

## cARPU diem!

“Librarian, or Farmer?”, is the question posed by Nobel-prize winning author Daniel Kahneman in his bestselling book *Thinking, Fast and Slow*. He writes about one Steve - a randomly selected individual from a representative sample in the United States. “Steve is very shy and withdrawn, invariably helpful but with little interest in people or in the world of reality. A meek and tidy soul, he has a need for order and structure, and a passion for detail. Is Steve more likely to be a librarian or a farmer?” As the author explains, most people instinctively jump to choose ‘librarian’. But male farmers in the US outnumber male librarians by a ratio of about 20 to 1. Hence only 5 in every 100 would be librarians, and thus Steve is much more likely to be a farmer. Mr. Kahneman argues that most people ignore such “base rates” when making decisions.

Another familiar “base rate” in the investment world is that the telecom sector *never* makes money for its investors. One look at the share price charts of the top 3 global telecom players (AT&T, Verizon and Deutsche Telekom) is enough. These are down anywhere ~35 to ~80% from their peaks back in 2000. The sector is notorious for a deadly cocktail of high capex, low ROCE and high leverage, and few companies in the space have created lasting wealth. Despite being cognizant of all this, we recently added a telecom company called Bharti Airtel to our ~20-stock concentrated high-conviction portfolio. To quote a Bon Jovi billboard smash-hit, are we “Livin’ on a Prayer”?

The short answer is “no”, but first, a quick recap of the telecom sector in India. It’s hard to believe that just ten years ago, there were 14 telecom operators in the country. Today, nearly 95% of the active subscriber market-share is held by just 3 players, viz. Reliance Jio, Bharti Airtel and Vodafone Idea. Two important events took place that led to the market structure today:

- i) In 2012, citing an arbitrary grant of 2G spectrum licenses, the Supreme Court cancelled 122 unified access services licenses issued to 8 telecom players. This led to a first round of player-exits.
- ii) In 2016, Reliance Industries (today India’s largest company by market-cap) with a cash rich balance sheet launched its own telecom venture named Jio. By offering bundled voice-and-data packages, mobile data tariffs fell sharply from ~USD 1.5/GB to ~USD 0.1/GB, the lowest in the world. Per capita data consumption increased from ~500MB per month in 2016 to now ~20GB. Other telecom incumbents were left in deep financial distress.

Other issues have surfaced from time to time, including AGR or Adjusted Gross Revenue demands, spectrum charges demands and requirements of large payments upfront, which led to further consolidation including Bharti buying Telenor and, Vodafone and Idea merging. Despite having a primarily 3-player market, Voda-Idea (VI) has struggled. In FY2022 for instance, VI had debt of ~USD 25 bn and an annualized EBITDA run-rate of <~USD 1 bn, while continuing to bleed on subscribers – so a precarious position when seen from any vantage point. To improve the viability of the Indian telecom industry and to sustain multiple players, the government took several initiatives such as cushioning liquidity to pay off AGR dues, moratorium in spectrum arrears payment, reduction in bank guarantees and others. While these measures provided a lifeline for VI’s survival, it strengthened the operations of Bharti and Jio significantly.

What does mobile phone usage in India look like today? As of 30<sup>th</sup> Sep 2022 (latest quarterly data), there are nearly 1.1 billion wireless (i.e. mobile) subscribers, roughly 55% urban and 45% rural. Overall tele-density is ~83%, urban at 130% (some have dual-SIMs) while rural is 58%. Total wireless broadband users have nearly quadrupled from 200 mn in Sep’16 pre-Jio to ~800 mn in 2021. This is in-turn driving 4G adoption, with 4G penetration in CY21 at 56% as against 16% in CY16. Cheaper smartphones and phasing out of 2G is expected to help increase 4G penetration to ~76% by 2025.

