
% chg			652.4	328.5	38.6	43.4	23.2	15.9	34.6	21.4
% of PBT	0.0	11.3	12.1	34.0	34.0	34.0	34.0	34.0	34.0	34.0
Share of Profit/loss in associates (Indus)	253	273	647	862	1,110	1,511	1,869	2,237	2,560	3,059
Profit After Tax	108	309	904	1,158	1,520	2,098	2,593	3,076	3,690	4,430
% chg		186.3	192.1	28.1	31.3	38.1	23.6	18.6	20.0	20.0
PAT margin (%)	6.4	13.1	30.5	33.3	38.7	48.6	54.9	60.7	67.9	77.1

Source: Company, Angel Research

Exhibit 33: Balance Sheet										(Rs cr)
Y/E March	FY09E	FY10E	FY11E	FY12E	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E
SOURCES OF FUNDS										
Net Worth/Equity	5,325	5,634	6,538	7,696	9,216	11,314	13,907	16,983	20,673	25,104
Loan Funds	3,062	4,468	5,773	6,817	7,218	7,257	7,133	6,733	5,815	4,652
Total Liabilities	8,387	10,103	12,312	14,513	16,434	18,571	21,040	23,717	26,488	29,755
APPLICATION OF FUNDS										
Gross Fixed Assets	8,865	10,740	12,480	13,872	15,193	16,325	17,442	18,464	19,123	19,711
Depreciation	769	1,306	1,868	2,492	3,176	3,829	4,526	5,265	5,887	6,429
Net Fixed Assets	8,095	9,433	10,612	11,380	12,017	12,497	12,915	13,199	13,237	13,283
Capital work-in-progress	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Current Assets	745	1,448	2,790	4,530	6,119	8,103	10,483	13,237	16,344	19,968
Less: Current Liabilities	1,454	1,779	2,090	2,396	2,703	3,028	3,358	3,719	4,093	4,496
Net Current Assets	(709)	(331)	700	2,134	3,417	5,075	7,124	9,518	12,252	15,473
Total Assets	8,387	10,103	12,312	14,513	16,434	18,571	21,040	23,717	26,488	29,755

Source: Company, Angel Research

Indus Towers - A 'Towering' Partnership

India's largest tower company

Indus Towers is India's largest tower company, with an estimated tower portfolio of over 70,000 towers at the end of FY2008

Indus Towers is India's largest tower company, with an estimated tower portfolio of over 70,000 towers at the end of FY2008. The company is a partnership between three of India's major GSM-based cellular operators - Bharti Airtel (through Bharti Infratel), Vodafone-Essar and Idea Cellular - and an announcement to this effect was made in December 2007. Indus Towers will offer passive infrastructure services on a non-discriminatory basis to all telecom operators in the country. The company has been formed by merging the passive infrastructure assets of the three GSM majors in 15 of the 22 telecom circles in India, namely Mumbai, Delhi, Kolkata, Tamil Nadu (including Chennai), Maharashtra, Andhra Pradesh, Karnataka, Gujarat, Haryana, Kerala, Punjab, UP (East), UP (West), Rajasthan, and West Bengal and A&N. This move to create a telecom tower behemoth signifies increasing co-operation between these three companies at the 'back-end', even as they continue to compete for subscribers at the 'front-end'. Indus accounted for nearly 40% of the total estimated tower base in India at the end of FY2008.

Bharti Airtel (through Bharti Infratel) owns 42%, Vodafone-Essar 42% and Idea Cellular, the balance 16%

In terms of the share of the three companies in Indus, Bharti Airtel (through Bharti Infratel) owns 42%, Vodafone-Essar 42% and Idea Cellular, the balance 16%. Bharti Infratel will transfer around 30,000 towers to Indus. The company will operate the remaining 23,000-odd towers in its portfolio in the 7 ex-Indus circles independently. Vodafone-Essar has also transferred 30,000 towers to Indus (its entire passive infrastructure, as it has operations in all the 15 circles of operations of Indus and none in the ex-Indus circles), while Idea Cellular has transferred around 10,000 towers in 9 circles of operations of the towerco in which the telco operates (its Madhya Pradesh and Himachal Pradesh tower portfolio excluded).

Key Equity Placements

The towerco has been involved in a few major equity placements in recent times

The towerco has been involved in a few major equity placements in recent times. The first deal involved Bharti Infratel selling an 8-10% stake to global investors for a consideration of US \$1bn in December 2007. The second deal was a US \$250mn placement with Private Equity (PE) firm Kohlberg Kravis Roberts & Co for a 2-2.5% stake in Infratel. These transactions also involved the buyers getting a proportionate stake in Indus Towers, given that Bharti Infratel holds 42% stake in the towerco. Thus, through Bharti Infratel, around 4.2-5.25% stake has been sold to global investors in Indus Towers.

Through the Infratel and ABTL deals, a total of 7.4-8.45% stake has been sold in Indus for a total consideration of over US \$1.1bn

More recently in May 2008, Idea Cellular, a 16% stakeholder in Indus, sold a 20% stake in Aditya Birla Telecom (ABTL) to Providence Equity Partners for a consideration of US \$640mn. ABTL holds the universal access service (UAS) licence for the Bihar circle and held a 16% stake in Indus Towers prior to the deal. Thus, Idea holds its stake in Indus through ABTL. The company has paid Rs10cr as the licence fee for the Bihar circle. However, the majority value of ABTL is on account of its stake in Indus. The transaction values ABTL at US \$3.2bn and Indus at US \$20bn. Through this deal, Idea has indirectly sold around 3.2% stake in Indus Towers. Thus, through the Infratel and ABTL deals, a total of around 7.4-8.45% stake has been sold in

Indus for a total consideration of over US \$1.1bn, reflecting the confidence that global investors have in the Indian Telecom Infrastructure story.

Favourable Sector Developments

Recent industry developments, such as the entry of newer players in the sector and more importantly, the awarding of spectrum to some of these players in a few circles, as well as the announcement of the much-awaited 3G and Broadband Wireless Access (BWA) Policy, suggest an increasingly favourable environment for infrastructure sharing, leading to a potential increase in valuations over and above the discovered figures in the above-mentioned transactions. Thus, these developments are favourable for companies like Indus and other telecom infrastructure majors as well. We believe Indus is in a strong position to tap this demand, given its vast tower portfolio and expansion plans leveraged on the three GSM majors, apart from improving shareability, with an estimated 3.10 tenancy slots per tower by FY2011, translating into a total of over 4.3lakh tenancy slots available for leasing (nearly 1.4lakh towers estimated).

Financials

Our Revenue CAGR stands at a healthy 34.8% over FY2009-11E, while our EBITDA CAGR stands at a strong 38%, with Margin expansion of 249bp (2.49%) expected over the period

In terms of financials, we forecast Revenues of Rs9,239cr in FY2010 and Rs12,142cr in FY2011 (vis-à-vis Rs6,680cr in FY2009) for Indus, while we expect the company to record an EBITDA of Rs4,868cr in FY2010 and Rs6,588cr in FY2011 (vis-à-vis Rs3,458cr in FY2009), implying EBITDA Margins of 52.7% and 54.3% in FY2010 and FY2011, respectively (vis-à-vis 51.8% Margins in FY2009). Thus, our Revenue CAGR stands at a healthy 34.8% over FY2009-11E, while our EBITDA CAGR stands at a strong 38%, with Margin expansion of 249bp (2.49%) expected over the period. This is on the back of significant roll-out demand from Bharti Airtel, Vodafone-Essar and Idea Cellular, as well as from newer operators, leading to an increase in the tenancy ratio from 1.22x in FY2008 to 2.19x in FY2011, even as the number of towers are estimated to rise at a CAGR of over 25% over FY2008-11E to hit nearly 1.4lakh.

Valuation

Our DCF analysis values Indus Towers at Rs63,063cr (~ US \$15bn). We have derived our DCF value using a weighted average cost of capital (WACC) of 11.2%, with the cost of equity taken as 15.6%, while cost of debt is taken as 8%. We have assumed a terminal growth rate of 5%. **Thus, the implied value of Indus Towers for Bharti Airtel shareholders works out to Rs140 per share, giving an upside of 15% over and above the core business value of Rs924 per share. For Idea Cellular shareholders, the value works out to Rs31 per share, giving an upside of 42% over and above the core business value of Rs73 per share.**

Exhibit 1: Discounted Cash Flow Model										(Rs cr)
Y/ E March	FY09E	FY10E	FY11E	FY12E	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E
EBIT	2,086	3,162	4,739	6,051	7,057	8,405	9,560	10,644	11,462	12,788
% growth		51.6	49.9	27.7	16.6	19.1	13.7	11.3	7.7	11.6
Add: Depreciation	1,371	1,706	1,849	2,162	2,417	2,341	2,505	2,654	2,787	2,349
EBITDA	3,458	4,868	6,588	8,213	9,474	10,746	12,066	13,298	14,248	15,137
Less: Tax Expense	77	571	793	1,057	1,361	1,852	2,292	2,742	3,139	3,750
Operating Cash Flows	3,381	4,298	5,795	7,157	8,114	8,894	9,774	10,555	11,109	11,386
Add/(Less): Chg in working capital	651	832	788	664	776	831	857	851	955	1,075
Pre-capex Free Cash Flows	4,031	5,129	6,583	7,821	8,890	9,725	10,631	11,407	12,064	12,461
Less: Capex	7,500	6,694	6,972	6,960	5,663	4,813	4,102	3,717	3,319	2,596
Free Cash Flows	(3,469)	(1,565)	(389)	861	3,227	4,912	6,529	7,690	8,745	9,865
% growth					274.7	52.2	32.9	17.8	13.7	12.8
Discounting Multiple	1	2	3	4	5	6	7	8	9	10
Present Value of FCF	(3,119)	(1,265)	(283)	563	1,898	2,598	3,105	3,289	3,364	3,413

(A) Present Value (PV) of FCF till FY2018E (Rs cr)	13,563
(B) Terminal Value Calculation	
WACC (%)	11.2
Terminal Growth Rate (%)	5.0
FCF in FY2018E (Rs cr)	9,865
Terminal Value (TV, Rs cr)	167,096
PV of TV (Rs cr)	57,804
(C) Enterprise Value (EV)	
Total EV ((A) + (B), Rs cr)	71,367
Less: Net Debt (Rs cr)	8,304
Total Equity Value (Rs cr)	63,063
Total Equity Value (US\$ mn)	15,015
Bharti Airtel share	
Equity Value @ 42% (Rs cr)	26,486
Equity Value @ 42% (US\$ mn)	6,306
Number of shares (Cr)	190
Value per Bharti Airtel share (Rs)	140
Idea Cellular share	
Equity Value @ 16% (Rs cr)	10,090
Equity Value @ 16% (US\$ mn)	2,402
Number of shares (Cr)*	323
Value per Idea Cellular share (Rs)	31

* After dilution on account of the Spice deal

Source: Angel Research, Note: We have assumed a Rupee-Dollar rate of Rs42 per Dollar for conversion into US Dollars.

Exhibit 2: Bharti Airtel - Sensitivity Analysis

WACC	Terminal Growth Rate				
	4.0%	4.5%	5.0%	5.5%	6.0%
10.0%	161	175	192	212	238
11.0%	126	136	147	160	175
11.2%	121	129	140	151	166
12.0%	101	108	115	124	134
13.0%	82	86	92	98	105

Source: Angel Research

Exhibit 3: Idea Cellular - Sensitivity Analysis

WACC	Terminal Growth Rate				
	4.0%	4.5%	5.0%	5.5%	6.0%
10.0%	36	39	43	47	53
11.0%	28	30	33	36	39
11.2%	27	29	31	34	37
12.0%	23	24	26	28	30
13.0%	18	19	20	22	23

Source: Angel Research

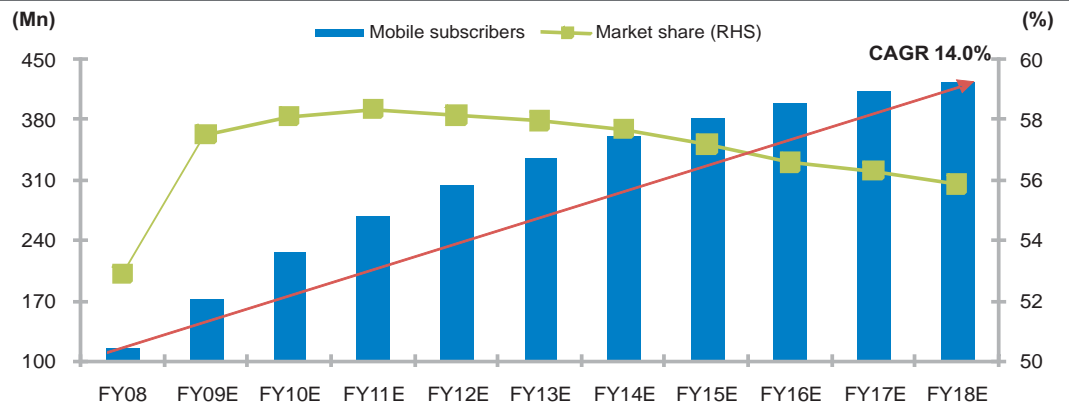
Partnering for growth: Bharti, Vodafone and Idea - United, we stand!
Indus is likely to witness robust growth in its financials

Indus, as we have mentioned, is a partnership between three major GSM-based cellular operators, namely Bharti Airtel, Vodafone-Essar and Idea Cellular. The towerco will be the primary vehicle through which these three operators will expand their networks and subscriber bases in its 15 circles of operations. These operators have highly aggressive roll-out plans, with Bharti and Vodafone more in terms of expanding coverage deeper in existing circles of operations (both these players have operations across all 15 circles of operations of Indus) and Idea Cellular for both expanding coverage in existing circles as well as faster time-to-market in newer circles, as and when it commences operations. Thus, given this factor, Indus is likely to witness robust growth in its financials. With the presence of as many as three 'anchor tenants' across most of its towers, strong growth and the likelihood of faster break-even seem a fairly likely possibility.

In the 15 circles of operations of Indus, we expect these three companies to have a total of 423.8mn mobile subscribers by FY2018E

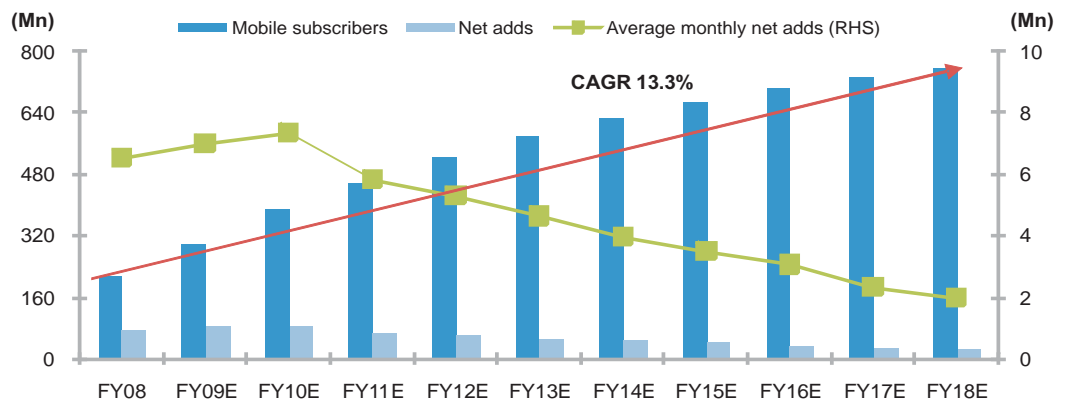
We estimate these three telcos to have a total of 501.2mn mobile subscribers by FY2018E, implying a CAGR growth of 14.4% over FY2008-18E (130.1mn subscribers in FY2008). This is likely to account for over 54% of the all-India mobile subscriber base in FY2018E. In the 15 circles of operations of Indus, we expect these three companies to have a total of 423.8mn mobile subscribers by FY2018E, implying a CAGR growth of around 14% over FY2008-18E (114.8mn subscribers in FY2008). This implies a marketshare of nearly 56% in these circles. We estimate a total of 758.5mn mobile subscribers in these 15 circles by FY2018E, implying a CAGR growth of 13.3% over FY2008-18E (217.1mn subscribers in FY2008). This would translate into an approximate mobile teledensity of over 82% in these circles.

