

Telecom Update

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With the entry of new player, the telecom industry has witnessed significant changes with respect to industry structure (number of telcos), trend in ARPU, broadband subscriber base, data usage by subscribers and financial performance which is explored in the report.

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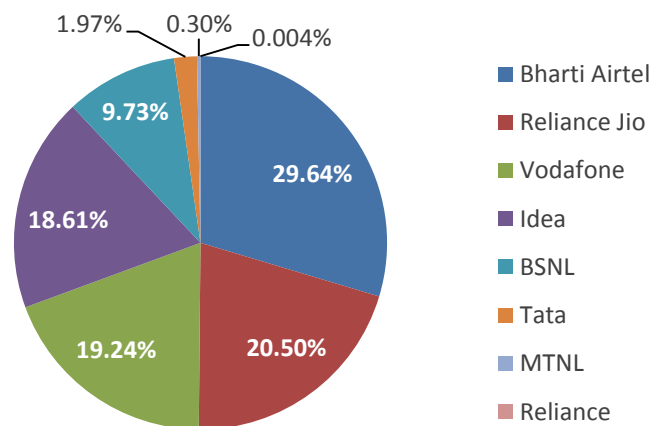
In addition to this, the industry also saw introduction of new policy and various recommendations by TRAI. Some of the announcements made by the government included approval of National Digital Communications Policy 2018, recommendations made by TRAI on auction of spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300-3400 MHz and 3400-3600 MHz bands are also discussed here.

The Report concludes that while the government looks very keen on introducing 5G technology in India, the Indian telcos (two of the top three leaders) may not appear very determined to bid for 5G spectrum auction.

Market share of wireless service providers

As per the Telecom Regulatory Authority of India (TRAI), the total telecom wireless subscriber base in India stood at 1,166.9 million as on 31st August 2018. Of this, the subscriber base is dominated by Vodafone-Idea which together has a largest share of 37.85% that represents a subscriber base of 441.7 million wireless users.

Chart 1: Market share of wireless service providers as on 31st August 2018



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Source: TRAI

This is followed by Bharti Airtel, Reliance Jio and BSNL that have a share of 29.64% (345.9 million), 20.5% (239.2 million) and 9.73% (113.5 million), respectively. The other telcos Tata, MTNL and Reliance have relatively a very smaller share in total wireless subscriber base as shown in the chart above.

It is to be noted that the market share scenario was very different two years back in 2016 when Reliance Jio had not entered the telecom market. At this time, the telecom industry comprised 11 operators with the largest share of 25.03% being held by Bharti Airtel with a wireless subscriber base of 257.5 million. This was followed by Vodafone (19.46%), Idea (17.19%), BSNL (8.98%), Aircel (8.72%), Reliance (8.46%), Tata (5.66%) and Telenor (5.17%). The share of other players Sistema, MTNL and Quadrant was in the range of 0.3%-0.7%. The total wireless subscriber base was 1,028.88 million as on 31st August 2016.

Reliance Jio entered the telecom market on 5th September 2016 with its ‘Welcome Offer’ that provided free data services, free voice calls and no roaming charges across the country till the end of December 2016. Post this, the company continued to provide various attractive offers and cheap data services to its users which aided the telco to garner a market share of 20.5% in two years of its launch. **Also, the company’s entry reduced the number of telecom players and resulted in consolidation of the telecom industry.**

Boost to broadband subscribers base and data usage

The launch of services by the new entrant not just changed the structure of telecom industry but also boosted the data usage of telecom subscribers. The wireless broadband subscriber base which was 154 million users as on August 2016 surged to a base of 298.4 million subscribers as on August 2017, growth of 93.7% y-o-y. The base further strengthened to 445.6 million users by August 2018, implying an increase of 49.4%.

The tremendous rise in the broadband subscriber base was mainly driven by cheap data services offered by Reliance Jio which, in turn, also compelled other telcos to reduce their data charges in order to retain their market share. **Subsequently, cheap data services provided by telecom industry was the prime and major reason for the spurt in wireless subscriber base of users.**

Chart 2: Wireless broadband subscribers base (in million)

