Indian Telecom Tower Industry: Consolidation Round the Corner

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The Indian telecom industry has witnessed significant growth in subscriber base over the last decade, with increasing network coverage and a competition-induced decline in tariffs playing facilitators. The growth story and the potential have also served to attract newer players in the industry, with the result that the intensity of competition has kept increasing, forcing the telecom operators (telcos) to look for cost-cutting measures. One such measure has been the hive-off of telecom tower related operations into separate companies to allow for greater operating efficiencies and tower sharing. The attractiveness of the telecom tower industry, given the aggressive network rollout plans of the telcos, has led to the entry of several companies in the fray.

Telecom tower companies with a relatively large portfolio of towers offer certain clear advantages to telcos, including rapid rollout over a large area, and tenancy driven discounts. Further, large tower companies can access capital markets better to fund growth. These advantages make it somewhat difficult for the smaller tower companies to grow, thereby paving the path for consolidation in the industry. So far, the telecom tower industry has witnessed some consolidation, including, among others, Quippo Telecom Infrastructure’s acquisition of Wireless Tata Tele Info Services, and Global Telecom Infrastructure’s acquisition of the tower assets of Aircel Cellular. ICRA expects such consolidation to continue, with the smaller players either getting acquired or merging with one another to stay competitive.
1. India among fastest growing mobile markets globally, but also characterised by intense competition and declining tariffs

Telecommunications in India has grown from a fledgling to a large industry over the last decade, reporting a compounded annual growth rate (CAGR) of 70% in wireless subscriber base between March 1999 and September 2010. During this period, the size of the wireless subscriber base has increased from 0.12 crore to 68.77 crore, taking wireless teledensity up from 10% to 54%.

The growth in subscriber base has been facilitated mainly by the increase in network coverage and decline in tariffs and handset prices. The Government of India’s auction of 2G licences in January 2008 also gave an impetus to the telecom industry’s growth by providing more spectrum and allowing new players to enter the arena.

With new players coming in, the intensity of competition in the industry has increased, especially over the last four years, leading to a steep decline in the Average Revenue per User (ARPU). This has been exerting pressure on the profitability of the telcos. The market shares of the telcos, as seen in Figure 2, reflects the fragmented nature of the industry, which features as many as 15 players. Figure 3 brings out the pressure on ARPUs for GSM\(^1\) and CDMA\(^2\) operators over the last four years.

Figure 2: Market Shares of Telcos (as of Sept 30, 2010)\(^3\)

![Figure 2: Market Shares of Telcos (as of Sept 30, 2010)](image)

**Source:** TRAI Database

### Notes

1. Global System for Mobile Communications
2. Code Division Multiple Access
2. Emergence of telecom towers as a separate industry

Competitive pressures aside, the growth in subscriber base has necessitated expansion of network coverage, which in turn has driven the telcos to make sizeable investments in active and passive infrastructure. This has added to the strain on their finances, coming on top of profitability pressures and a larger debt burden. Given this situation, the telcos, to reduce costs and focus on their core operations, have been hiving off their tower assets into separate companies (refer annexure on page 9 for functions performed by a tower infrastructure company). This has helped the telcos improve their capital structure and lower operating expenditure. Moreover, the segregation of tower assets into separate companies has increased the prospects of sharing of passive infrastructure and hence of having an additional revenue stream, thereby increasing the potential of value-unlocking for the telcos. It is against this background that “telecom towers” has emerged as a separate industry during the last few years. Government’s efforts on increasing the sharing of passive infrastructure have also encouraged the growth of telecom towers as an industry by itself.

Figure 4: Growth of Telecom Tower Industry

Source: ICRA Research

Over the last few years, driven by the need for more towers and increasing tower sharing, many independent telecom tower companies (ITTCs) have also emerged, although these remain much smaller in relation to the telecom operator-owned tower companies.

Figure 5: Ownership of Tower Companies

1. Telcos-owned Tower Companies: This category consists of companies created by hiving off the tower portfolios of telcos into subsidiaries\(^4\). Among operator-owned companies, while most are owned by a single telco, there is one joint venture, Indus Towers Limited (ITL), the shareholding in which is held by three telcos: Bharti Airtel Limited, the Vodafone group, and the Idea Cellular group. Over 80% of the telecom towers in the country are owned and managed by telco-owned companies.

Source: ICRA Research

2. Independent Telecom Tower Companies: This category consists of companies that are not owned or managed by telcos. These companies build, own and lease telecom towers to telcos. This is a fragmented segment with a large number of players. In this segment there are four to five large players, even as there are over 50 players that are significantly smaller in size than the telco-owned tower companies.