Exhibit 4: Bharti, Vodafone and Idea - Powering growth for Indus in its 15 circles



Source: Company, COAI, AUSPI, Angel Research

Exhibit 5: Total mobile subscriber base in 15 Indus circles - Crossing 750mn!

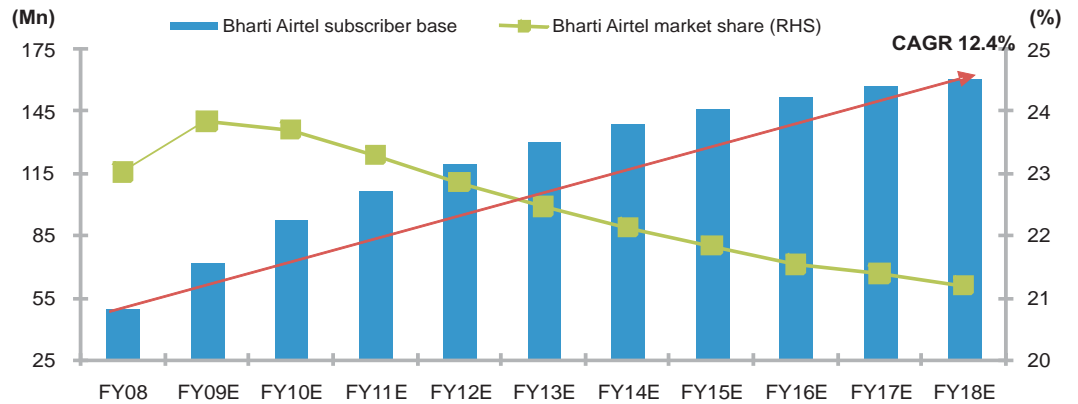


Source: COAI, AUSPI, Angel Research

We expect Bharti Airtel to record a subscriber base of 160.7mn in the 15 circles of operations of Indus by FY2018E

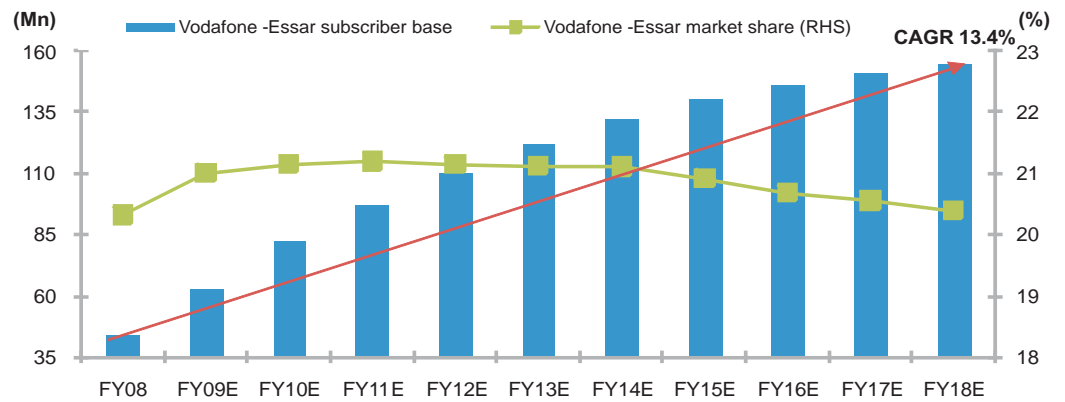
On a company-wise basis, we expect Bharti Airtel to record a subscriber base of 160.7mn in the 15 circles of operations of Indus by FY2018E, implying a CAGR growth of 12.4% over the period (50.0mn subscribers in FY2008). Vodafone-Essar, on the other hand, is expected to record a subscriber base of 154.6mn in these circles by FY2018E, implying a CAGR growth of 13.4% over the period (44.1mn subscribers in FY2008), while Idea Cellular is expected to record a subscriber base of 108.4mn, implying a CAGR growth of 18% (20.7mn subscribers in FY2008).

Exhibit 6: Bharti Airtel - Subscriber base, market share in Indus circles



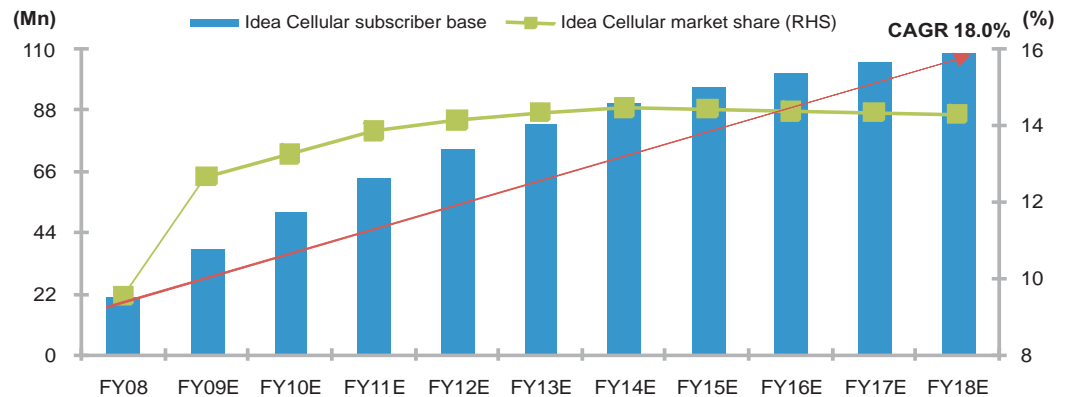
Source: COAI, AUSPI, Angel Research

Exhibit 7: Vodafone-Essar - Subscriber base, market share in Indus circles



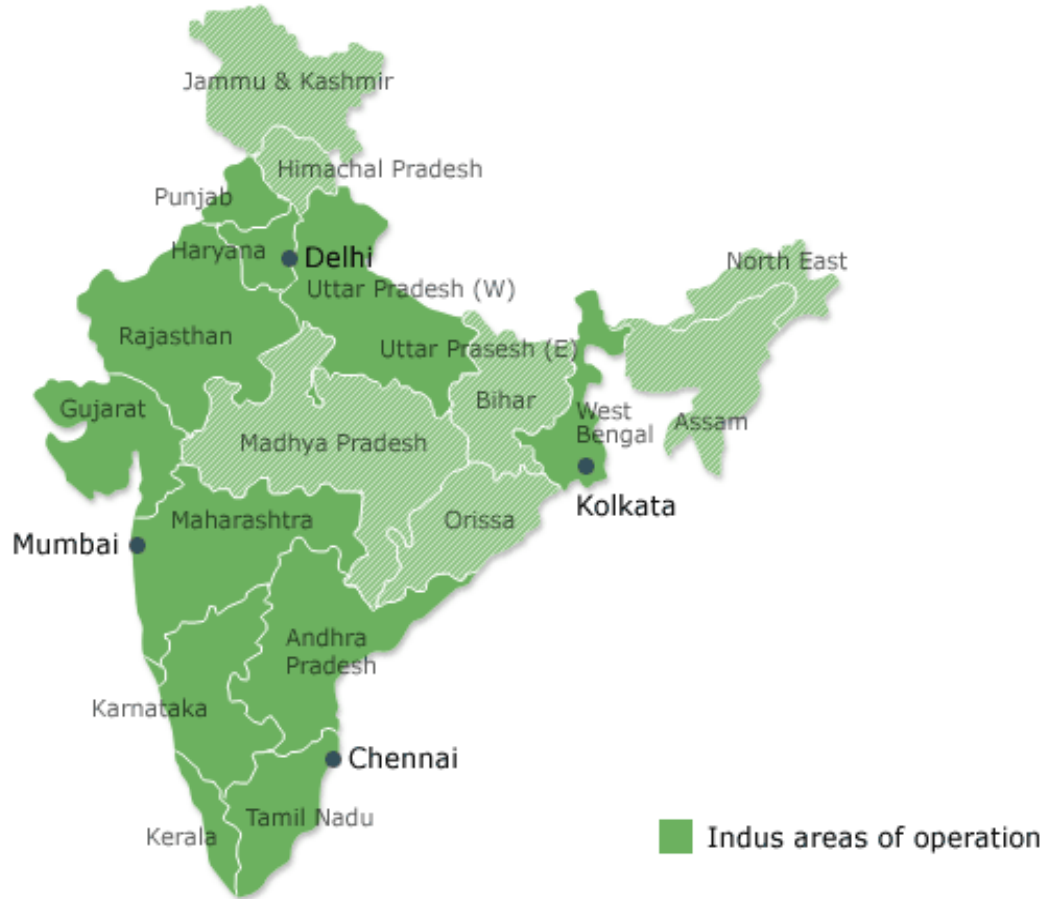
Source: COAI, AUSPI, Angel Research

Exhibit 8: Idea Cellular - Subscriber base, market share in Indus circles



Source: COAI, AUSPI, Angel Research

Exhibit 9: Indus Towers - Circles of operations



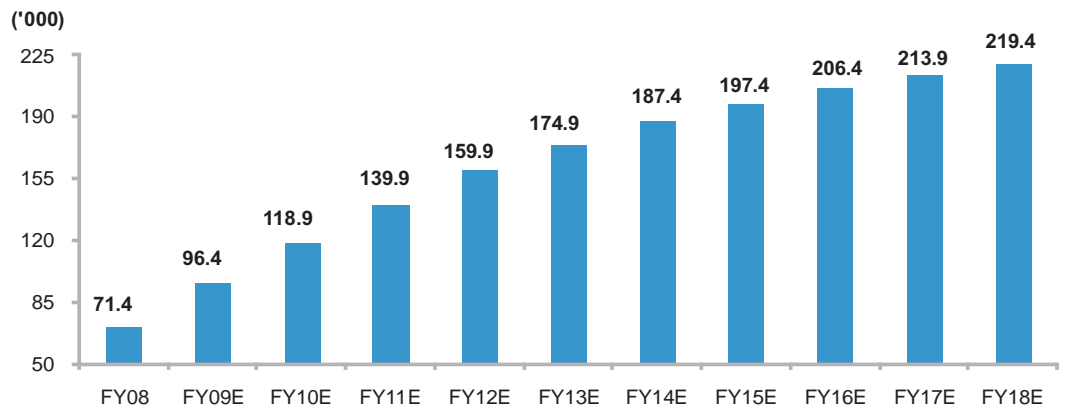
Source: Company, Angel Research

We estimate Indus to build out a total of 219,429 towers by FY2018

Indus to build out nearly 2.2lakh towers by FY2018E

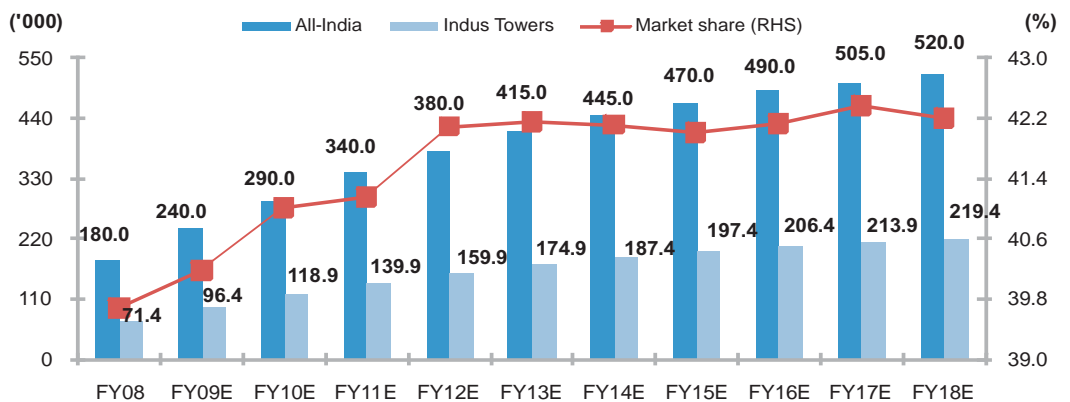
To cater to the rapidly growing subscriber base of the three GSM majors, as well as newer operators and across technologies like 2G, 3G and BWA, we estimate Indus to build out a total of 219,429 towers by FY2018. This implies a CAGR of 11.9% over FY2008-18E (71,429 towers in FY2008). This would imply Indus having around 42% of the all-India tower base of 520,000 estimated by that time-frame.

Exhibit 10: Indus Towers - Tower portfolio till FY2018E



Source: Industry, Angel Research

Exhibit 11: Indus v/s all-India tower portfolio, market share till FY2018E

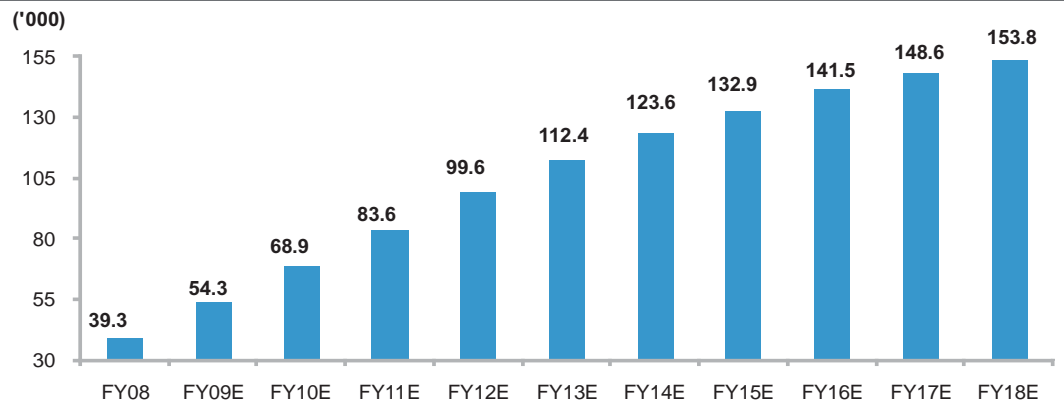


Source: Industry, Angel Research

GBTs to drive tower growth

We expect the lion's share of Indus' tower build-out going ahead to be ground-based towers (GBT). Given that most of the incremental expansion for all telcos including Bharti Airtel, Vodafone-Essar and Idea Cellular would have to come from the semi-urban and rural areas of the country, which are relatively untapped vis-à-vis their urban counterparts, there would be a greater need for GBTs, given that there are not too many high rises in these areas.

