

CCS

insight



INDIA

**HALCYON DAYS AHEAD IN A
FOUR-OPERATOR MARKET**

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EXECUTIVE SUMMARY

The consolidation process in India is moving along at a rapid pace. In February 2017, Bharti Airtel agreed to acquire Telenor India; a month later, Vodafone and Idea Cellular announced they would merge their activities. Consolidation is bringing to an end almost two decades of market chaos, although the recent aggressive entrance by Reliance Industries' Jio unit is continuing the market disruption — for now.

68%

believe the market will consolidate to just four operators over the next three years

A survey of telecom executives by CCS Insight found that 68 percent believe the market will consolidate to just four operators over the next three years. In this report, we examine what a stable, consolidated market would look like and its implications for mobile network operators, suppliers of network equipment and mobile devices, infrastructure companies and consumers. Notably, the survey also found that a slim majority believes that Vodafone will still be in India in five years' time.

With a population of more than 1.25 billion people, India represents a huge market for mobile communications. It has attracted many billions of dollars of investment since the mid-1990s from domestic and international companies. Some players have survived, but many have invested and subsequently withdrawn, often losing most of their investments.

After a decade of initial consolidation until the mid-2000s, a much-publicized and criticized auction of 2G licences in 2008 resulted in as many as 15 operators owning spectrum in at least one of India's 23 operating circles, with up to 10 operators competing in an individual circle by 2010.

This untenable situation led to bankruptcies and market consolidation, with a smaller cluster of national operators remaining.

CCS Insight believes market consolidation will be a positive outcome for network operators, consumers and manufacturers of infrastructure and handsets, but perhaps less positive for the companies that operate cell towers in India.

INTRODUCTION

The modern-day Indian mobile communications market came into existence after the 1994 National Telecommunications Policy, which introduced the concept of “telecommunications for all”. The country was divided into 23 operating circles and liberalization of the industry started, with operating licences awarded to bidding companies. The companies had to be majority-owned by an Indian entity, with foreign investors allowed to own up to a 49 percent stake.

The 1995 auction in India of GSM spectrum was a bidding frenzy. Largely financed by the considerable operating profits of incumbent foreign operators, companies were invited to bid for one of two operating licences per circle. AT&T, BellSouth, Bezeq, BT, France Telecom, Hutchison, KPN, Singapore Telecom, Swisscom, Telecom Italia, Telstra and Vodafone (including AirTouch) all invested heavily in the industry at some point between 1995 and 2007. Most withdrew with large investment write-downs; the lucky few made a return.

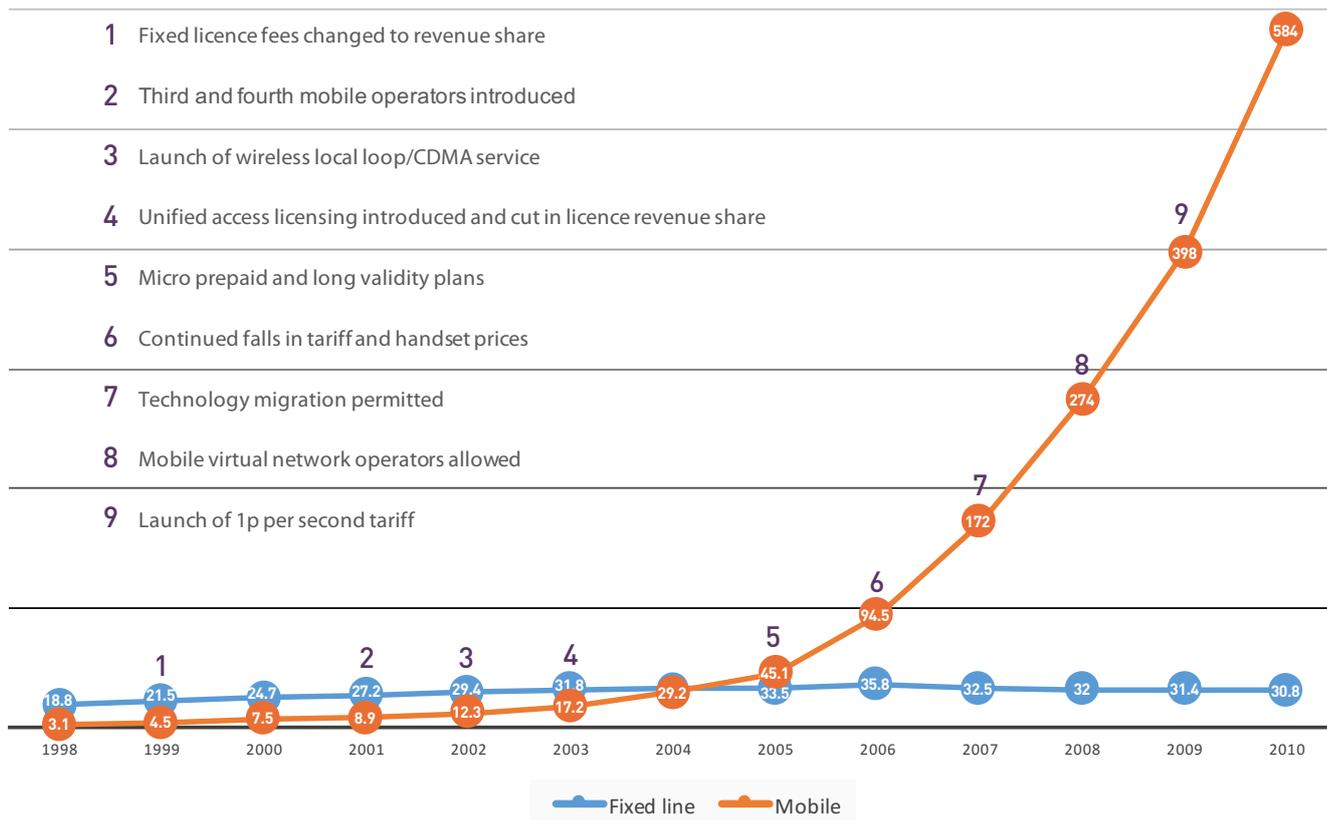
Growth in the market’s early years was slow. The author of this report was, at the time, working as a banker advising one of the European operators on its licence bids and subsequent financing. Business plans were largely based on the precedents of the newly liberalized markets of Europe and South-East Asia, and the subsequent take-up of demand in India was disappointing. Intensive government intervention, fixed licence fees — as opposed to revenue-share fees — and the practice of “receiving party pays” some of the cost of a call acted as bottlenecks.