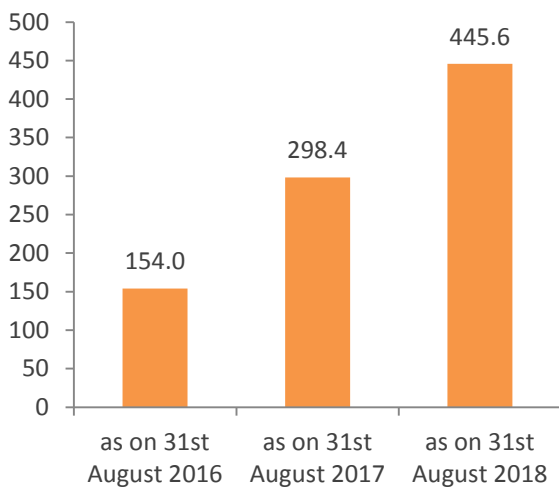
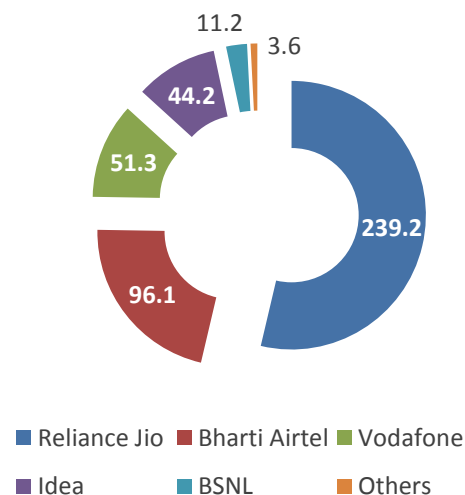


Chart 3: Share of wireless broadband service providers as on 31st August 2018 (in million)



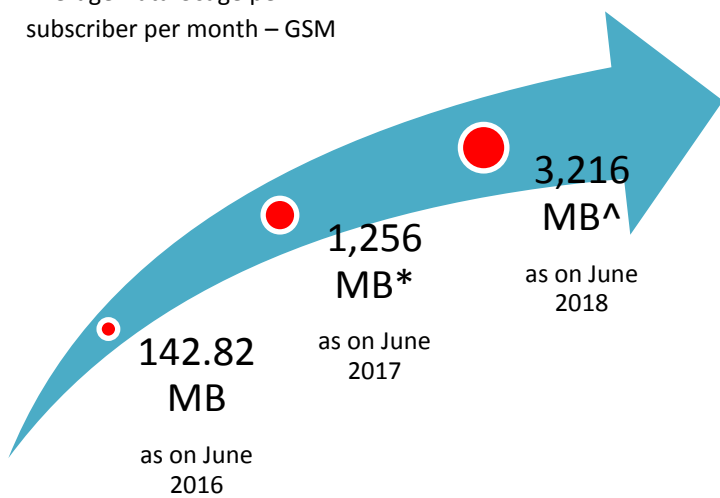
Source: TRAI

As can be seen from chart 3, Reliance Jio that initiated the trend of cheap data services is the leader when it comes to wireless broadband subscriber base. As on 31st August 2018, the company provides wireless broadband services to more than half of the users (239.2 million subscribers) that indicate a share of 53.7%. Bharti Airtel holds the second largest share of 21.6% with a subscriber base of 96.1 million users followed by Vodafone (11.5%), Idea (9.9%), BSNL (2.5%) and other telcos (0.8%).

We expect the growth momentum in broadband wireless subscriber base to continue on account of increasing usage of data services. With data being available at affordable prices, more subscribers are expected to get added to the base. **The broadband wireless subscriber base is likely to reach 515-530 million by March 2019. It is estimated to grow by 30%-35% y-o-y.**

Surge in data usage

Average Data Usage per subscriber per month – GSM



In addition to the growth in broadband subscriber base, there has been a noteworthy increase in terms of data usage as well. The average data usage per subscriber per month GSM which was at 142.82 MB as on June 2016 rose sharply to 1,256 MB as on June 2017 with the introduction of cheap data services. The average data usage continued to be on uptrend and it surged to 3,216 MB as on June 2018.