\(^4\) A few companies (especially BSNL) still own the tower assets in their books.
3. Fragmented industry dominated by a few large players

The top six telecom tower companies hold more than 90% of the country’s total tower portfolio. The various tower companies in India along with their tower portfolios are listed in Table 1.

<table>
<thead>
<tr>
<th>Players</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indus Towers Limited (ITL)</td>
<td>32.2%</td>
</tr>
<tr>
<td>Bharat Sanchar Nigam Limited (BSNL)</td>
<td>15.2%</td>
</tr>
<tr>
<td>Reliance Infratel Limited (RITL)</td>
<td>15.2%</td>
</tr>
<tr>
<td>Viom Networks Limited (Viom)</td>
<td>11.2%</td>
</tr>
<tr>
<td>Bharti Infratel Limited (BIL)</td>
<td>9.7%</td>
</tr>
<tr>
<td>GTL Infrastructure Limited (GTL)</td>
<td>9.5%</td>
</tr>
<tr>
<td>American Tower Company Limited (ATC)</td>
<td>2.3%</td>
</tr>
<tr>
<td>Tower Vision India Limited (TVIL)</td>
<td>0.9%</td>
</tr>
<tr>
<td>India Telecom Infra Limited (ITIL)</td>
<td>0.3%</td>
</tr>
<tr>
<td>Aster Infrastructure Limited (Aster)</td>
<td>0.3%</td>
</tr>
<tr>
<td>Others</td>
<td>3.2%</td>
</tr>
</tbody>
</table>

Source: ICRA Research and media reports

While there are over 50 independent telecom tower companies in India, most of them have a small tower portfolio. Nevertheless, the small tower companies compensate for their smaller portfolio by offering towers concentrated in a particular geography, which makes it easier for them to attract telcos looking to rollout services in that location.

4. Globally, infrastructure sharing prevalent, but there are no large ITTCs

Globally, tower sharing has emerged as a key growth driver for the telecom industry, providing such benefits as cost reduction, faster rollout, and improvement in asset turnover. However, the ownership and management of telecom towers have largely been in the hands of telcos. Nevertheless, the telecom tower industry has gained prominence as an independent industry primarily in two countries, India and the USA.

Source: ICRA Research and media reports
The USA and India have witnessed segregation of telecom towers by telcos, who have either hived off the towers business into separate entities or sold their tower assets to a third party, thereby paving the path for the emergence of telecom towers as a separate industry. Further, independent players have also developed telecom towers, which they lease to the telcos. In other parts of the world, cell site sharing is either already in practice or has been initiated, but telecom towers are managed and operated primarily by the telcos.

5. Dynamics of tower industry favour large players

The large telecom tower players are at a competitive advantage over their smaller counterparts, given the capital intensive nature of the tower industry, and the dynamics of the Indian telecom industry, characterised by increasing competition, pressures on profitability, and criticality of time-to-market. The factors favouring the larger players in the industry are discussed in the following subsections. Given these factors, the smaller players are likely to find it challenging to capture any significant share of the anticipated growth in the tower industry, paving the way for consolidation.

5.1. Ability to attract larger number of tenants per tower, leading to higher profitability

The tower industry is capital intensive and its profitability is directly related to the tenancy ratio (average number of tenants per tower) as it leads to significant addition to revenue at a relatively low incremental cost. According to ICRA’s estimates, the financial metrics of the telecom tower business improve significantly once the tenancy ratio crosses 1.8 times. Assuming an initial capital expenditure of Rs. 26 lakh (for ground based tower, or GBT) and a life of 15 years, the manner in which the IRR moves at various occupancy levels is depicted in Figure 9.

A key factor enabling higher tenancy for a telecom tower company is growth in its tower portfolio. Tower companies with larger tower portfolios have been able to command higher tenancy on account of following factors:

a. Telcos prefer to deal with large tower companies that offer wider coverage. This helps the telcos avoid dealing with multiple tower companies (which makes managing network rollout easier), and also lowers logistics costs.

b. Telcos can benefit from volume discounts that come with placing orders for a number of towers with large tower companies.

c. Each incremental tenancy on a given tower lowers the rental for all the tenants. Thus large tower companies with an already high tenancy are more likely to attract more tenants.
5.2. Captive tenancy a source of advantage for some large tower companies

The large tower companies by virtue of being owned by one or more telecom operators enjoy the benefit of captive tenancy. This is because the telcos are expected to give preference to their own tower companies when they (the telcos) roll out their networks (refer Table 3). The smaller independent telecom tower companies, on the other hand, have no such advantage and for them the scope of business growth is thus lower.