Fortunately, a series of crucial policy changes provided a much-needed stimulus to the mobile industry. In 1997 the government established the Telecom Regulatory Authority of India (TRAI) with the intention of creating a more independent regulatory body. In 2000, the state-owned operator Bharat Sanchar Nigam Limited (BSNL) was corporatized rather than being run as a government department.

The period from 1999 to 2008 saw further policy measures being introduced. These are summarized in Figure 1.

FIGURE 1

Millions of Connections



Measures such as increasing competition in circles from two to four operators, allowing foreign companies to own up to 75 percent of operating companies, establishing licence fees based on revenue shares and permitting technology migration between GSM and CDMA stimulated growth. Mobile connections rose from 50 million in April 2005 to over 10 times that amount five years later. Finally the industry was thriving.

UNSTABLE AND UNSUSTAINABLE

Despite this background of rapid subscriber growth and strong competition, it is worth pausing to remember that in the first 10 years after TRAI's creation, there were many casualties. By 2007, many of the international investors that entered the market in the mid-1990s had lost patience and withdrawn. Some got their money back. Most didn't.

By 2008, through a combination of more licences being issued and technology migration, many circles had five or six operators. In a bid to increase competition even further, the government issued another 122 licences across the 23 circles on a first come, first served basis. More international operators such as Batelco, Etisalat, NTT DoCoMo and Telenor entered the market with local partners.

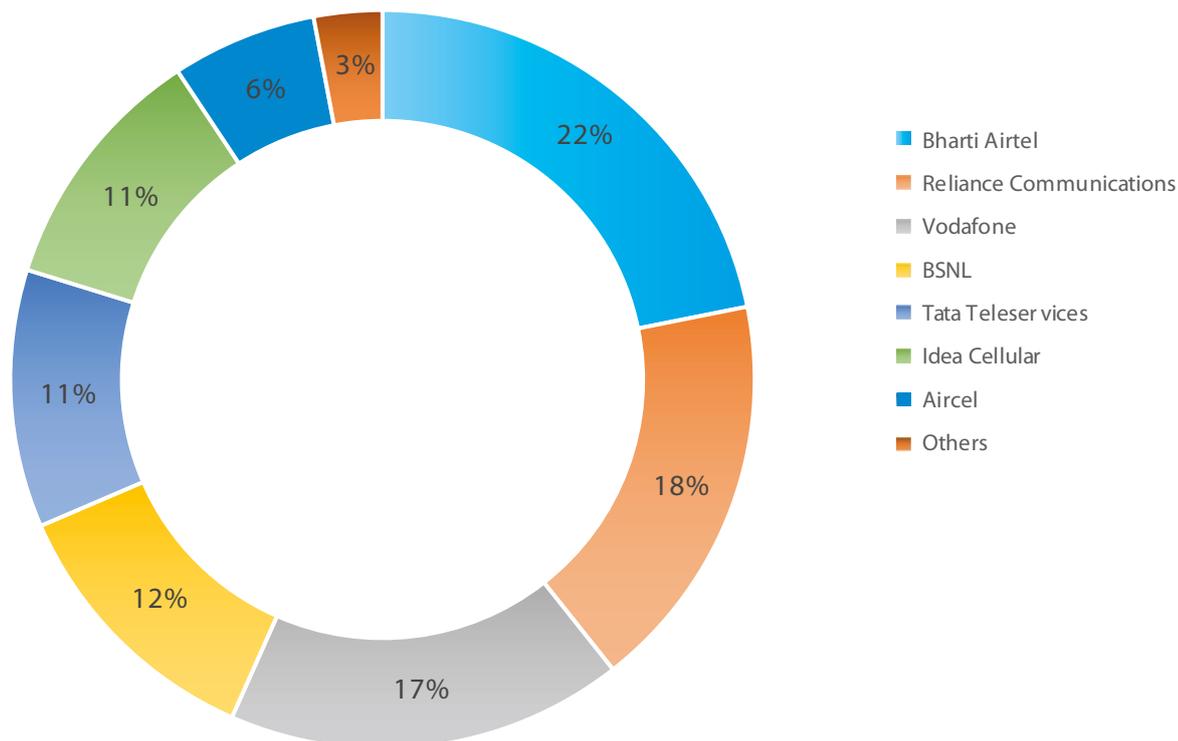
Table 1 and Figure 2 show how the industry looked in March 2010. Incredibly, 11 operators had acquired spectrum to enable services to be launched in almost every circle in India. A growing sense of concern became widespread among those working in the telecom sector. This industry structure was unprecedented and appeared unsustainable.