Split by company, since 2016, Jio has gone from 0 subscribers to an incredible ~419 mn, while Bharti has gone from ~260 mn to ~365 mn, and VI has lost out, going from ~380 mn to ~250 mn. In fact, VI has been bleeding subscribers at a crippling rate of ~2-3 mn a month on average for the last 5 years, all of which have gone to Bharti and Jio. It’s not just the subscriber count that matters though. If there is not enough revenue and free cash generation, companies cannot reinvest to maintain, upgrade and expand their infrastructure – which is all the more critical now

that India is on the cusp of 5G adoption (more on this below!). What all this industry consolidation and reduction in competitive intensity has resulted in - is the revival of pricing power. With only 3 large players, substantial capex already done and 5G related expenses ahead, there is little reason to keep undercutting one another. There is in fact a need to demonstrate sustained profitability sooner than later. The industry has seen two rounds of ~20% tariff hikes - first in Dec'19 and then then in Nov'21. We believe the cash-friendly winds of change in the Indian telecom sector have started blowing, and this is what excites us about Bharti Airtel.

If there is one critical metric to track in this space, it is ARPU or Average Revenue Per User, on a per-month basis. The ARPU for the sector as a whole today is ~INR 131 (i.e. USD 1.65), while that for Bharti's India mobile business is ~INR 178 (~USD 2.01). Bharti's ARPU is expected to touch ~INR 266 (~USD 3.28) by FY26 with ~350 mn subscribers. Rising digitization and improved awareness of the benefits of internet connectivity implies mobile internet penetration should only continue to increase. India already leads as the country with the highest number of YouTube users at over 467 mn. There is a growing OTT (Over The Top) culture as well, with not just Netflix and Disney-Hotstar, but several Indian / regional options too like Liv, Zee5, Voot and SunNXT. A 3-minute song on Spotify consumes 2MB of data versus a 30-minute TV show needing ~165MB, so the need for data is likely to keep increasing.

How will Bharti deliver on higher ARPU? By its focus on mining premium customers across categories. As such, Bharti's headline tariff is at a ~5-10% premium to Jio. Bharti is consciously targeting the top 50 mn high value households to increase its wallet share. This is a reasonable target given ~30 mn households are already using some of Airtel's services, for example ~18 mn use postpaid mobile, ~17.5 mn use digital TV and ~5 mn use home and broadband services. The company has also launched Airtel Black, which combines mobile, DTH (Direct to Home) and Fiber, all in one plan. As a customer journeys from feature-phone to 4G smartphone to postpaid customer to Airtel Black, not only does ARPU jump 1-5 to 2x in each step, but this premiumization results in increased customer stickiness as well.

Under the onslaught of Jio's aggressive launch campaign, most competitors buckled, but not Bharti. Over a two-year period, Bharti has increased revenue share in 21 out of 22 circles (licensed service areas), while Jio has lost share in 15 circles. Vi lost revenue market share in 20 circles, largely due to lack of investment in capacity enhancement and upgradation. In Q1FY20, Vi's subscriber share was ~33% while Bharti's was ~29%. Cut to today, and Vi's share has fallen to ~22%, while Bharti's has risen to ~32%.

What else is on offer? While its India mobile business contributed ~53% to Bharti's revenues and EBITDA in FY22, other key businesses include its mobile business in Africa (~30%), an enterprise business (~10%), and fixed broadband and DTH (~5%). Airtel Africa is a leading provider of telecom and mobile-money services across 14 African countries with a total of ~135 mn subscribers. This business is expected to grow revenues steadily at ~9-10% CAGR over the next ~3-5 years. The Enterprise business is likely to be a big market opportunity for Bharti in fast growing (>25% CAGR) areas such as data centers, cloud, cybersecurity, Internet of Things (IoT) and others. The company is a leader in Enterprise, with ~32% market share and works with >3500 enterprises including government agencies and small and medium businesses. EBITDA margins for this segment are ~40%, and EBITDA could grow at a healthy clip over the next ~3-5 years.

The Home Services business includes fixed line and broadband with ~5 mn subscribers, up from ~2.4 mn two year ago. ARPU here has come off however due to rising competition. But Bharti expects the broadband industry pie itself to grow, anticipating the subscriber base to expand from ~27 mn now to ~40 mn in ~3 years. There is also the Airtel Payments Bank business, which is the company's digital bank offering, and one of the country's only profitable fintech companies. In a country with ~300 mn underbanked individuals, the company has ~130 mn customers, and has a cross-sell and up-sell captive base of its ~365 mn mobile subscribers.