Further, given the growth plans of the telcos, the operator-owned telecom tower companies are likely to be able to grow their tower portfolios at a relatively faster pace, further widening the gap between the large and small players.

Table 3: Telcos and Tower Companies

<table>
<thead>
<tr>
<th>Telecom Operator</th>
<th>Main Tower Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bharti</td>
<td>BIL/ITL</td>
</tr>
<tr>
<td>Reliance</td>
<td>RITL</td>
</tr>
<tr>
<td>Vodafone</td>
<td>ITL</td>
</tr>
<tr>
<td>BSNL</td>
<td>MTNL, BSNL and Others</td>
</tr>
<tr>
<td>Idea</td>
<td>ITL</td>
</tr>
<tr>
<td>Tata</td>
<td>Viom</td>
</tr>
<tr>
<td>Aircel</td>
<td>Own and Others</td>
</tr>
<tr>
<td>MTNL</td>
<td>BSNL, MTNL and Others</td>
</tr>
<tr>
<td>Others</td>
<td>Own and Others</td>
</tr>
</tbody>
</table>

Source: ICRA Research

5.3. Ability of large tower companies to offer attractive rentals a competitive advantage

The large tower companies benefit from a wide portfolio and relatively more established tenancy, which allows them to offer discounts on rentals, making them more attractive for telcos. This is especially true in the current scenario in which telcos, faced with profitability pressures, are seeking to lower their costs. Moreover, with the launch of 3G services and the introduction of mobile number portability, the competitive pressures are likely to increase further, and this in turn would bring cost reduction under sharper focus.

5.4. Seeking faster 3G, BWA network-rollout, telcos likely to favour larger tower players

In May 2010, Government of India completed its auctions for 3G and broadband wireless access (BWA) spectrums. The telcos have paid large fees for acquiring these spectrums, and given the scale of investments, the operators now need to roll out the 3G/BWA networks at a rapid pace. Further, the fact that 3G spectrum has been allocated in a higher frequency band of 1800-2100 MHz, the requirement of telecom towers is expected to be high. Thus, the telcos are expected to give preference to large telecom tower companies to achieve faster network rollout.

Table 4: Results of 3G Auction

<table>
<thead>
<tr>
<th>Operator</th>
<th>Circles</th>
<th>Amount (Rs. Cr.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bharti Airtel</td>
<td>13</td>
<td>12,295</td>
</tr>
<tr>
<td>Aircel</td>
<td>13</td>
<td>6,499</td>
</tr>
<tr>
<td>Idea</td>
<td>11</td>
<td>5,769</td>
</tr>
<tr>
<td>Reliance</td>
<td>13</td>
<td>8,585</td>
</tr>
<tr>
<td>Stel</td>
<td>3</td>
<td>338</td>
</tr>
<tr>
<td>Tata</td>
<td>9</td>
<td>5,864</td>
</tr>
<tr>
<td>Vodafone</td>
<td>9</td>
<td>11,618</td>
</tr>
<tr>
<td>BSNL</td>
<td>20</td>
<td>10,187</td>
</tr>
<tr>
<td>MTNL</td>
<td>2</td>
<td>6,564</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>67,719</strong></td>
</tr>
</tbody>
</table>

Source: Department of Telecommunication (DoT) Database

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5. Tata Teleservices Maharashtra Limited
6. The coverage of a telecom tower is determined by the Base Transceiver Station (BTS) which contains the equipment for transmitting and receiving radio signals (transceivers), antennas, and equipment for encrypting and decrypting communication signals. The coverage, in terms of area, of a BTS reduces as the frequency band at which it operates increases. Thus, in order to provide coverage in a given area, the number of BTSs required at spectrum of 1800-2100 MHz would be higher than the number of BTSs required at spectrum of 800 – 900 MHz
5.5. Financially strong players better placed to make the required capital expenditure

According to ICRA’s estimates, the size of the total wireless subscriber base in the country would cross 90 crore by March 2013. Given such growth in subscriber base, the expected increase in coverage requirements for the rollout of 3G and BWA networks, and the scattered distribution of the rural population, significant investments in setting up telecom towers are anticipated over the next few years. Besides, capital expenditure would also be required towards maintenance, upgrade and replacement of existing towers, which will only push up the funding requirement.

The capital intensive nature of the telecom tower industry is likely to make it challenging for the smaller companies to significantly expand their scale. Thus the tower addition anticipated is likely to be driven mainly by the larger players. In this context, their relatively strong financial position enables them to ensure faster rollout of new towers, making them more attractive for telcos.