TABLE 1

Operator	Circles in which licensed	Circles in which licences already held	Major shareholders	Connections (M)
Bharti Airtel	23	23	Bharti Group (45.3%); SingTel (30.4%)	127.62
Reliance Communications	23	23	Anil Dhirubhai Ambani Group	102.42
Vodafone	23	23	Vodafone (67%); Essar Group (33%)	100.86
BSNL	21	21	Government-owned	69.45
Tata Teleservices	23	23	Tata Group; NTT DoCoMo (26%)	65.94
Idea Cellular	23	21	Aditya Birla Group (46.2%); Axiata Group Holding (20.0%)	63.82
Aircel	23	18	Maxis Malaysia (74%)	36.86
MTNL	2	2	Government-owned	5.09
Uninor	23	8	Telenor (67.25%); Unitech (32.75%)	4.26
Sistema Shyam Teleservices	23	11	Sistema (74%)	3.78
Loop Mobile	23	1	Essar Group	2.84
S-Tel	6	3	Sterling Infotech Group (51%)	1.01
HFCL Infotel	1	1	HFCL Group	0.33
Videocon	21	6	Videocon Group	0.03
Etisalat	15	9	Joint venture between Etisalat and DB Realty	0.0004

Mobile network operators, India, March 2010
Source: TRAI, COAI

FIGURE 2



Mobile network operators, India, March 2010
Source: TRAI

Worse was to follow. The following years witnessed allegations of corruption around the 2008 licence issuance process, with the Supreme Court ultimately cancelling all issued licences. Many network operators, investors, financiers and other parties were confused and angry. Batelco and Etisalat walked away. Telenor reapplied for its licences and struggled on gamely for a few more years. The industry had started to lose its credibility.

One of the biggest constraints for operators was limited frequency spectrum. So in 2010 the government started a process to auction off 3G spectrum. Auctions over a 34-day period raised \$15 billion. Although operators and investors were understandably concerned about the costs of the auction, it was conducted in a transparent manner that was much-needed after the 2008 experience.

An interesting and highly significant footnote to the auctions in 2010 was the emergence of Reliance Industries, which paid \$3.7 billion in spectrum fees and equity investments to acquire 20 MHz of LTE spectrum. The company renamed its telecom division Reliance Jio Infocomm in January 2013, and the unit now operates under the Jio brand. It is discussed in a later section of this report.

But still consolidation needed to happen. Operators lobbied the government to amend regulatory guidelines to make it easier for mergers to be agreed and approved. International companies — the brave ones still competing — were allowed to acquire up to 100 percent of the operating companies in which they invested. And spectrum continued to be auctioned off, again with TRAI running a reserve price auction.

FINALLY, CONSOLIDATION

Operators in India like to talk. And talk. Some merger discussions between large mobile network operators go back over a decade. But after so many stop-go discussions, there have been several transactions announced recently that will result in sorely needed consolidation.

Of course, the transactions require approval from the telecom regulatory bodies and competition authorities, but with all parties so keen for consolidation to take place, there appears to be a low risk that the announced transactions will fail to complete, despite the inevitable lobbying that will take place behind the scenes.

The transactions involve seven operators in India, so it is worthwhile considering the current status of the mobile market in terms of connections and the effect the transactions will have on the structure of the industry. Table 2 shows that, in June 2017, Bharti Airtel was the clear market leader with almost 24 percent of mobile connections, followed by Vodafone with 18 percent and Idea Cellular with close to 17 percent. India has 1.17 billion mobile connections and a total population of 1.25 billion.

TABLE 2

Operator	Connections (M)	Market share (%)
Bharti Airtel	276.5	23.5%
Vodafone India	209.8	17.9%
Idea Cellular	196.1	16.7%
Reliance Jio	112.6	9.6%
BSNL	101.8	8.7%
Aircel	90.6	7.7%
Reliance Communications	82.2	7.0%
Telenor	49.3	4.2%
Tata Teleservices	47.5	4.0%
Sistema Shyam Teleservices	4.6	0.4%
MTNL	3.6	0.3%
Total	1,174.6	100.0

Mobile operators, India, June 2017
Source: TRAI

Three recently announced transactions will change the market structure significantly. Firstly, in January 2016, Reliance Communications agreed to acquire the small operator Sistema Shyam Teleservices, whose MTS India brand holds a market share of about 1 percent of connections. In September 2016, it announced a merger with Aircel that will result in equal shareholdings in the merged entity for the two parent companies. The new entity will hold just over 16 percent of the mobile market in terms of connections.

The second notable transaction, announced in February 2017, involved market leader Bharti Airtel acquiring Telenor India. For Bharti Airtel, this was the latest in a long line of acquisitions during its 20-year history. Bharti Airtel's strategy has been to build and maintain its market leadership through small, bolt-on acquisitions. Since 2012, for example, it has acquired LTE spectrum from Qualcomm, Augere and Aircel Dishnet, and spectrum and some operations from Videocon. The purchase of Telenor India would be one of Bharti Airtel's largest in terms of size, but is still a niche, bolt-on given that Telenor India operates in just six circles. Based on June 2017 numbers, a successful acquisition would mean Bharti Airtel holds 28 percent of mobile connections in India.