Exhibit 12: Indus Towers - GBT build-out till FY2018E



Source: Industry, Angel Research

We estimate a total of 153,811 GBTs to be built out by FY2018

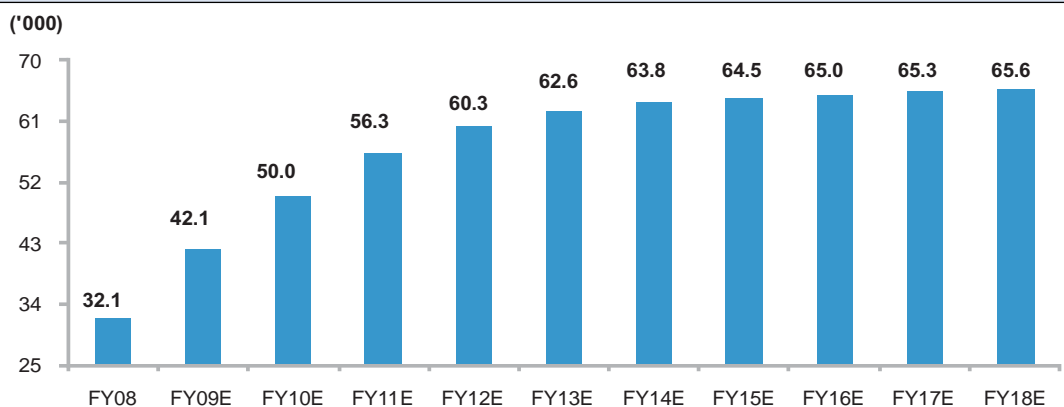
We have estimated that around 77% of the incremental towers built by Indus over the period FY2008-18E will be GBTs. Given their greater degree of shareability, Indus will be focussing on these towers to drive tenancy ratios higher, with the added advantage of having a tenancy ratio of over 2x right from scratch, given the presence of its anchor tenants, Bharti, Vodafone and Idea. We estimate a total of 153,811 GBTs to be built out by FY2018, implying a CAGR growth of 14.6% over FY2008-18E (39,286 GBTs in FY2008).

RTTs - To account for 23% of incremental tower additions over FY2008-18E

We estimate Indus to build out a total of 65,618 RTTs by the end of FY2018

While we expect GBTs to account for the lion's share of tower additions going forward, we estimate Indus to build out a total of 65,618 roof-top towers (RTTs) by the end of FY2018, implying a CAGR growth of 7.4% over FY2008-18E (32,143 RTTs in FY2008). RTTs have a lower degree of shareability vis-à-vis GBTs, given their lower heights. We do not expect the total number of tenancy slots on an average RTT for BITL to exceed 3 and estimate RTTs to account for around 23% of the incremental towers built by the company over FY2008-18E.

Exhibit 13: Indus Towers - RTT build-out till FY2018E



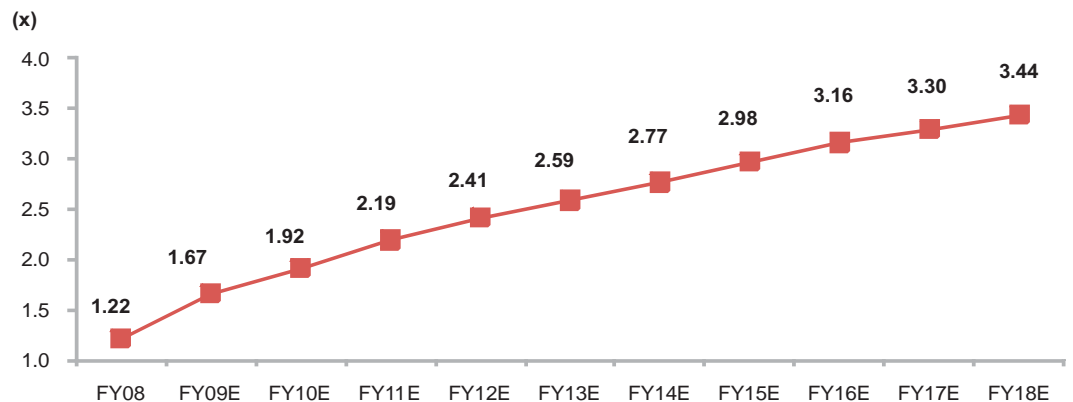
Source: Industry, Angel Research

We expect increasing tenancy ratios to be the key growth driver for Indus and estimate the tenancy ratio to rise from 1.22x in FY2008 to 3.44x in FY2018E

Tenancy ratios - Anchor clients, increased sharing to drive growth

In the Telecom Infrastructure Leasing Business, Revenue growth for any company is driven primarily by an increase in tenancy ratios. This is the key factor that renders the business model viable. We expect increasing tenancy ratios to be the key growth driver for Indus Towers and estimate the overall tenancy ratio to rise from 1.22x in FY2008 to 3.44x in FY2018E, led by increased occupancy levels, specially in the company's GBTs. Aggressive network roll outs by Bharti Airtel, Vodafone-Essar and Idea Cellular are expected to be the key growth drivers for Indus, as also greater sharing with newer operators needing to quicken their time-to-market post the receipt of start-up spectrum. Newer technologies like 3G and WiMAX are also likely to provide a further fillip in future.

Exhibit 14: Indus Towers tenancy ratios - Strong growth, led by anchor clients



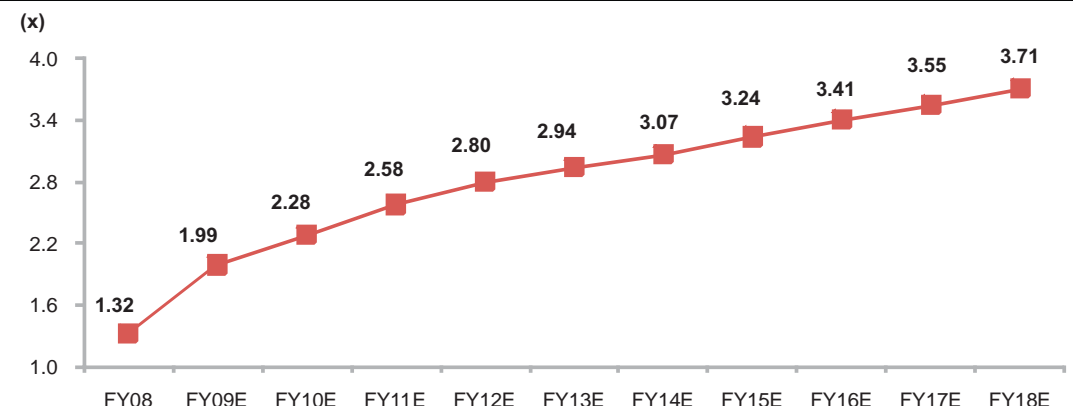
Source: Industry, Angel Research

GBT tenancy ratio to rise to 3.71x in FY2018E

We expect the tenancy ratio on Indus' GBTs to rise from 1.32x in FY2008 to 3.71x by FY2018E

As we have mentioned, we expect Indus Towers to build out a greater number of GBTs going ahead. We expect the total tenancy ratio on the company's GBTs to rise from 1.32x in FY2008 to 3.71x by FY2018E.

Exhibit 15: Indus Towers - GBT tenancy ratios till FY2018E



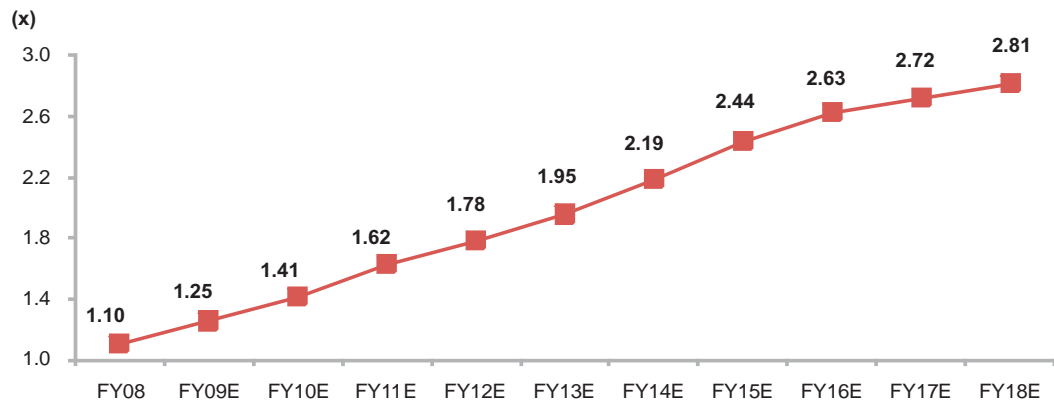
Source: Industry, Angel Research

RTT tenancy ratio to hit 2.81x in FY2018E

We expect the tenancy ratio for Indus' RTTs to rise from 1.1x in FY2008 to 2.81x in FY2018E

We estimate the total tenancy ratio for Indus Towers' RTTs to rise from 1.1x in FY2008 to 2.81x in FY2018E. Given the lower sharing potential of RTTs vis-à-vis GBTs, we do not expect the tenancy ratio on Indus' RTTs to cross 3x, even beyond FY2018E.

Exhibit 16: Indus Towers - RTT tenancy ratios till FY2018E



Source: Industry, Angel Research

Revenue growth to be driven by higher tenancy ratios

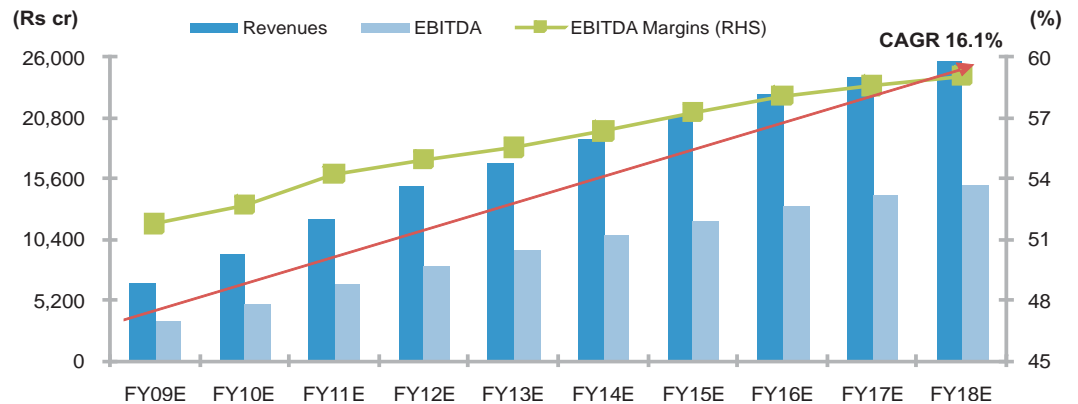
We expect Indus Towers to grow its Revenues at a CAGR of 16.1% over FY2009-18E

We expect Indus Towers to grow its Revenues at a CAGR of 16.1% over the period FY2009-18E, to hit Rs25,616cr in FY2018E (vis-à-vis Rs6,680cr in FY2009E). This will be led by the ever-increasing tenancy ratios expected, with Bharti Airtel, Vodafone-Essar and Idea Cellular providing a 'three-pronged anchor client strategy', leading to tenancy ratios on newer towers hitting 2-2.5x right from scratch. The higher tenancy ratios will also be aided by increasing demand for tenancy leasing slots from newer operators.

We have assumed rentals per tenancy slot per month at around Rs39,608 for GBTs in FY2009, while for RTTs, the figure stands at Rs24,250

In terms of pricing, assuming a capex recovery of around 12-15%, we have assumed rentals per tenancy slot per month at around Rs39,608 for GBTs in FY2009, while for RTTs, the figure stands at Rs24,250. We have factored in a 2.6% CAGR fall in lease rentals over FY2009-18E for both GBTs and RTTs, as increasing tenancy ratios lead to scale benefits. Apart from this, we expect competitive pressures to also cap any chances of an increase in rentals going forward.

Exhibit 17: Indus Revenues, EBITDA, EBITDA Margins - Impressive growth



Source: Industry, Angel Research

We estimate EBITDA Margins to cross 50% by FY2009E itself

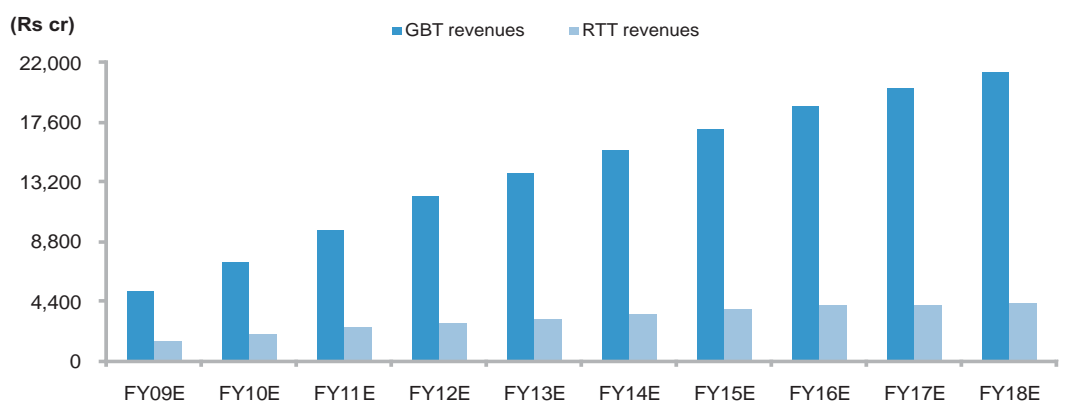
In terms of the cost structure, the key cost items for a towerco are Lease Rentals, which are paid out to the land owner, Power and Fuel Costs and Employee and Annual Maintenance (AMC) Costs. Power and Fuel Costs are variable in nature and are passed on to the tenant. Going ahead, we expect an escalation in Lease Rentals and Power and Fuel Costs on account of the increasing costs of these items of expenditure. However, increasing tenancy ratios are likely to lead to strong operating leverage and scale benefits, as the cost of adding new tenants on to a towerco's towers is minimal. This is likely to enable Indus to manage any escalation, especially given its 'three anchor client strategy', leading to a strong EBITDA Margin profile. We estimate EBITDA Margins to cross 50% by FY2009E itself and hit around 59% by FY2018E.

GBT Revenues to drive overall Revenue growth

We estimate Indus Towers' GBT Revenues to clock a 17.2% CAGR in Revenues over FY2009-18E

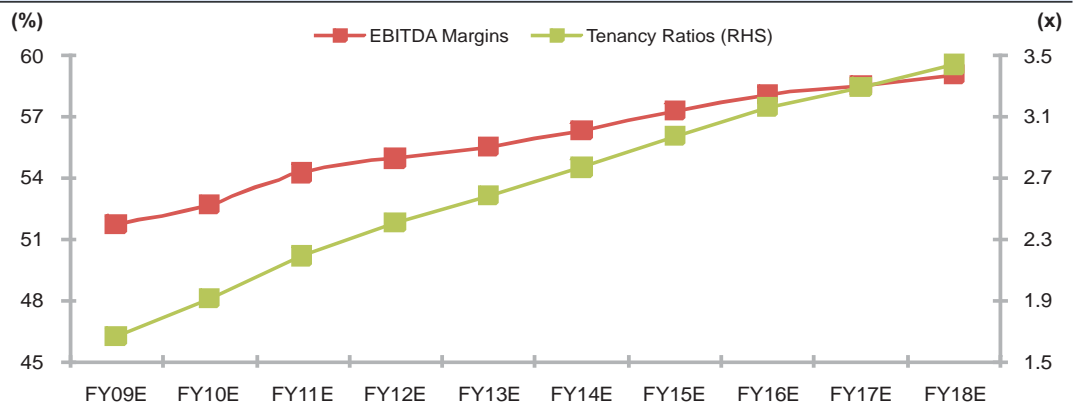
We estimate Indus Towers' GBT Revenues to clock a 17.2% CAGR growth in Revenues over FY2009-18E to hit Rs21,381cr (vis-à-vis Rs5,143cr in FY2009E). This is expected to be the main growth driver for overall Revenues over this period. On the other hand, we estimate Indus' RTT Revenues to clock an 11.9% CAGR growth in Revenues over FY2009-18E to hit Rs4,235cr (vis-à-vis Rs1,536cr in FY2009E). Overall, GBT Revenues are expected to account for nearly 86% of total incremental Revenues over FY2009-18E.

