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Shri Sanjeev Banzal
Advisor (Networks, Spectrum and Licensing)
Telecom Regulatory Authority of India,
Mahanagar Door Sanchar Bhawan,
J.L. Nehru Marg, (Old Minto Road),
New Delhi - 110 002

Sub: Consultation Paper on Delinking of the license for networks from delivery of services by way of Virtual Network Operators

Ref: TRAI Consultation Paper No. 15/2014, dated 5th December 2014

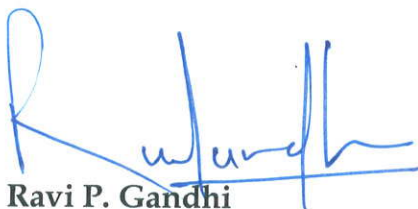
Dear Sir,

This is with reference to your above mentioned Consultation Paper. In this regard, please find enclosed our response for your kind consideration.

Thanking you.

Yours Sincerely

For Bharti Airtel Limited



Ravi P. Gandhi
Chief Regulatory Officer (Policy)

Encl : As Above

Bharti Airtel Limited's Response to TRAI's Consultation Paper on "Delinking of the license for networks from delivery of services by way of Virtual Network Operators"

A healthy and sustainable telecom sector is critical for the economic and social development of any nation. This fact forms the core value proposition for the ambitious vision set by the National Telecom Policy 2012 - *"To provide secure, reliable, affordable and high quality converged Telecom services anytime, anywhere for accelerated inclusive socio-economic development."* The policy emphasizes the power of 'broadband information highways' to transform the lives of people and envisages 175 million broadband customers by 2017 and 600 million by 2020.

The present government has also laid down a bold vision for a "Digital India" that would offer a one-stop shop for government services using mobile phones as the backbone of its delivery mechanism.

The vision of a Digital India, once accomplished, would transform the country into a digitally empowered society driven by a knowledge economy. However, this would require serious, consistent and long-term investments in the creation of state of the art telecommunications networks.

We believe there are three critical enablers to achieve the objectives of policy:

1. **Adequate and consistent supply of funds:** It is critical for operators to possess sufficient funds and resources for investment into telecom infrastructure and assure investors of delivering expected rates of return. Increased investor confidence will attract more investment and allow the industry to play an active role in achieving the ambitious vision set out by the government.
2. **Timely availability of spectrum resources for Access and backbone:** It is absolutely essential for operators to have sufficient resources such as spectrum at their disposal. Timely availability of adequate spectrum will allow the industry to create the kind of networks that are conducive for the proliferation of affordable broadband services throughout the nation.
3. **Sustainable telecom sector:** A sustainable telecom sector with affordable prices is a key characteristic of a mature market that has achieved appropriate levels of scale. For the proliferation of broadband services, the industry, while ensuring the viability and sustainability of the sector, needs to create a network that promotes affordability, which in turn would stimulate demand to the kind of levels envisioned in the NTP, 2012.

The above enablers are absolutely essential for achieving the national goals of a 'Digital India' powered by 'Broadband Highways'. Policies that seek to advance competition well past current unsustainable hypercompetitive levels will severely damage the industry as a whole

It is a well-known fact that the acquisition of spectrum rights and roll out of Infrastructure are highly capital intensive and require large investments. According to a report by Ericsson¹, network investments in India between 2014 and 2018 are expected to be in the range of USD 40-45 billion. However, the present financial condition of the sector poses several challenges, especially with respect to the long term sustainability and the capability of the Industry to achieve policy targets. Briefly stated:

- **Alarming financial state of Telecom Industry:** The cumulative debt burden of telecom companies increased by over 300% from INR 82,726 crores in 2008-09 to INR 2,50,000 crores in 2012-13. Over the same period EBITDA margins fell from 33.8% to 15.5%. The PAT of TSPs, which was in the range of 35% to (-) 53% in 2006-07 has further declined in the range of 14% to (-) 101% in 2011-12. The Industry's Debt to equity ratio increased from 1.08 in FY 08 to 1.52 in FY 12, further indicating how aggressively the sector has financed its growth through debt.

This has resulted in a situation where despite the liberalization of the telecom sector almost 20 years ago; most TSPs have yet to achieve acceptable returns on capital employed. Therefore, there is an urgent need to improve the prevailing financial and market conditions, which will act as precursors for attracting future investments.

- **Non Availability of sufficient spectrum resources:** Indian TSPs hold an abysmally low quantum of spectrum, approx. 13MHz on average, which contrasts strikingly with international counterparts in developed markets e.g. {(EU allocation (92.6MHz), UK (82.2MHz), France (138.5MHz), Spain (100.6MHz) and US (96MHz)}. The presence of a high number of TSPs has led to excessive fragmentation of spectrum. Due to constrained spectrum availability, most TSPs are already running their network at near full utilization, facing huge congestion and constrained capacities. This prevents operators from providing much needed data/internet connectivity.

The poor financial condition of the industry coupled with constrained resources is a huge impediment in attracting additional investments in the sector.