The third significant transaction was announced in March 2017, just a few weeks after Bharti Airtel's announced acquisition of Telenor India. The transaction had been long mooted but never finalized. Vodafone and Idea Cellular intend to combine operations to create the largest operator in India with a 35 percent market share, based on June 2017 connection numbers. This very statement hints that severe regulatory hurdles will need to be overcome, possibly involving the divestiture of spectrum. But the resultant venture, to be owned 50:50 by its parents, will create a very strong entity.

Table 3 shows how a consolidated market would look, based on June 2017 mobile connections.

TABLE 3

Operator	Connections (M)	Market share (%)
Vodafone-Idea Cellular	405.9	34.6
Bharti Airtel-Telenor	325.8	27.7
Reliance Communications-Aircel	177.4	15.1
Reliance Jio	112.6	9.6
BSNL	101.8	8.7
Tata Teleservices	47.5	4.0
MTNL	3.6	0.3
Total	1,174.6	100.0

Potential consolidation of mobile operators, India, based on June 2017 figures
Source: TRAI

RELIANCE JIO

Earlier we briefly mentioned Reliance Industries and its Jio unit. Reliance Industries is led by Mukesh Ambani; it is separate from Reliance Communications, an entity controlled by his brother, Anil. Following the death of their father, the two sons divided up the assets of the family business and have had a challenging relationship since then.

Jio has long held the potential to shake up the market. It launched services in the fourth quarter of 2016 and quickly amassed 100 million subscribers by offering a limited-time free data package. Jio has ambitions to become a top-four operator by revenue and subscriber market share, squeezing harder the more niche operators that lack scale.

Jio's assertive moves since launch have done little to subdue the chaos of the Indian market. The impact of its entrance on other mobile operators has been startling. Industry revenues have fallen for two quarters in a row. Bharti Airtel, for example, announced bruising results in May 2017. Revenue for the first three months of 2017 was down 10 percent year-on-year, and net profit plummeted by more than 70 percent. The operator blamed the results not only on Jio's aggressive pricing, but on what CEO Gopal Vittal described as a "tsunami of incoming traffic from the new operator, as a result of which significant investments had to be made just to carry the incoming traffic on our network".

Given the current state of the market, coupled with the trend toward consolidation, an acquisition by Jio looks inevitable. The key question is which operator it will buy. Tata Teleservices is struggling and state-owned BSNL is unavailable. The newly merged Reliance Communications-Aircel is the obvious choice. This situation is unique, though. Deal logic, the potential to create value and the finances may all look compelling. But we are dealing with a complex relationship between two siblings. This emotional factor will be the principal element in any future transaction.

MARKET CONSOLIDATION SCENARIOS

As the three transactions outlined earlier close and the shareholders of Tata Teleservices review their options, a “stable state” market of four or five mobile network operators is likely to emerge.

Five-Operator Market

Under this scenario, we fast-forward to early 2019. Vodafone-Idea Cellular is the market leader in terms of connections, followed by Airtel and Reliance Communications-Aircel. The government has sensibly decided to merge BSNL with Mahanagar Telephone Nigam Limited (MTNL), which operates only in Mumbai and Delhi. Jio has continued to grow strongly organically and is now number four in terms of connections, ahead of BSNL. Tata Teleservices has merged with one of the other operators.

This scenario has, in our view, a good chance of transpiring. The future of Tata Teleservices is intriguing. The main strategic options for its shareholders are for the company to be acquired by Airtel, to enter into a complex merger with Reliance Communications-Aircel or, even more intriguingly, a merger with the state-owned operator.

Tata Group has history with state-owned Indian telecom companies. Tata Communications, its international voice and data arm, previously acquired Videsh Sanchar Nigam Limited, India’s state-owned equivalent company. A union with Tata Teleservices would also be an elegant method of facilitating BSNL’s privatization.

Based on Jio’s current rate of expansion and the speed at which Tata Teleservices is shrinking, the latter’s fate is not the key issue in this scenario. The main point is that India will become a five-operator market — four private and one state-owned — each with more than 100 million subscribers.

Four-Operator Market

Under this scenario, the market consolidates still further. By 2020 the Ambani brothers have finally agreed to combine their two businesses. India has three private operators and one state-owned. The three private operators each have more than 300 million subscribers and the state-owned BSNL over 100 million.

In this scenario, consolidation has been spectacular. From 15 licensed operators in 2010 India now has four national providers. There may be a smattering of mobile virtual network operators and small local players, but collectively they hold less than 0.5 percent of total connections.

So which scenario is the more likely to transpire?