Exhibit 18: Indus Towers - GBT, RTT Revenues



Source: Industry, Angel Research

Exhibit 19: EBITDA Margins, Tenancy Ratios - Strong correlation



Source: Industry, Angel Research

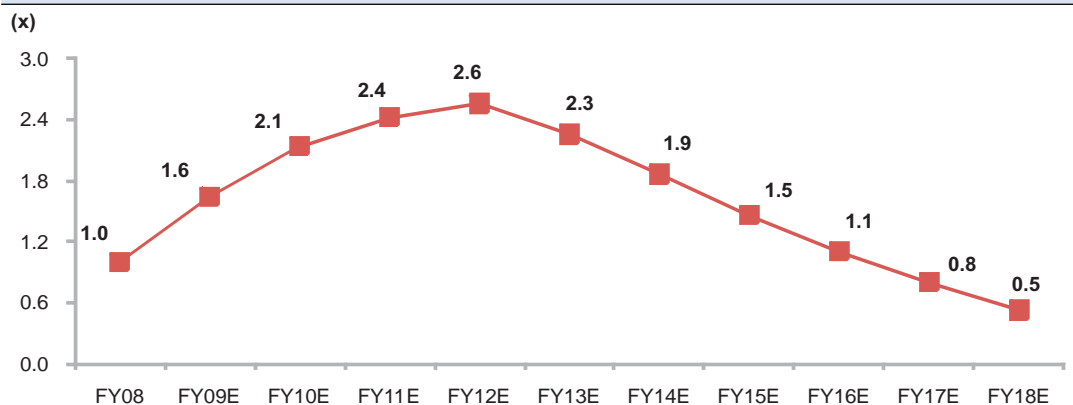
To invest over Rs52,000cr over the next 10 years

We estimate Indus to invest Rs52,335cr towards capex until FY2018E to expand the network of these three GSM majors and to cater to the expected strong demand from newer operators to fast-track their expansion plans

Given the ambitious network expansion plans of Indus' three 'anchor clients' - Bharti Airtel, Vodafone-Essar and Idea Cellular - we expect the towerco to invest heavily towards this objective going forward. We estimate Indus to invest Rs52,335cr towards capex until FY2018E to expand the network of these three GSM majors, as also to cater to the expected strong demand from newer operators to fast-track their expansion plans. For this purpose, we expect the company to leverage significantly on its balance sheet, given its scale and greater ability to raise low-cost debt, thereby bringing down the overall cost of capital.

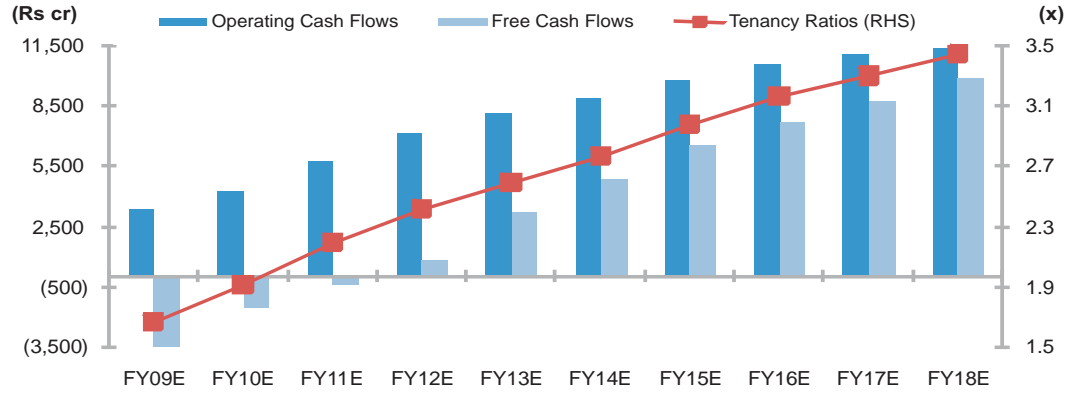
We estimate a peak debt-equity ratio of 2.6x in FY2012E. However, as the company witnesses increasing tenancy ratios going forward, aided by its 'anchor clients', its cash flows are expected to rise substantially and post-FY2012, we estimate the company's debt-equity ratio to fall steadily to just 0.5x in FY2018E.

Exhibit 20: Indus Towers Debt-Equity ratio - Peaking in FY2012E



Source: Industry, Angel Research

Exhibit 21: Indus Towers Cash flows, Tenancy Ratios - Direct correlation



Source: Industry, Angel Research

Exhibit 22: Profit and Loss Account										(Rs cr)
Y/E March	FY09E	FY10E	FY11E	FY12E	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E
Sales	6,680	9,239	12,142	14,942	17,055	19,072	21,055	22,885	24,323	25,616
<i>% chg</i>		38.3	31.4	23.1	14.1	11.8	10.4	8.7	6.3	5.3
Cost structure										
Lease Rentals	1,139	1,545	1,964	2,379	2,680	2,943	3,178	3,389	3,548	3,675
<i>% chg</i>		35.7	27.1	21.2	12.7	9.8	8.0	6.6	4.7	3.6
<i>% of sales</i>	17.1	16.7	16.2	15.9	15.7	15.4	15.1	14.8	14.6	14.3
Power and Fuel Costs	1,302	1,766	2,244	2,719	3,063	3,364	3,632	3,874	4,095	4,284
<i>% chg</i>		35.7	27.1	21.2	12.7	9.8	8.0	6.6	5.7	4.6
<i>% of sales</i>	19.5	19.1	18.5	18.2	18.0	17.6	17.3	16.9	16.8	16.7
Employee, AMC and Other Costs	781	1,060	1,347	1,631	1,838	2,018	2,179	2,324	2,433	2,520
<i>% chg</i>		35.7	27.1	21.2	12.7	9.8	8.0	6.6	4.7	3.6
<i>% of sales</i>	11.7	11.5	11.1	10.9	10.8	10.6	10.4	10.2	10.0	9.8
Total Operating Costs	3,222	4,371	5,554	6,729	7,581	8,326	8,989	9,587	10,075	10,479
<i>% chg</i>		35.7	27.1	21.2	12.7	9.8	8.0	6.6	5.1	4.0
<i>% of sales</i>	48.2	47.3	45.7	45.0	44.4	43.7	42.7	41.9	41.4	40.9
EBITDA	3,458	4,868	6,588	8,213	9,474	10,746	12,066	13,298	14,248	15,137
<i>% chg</i>		40.8	35.3	24.7	15.4	13.4	12.3	10.2	7.1	6.2
<i>EBITDA margin (%)</i>	51.8	52.7	54.3	55.0	55.6	56.3	57.3	58.1	58.6	59.1
Depreciation	1,371	1,706	1,849	2,162	2,417	2,341	2,505	2,654	2,787	2,349
<i>% chg</i>		24.4	8.4	16.9	11.8	(3.1)	7.0	5.9	5.0	(15.7)
<i>% of sales</i>	20.5	18.5	15.2	14.5	14.2	12.3	11.9	11.6	11.5	9.2
EBIT	2,086	3,162	4,739	6,051	7,057	8,405	9,560	10,644	11,462	12,788
<i>% chg</i>		51.6	49.9	27.7	16.6	19.1	13.7	11.3	7.7	11.6
<i>EBIT margin (%)</i>	31.2	34.2	39.0	40.5	41.4	44.1	45.4	46.5	47.1	49.9
Interest Costs	1,407	1,943	2,407	2,943	3,054	2,956	2,819	2,576	2,226	1,755
<i>% chg</i>		38.1	23.9	22.3	3.8	(3.2)	(4.7)	(8.6)	(13.6)	(21.2)
<i>% of sales</i>	21.1	21.0	19.8	19.7	17.9	15.5	13.4	11.3	9.2	6.8
Profit Before Tax	679	1,219	2,332	3,108	4,003	5,449	6,742	8,068	9,236	11,033
<i>% chg</i>		79.6	91.2	33.3	28.8	36.1	23.7	19.7	14.5	19.5
<i>PBT margin (%)</i>	10.2	13.2	19.2	20.8	23.5	28.6	32.0	35.3	38.0	43.1
Tax	77	571	793	1,057	1,361	1,852	2,292	2,742	3,139	3,750
<i>% chg</i>		641.6	38.9	33.3	28.8	36.1	23.7	19.7	14.5	19.5
<i>% of PBT</i>	11.3	46.8	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
Profit After Tax	602	649	1,539	2,052	2,642	3,597	4,450	5,326	6,096	7,283
<i>% chg</i>		7.8	137.2	33.3	28.8	36.1	23.7	19.7	14.5	19.5
<i>PAT margin (%)</i>	9.0	7.0	12.7	13.7	15.5	18.9	21.1	23.3	25.1	28.4

Source: Company, Angel Research

Exhibit 23: Balance Sheet										(Rs cr)
Y/E March	FY09E	FY10E	FY11E	FY12E	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E
SOURCES OF FUNDS										
Net Worth/Equity	10,691	11,340	12,880	14,931	17,574	21,170	25,621	30,946	37,043	44,326
Loan Funds	17,589	24,283	31,255	38,215	39,663	39,416	37,580	34,342	29,681	23,394
Total Liabilities	28,281	35,623	44,135	53,146	57,237	60,587	63,201	65,288	66,724	67,720
APPLICATION OF FUNDS										
Gross Fixed Assets	27,429	34,122	41,094	48,054	53,717	58,529	62,631	66,348	69,667	72,263
Depreciation	2,380	4,086	5,936	8,098	10,515	12,857	15,362	18,016	20,803	23,151
Net Fixed Assets	25,048	30,036	35,159	39,956	43,201	45,673	47,270	48,333	48,865	49,112
Capital work-in-progress	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Current Assets	5,325	8,862	13,436	18,698	20,609	22,594	24,740	26,866	28,921	30,922
Less: Current Liabilities	4,592	5,775	6,960	8,008	9,073	10,180	11,309	12,411	13,562	14,814
Net Current Assets	732	3,087	6,476	10,690	11,536	12,414	13,431	14,456	15,359	16,108
Total Assets	28,281	35,623	44,135	53,146	57,237	60,587	63,201	65,288	66,724	67,720

Source: Company, Angel Research

Reliance Infratel - Creating 'Towering' Value

A high quality tower portfolio, creating strong value

RITL is one of the largest tower companies in India, with a tower base of 36,849 towers at the end of FY2008

Reliance Communications (RCOM), with a view to unlocking value and creating a separate focus on the high growth potential telecom infrastructure space, has hived off its telecom infrastructure assets into a separate company, Reliance Infratel (RITL, earlier known as Reliance Telecom Infrastructure). RITL is one of the largest tower companies in India, with a tower base of 36,849 towers at the end of FY2008 accounting for approximately 21% of the total estimated tower base in India. RCOM, in the first transaction involving a stake sale in a tower company in India, sold 5% stake in RITL in July 2007 to global investors for a consideration of US \$337.5mn (around Rs1,417.5cr) implying total equity valuation of US \$6.75bn (around Rs28,350cr) and enterprise value (EV) of US \$9bn (around Rs37,800cr) for the towerco. This signals the high levels of confidence that global investors have in the Indian telecom infrastructure story.

We believe RITL is in a strong position to tap the significant demand for tower leasing space in the country going ahead, from both existing and newer operators and newer technologies like 3G and WiMAX, given its pan-India tower portfolio and greater shareability, with an estimated 5.08 tenancy slots per tower by FY2011, translating into a total of over 3.8lakh tenancy slots available for leasing (over 75,000 towers estimated).

Financials

Our Revenue CAGR stands at 33.5% over FY2009-11E, while our EBITDA CAGR stands at a robust 40.9%, with strong Margin expansion of 536bp (5.36%) expected over the period

In terms of financials, we forecast Revenues of Rs4,998cr in FY2010 and Rs6,169cr in FY2011 (Rs3,461cr in FY2009) for RITL, while we expect the company to record EBITDA of Rs2,613cr in FY2010 and Rs3,250cr in FY2011 (Rs1,638cr in FY2009), implying EBITDA Margins of 52.3% and 52.7% in FY2010 and FY2011, (47.3% Margins in FY2009) respectively. Thus, our Revenue CAGR stands at 33.5% over FY2009-11E, while our EBITDA CAGR stands at a robust 40.9%, with strong Margin expansion of 536bp (5.36%) expected over the period. This would be on the back of significant roll-out demand from RITL's parent, RCOM itself as well as from newer operators, leading to an increase in the tenancy ratio from 1.16x in FY2008 to over 2x in FY2011, even as the number of towers is estimated to rise at a CAGR of around 27% over FY2008-11E to cross 75,000.

Valuation

Our DCF analysis values RITL at Rs24,961cr (around US \$5.94bn) based on a weighted average cost of capital (WACC) of 11.1%, cost of Equity of 15.6% and cost of Debt of 8%. We have assumed a terminal growth rate of 5%. **Thus, implied value of RITL for RCOM shareholders works out to Rs116 per share, giving an upside of 24% over and above the core business value of Rs479 per share.**

Exhibit 1: Discounted Cash Flow Model										(Rs cr)
Y/ E March	FY09E	FY10E	FY11E	FY12E	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E
EBIT	804	1,616	2,203	2,616	3,020	3,639	4,323	4,796	5,351	5,904
<i>% growth</i>		101.0	36.3	18.7	15.5	20.5	18.8	10.9	11.6	10.3
Add: Depreciation	834	997	1,047	1,172	1,300	1,263	1,362	1,435	1,497	1,158
EBITDA	1,638	2,613	3,250	3,788	4,319	4,902	5,685	6,231	6,848	7,062
Less: Tax Expense	0	95	313	408	507	722	960	1,158	1,395	1,667
Operating Cash Flows	1,638	2,519	2,937	3,380	3,813	4,180	4,725	5,073	5,454	5,395
Add/(Less): Chg in working capital	213	130	150	177	205	262	183	252	141	311
Pre-capex Free Cash Flows	1,850	2,648	3,087	3,558	4,018	4,442	4,908	5,325	5,594	5,706
Less: Capex	5,075	3,023	3,820	3,284	3,331	2,695	2,461	1,846	1,544	1,180
Free Cash Flows	(3,225)	(374)	(733)	274	687	1,747	2,447	3,479	4,051	4,526
<i>% growth</i>					151.0	154.3	40.1	42.2	16.4	11.7
Discounting Multiple	1	2	3	4	5	6	7	8	9	10
Present Value of FCF (2,903)	(303)	(535)	180	406	929	1,172	1,500	1,571	1,581	

(A) Present Value (PV) of FCF till FY2018E (Rs cr) **3,598**

(B) Terminal Value Calculation

WACC (%)	11.1
Terminal Growth Rate (%)	5.0
FCF in FY2018E (Rs cr)	4,526
Terminal Value (TV, Rs cr)	77,980

PV of TV (Rs cr) **27,230**

(C) Enterprise Value (EV)

Total EV ((A) + (B), Rs cr)	30,828
Less: Net Debt (Rs cr)	5,867

Total Equity Value (Rs cr) **24,961**

Total Equity Value (US\$ mn) **5,943**

Number of shares (Cr) 216

Value per RCOM share (Rs) **116**

Source: Angel Research, Note: We have assumed a Rupee-Dollar rate of Rs42 per Dollar for conversion into US Dollars