That's not all. The most exciting aspect of growth will perhaps come from the next frontier, i.e., 5G. What does India's 5G landscape look like today? In August 2022, the Indian government concluded the 5G spectrum auctions, with ~51GHz lapped up for a cost of ~USD 20 bn across the top 3 telcos, to be amortized and paid over the next decade.

Jio bid for the expensive 700MHz band as it plans to launch Stand-Alone (SA) 5G – similar to T-Mobile in the US. Bharti on the other hand, will use its existing 4G infrastructure, along with the 3.5GHz spectrum won in the 5G auctions, and provide non-SA (NSA) 5G, similar to Verizon and AT&T, citing the infancy of the 5G ecosystem. NSA 5G for Bharti will result in up to 50% lower operating expenses, and works well for speed and capacity, but less so for coverage. This makes sense, given the divergent strategies for both companies - Bharti's approach is to cover ~5,000 towns by Mar'24, while Jio seeks a pan-India 5G footprint by Dec'23.

How is the 5G experience on the ground so far? It's still early days, but newspapers and TV channels and billboards in the major cities have begun displaying ads for 5G by Bharti and Jio. Select users have received beta tryouts, where ridiculous speeds of over 1.5 Gbps have been witnessed, which is 10x of most home broadband connections. So, the trial-phase is certainly good, but further buildout would also depend on consumer migration to 5G. Only ~50 mn devices are 5G ready today, but Ericsson expects this number to rise to ~500 mn in 5 years. To put this in perspective, ~110 mn 5G subscriptions were added globally between Jul-Sep'22, bringing the total to about ~870 mn. Device costs continue to fall, and the cheapest 5G smartphone today is available for as low as INR 10,000 (~USD 125).

Bharti today serves over 1,200 global enterprises, 2,000 large and 1 million medium/small businesses across India and ranks among the top 3 mobile service providers in the world by number of subscribers. Multiple tariff hikes, cumulatively >50% – unheard-of in the past decade – led to a ~39% increase in ARPU over FY19-22 and a ~5.3% revenue market share gain for Bharti. In the same period, EBITDA has doubled, adding ~USD 3.9 bn as against average capex (ex-spectrum) of ~USD 2.8 bn (flat over the period). Despite upcoming investments in 5G, we expect that Bharti's Free Cash Flow conversion (i.e., FCF/EBITDA) and ROCE to increase and net-debt/EBITDA to decrease.

Are there risks? There always are, but we think the risk-reward stacks up well. Any increase in competitive intensity (again!) will impact pricing power, denting revenue growth and margins. But given the current duopolistic backdrop where the top 2 players (Jio and Bharti) are expected to have ~72% of FY25's subscriber share, and where VI is in dire need of cash, a re-emergence of predatory pricing is unlikely. The other major risk is regulatory, given the sector is highly regulated. But looking at the supportive actions of the govt. over the last few years where it has tried to stabilize the sector, knee-jerk policy changes are unlikely.

For the sake of completeness, we must mention that we not only own Bharti in our portfolio, but also Reliance Industries (the parent company of Jio). For reference, Jio contributes ~34% of RIL's EBITDA, but there are other businesses in the RIL group, making Bharti the more telecom-focused investment amongst the two. We believe that all 1.4 billion Indians, whether farmers, librarians or others are going to not just contribute to this sector's growth but also benefit from its ubiquitous technology. It might be time for India's Telecom sector to seize the day!

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Data sources: publicly available media articles, sector reports.

Prior Editions of Access India Equity Insights:

1. All's Well That Trends Well – Nov 2022 ([link](#))
2. 'Foods' for Thought – Oct 2022 ([link](#))
3. EV Wonder – Sep 2022 ([link](#))
4. Forest or Trees – Aug 2022 ([link](#))

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