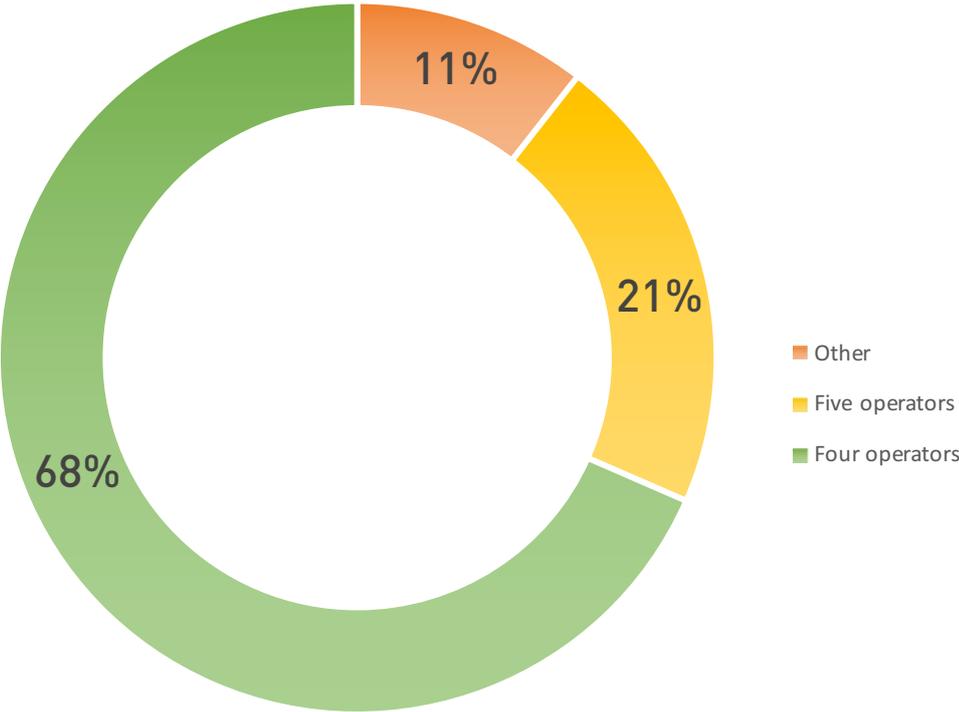
CCS INSIGHT SURVEY

CCS Insight undertook a survey in April 2017 of a sample of 57 telecoms executives with experience of deal-making in India, either as an advisor, financier or company executive.

Firstly, we asked whether the respondent thought that the market would migrate to five operators, four, or another number. In reality, "another number" would be six or more, as the Indian regulatory authorities are unlikely to allow a three-operator market to form, even if such difficult mergers could be agreed.

Figure 3 reveals that the majority of respondents (68 percent) thought that a four-operator market would prevail. Slightly more than 20 percent thought consolidation would stop at five operators, and just 11 percent thought another scenario most likely.

FIGURE 3

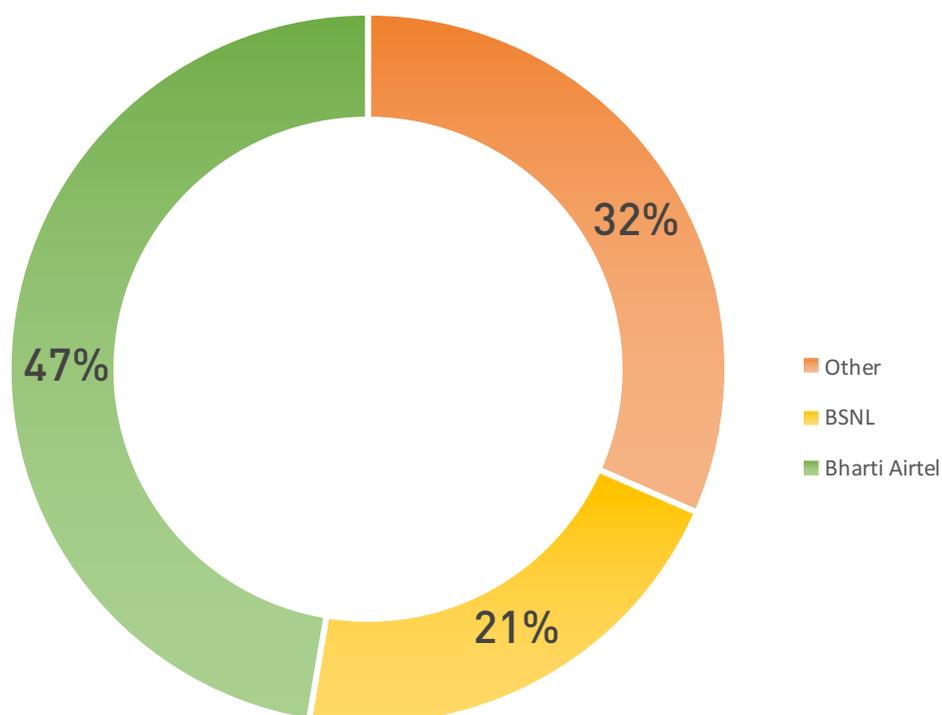


Consolidation is likely to reduce the Indian mobile market to how many operators?
Sample = 57
Source: CCS Insight

Secondly, we asked respondents what they thought would happen to Tata Teleservices. The operator has had a troubled past, formed from groups as disparate as Hughes Tele.com and Sterling Infotech. NTT DoCoMo was unveiled as a strategic investor to much fanfare in 2009. Despite the best efforts of the Japanese operator, Tata Teleservices was unable to compete effectively in such an aggressive marketplace. In recent years, subscribers have left and the Japanese and Tata Group have been embroiled in a shareholder dispute. With the business limping along, it is surely a question of when, not if, a merger or acquisition takes place.

From structuring and approval perspectives, the easiest transaction would be for Tata Teleservices to be subsumed by Bharti Airtel. Our view is that the main alternative is a tie-up with BSNL, but other combinations exist, such as a merger with the Reliance Communications-Aircel business. So we asked respondents where they thought Tata Teleservices' future home lay. The findings are summarised in Figure 4. Almost half of respondents chose Bharti Airtel, 22 percent BSNL and 32 percent one of the other network operators.