Source: TRAI

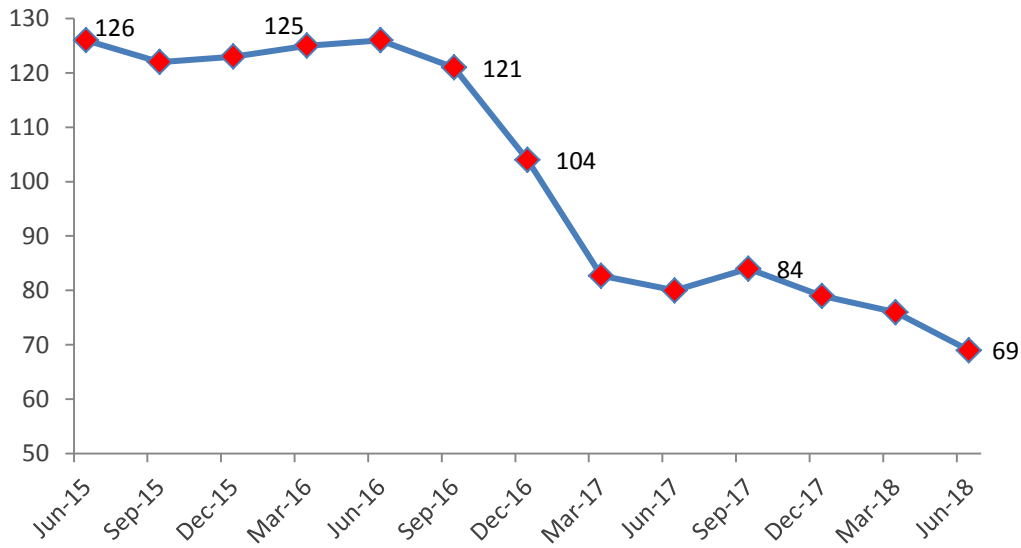
* GSM (2G+3G+4G)
^ GSM including LTE (2G+3G+4G)

While the cheap data services offered by telcos prompted the growth in broadband data usage and subscriber base, it led to the decline in realisations of the players resulting in lower Average Revenue per User (ARPU). **The growth in broadband subscriber base was thus at the expense of telcos’ realisations.**

Trend in ARPU

During FY16 and the first two quarters of FY17, the all-India GSM ARPU remained in the range of Rs.121 to Rs.126. In the December 2016 quarter, the ARPU declined to Rs.104 a sequential fall of 14% with the introduction of cheap data services by the new entrant on 5th September 2018. Post this quarter, the ARPU is on a free fall as can be seen in the chart below except for the September 2017 quarter where it increased by 5% q-o-q to Rs.84. *In the June 2018 quarter, the ARPU fell below Rs.70 mark for the first time where it stood at Rs.69 during the quarter.*

Chart 4: All-India GSM ARPU (in Rs.)



Source: CMIE

The pressure on ARPU is expected to continue in the coming quarters on a y-o-y basis. Nevertheless, the ARPU may see an improvement on a sequential basis in the second half of FY19 on the back of minimum recharge packs announced by the telcos across India. These plans aim to generate revenue from low-revenue customers which, in turn, will also reduce the number of inactive users.

Financials of telecom industry

The downtrend in ARPU on account of price-war among the telecom service providers post the entry of new telco affected the industry’s sales and profits. Resultantly, the aggregate sales performance of the industry continued to remain under pressure in each of the quarters beginning with December 2016 quarter. The industry reported decline in sales on a y-o-y basis for the eighth consecutive quarter ended September 2018 where aggregate sales of the nine telecom service providers fell by 8.2%.

Chart 5: Sales growth rate (y-o-y % change)

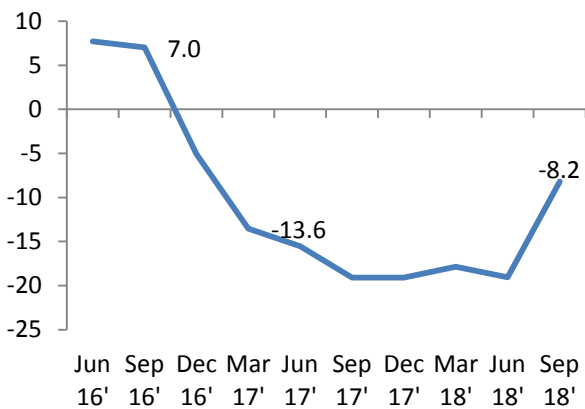
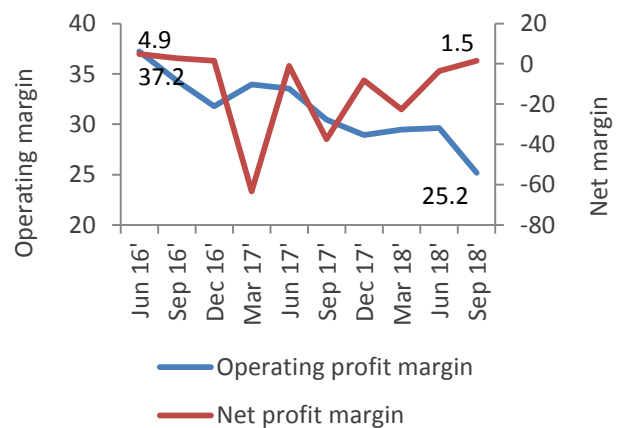


Chart 6: Operating and net margin (in %)



Source: Ace Equity

Also the industry's performance remained subdued at the operating and net profit level with the launch of cheap services by the new telco. Subsequently, the operating profit margin of the industry deteriorated in the range of 284 basis points to 527 basis points y-o-y in each of the quarters during the period January 2017 to September 2018. The industry' operating profit margin eroded by 527 basis points y-o-y and stood at 25.17% in the September 2018 quarter. In addition to this, the industry continued to remain in losses at the net level in each of the quarters during the period January 2017 to June 2018. The net profit margin of the industry was at 1.48% in the September 2018 quarter.