Exhibit 2: Sensitivity Analysis

WACC	Terminal Growth Rate				
	4.0%	4.5%	5.0%	5.5%	6.0%
10.0%	132	146	162	182	206
11.0%	99	108	119	131	146
11.1%	97	106	116	128	142
12.0%	75	82	89	97	107
13.0%	57	62	67	73	79

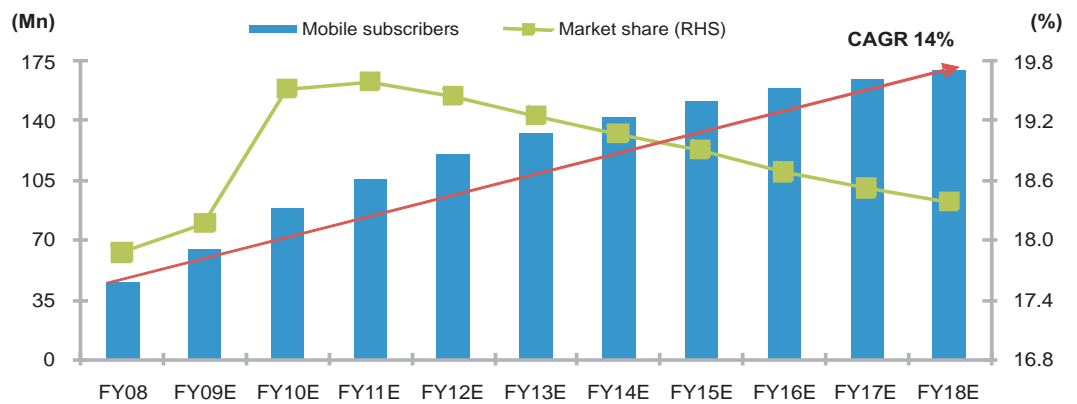
Source: Angel Research

Riding on the parent's growth plans; RCOM to have 169mn subs by FY2018E

We estimate a total subscriber base of 169.4mn by FY2018 for RCOM

RITL's growth prospects going forward are highly leveraged on its parent, RCOM's growth plans. We expect growth in RITL's business to come mainly from the aggressive roll-out plans of RCOM. Given the significant potential yet to be tapped in the Indian Telecom Market, with mobile tele-density still at low levels of around 26%, we expect RCOM to aggressively roll out its networks, specially the GSM network, having received start-up GSM spectrum across the country earlier this year, with most of its roll-out plans being implemented by RITL. We estimate a total subscriber base of 169.4mn by FY2018 for RCOM. This implies a 14% CAGR growth over FY2008-18E (45.8mn subscribers at the end of FY2008).

Exhibit 3: RCOM mobile subscriber base - Prime growth driver for RITL

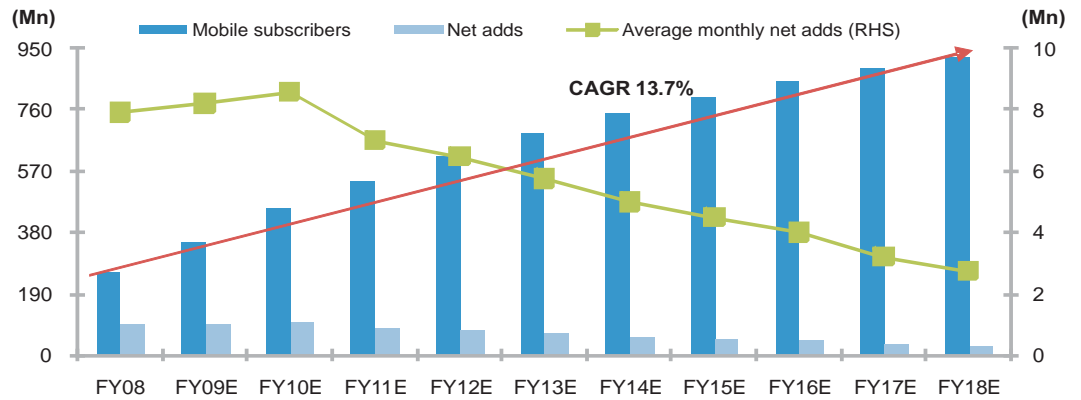


Source: Company, COAI, AUSPI, Angel Research

We expect India to have a total of 921.7mn mobile subscribers by FY2018E

We expect RCOM to command around 18.4% of the all-India mobile subscriber marketshare by FY2018E. We estimate a steady increase in mobile subscribers till FY2011E, beyond which we estimate a steady decline on account of heightened competition. We expect India to have a total of 921.7mn mobile subscribers by FY2018E, implying a CAGR growth of 13.7% over FY2008-18E (256.2mn subscribers at the end of FY2008). This would translate into an approximate mobile teledensity of 73%, if we were to assume a 1.5% annual increase in population, which would lead to a total estimated population base of 1.27bn by that time-frame.

Exhibit 4: All-India mobile subscriber base - Onward to 1 billion!



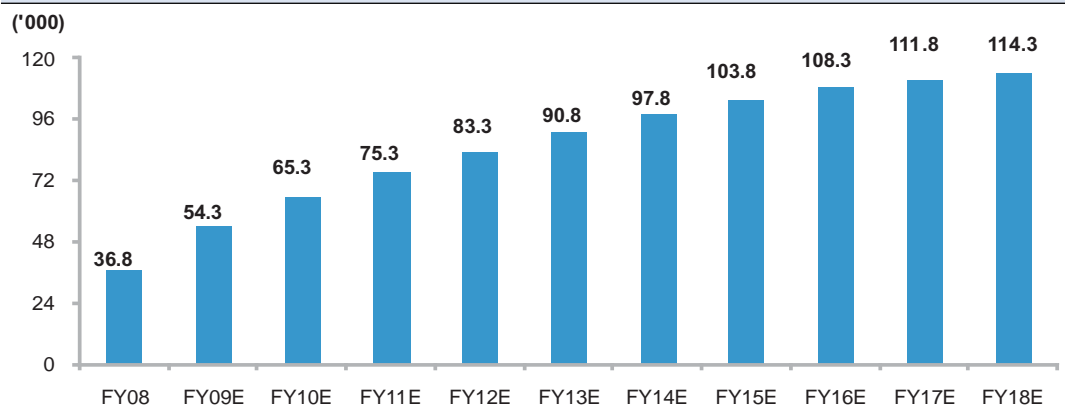
Source: COAI, AUSPI, Angel Research

RITL to build over 1.14lakh towers by FY2018E

We estimate RITL to build totally 114,349 towers by FY2018

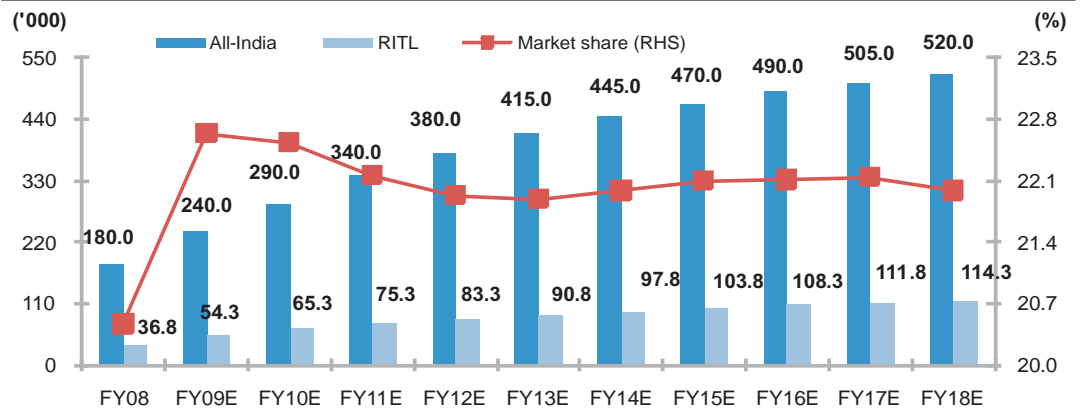
To cater to the ever-increasing subscriber base of the parent as well as newer operators and across technologies like 2G, 3G and BWA, we estimate RITL to build totally 114,349 towers by FY2018. This implies a CAGR of 12% over FY2008-18E (36,849 towers in FY2008). This implies that RITL would have around 22% of the all-India tower base of 520,000 in FY2018. These towers would be built primarily based on RCOM's network expansion plans and would substantially support the telco's active infrastructure and electronics.

Exhibit 5: RITL - Tower Portfolio till FY2018E



Source: Company, Angel Research

Exhibit 6: RITL v/s all-India Tower Portfolio, market share till FY2018E

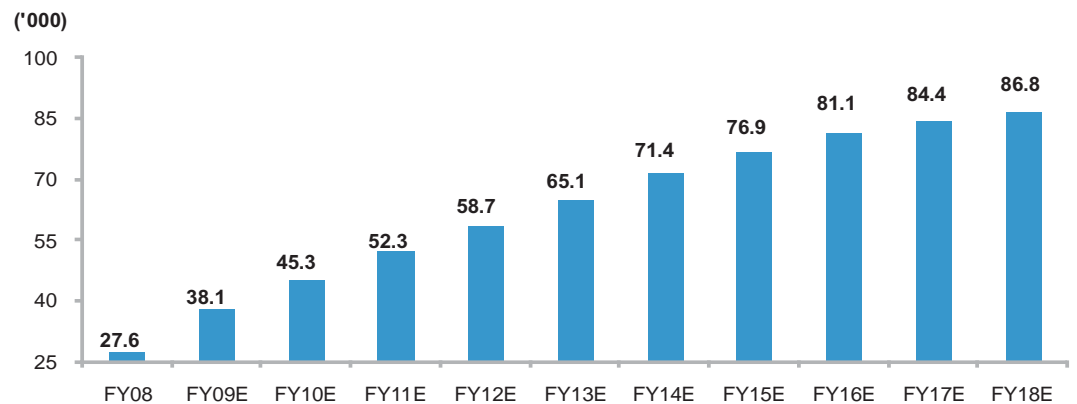


Source: Company, Industry, Angel Research

GBTs to drive tower growth

We estimate a significant portion of RITL's tower build-out going ahead to be ground based (GBT). Given that most of the incremental expansion for the company would have to come from the semi-urban and rural areas, which are relatively untapped, there would be greater need for GBTs given that there are not too many high rises in these areas.

Exhibit 7: GBT build-out till FY2018E



Source: Company, Angel Research

We estimate 86,792 GBTs to be built out by FY2018

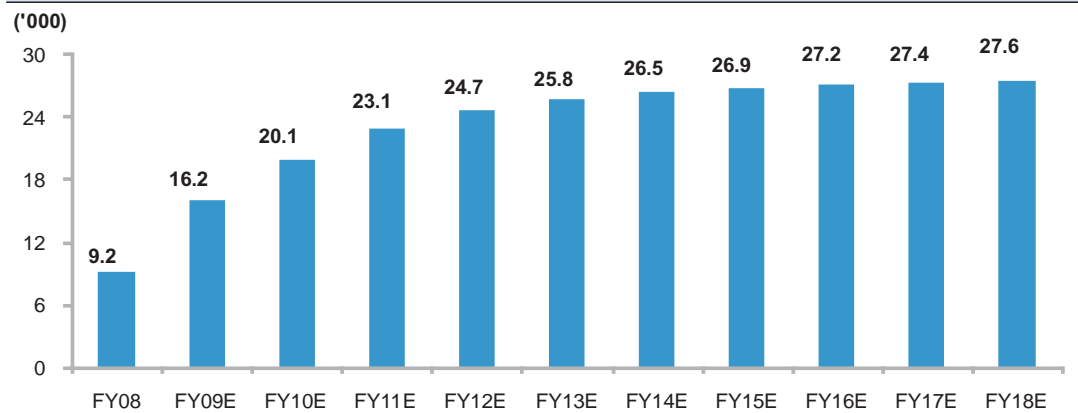
We have estimated around 76% of the incremental towers built by RITL over FY2008-18E to be GBTs. It should also be noted that GBTs typically have greater degree of share-ability given their greater height and potentially higher number of tenancy slots that can be loaded on to the towers. We believe RITL can take the tenancy slots on an average GBT up to 6-7 at little incremental capex, thus leading to strong leverage, as the concept of infrastructure sharing takes off. We estimate a total of 86,792 GBTs to be built by FY2018, implying a CAGR growth of 12.1% over FY2008-18E (27,637 GBTs in FY2008).

RTTs to account for 24% of incremental tower additions

We estimate RITL to build out a total of 27,557 RTTs by FY2018E

While we expect GBTs to account for the lion's share of tower additions going forward, we estimate RITL to build a total of 27,557 RTTs by FY2018E, implying a CAGR growth of 11.6% over FY2008-18E (9,212 RTTs in FY2008). As RCOM builds a pan-India GSM cellular network, we expect RTTs also to drive part of the expansion process, more specifically in the urban areas. RTTs have a lower degree of shareability v/s GBTs given their lower heights. We do not expect the total number of tenancy slots, on an average RTT for RITL, to exceed three. We expect RTTs to account for around 24% of the incremental towers built by the company over FY2008-18E.

Exhibit 8: RITL - RTT build-out till FY2018E



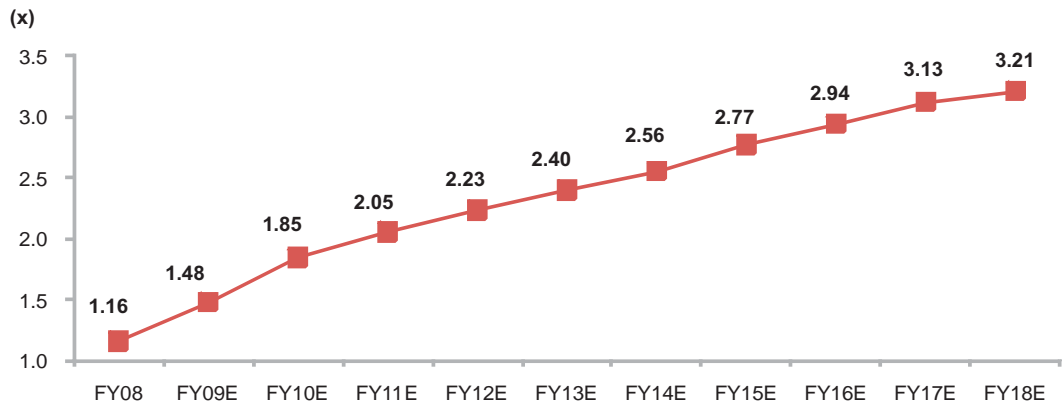
Source: Company, Angel Research

Increasing Tenancy ratios to drive Revenue growth

We estimate the tenancy ratio to rise from 1.16x in FY2008 to 3.21x in FY2018E

In the Telecom Infrastructure Leasing Business, Revenue growth for any company is primarily driven by an increase in Tenancy ratios, which is the key factor that renders the business model viable, rather than just the number of towers built. We expect increasing tenancy ratios to be the key growth driver for RITL and estimate the overall tenancy ratio to rise from 1.16x in FY2008 to 3.21x in FY2018E, led by higher occupancy levels in the company's GBTs. As the concept of infrastructure sharing takes off in a bigger way, occupancy levels should further increase.