FIGURE 4

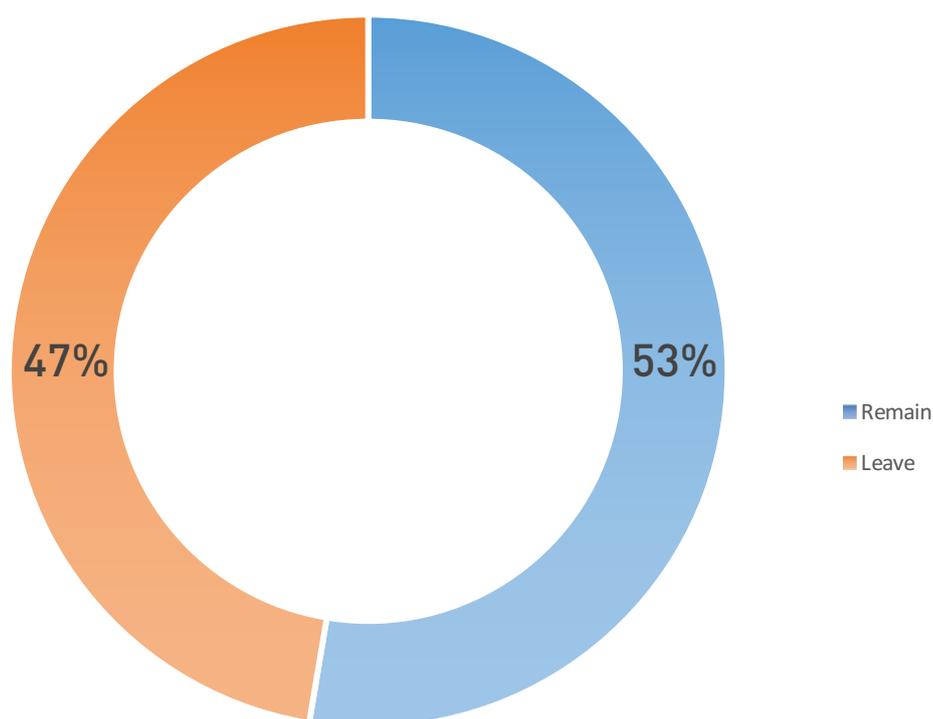


Which mobile operator is most likely to acquire Tata Teleservices?
Sample = 57
Source: CCS Insight

Finally, we asked respondents about the presence of Vodafone in India. Since its initial investment in 2007, the global operator has weathered some tough challenges, initially with the tax implications of its original investment and then with its previous co-shareholder, Essar Group. One masterstroke was recruiting the highly experienced Dutchman Marten Pieters as CEO. Mr Pieters steadied the ship and positioned Vodafone into a strong second place during his time in Mumbai. It is no surprise that he was asked to come out of semi-retirement to help negotiate the recent transaction with Essar.

As summarised in Figure 5, slightly more respondents believed that Vodafone would still be operational in India in five years' time than those who thought it would leave.

FIGURE 5



Will Vodafone leave India within five years?
Sample = 57
Source: CCS Insight

Survey Assessment

Consolidation is not a new phenomenon for mobile network operators. Since the 1990s, the number of market players has continued to shrink. Sometimes, new entrants arrive in mature markets as start-ups: Three in Europe in the 1990s and Jio in India in 2016 are good examples. But the trend is toward fewer, rather than more operators in mobile markets.

Twenty years ago when the author of this report was spending most of his time building investment models for 2G licence bidders, he adopted a rule of thumb that still holds good today. In a market of more than 10 million to 15 million potential subscribers, the first three operators in terms of market size should be profitable. The number-four player may or may not be. Numbers five and higher are rarely so.

There are, of course, exceptions to this rule. For example, in South Africa, third-placed Cell C took eight years to become profitable at the earnings before interest, tax, depreciation and amortisation (EBITDA) line. In Kenya, Safaricom has dominated the market for so long there are only two profitable operators at this level. But, by and large, this guidance serves as a useful benchmark in most markets.

Normally it matters whether the market has four or five operators. But India is unique in terms of size and scale — it should comfortably be able to support five EBITDA-positive operators. Only China can boast of a market of more than 1 billion active subscribers. In our five-operator scenario, only Jio is not EBITDA-positive today and that is because it only launched operations in 2016.

The financial and operational resources of parent company Reliance Industries suggest Jio is highly likely to become EBITDA-positive during 2019 or 2020. But as the results from our survey show, a number of experienced market commentators believe a merger with Reliance Communications is inevitable.

An agreement between Jio and Reliance Communications makes sound strategic sense and should be possible to agree between the various stakeholders from a financial perspective. The only possible stumbling block is the emotion surrounding a deal. The relationship between the Ambani brothers has been ill-tempered over the years since their businesses split in the 1990s. If they can reconcile their differences and work together — or Anil exits completely — a very strong top-three operator will be established.

Our survey findings predict a market of four mobile network operators, with a fifth as a possibility. In either scenario, this is dramatic consolidation compared with the chaos of the years from 2009 to 2012. The following sections of this report look at the impact of consolidation from the perspectives of network operators, suppliers of telecom equipment and mobile phones, companies that operate network infrastructure, and consumers.

MOBILE NETWORK OPERATORS

A consolidated market is largely good news for the surviving operators. Fewer rivals means less price competition, which can result in stable or improving operating profits for an operator, in the absence of other changes.