Besides, the Interconnection Usage Charges (IUC) was reduced to 6 paise per minute from 14 paise per minute in September 2017 and International Termination Charges (ITC) was cut to 30 paise per minute from 53 paise per minute in January 2018 which also impacted the industry's performance during FY18. The industry financials do not include the financial numbers of Reliance Jio.

In the September 2018 quarter, sales of Reliance Jio were up by a strong 50.3% on a y-o-y basis. Similarly, the company's EBITDA grew by a healthy 147.6% and its EBITDA margin expanded by 15.2% to 38.7% and the company made net profits in the September 2018 quarter as against losses made in the corresponding quarter a year ago. The company attributed this growth to rise in subscriber additions and its customer engagement.

With the entry of new player, the industry witnessed changes with respect to industry structure (number of telcos), trend in ARPU, broadband subscriber base, data usage of subscribers and financial performance of the industry as discussed above. In addition to this, the industry also saw introduction of new policy and various recommendations by TRAI. Some of the announcements made by the government that includes approval of National Digital Communications Policy 2018, recommendations by TRAI on auction of spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300-3400 MHz and 3400-3600 MHz Bands and 5G Steering Committee Report: Making India 5G ready are discussed here.

National Digital Communications Policy 2018

The objective of this document is to lay out a policy and principles framework that will enable creation of a vibrant competitive telecom market to strengthen India's long term competitiveness and serve the needs of our aspiring nation.

Strategic objectives of National Communications Policy: Looking at 2022

- Provisioning of broadband for all
- Creating 4 million additional jobs in the digital communications sector
- Enhancing the contribution of the digital communications sector to 8% of India's GDP from ~ 6% in 2017
- Propelling India to the top 50 nations in the ICT development index of ITU from 134 in 2017
- Enhancing India's contribution to global value chains
- Ensuring digital sovereignty

Mission

In order to achieve these objectives, the policy envisages three missions (Connect India, Propel India, and Secure India) and strategies for these missions.

Connect India: Creating a robust digital communication infrastructure

The goals to be achieved under this strategy by 2022 includes

- Provide universal broadband coverage at 50 Mbps to every citizen
- Provide 1 Gbps connectivity to all Gram Panchayats of India by 2020 and 10 Gbps by 2022
- Enable 100 Mbps broadband on demand to all key development institutions; including all educational institutions
- Enable fixed line broadband access to 50% of households
- Achieve 'unique mobile subscriber density' of 55 by 2020 and 65 by 2022
- Enable deployment of public Wi-Fi hotspots; to reach 5 million by 2020 and 10 million by 2022
- Ensure connectivity to all uncovered areas

Propel India: Enabling next generation technologies and services through investments, innovation, indigenous manufacturing and IPR generation

The goals to be achieved under this strategy by 2022 includes

- Attract investments of USD 100 billion in the digital communications sector
- Increase India's contribution to global value chains
- Creation of innovation led start-ups in digital communications sector
- Creation of globally recognized IPRs in India
- Development of standard essential patents (SEPs) in the field of digital communication technologies
- Train/ re-skill 1 million manpower for building new age skills
- Expand IoT ecosystem to 5 billion connected devices
- Accelerate transition to Industry 4.0

Secure India: Ensuring digital sovereignty, safety and security of digital communications

The goals to be achieved under this strategy by 2022 includes

- Establish a comprehensive data protection regime for digital communications that safeguards the privacy, autonomy and choice of individuals and facilitates India's effective participation in the global digital economy
- Ensure that net neutrality principles are upheld and aligned with service requirements, bandwidth availability and network capabilities including next generation access technologies
- Develop and deploy robust digital communication network security frameworks
- Build capacity for security testing and establish appropriate security standards
- Address security issues relating to encryption and security clearances
- Enforce accountability through appropriate institutional mechanisms to assure citizens of safe and secure digital communications infrastructure and services

On the whole while the objectives are laudable, there would be several challenges that have to be overcome to achieve them. Funding would be the most important link here.

To support the objectives under Digital Communications Policy and to work on the deployment of 5G technology the government has come up with various recommendations on this spectrum.