Exhibit 9: Increased occupancy levels - The heart and soul of Revenue growth

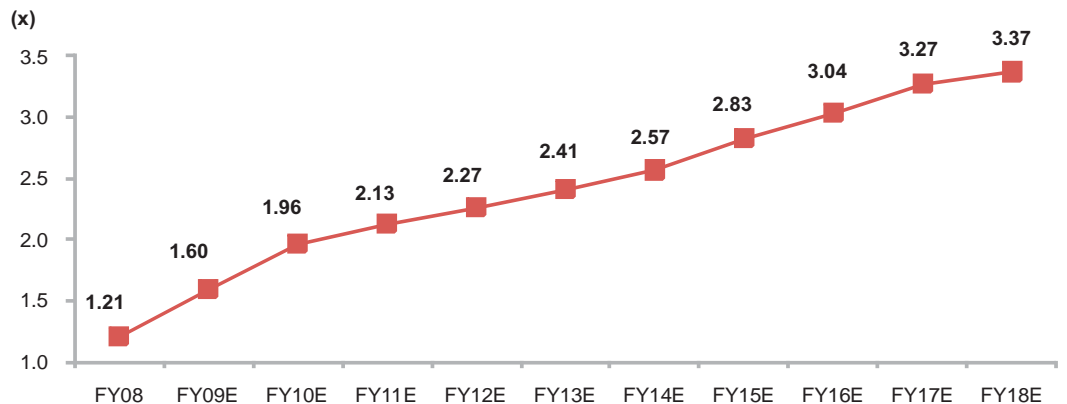


Source: Company, Angel Research

We expect the tenancy ratio on RITL's GBTs to rise from 1.21x in FY2008 to 3.37x by FY2018E

As we have mentioned, on account of greater sharing potential for GBTs vis-à-vis RTTs, apart from the fact that most of the incremental expansion is likely to come from rural areas, we expect RITL to build out a greater number of these towers going ahead. We expect the total tenancy ratio on RITL's GBTs to rise from 1.21x in FY2008 to 3.37x by FY2018E.

Exhibit 10: RITL - GBT Tenancy Ratios till FY2018E

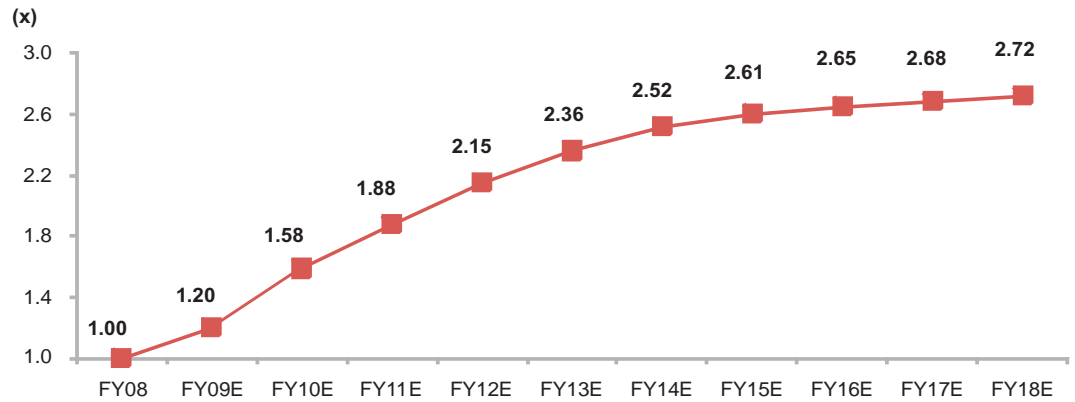


Source: Company, Angel Research

We expect the tenancy ratio for RITL's RTTs to rise from 1x in FY2008 to 2.72x in FY2018E

We estimate total Tenancy ratio for RITL's RTTs to rise from just 1x in FY2008 to 2.72x in FY2018E led by parent, RCOM, which is expected to see occupancy levels of nearly 2x by FY2018.

Exhibit 11: RITL - RTT Tenancy Ratios till FY2018E



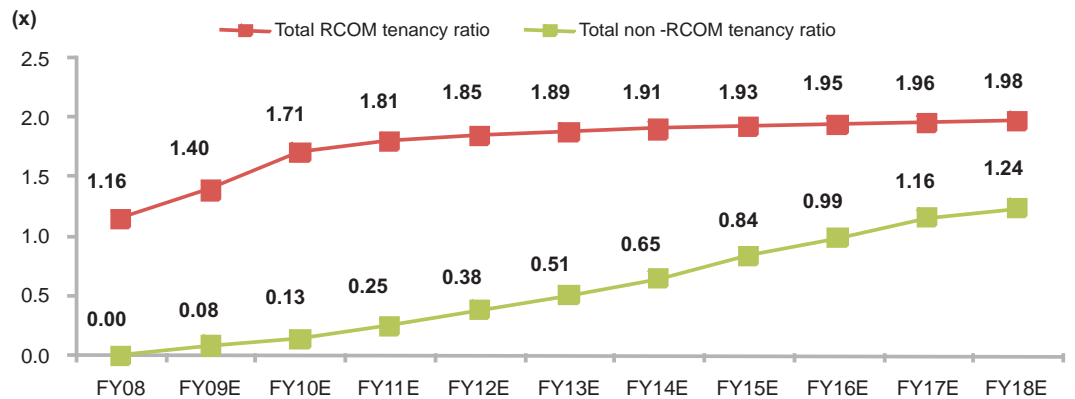
Source: Company, Angel Research

RCOM-led improvement in tenancy ratios

We expect RITL's tenancy ratios to improve primarily on the back of parent, RCOM's network expansion strategy

We expect RITL's tenancy ratios to improve primarily on the back of parent, RCOM's network expansion strategy. RITL is clearly an RCOM-driven story and is expected to be the main vehicle for the telco's rapid expansion into the interiors of the country. We expect RCOM to account for an overall tenancy ratio of nearly 2x by FY2018E, from around 1.16x in FY2008, accounting for 60.5% of total FY2018E Revenues. Nonetheless, we do expect strong growth in occupancy rates from non-RCOM clients, who will account for 39.5% of total FY2018E Revenues, up from just 5.2% in FY2009E.

Exhibit 12: RCOM drives growth in total occupancy rates

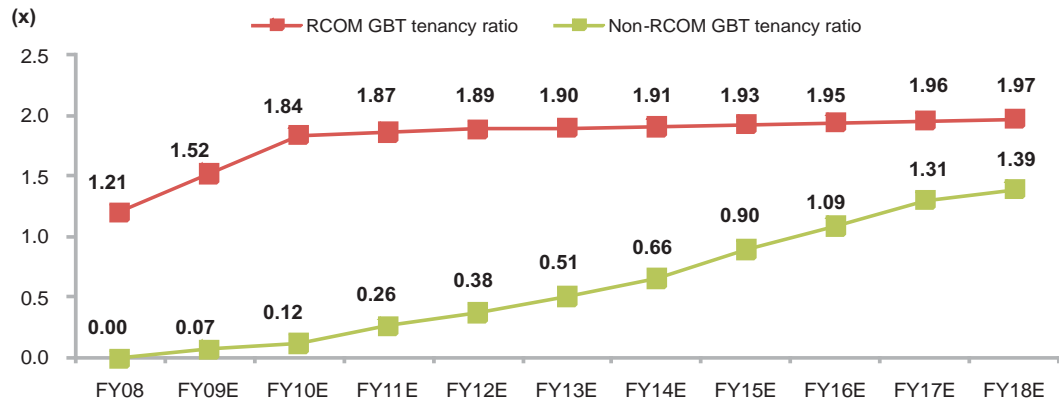


Source: Company, Angel Research

We estimate the captive tenancy ratio (RCOM) for the company's GBTs to touch nearly 2x in FY2018E from 1.21x in FY2008

We expect RITL's GBT tenancy ratio to be the key driver for the overall tenancy ratio given greater share-ability of GBTs. We estimate the captive tenancy ratio (RCOM) for the company's GBTs to touch nearly 2x in FY2018E from 1.21x in FY2008, thereby accounting for 58.6% of GBT Revenues in FY2018E. On the other hand, we estimate tenancy ratio from non-RCOM clients is expected to touch 1.39x in FY2018E from NIL in FY2008, reflecting impressive growth and diversification away from just RCOM.

Exhibit 13: RCOM, non-RCOM GBT tenancy ratios

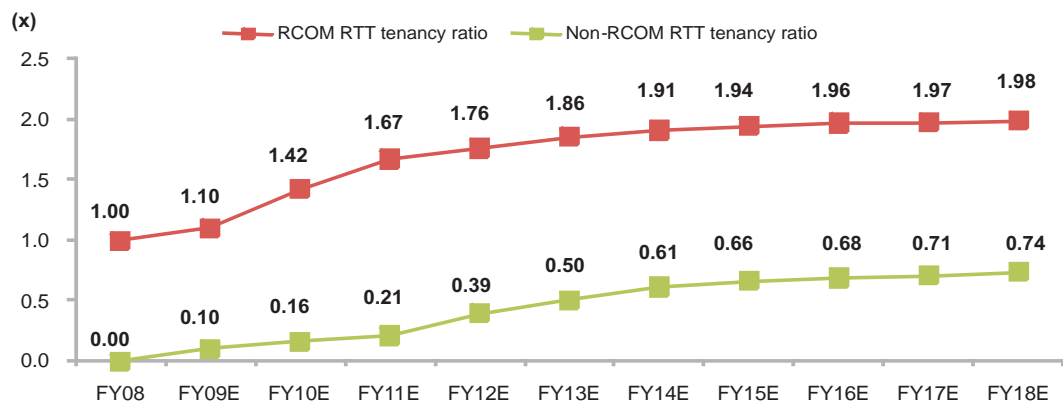


Source: Company, Angel Research

As regards RITL's RTT tenancy ratios, we expect RCOM to account for the lion's share again, touching nearly 2x levels in FY2018E from 1x in FY2008

As regards RITL's RTT tenancy ratios, we expect RCOM to account for the lion's share again, hitting nearly 2x levels in FY2018E from 1x in FY2008, thereby accounting for a significant 73% of RTT Revenues in FY2018E. We have been conservative in our estimates for non-RCOM RTT tenancy ratios and expect it touch 0.74x by FY2018E from NIL in FY2008. This is on account of the lower shareability of RTTs v/s GBTs. We expect RCOM to serve as the 'anchor tenant' on RITL's towers and consequently, the telco will account for a significant portion of the company's RTT Revenues given the maximum of three tenancy slots available on an average RTT.

Exhibit 14: RCOM, non-RCOM RTT tenancy ratios



Source: Company, Angel Research

Revenue growth to be robust led by higher tenancy ratios

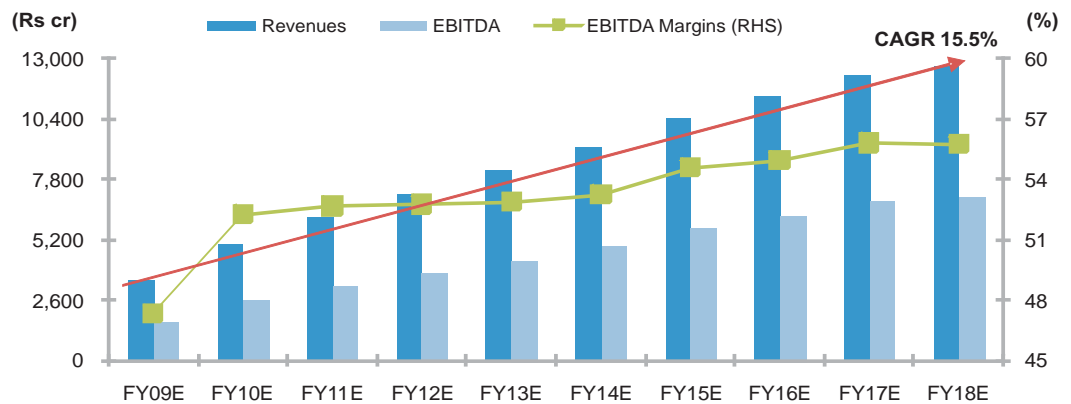
We expect RITL to grow its Revenues at a CAGR of 15.5% over FY2009-18E to hit Rs12,665cr

We expect RITL to grow its Revenues at a CAGR of 15.5% over FY2009-18E to Rs12,665cr in FY2018E (Rs3,461cr in FY2009E). This will be led by the ever-increasing tenancy ratios expected, with RCOM as the 'anchor client' also aided by robust growth in non-RCOM tenancy ratios. Assuming arm's length relationship between RCOM and RITL and non-discriminatory pricing, we expect total Revenues from RCOM to grow at a CAGR of 9.9% over FY2009-18E to hit Rs7,666cr (Rs3,282cr in FY2009E), while Revenues from non-RCOM clients are expected to clock a robust CAGR of 44.8% to hit Rs4,999cr (Rs179cr in FY2009E).

We have taken rentals per tenancy slot per month at around Rs39,608 for GBTs in FY2009; for RTTs, the figure stands at Rs24,250

In terms of pricing, assuming capex recovery of 12-15%, we have taken rentals per tenancy slot per month at around Rs39,608 for GBTs in FY2009; for RTTs, the figure stands at Rs24,250. We have factored in 2.6% CAGR decline in lease rentals over FY2009-18E for both GBTs and RTTs, as increasing tenancy ratios lead to scale benefits. Apart from this, we expect competitive pressures to also cap any chances of an increase in rentals going forward.

Exhibit 15: RITL - Robust growth in Revenues, EBITDA, EBITDA Margins



Source: Company, Angel Research

We estimate EBITDA Margins to cross 50% by FY2010E

In terms of the cost structure, key cost items for a towerco are Lease Rentals, which are paid out to the land owner include power and fuel costs, employee expenditure and annual maintenance (AMC) costs. Power and Fuel costs are variable in nature and are passed on to the tenant. Going ahead, we expect an escalation in the lease rentals and power and fuel costs on account of the increasing costs of these items. However, increasing tenancy ratios are likely to lead to strong operating leverage and scale benefits, as the cost of adding new tenants to a towerco's tower is minimal. This is likely to enable RITL manage any escalation, leading to a robust EBITDA Margin profile. We estimate EBITDA Margins to cross 50% by FY2010E.

GBT Revenues to drive overall Revenue growth

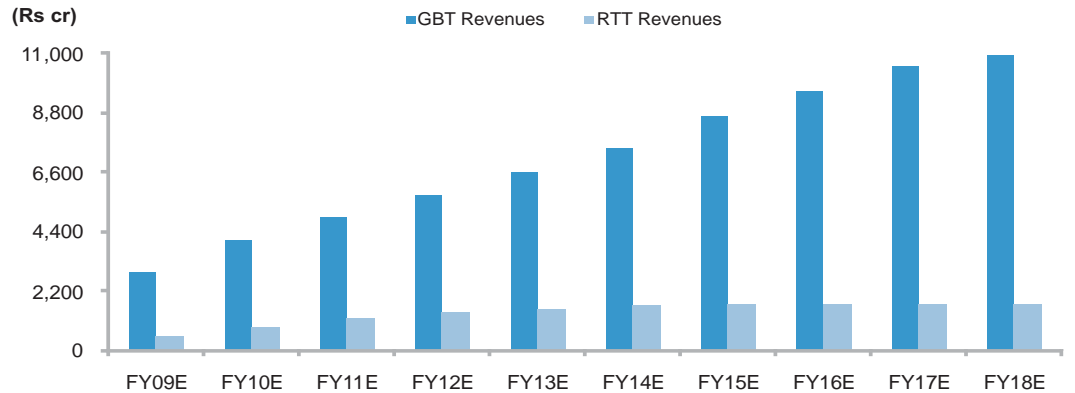
We estimate RITL's GBT Revenues to clock a 15.9% CAGR over FY2009-18E to hit Rs10,947cr

We estimate RITL's GBT Revenues to clock 15.9% CAGR over FY2009-18E to hit Rs10,947cr (Rs2,895cr in FY2009E). This is expected to be the main growth driver for overall Revenues over the period. Of GBT Revenues, we estimate RCOM-led Revenues to grow at a CAGR of 9.8% over the mentioned period to hit Rs6,413cr (Rs2,763cr in FY2009E), while non-RCOM Revenues are expected to grow at a strong CAGR of 48.2% to hit Rs4,534cr (Rs131cr in FY2009E). RITL's GBT Revenues are expected to account for around 87% of total incremental Revenues over FY2009-18E.