It is worthwhile looking at this in greater detail. One market that displays similar macroeconomic and social characteristics to India is Kenya, although it is admittedly much smaller in size. The Kenyan mobile market has consolidated in recent years, largely because of the domination of Safaricom. In 2010 and 2011, after Bharti Airtel acquired Zain Kenya, tariffs plummeted as providers engaged in heavy price competition. Number-four operator Yu, owned by Essar, withdrew from the market, closely followed by Orange. Interestingly, in 2009, Safaricom's EBITDA margin was 45 percent. In 2016 its EBITDA margin was 43 percent. Over a seven-year period of intense competition, consolidation and then stability, Safaricom's EBITDA margin remained roughly constant, staying within a band of 39 percent to 45 percent.

In India, we can consider the EBITDA margins of Idea Cellular and Reliance Communications as pure-India comparables. (Bharti Airtel has significant exposure to Africa so its numbers are distorted.) Between 2009 and 2016, Idea Cellular's EBITDA margin improved from 28 percent to 36 percent; Reliance Communications' margin edged down from 39 percent to 35 percent.

It is highly likely that 2017 will see a significant dip in EBITDA margins among all operators in India as established providers feel the impact of Jio's aggressive market entrance. However, as history shows, such low tariffs are unsustainable in the longer term. Once Jio has carved out sufficient market share, we expect a return to more normal tariff levels.

Although a consolidated market does not guarantee improvements in EBITDA, it does enable the remaining players to focus more on their core businesses. An operator in Mumbai will be far happier competing against three or four rivals rather than nine, as was the case at one point.

NETWORK EQUIPMENT SUPPLIERS

India has always been a bit of a mixed bag for network equipment suppliers. Ericsson, Nokia and more recently Huawei and ZTE have all secured substantial contracts from leading mobile operators. But the Indian operators have typically put in place canny procurement processes that oblige suppliers to compete heavily for contracts, often only making an acceptable return over the subsequent maintenance life time of the network assets.

Suppliers also suffered from defaults and bankruptcies in the industry — in the 1990s owing to dormant demand and weak cash flow among operators, and more recently after the 2G licences issued in 2008 were cancelled. Several of the newly licensed operators went into administration as they were unable to provide a service without a licence, despite having networks installed, financed by bank debt or finance from the suppliers.

Operators have recently been investing heavily. Bharti Airtel announced that in its financial year 2016 it spent about \$2.3 billion on network capital expenditure in India, principally on 3G and 4G infrastructure. This was around \$400 million more than planned and was perceived as a response to Jio's intensive roll-out of 4G networks. We believe Vodafone, Idea Cellular and Reliance Communications all increased or brought forward capital expenditure plans for 2016.

Consolidation to four or five operators will be a double-edged sword for network suppliers. On the one hand, fewer operators will mean fewer networks and thus fewer orders. But, on the other hand, operators with fewer competitors will be encouraged to invest more heavily in networks as future cash flows look more stable. Technology evolution is happening at a faster pace and India is now catching up with its Asian peers in terms of 4G network deployment. In addition, operators typically spend 10 percent to 20 percent of their revenue on capital expenditure, and a consolidated market is unlikely to witness a reduction in this range. Furthermore, the network supplier market has also consolidated in recent years, so there are now fewer suppliers chasing business.

So for network equipment manufacturers, although there may be fewer operators to supply in the future in India, the remaining ones are likely to be investing in advanced technological infrastructure more readily than in the past. The net effect of consolidation should be neutral to positive.

DEVICE SUPPLIERS

India has always been a unique market for phone-makers. A decade or so ago, entrepreneurial and thrifty Indians demanded multi-SIM handsets, to be able to switch between networks according to the most economical tariff at the time. This saw a rise in ultralow-cost producers, chiefly domestic and Chinese.

An important particularity of the Indian mobile phone market is that it is still heavily skewed toward basic feature phones. In 2016, they accounted for 57 percent of the total of 256 million mobile phones sold in India (the other 43 percent were smartphones). Although low-cost smartphones are gradually replacing feature phones, this process is way behind other emerging markets. For comparison, in China smartphones accounted for 95 percent of all phone sales in 2016; in Latin America, the proportion was 76 percent.

In early 2017, feature phones received a boost thanks to the launch of the Qualcomm 205 chipset, which enables manufacturers to add 4G connectivity to low-end phones. Smartphones as a proportion of device sales will grow only marginally in 2017, rising to 45 percent of all sales, up from 43 percent in 2016. We forecast growth in smartphone sales to pick up over the next few years, so that by 2021 they will account for 80 percent of the more than 310 million mobile phones that will be sold in India.

Today, the Indian smartphone market is dominated by Samsung and Chinese manufacturers Xiaomi, Oppo and Lenovo. Previously, domestic manufacturers Micromax, Lava and Intex appeared to be on a winning streak, but the scale that Chinese manufacturers can achieve and the marketing budgets they can commit to have put pressure on local players, which are now falling behind. Furthermore, Jio has introduced an own-branded 4G device, which will further erode the market shares of the other domestic suppliers.

There are very few markets in the world where Apple ranks at the bottom of the leader board in terms of smartphone sales, but India is one such place. Apple is the number-one supplier in the premium smartphone band, but sells relatively few phones, owing to the limited addressable market for high-end smartphones in India. Apple is expected to start manufacturing phones in India soon, but this is unlikely to help pricing significantly enough to open up a massive opportunity.

Interestingly, mobile phone sales slowed in 4Q16, despite Jio's arrival. This slowdown can be attributed to the demonetisation of low-value banknotes in India, and should not be seen as a reaction to market consolidation.