Recommendations on spectrum auctions in India

On 1st August 2018, Telecom Regulatory Authority of India (TRAI) released recommendations on auction of spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300-3400 MHz, 3400-3600 MHz bands. With this notification on spectrum auction, TRAI recommended bidding of the spectrum that was not sold in October 2016 auction. The spectrum had remained completely unsold in 700 MHz and 900 MHz bands. Citing high price and the lack of ecosystem for spectrum in 700 MHz band as major barriers, the telecom companies opted for spectrum in 1,800/2,300/2,500 MHz bands that can be used to provide 4G services to their customers.

Table 1: Band-wise units that remained unsold in October 2016 auction

Band	Units that remained unsold in October 2016 auction (in MHz)
700 MHz	770
800 MHz	58.75
900 MHz	9.4
1800 MHz	46.8
2100 MHz	275
2300 MHz	NA
2500 MHz	230

Source: TRAI

Introduction of new bands (3300-3400 MHz and 3400-3600 MHz band)

Apart from this unsold spectrum, TRAI also recommended introduction of spectrum to be auctioned in new bands which are 3300-3400 MHz and 3400-3600 MHz bands. The spectrum in frequency range 3300-4200 MHz is expected to come up as primary band for early 5G introduction.

Reserve price suggested by TRAI

Table 2: Band-wise reserve price recommended by TRAI

Band	Recommended reserve price per MHz (in Rs. crore)
700 MHz	6,568
800 MHz	4,651
900 MHz	1,622
1800 MHz	3,285
2100 MHz	3,399
2300 MHz	960
2500 MHz	821
3300-3600 MHz	492

Source: TRAI Note: The price is aggregate of 22 circles for all bands except for 800 MHz band (19 circles), 900 MHz band (7 circles), 2100 MHz band (21 circles), and 2500 MHz band (12 circles)

One of the reasons for absence of bidding in 700 MHz band in October 2016 auctions were higher spectrum prices for spectrum under this band. Considering this fact, the price suggested by TRAI for each unit of 700 MHz band is at Rs.6,568 crore. This is 42.7% lower compared to the earlier reserve price of Rs.11,475 crore. To buy spectrum under this band, the telco will have to buy a minimum block of 5 MHz. Thus, overall the telco will have to pay a total of Rs.32,840 crore.

The reserve price set for spectrum under new band 3300-3600 MHz band is Rs.492 crore. This band will have to be put to auction in the block size of 20 MHz. Thus, a telco will have to shell out Rs.9,840 crore to buy this spectrum. Also, TRAI suggested minimum amount of spectrum that a bidder (existing licensees and new entrants) is required to bid for other bands.

Just after few days, **the Steering Committee** on behalf of the high level forum was out with a report '**Making India 5G ready**' that provided recommendations on subjects like spectrum policy, regulatory policy etc. for early deployment of 5G in India. The report articulates the vision for 5G in India and recommends policy initiatives and action plans to realize this vision.

In the report, the Steering Committee stated that the cost of spectrum, relative to per capita GDP, is much higher than most countries. It commented that in recent years, the high cost of spectrum has left large quantities of unsold spectrum. Thus, the report mentioned that it is important that India correct these anomalies in 5G. Besides, the report recommended that most guidelines on regulatory matters be promulgated by March 2019 to facilitate early 5G deployment.

Is India 5G ready?

With the announcements coming at this pace, it looks like the government is very keen on introducing 5G technology in the country. The Indian telcos (two of the top three leaders) on the other hand do not appear very determined to bid for 5G spectrum due to stressed financial condition and lack of compatible device ecosystem. While Vodafone Idea indicated that it has plans to focus on 4G network expansion, Bharti Airtel mentioned that is unlikely to opt for 5G spectrum if the sale takes place anytime soon. This gives a clear signal that India is not ready for 5G spectrum sale at least in 2019.

CARE Ratings' View

- *We expect the growth momentum in broadband wireless subscriber base to continue on account of increasing usage of data services. With data being available at affordable prices, more subscribers are expected to get added to the base. The broadband wireless subscriber base is likely to reach 515-530 million by March 2019. It is estimated to grow by 30%-35% y-o-y.*
- *The pressure on ARPU is expected to continue in the coming quarters on a y-o-y basis. Nevertheless, the ARPU may see an improvement on a sequential basis in the second half of FY19 on the back of minimum recharge packs announced by the telcos across India. These plans aim to generate revenue from low-revenue customers which, in turn, will also reduce the number of inactive users.*
- *The Indian telcos (two of the top three leaders) do not appear very determined to bid for 5G spectrum due to stressed financial condition and lack of compatible device ecosystem which gives a clear signal that India is not ready for 5G spectrum sale at least in 2019.*


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