We estimate RITL's RTT Revenues to clock a CAGR of 13.1% over FY2009-18E to hit Rs1,718cr

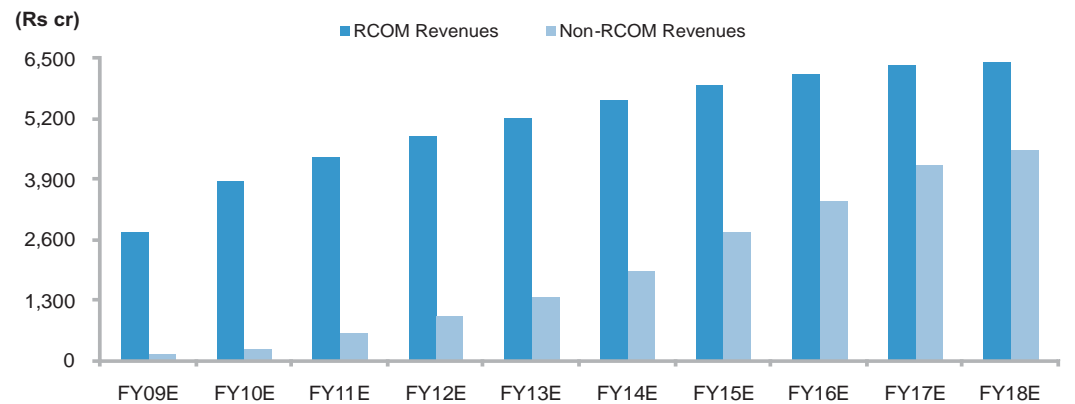
We estimate RITL's RTT Revenues to clock a CAGR of 13.1% over FY2009-18E to hit Rs1,718cr (Rs566cr in FY2009E). Of this, we estimate RCOM-led Revenues to grow at a CAGR of 10.3% over the mentioned period to hit Rs1,254cr (Rs519cr in FY2009E), while non-RCOM Revenues are expected to grow at a CAGR of 28.9% to hit Rs465cr (Rs47cr in FY2009E).

Exhibit 16: RITL - GBT, RTT Revenues



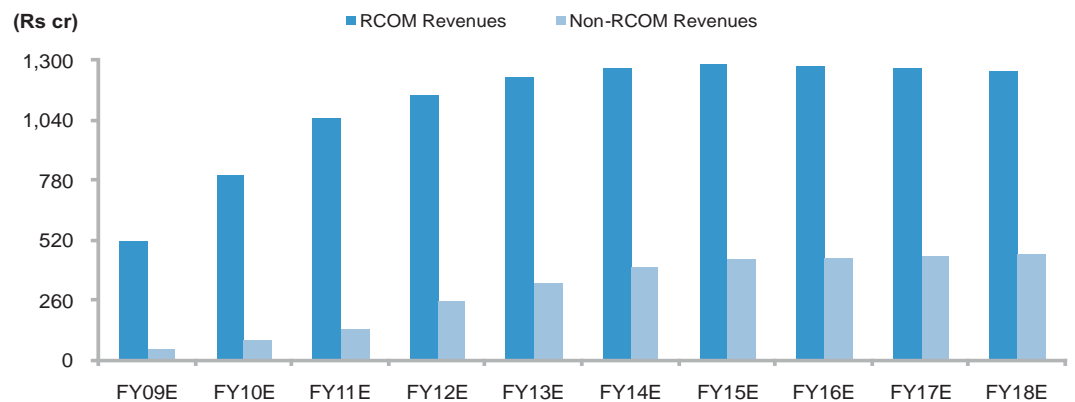
Source: Company, Angel Research

Exhibit 17: RITL GBT Revenues - RCOM, non-RCOM



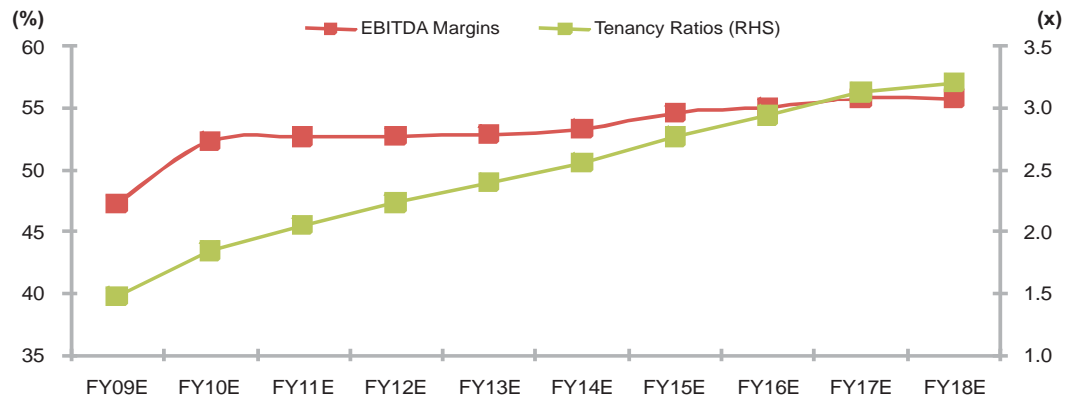
Source: Company, Angel Research

Exhibit 18: RITL RTT Revenues - RCOM, non-RCOM



Source: Company, Angel Research

Exhibit 19: EBITDA Margins, Tenancy Ratios - Strong correlation



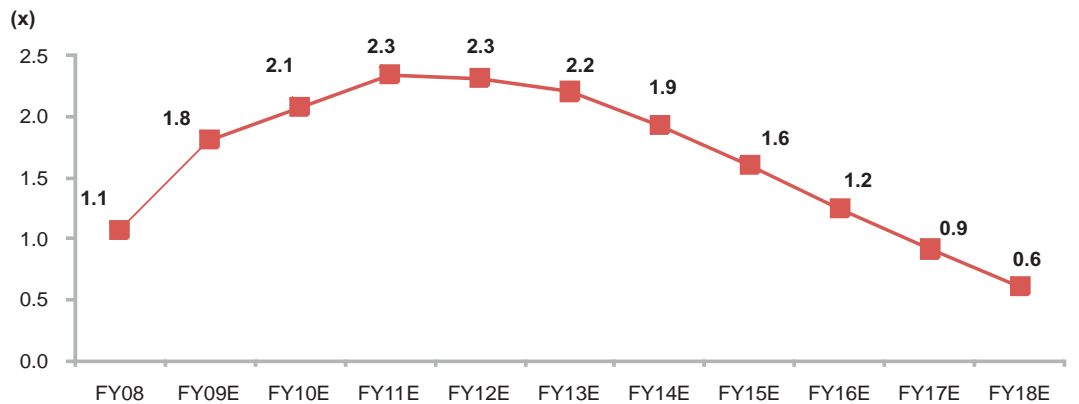
Source: Company, Angel Research

To invest over Rs28,000cr over the next 10 years

We expect RITL to spend Rs28,258cr towards capex until FY2018E to expand RCOM's network and cover nearly the entire population

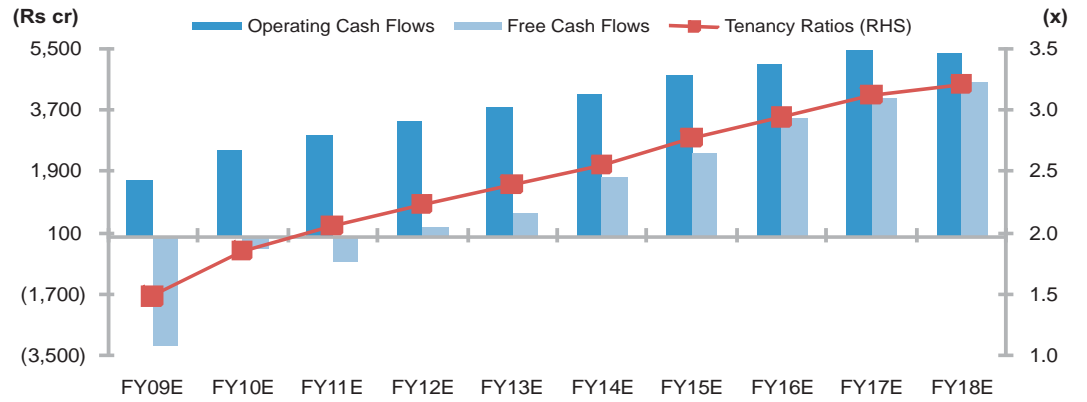
RITL's ambitious growth plans over the next few years will be mainly driven by RCOM's network expansion plans. We expect RITL to spend Rs28,258cr towards capex until FY2018E to expand RCOM's network, particularly in rural areas and cover nearly the entire Indian population. For this purpose, the company will have to raise debt in the initial years, leading to a peak Debt-Equity ratio of 2.3x in FY2011E. However, as the company witnesses increasing tenancy ratios going forward, its cash flows are expected to rise substantially and post-FY2011, we estimate the company's debt-equity ratio to fall steadily to just 0.6x in FY2018E.

Exhibit 20: RITL Debt-Equity ratio - Peaking in FY2011E



Source: Company, Angel Research

Exhibit 21: RITL Cash flows, Tenancy Ratios - Direct correlation



Source: Company, Angel Research

Exhibit 22: Profit and Loss Account										
(Rs cr)										
Y/E March	FY09E	FY10E	FY11E	FY12E	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E
Sales	3,461	4,998	6,169	7,181	8,169	9,201	10,414	11,335	12,275	12,665
% chg		44.4	23.4	16.4	13.8	12.6	13.2	8.8	8.3	3.2
Cost structure										
Lease Rentals	634	824	988	1,136	1,276	1,415	1,547	1,663	1,768	1,825
% chg		29.9	19.9	15.0	12.3	10.9	9.3	7.5	6.3	3.3
% of sales	18.3	16.5	16.0	15.8	15.6	15.4	14.9	14.7	14.4	14.4
Power and Fuel Costs	743	983	1,225	1,436	1,643	1,841	2,032	2,205	2,344	2,420
% chg		32.3	24.5	17.3	14.4	12.0	10.4	8.5	6.3	3.3
% of sales	21.5	19.7	19.9	20.0	20.1	20.0	19.5	19.4	19.1	19.1
Employee, AMC and Other Costs	445	578	707	821	931	1,042	1,151	1,236	1,315	1,357
% chg		29.9	22.2	16.1	13.4	12.0	10.4	7.5	6.3	3.3
% of sales	12.9	11.6	11.5	11.4	11.4	11.3	11.0	10.9	10.7	10.7
Total Operating Costs	1,823	2,385	2,919	3,393	3,850	4,298	4,729	5,103	5,426	5,603
% chg		30.8	22.4	16.2	13.5	11.7	10.0	7.9	6.3	3.3
% of sales	52.7	47.7	47.3	47.3	47.1	46.7	45.4	45.0	44.2	44.2
EBITDA	1,638	2,613	3,250	3,788	4,319	4,902	5,685	6,231	6,848	7,062
% chg		59.6	24.4	16.6	14.0	13.5	16.0	9.6	9.9	3.1
EBITDA margin (%)	47.3	52.3	52.7	52.7	52.9	53.3	54.6	55.0	55.8	55.8
Depreciation	834	997	1,047	1,172	1,300	1,263	1,362	1,435	1,497	1,158
% chg		19.6	5.0	12.0	10.9	(2.8)	7.8	5.4	4.3	(22.6)
% of sales	24.1	20.0	17.0	16.3	15.9	13.7	13.1	12.7	12.2	9.1
EBIT	804	1,616	2,203	2,616	3,020	3,639	4,323	4,796	5,351	5,904
% chg		101.0	36.3	18.7	15.5	20.5	18.8	10.9	11.6	10.3
EBIT margin (%)	23.2	32.3	35.7	36.4	37.0	39.6	41.5	42.3	43.6	46.6
Interest Costs	855	1,061	1,282	1,416	1,529	1,515	1,499	1,389	1,248	1,000
% chg		24.0	20.8	10.5	8.0	(0.9)	(1.1)	(7.4)	(10.1)	(19.9)
% of sales	24.7	21.2	20.8	19.7	18.7	16.5	14.4	12.3	10.2	7.9
Profit Before Tax	(51)	555	921	1,200	1,491	2,124	2,824	3,407	4,103	4,904
% chg		(1,183.6)	65.9	30.2	24.3	42.4	33.0	20.7	20.4	19.5
PBT margin (%)	(1.5)	11.1	14.9	16.7	18.3	23.1	27.1	30.1	33.4	38.7
Tax	0	95	313	408	507	722	960	1,158	1,395	1,667
% chg			231.0	30.2	24.3	42.4	33.0	20.7	20.4	19.5
% of PBT	0.0	17.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
Profit After Tax	(51)	461	608	792	984	1,402	1,864	2,249	2,709	3,237
% chg			32.0	30.2	24.3	42.4	33.0	20.7	20.4	19.5
PAT margin (%)	(1.5)	9.2	9.9	11.0	12.0	15.2	17.9	19.8	22.1	25.6

Source: Company, Angel Research

Exhibit 23: Balance Sheet										(Rs cr)
Y/E March	FY09E	FY10E	FY11E	FY12E	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E
SOURCES OF FUNDS										
Net Worth/Equity	5,549	6,009	6,617	7,409	8,394	9,796	11,660	13,909	16,617	19,855
Loan Funds	10,060	12,478	15,534	17,163	18,530	18,941	18,737	17,357	15,216	12,190
Total Liabilities	15,609	18,487	22,151	24,572	26,923	28,736	30,397	31,266	31,834	32,045
APPLICATION OF FUNDS										
Gross Fixed Assets	16,675	19,948	23,268	26,052	28,883	31,578	34,039	35,885	37,428	38,608
Depreciation	1,414	2,411	3,458	4,630	5,930	7,193	8,555	9,990	11,487	12,646
Net Fixed Assets	15,261	17,536	19,809	21,421	22,953	24,384	25,484	25,895	25,941	25,963
Capital work-in-progress	1,250	1,000	1,500	2,000	2,500	2,500	2,500	2,500	2,500	2,500
Current Assets	587	1,781	2,983	3,608	4,269	5,053	5,963	6,800	7,591	8,145
Less: Current Liabilities	1,490	1,830	2,141	2,457	2,798	3,201	3,550	3,929	4,198	4,563
Net Current Assets	(902)	(49)	842	1,151	1,471	1,852	2,413	2,871	3,393	3,582
Total Assets	15,609	18,487	22,151	24,572	26,923	28,736	30,397	31,266	31,834	32,045

Source: Company, Angel Research

Independent Tower Companies

GTL Infrastructure**(Rs37, Not Rated)****Company Background**

GTL Infrastructure (GTLI) is the only listed independent telecom tower company in India and also the largest, with a total of 6,010 towers in its portfolio at the end of FY2008, accounting for over 3% of the total telecommunication tower base in India and nearly 40% of the total tower base of independent tower companies (*Source: GTLI Annual Report*). The company's market capitalisation stands at Rs2,706cr (US \$644mn, at Rs42 to a Dollar). GTLI was established in 2004 and is a pioneer in the area of shared passive telecom infrastructure services in India. It is registered with the DoT as an Infrastructure Provider in Category I (IP-I). It builds, owns, operates and maintains passive network infrastructure on a shared basis to cater to the rapidly growing roll out needs of cellular operators. The company's core business is providing antenna space on its towers that can accommodate multiple tenants (also known as 'co-location').