It is difficult to see device suppliers being negatively impacted by consolidation in India — the country had almost 1.1 billion mobile connections at the end of 2016, and we expect sales of 125 million smartphones in 2017, doubling to more than 250 million in 2021. Rather, with increased capital expenditure on 3G and 4G infrastructure, the remaining operators will be able to offer better coverage, increasing the appeal of mobile communications to potential smartphone buyers.

CONSUMERS

At first sight, it is unlikely that consolidation among India mobile network operators will lead to more-expensive devices or less choice for consumers. India's unique smartphone market structure, with a diversified set of suppliers and demanding consumers, will always ensure that phone-makers treat the world's second-largest market seriously.

The infusion of multi-SIM devices was a direct response to not just consumer demand, but also consumer innovation. Several Indian device manufacturers can trace their roots to their founders' dissatisfaction with the limitations of a single-SIM device.

CCS Insight's research indicates there were 320 million smartphone users in India at the end of 2016, and we forecast this number to double to 653 million by the end of 2020. Mass-market smartphone users are increasingly switching to Samsung and Chinese devices and loyalty to Indian brands has diminished. We expect domestic manufacturers to respond to the threat.

A slowdown in smartphone sales during the fourth quarter of 2016 can be partly attributed to domestic economic policy, rather than the consequences of market consolidation. In addition, Jio flooded the market in late 2016 with its own-brand devices, and the market still technically had 10 operators, as the announced mergers and acquisitions were not completed.

TOWER COMPANIES

We have established that market consolidation is unlikely to be detrimental for operators, suppliers of network equipment and phones, and consumers. But one small group may be hit by consolidations: the “tower companies” that manage and operate India’s network infrastructure. However, changes are unlikely for quite some time.

In common with many markets worldwide, India has witnessed the creation of a multibillion-dollar industry through the process of asset monetisation. Historically, operators have moved their cell towers, or passive infrastructure, into separate companies and sold part or all of these companies to investors. The operator signs a long-term contract with the new tower company to lease capacity on the infrastructure, typically for 10 years or more. It uses the proceeds from the sale to reduce debt, reinvestment, or returns to its shareholders. If the assets are well run by the tower company, the operator should also benefit from lower operating costs.

The largest tower companies in India are Indus Towers (which is owned by Bharti Airtel, Vodafone and Idea Cellular), Bharti Infratel and Reliance Infratel. All have tenancy ratios for their towers above one. In other words, in addition to the anchor tenant, other operators have leased capacity on one or more of their towers.

Tower companies were one of the main beneficiaries of the 2008 2G licence bonanza. As a newly licensed operator, why assemble expensive towers that take years of planning permissions when you can lease space from an existing tower company and be operational in a matter of months?

Unfortunately, when the 2G licences were cancelled, some operators walked away, leading to lawsuits with several tower companies over defaulted tenancy agreements.

Market consolidation means worse is to follow for the tower companies. A market of four or five national operators would be very different from the situation in 2010. Lower tenancy ratios mean lower revenues and lower operating margins. Tower companies are often perceived as a leveraged play, meaning debt levels can be quite high. In a worst-case scenario, tower companies may have difficulties servicing this debt.

Fortunately, there are two reasons why this outcome is unlikely to occur for many years. Firstly, the lease agreements between tower companies and operators are long-term deals. They often contain renegotiation clauses in the event of a change of control, but the terms of the agreement will need to be honoured by the new parent company. Airtel has been struggling in the mobile market for many years. A merged Reliance Communications-Airtel will have an EBITDA margin of more than 30 percent and more financial strength. Airtel’s existing tower company should, in the short to medium term, be happier with this scenario. Only as the long-term lease expires should it start to be concerned.

Secondly, India is booming with other service providers that need space on towers. Broadcasters, mobile broadband operators, radio companies and virtual private network providers all have a demand for space. Monthly rentals from these sources are lower than from a MNO, but nonetheless can account for a growing proportion of revenue.

In a decade or so, the few smaller tower companies in India will face some hard choices. The big three — with strong mobile network operator tenants — should survive. But they will be hoping that the reduced number of mobile operators will be signing long-term contracts for their 5G and 6G equipment.

CONCLUSION

India is the second-largest mobile market in the world and unique in so many ways. Its 20-year existence has been chaotic, controversial yet emphatic. Regulators have not helped the market evolve over the years, but a level playing field finally seems to be in place.

There are 1.1 billion mobile connections in India in a market that is still growing. Market leader Bharti Airtel has impressively achieved its position through dozens of small bolt-on acquisitions. This strategy has been important in developing and maintaining a strong culture. Vodafone-Idea Cellular and Reliance Communications-Aircel have taken the merger-of-equals option. This route can be more risky but also effective in quickly establishing a top-three player. New entrant Jio is ambitious, has financial muscle and is presently disrupting the market. State-owned BSNL continues to follow its own path.

Consolidation has started and is inevitable. CCS Insight's survey findings predict a four-operator market, probably with Vodafone remaining in the long term, and with long-established names such as Tata and MTS India disappearing.

We do not expect consolidation to have a negative effect on operators, equipment and handset suppliers and consumers. Indeed, for the remaining operators, a more orderly market structure should boost confidence for profits to be reinvested into enhancing networks and services. Compared with its chaotic past and present, halcyon days should lie ahead for the Indian mobile market.

AUTHOR



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Tony Worthington is Senior Adviser at CCS Insight. He built and led global industry teams at Standard Chartered and ABN AMRO banks.

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