5.6. Large players more likely to make investments in research and development for reducing energy cost at towers

For a telco, after site rental, the next biggest operating expenditure at a tower is the power expense (mainly for air-conditioning and running of equipment). The power requirement of a tower can be met from either of the two sources, the grid or diesel generator (DG) sets, with the latter being more expensive. As telcos expand into rural areas, availability of grid power may be a constraint, which would then force the towers to rely more on high-cost DG sets. To retain their own attractiveness and enable telcos control their overall operating cost, tower operators would want to bring down the power cost through various means. But this would require investments in research and development towards exploring alternative means of power generation and/or ways to reduce power consumption. Such investments are more likely to be undertaken by large players, given their relatively strong financial profile. Thus, the ability of large players to lower operating costs increases their bargaining power and competitive advantage over the smaller players.

6. Acquisitions – a possible route for faster tower rollout

The competitive scenario in the telecom industry in India has made new customer acquisition difficult and increased the cost of the same. This, in addition to the high capital expenditure involved in rolling out services in a new geography, has made time-to-market a critical success factor for telecom players. There is thus a need for faster rollout of towers in new geographies and for new services like 3G/BWA. In this context, the preference of telcos to deal with larger tower companies, as discussed earlier, is likely to exert greater pressure on these companies to roll out towers faster. In some cases, the pace at which the telcos need to roll out services may outstrip the pace at which towers can be erected by the tower companies. Thus, for some tower companies, one of the possible ways to expand the tower portfolio faster is by acquiring smaller tower companies that have a presence in small geographical areas.

7. Some level of consolidation has already taken place

The telecom tower industry has exhibited a trend of consolidation over the last two years: Quippo Telecom Infrastructure Limited (QUIL) has acquired an equity stake in Wireless TT Info Services Limited (WTTIL; renamed Viom Networks Limited) and merged the tower portfolios of the two companies; while GTL and ATC have grown their tower portfolios through acquisition. Some of the key details of these deals are presented in Table 5.
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Table 5: Merger and Acquisition Deals in Telecom Tower Industry

<table>
<thead>
<tr>
<th>Company</th>
<th>Acquirer</th>
<th>Valuation (Rs. cr.)</th>
<th>No. of Towers</th>
<th>Tenancy (at acquisition)</th>
<th>Valuation per tower (Rs. cr.)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTTIL</td>
<td>QTIL</td>
<td>13,000</td>
<td>18,000</td>
<td>1.7x</td>
<td>0.72</td>
<td>Jan 09</td>
</tr>
<tr>
<td>Essar Telecom</td>
<td>ATC</td>
<td>800-850</td>
<td>1,700</td>
<td>1.4x</td>
<td>0.47-0.50</td>
<td>Mar 09</td>
</tr>
<tr>
<td>Xcel Telecom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aircel Cellular Limited</td>
<td>GTL</td>
<td>8,500</td>
<td>17,500</td>
<td>-</td>
<td>0.49</td>
<td>Dec 09</td>
</tr>
</tbody>
</table>

Source: ICRA Research and media reports

Conclusion

Despite the consolidation witnessed in the recent past, the telecom tower industry in India continues to be highly fragmented. Going forward, ICRA expects the trend of consolidation to continue, with the smaller players either getting acquired by the larger ones or merging with one another to remain competitive. However, the pace of consolidation would depend on the prevailing market conditions; pace of infrastructure rollout by the telcos, especially for 3G and BWA; and the financial flexibility of the larger tower companies.
Functions of a Tower Infrastructure Company

A tower infrastructure company provides passive infrastructure on a sharing basis to telecom operators. The role of a tower infrastructure company may be summarised as follows:

⇒ Site acquisition, including entering into long-term agreements with land owners
⇒ Obtaining of necessary regulatory approvals
⇒ Erection and commissioning of tower and allied equipment
⇒ Provision of support services such as back-up power, air-conditioning, and security
⇒ Provision of turnkey solutions to telecom companies such as sourcing of equipment, testing, and maintenance

Types of Towers: Telecom towers are broadly classified on the basis of their placement as Ground-based and Roof-top.

a. **Ground-Based Tower:** Erected on the ground, ground-based towers (GBTs) are taller (typically 200 to 400 feet) and are mostly used in rural and semi-urban areas because of the easy availability of real-estate space there. GBTs involve a capital expenditure in the range of Rs. 24 to 28 lakh, depending on the height of the tower.

b. **Roof-Top Tower (RTT):** Roof-top towers (RTTs), which are generally placed on the roofs of high-rise buildings, are shorter (than GBTs) and more common in urban and highly populated areas, where there is paucity of real-estate space. Typically, these involve a capital expenditure of Rs. 15 to 20 lakh.
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