At the end of 1QFY2009, GTLI had 6,360 towers at various stages of completion, with the number of Ready for Installation of Equipment (RFIE) towers at 4,483, while the balance 1,877 towers were work-in-progress (WIP). The tenancy ratio on the RFIE towers stood at 0.95x, with a total of 4,260 tenants hosting their electronics on these towers. GTLI had a presence in 16 of the 22 telecom circles in India at the end of June 2008, namely Maharashtra, UP (East), Karnataka, Rajasthan, Gujarat, Punjab, Andhra Pradesh, Madhya Pradesh, Haryana, UP (West), West Bengal, Kolkata, Bihar, Tamil Nadu, Orissa and Himachal Pradesh. GTLI's total asset base stood at US \$537mn (Rs2,255cr, at Rs42 to a Dollar).

Business Plans

GTLI has fairly ambitious growth plans, with a target to have 23,700 towers by the end of FY2011, operating across all the 22 telecom circles in the country with a total asset base of US \$1.76bn (Rs6,677cr, at Rs38 to a Dollar). The company aims to meet around 10% of the total demand for towers in India over the next three years. If it achieves its tower roll out targets, GTLI will account for around 7% of the total telecommunication tower base in India in FY2011.

Client Base

GTLI's key clients include Bharti Airtel, Vodafone-Essar, Idea Cellular, Tata Teleservices, Spice Communications, BSNL, MTNL, Aircel, HFCL Infotel and BPL Mobile. Idea Cellular is the company's largest client, accounting for 25% of its tenancy slots in 1QFY2009, followed by Vodafone-Essar with 18% and Bharti Airtel with around 15%. GTLI had also won 421 towers in Phase 1 of the USOF-led subsidy scheme for promoting shared telecom infrastructure to provide connectivity in remote rural areas, involving 7,871 sites to be set up. These accounted for 30% of the tenancy slots in 1QFY2009.

Exhibit 1: Profit and Loss Account					(Rs cr)
Y/E March	FY2005	FY2006*	FY2007*	FY2008	1QFY2009**
Sales	0.1	17.0	50.0	124.6	45.8
<i>% chg</i>		14,923.0	193.9	149.4	155.1
Operating Costs					
Cost of Sales & Services	0.0	1.8	0.9	25.0	11.7
<i>% chg</i>		-	(49.7)	2,695.2	633.0
<i>% of sales</i>	0.0	10.5	1.8	20.1	25.6
Employee Cost	0.3	2.2	5.7	18.2	4.2
<i>% chg</i>		618.7	166.0	217.5	18.6
<i>% of sales</i>	264.9	12.7	11.5	14.6	9.2
Administration & Other Expenses	0.3	5.4	9.7	18.2	7.1
<i>% chg</i>		1,791.5	79.7	87.2	38.3
<i>% of sales</i>	252.8	31.8	19.5	14.6	15.5
Total Operating Costs	0.6	9.3	16.3	61.4	23.1
<i>% chg</i>		1,495.3	74.9	275.7	123.9
<i>% of sales</i>	517.6	55.0	32.7	49.3	50.4
EBITDA	(0.5)	7.7	33.6	63.2	22.7
<i>% chg</i>		-	339.1	87.9	(64.0)
<i>EBITDA Margins (%)</i>	(417.6)	45.0	67.3	50.7	49.6
Other Income	0.0	0.0	2.0	6.3	0.5
Interest & Finance Cost (Net)	0.0	0.7	3.6	7.0	15.2
Depreciation	0.0	19.3	33.4	82.4	29.6
Profit before Tax	(0.5)	(12.4)	(1.4)	(19.9)	(21.6)
<i>% chg</i>		-	-	-	-
<i>PBT Margin (%)</i>	(437.7)	(72.7)	(2.8)	(16.0)	(47.1)
Provision for Taxation	0.0	(1.5)	21.8	39.5	(18.4)
<i>% chg</i>		-	-	81.7	-
<i>Effective Tax Rate (%)</i>		-	-	-	-
Profit after Tax	(0.5)	(10.9)	(23.2)	(59.5)	(3.2)
<i>% chg</i>		-	-	-	-
<i>PAT Margin (%)</i>	(437.7)	(63.9)	(46.3)	(47.7)	(7.0)
EPS (Rs)	(26.5)	(0.9)	(0.4)	(0.8)	(0.0)

Source: Company Annual Reports; * FY2006 implies the 15-month period ending on June 30, 2006 and FY2007 implies the 9-month period ending on March 31, 2007; ** The % change in 1QFY2009 is over 1QFY2008.

Exhibit 2: Balance Sheet				(Rs cr)
Y/E March	FY2005	FY2006*	FY2007*	FY2008
SOURCES OF FUNDS				
Share Capital	25.0	225.0	332.8	734.3
Share Capital Suspense	0.0	85.6	0.0	0.0
Share Application Money	0.0	0.0	0.0	0.0
Amount for Pref. Convertible Warrants	0.0	0.0	0.0	91.3
Reserves & Surplus	0.0	19.9	19.9	197.9
ESOPs outstanding	0.0	0.0	0.4	3.4
Shareholders' Funds	25.0	330.5	353.2	1,026.9
Secured Loans	0.0	433.2	712.1	1,399.0
Unsecured Loans	0.0	17.2	5.7	1,076.7
Loan Funds	0.0	450.5	717.8	2,475.7
Deferred Tax Liability (Net)	0.0	13.5	35.2	74.2
Total Liabilities	25.0	794.5	1,106.1	3,576.8
APPLICATION OF FUNDS				
Gross Block	4.9	173.5	482.5	1,334.4
Less: Acc. Depreciation	0.0	19.3	51.9	131.1
Net Block	4.9	154.2	430.6	1,203.3
Capital work-in-progress	65.2	465.8	539.3	790.5
Current Assets, Loans & Advances	0.7	101.2	98.3	1,651.2
Less: Current Liabilities & Provisions	46.2	23.9	127.1	228.6
Net Current Assets	(45.6)	77.3	(28.7)	1,422.7
Investments	0.0	85.9	130.4	66.3
Profit & Loss Account	0.5	11.4	34.5	94.0
Total Assets	25.0	794.5	1,106.1	3,576.8

Source: Company Annual Reports; * The Balance Sheet for FY2006 is as on June 30, 2006, while the Balance Sheet for FY2007 is as on March 31, 2007.

Essar Telecom Infrastructure Pvt. Ltd.

(Unlisted)

Essar Telecom Infrastructure (ETIPL) is a major independent tower company with a portfolio of over 4,500 sites with 1,000 more under implementation. It is registered with the DoT as an Infrastructure Provider in Category I (IP-I). The company's service offerings include designing, acquiring, procuring and building passive infrastructure for cell sites, operating and maintaining passive infrastructure such as telecommunication towers, shelters, power, batteries, DG and AC, in-building solutions, RF planning and optimization services and offering active sharing when permitted by regulations.

ETIPL has a presence in 14 of the 22 telecom circles in India, namely Mumbai, Maharashtra, Madhya Pradesh, Rajasthan, Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, UP (East), UP (West), Bihar, Orissa, Gujarat and Haryana. The company plans to cover the remaining 8 circles in this financial year (FY2009).

Business Plans

ETIPL's growth plans appear to be highly ambitious, with multi-fold growth in business expected. From a current portfolio of over 4,500 sites, the company expects to build, own, operate and maintain over 10,000 sites at the end of FY2009 and 20,000 sites by FY2010, with a pan-India presence. ETIPL has a capacity to add over 1,000 sites a month and the company is rapidly rolling out its towers to cater to the fast-growing demand for co-location of telecommunication towers in the country. If it is able to achieve its targets, ETIPL will account for around 7% of the total telecommunication tower base in India in FY2010.

Client Base

ETIPL has an impressive client roster, with names like Bharti Airtel, Vodafone-Essar, BSNL, Idea Cellular, Tata Teleservices, Aircel, BPL Mobile and the Cellular Operators' Association of India (COAI) adorning it.

XCEL Telecom

(Unlisted)

XCEL Telecom is an independent tower company with a portfolio of around 1,000 sites (including capital work-in-progress) at the end of FY2008. The company commenced operations in the Punjab and Karnataka circles in July 2007. XCEL was started by former BPL Mobile CEO, Sandeep Basu. It was incubated in October 2006 with an equity commitment of US \$500mn from the Texas-based investment fund, Q Investments. Q Investments, a multi-strategy fund, was founded in 1994 and manages around US \$4bn for institutions, endowments and high net worth families globally.

XCEL Telecom is looking at becoming a 'One-stop Solution Provider' and Network Infrastructure Partner to telcos, WiMAX operators, walkie-talkie operators, 3G operators and ISPs across the country. Its service offerings include provision of shared telecom infrastructure services for both passive infrastructure like telecommunication towers, shelter with air conditioner and diesel generator, and active infrastructure like antennae, Node B, feeder cable and RAN.

XCEL Telecom at the end of FY2008 had a presence in 13 of the 22 telecom circles in India, namely Himachal Pradesh, Punjab, Haryana, Rajasthan, Mumbai, Maharashtra, Karnataka, Bihar, Orissa, West Bengal, Kolkata, the North East and Assam. The circles of Jammu & Kashmir, UP (East), UP (West), Delhi, Madhya Pradesh, Andhra Pradesh and Tamil Nadu (including Chennai) were scheduled to commence with effect from 1QFY2009, while Gujarat and Kerala are expected to commence from 2QFY2009.

Business Plans

XCEL Telecom had a portfolio of around 1,000 towers at the end of FY2008, including capital work-in-progress. The company expects to take this up to 7,000 towers in FY2009, implying a growth rate of 600%, and to 25,000 towers by FY2011, with a pan-India presence. It expects the fund requirements to power this roll out to amount to US \$2.5bn (Rs10,500cr, at Rs42 to a Dollar). These are very ambitious plans and call for a strong focus on flawless execution by the company. If XCEL is able to achieve this target, it will account of around 7.4% of the all-India telecommunication tower base in FY2011. XCEL Telecom also has plans to venture into the South East Asian market and will provide leasing of active infrastructure when permitted for independent BOO (build-own-operate) players.

Client Base

XCEL Telecom counts among its clients, reputed names such as Bharti Airtel, Vodafone-Essar, BSNL, Tata Teleservices, Aircel and Spice Communications.

TowerVision India Pvt. Ltd.

(Unlisted)

TowerVision India (TVIPL) is an independent tower management company specialising in the provision of shared passive infrastructures to wireless operators on the basis of long-term operational lease. TVIPL was established in India in January 2006 and the company's core offerings consist of acquisition, development, maintenance and asset management of telecommunication towers on the basis of BOO (build-own-operate) and SLB (Sale and Leaseback, Acquisition of Spin Offs/Hive Offs) models. The company holds a DoT-issued Infrastructure Provider-Category 1 (IP-1) licence.

TVIPL's main promoter is the Israel-based Fore Group (formerly Elgadcom Group), an international holding and investment company with 20 years of experience in setting up, owning and managing global companies in the Telecom Sector. Fore Group's portfolio includes the co-founding of companies such as Bakcel, a GSM operator in Azerbaijan and Leadcom Integrated Solutions, an international integrator of wireless telecommunication networks.

TVIPL operates in 10 of the 22 telecom circles in India, namely Jammu & Kashmir, Punjab, Haryana, Delhi, Rajasthan, Bihar, Orissa, Mumbai, Karnataka and Tamil Nadu (including Chennai) with a tower portfolio of over 1,000 towers (700 towers in progress). The company expects to expand to the remaining circles of the country in future.

Business Plans

TVIPL has been able to attract international financing through lead investors including Morgan Stanley. According to media reports, in February this year, the company had raised around US \$300mn, with Morgan Stanley contributing a major chunk of the funds for an equity stake. It expects to use these funds to increase the number of towers in its portfolio to 6,000 by the end of FY2009, from around 1,000-odd currently. If TVIPL is able to achieve this, it will account for around 2.5% of the all-India telecommunication tower base in FY2009.

Client Base

TVIPL had, in 2006, closed a Rs250cr deal with Spice Communications to construct and manage 1,000-odd towers for the telco in its circles of operations of Punjab and Karnataka. The company has commercial relationships with operators accounting for around 60% of the Indian Mobile Telephony Sector, with discussions in progress with other operators.

Other independent tower companies

Apart from the above-mentioned companies, there are numerous other independent tower companies operating in the Indian market. Quippo Telecom Infrastructure Limited (QTIL) is one such company. QTIL is a subsidiary of Quippo Infrastructure Equipment Limited, which is a group company of SREI Infrastructure Finance Limited, a listed company. The towerco holds a DoT-issued IP-1 licence for passive infrastructure services and had around 3,100 towers in its portfolio at the end of FY2008 (*Source: GTL Infrastructure Annual Report*). It offers 'plug-n-play' services for mobile operators and counts reputed names like Bharti Airtel, Idea Cellular and Spice Communications, among others, as its clients.

QTIL had won part of Phase 1 of the USOF-led subsidy scheme for promoting shared telecom infrastructure to provide connectivity in remote rural areas, involving a total of 7,871 sites to be set up. The company won 88 towers to be set up in remote rural areas in the UP (West) circle. QTIL also had, towards the end of 2007, bought out a portfolio of 875 telecommunication towers from regional mobile operator, Spice Communications for a sum of Rs600cr.

Apart from QTIL, there are towercos like Aster Teleservices (1,000 towers at end-FY2008), TVS Interconnect Systems (TVS-ICS, 550 towers at end-FY2008), a TVS Group subsidiary, and National Information Technologies (NITEL, now KEC), which had won 384 towers in Phase 1 of the USOF-led subsidy scheme. Foreign tower majors like American Tower, Crown Castle and TowerVision are also looking to build their businesses in the country. Thus, apart from the large operator-owned towercos, there are numerous independent towercos as well, apart from global majors, reflecting competitors of varying sizes. Going ahead, we expect some consolidation to take place in the tower industry and expect the operator-owned towercos to maintain their leadership, given their considerably larger scale, size, potentially faster break-even due to the presence of 'anchor clients' and greater access to financial resources.

Glossary

Technical/Industry-Related Terms

3G	Third generation mobile telecommunication
ADC	Access Deficit Charge
ARPU	Average Revenue Per User
AUSPI	Association of Unified Telecom Service Providers of India
BTS	Base Trans-Receiver Station
CDMA	Code Division Multiple Access
Circle(s)	The 22 service areas that the Indian telecommunications market has been segregated into
COAI	Cellular Operators Association of India
DoT	Department of Telecommunications, Ministry of Communications and Information Technology, Government of India
DTH	Direct to Home
GSM	Global System for Mobile Communication
IP	Internet Protocol
IP-I Provider/IP-II Provider	Infrastructure Provider Category I / Infrastructure Provider Category II
MHz	Mega Hertz
Spectrum	Electromagnetic waves utilized by antennas of appropriate size for transmission of voice and data traffic through telecom networks
TDSAT	Telecom Disputes Settlement Appellate Tribunal
TRAI	Telecom Regulatory Authority of India, constituted under the Telecom Regulatory Authority of India Act, 1997 as amended from time to time
Triple Play Service	Voice, Video (Cable TV) and Data (Internet)
USO	Universal Service Obligation
WiMAX	Worldwide Interoperability for Microwave Access
WLL	Wireless Local Loop
WPC	Wireless Planning Commission

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