In addition, investors in telecom networks take on large risks in making long term investments with an expectation of regulatory and policy stability. As per TRAI² also, a stable regulatory

¹ Ericsson White paper on "Broadband in India: realizing the vision"

² TRAI's recommendations on "Definition of Revenue Base (AGR) for the Reckoning of Licence Fee and Spectrum Usage Charges" dated 06.01.2015

framework which promotes investment is a *sine qua non* if the anticipated investments for rolling out the ambitious Digital India mission are to materialize.

With the Unified Licensing regime having been introduced only around a year ago, and still in the process of being operationalized, there is little to no visibility over the associated benefits of affecting a new licensing model, especially when the existing licensing framework is quite capable of ensuring growth. Moreover, affecting this change would have a significant negative impact on investor confidence, and may cause a further decline in the financial health of the industry.

EFFECT OF THE ENTRY OF VIRTUAL OPERATORS:

The current consultation exercise seeks to examine the entry of virtual operators or resellers in the Indian telecom market. Primarily, a need for virtual operators has been felt in markets with high levels of concentration, and high retail prices. However, the Indian Telecom industry is by many estimates the most competitive in the world, as well as one of the most affordable. With an HHI of 0.176, operators in India offer services at tariffs far below those in markets with hundreds of virtual operators {(HHI (US) – 0.25)}.

Hence, any further reduction in retail tariffs resulting from entry of VNOs/MVNO may not be viable and sustainable in the long term. The Industry has witnessed the negative effects of irrational tariffs and cut-throat competition in the sector. In fact, TRAI³ has also recognized that hyper-competition has adversely affected the financial health of TSPs/Industry and the current state of the Industry is unsustainable in the long run.

The entry of VNOs/MVNOs will only distort the telecom market. The Industry cannot afford another irrational tariff war with the entry of operators who only contribute to reselling without carrying out investment for the creation of telecom infrastructure. We believe that the need of the hour is to encourage network investments and facilitate consolidation rather than further increase competition through resellers.

Currently, like other Industries, MNOs have integrated operations and design tariffs across different segments in a manner that one segment support some of the less remunerative products/areas. MNOs may often offer a new service, say data/broadband in rural areas, at below-cost to encourage its usage, and compensate for these low rents by fixing tariffs in urban areas at a slightly higher price. However, with minimal investments and miniscule capital costs, VNOs/MVNOs may cause a reduction in tariffs/prices of these selected products/services, forcing MNOs to respond by reducing rates. Such competition will dis-incentivize investments, damage the profitability of MNOs and will force them to concentrate only on high value urban areas, and not expand to unchartered rural regions. Besides, since the already-low profit margins of the

³ TRAI's Consultation Paper on Valuation and Reserve Price of Spectrum dated 23rd July 2013

MNOs may further reduce in some segments, they would be forced to increase overall tariffs, which would be counter-productive to prescribed national goals.

We believe that instead of the entry of VNOs, which would increase hyper competition, the need of the hour is consolidation, which will not only improve the financial viability and sustainability of the sector, but will also help attract massive investments critical for meeting the national objectives of creating 'Broadband Highways' and a 'Digital India'.

In line with our position that current market conditions are inappropriate for the inclusion of VNOs, our views on the specific questions raised by the Authority are as follow:-

Q1. (a) Is there any need to introduce more competition in service delivery by the way of introduction of VNOs in the sector? If not, why not?

Airtel's response:

- a. With an HHI of 0.176, the Indian telecom market is recognized as one of the most competitive and the least concentrated in the world. The Indian market has 7-13 operators across access services areas and is hyper competitive to a damaging extent. Any further competition through regulatory intervention is an economically undesirable proposition. The poor financial health of Indian operators is well recognized, and is preventing them from expanding their networks at optimum rates. The introduction of additional competition from VNOs/MVNOs is even more undesirable.
- b. Moreover, the need for the VNOs is not understood. It is not clear what benefits they would bring to the Indian market. Some might argue that VNOs/MVNOs would enhance competition and consequently cause a decline in retail prices. However, the Indian telecom market is already hyper competitive and retail prices are already amongst the lowest in the world. A further reduction in retail prices may well be out of the realm of economic reality in the case of India, rendering this fundamental objective unachievable. The social welfare (through price reductions) associated with the entry of VNOs/MVNOs will simply not be realized in the Indian market, and as can be observed, tariffs in India are even lower than in markets with hundreds of VNOs/MVNOs.
- c. Our analyses of markets where VNOs are successful indicate that high levels of concentration and ample spectral resources allowed MNOs in these markets to hold capacities far in excess of immediate requirements, justifying the business case for monetizing unused resources by entering into wholesale agreements with VNOs. The low levels of concentration and highly fragmented resource allocations in India will only foster an unsustainable predatory price war due to different cost structures. With constrained capacities, MNOs would only lease so much capacity that does not hamper their own retail businesses. This constrained supply may well end up increasing retail prices, which is by no means a desirable outcome.
- d. We strongly believe that there is no need for any regulatory intervention to introduce more competition by way of VNOs in India. We support a "hands-off" regulatory approach to VNOs that is consistent with the regulatory principles of reliance on market forces, where intervention occurs only in cases of market failure. A regulatory approach that allows for the inclusion of VNOs/MVNOs, at this particular stage in time, would impose welfare costs far in excess of any benefits their inclusion may possibly be associated with. Additionally, the investment disincentives created as a result of their entry will hamper the growth of network

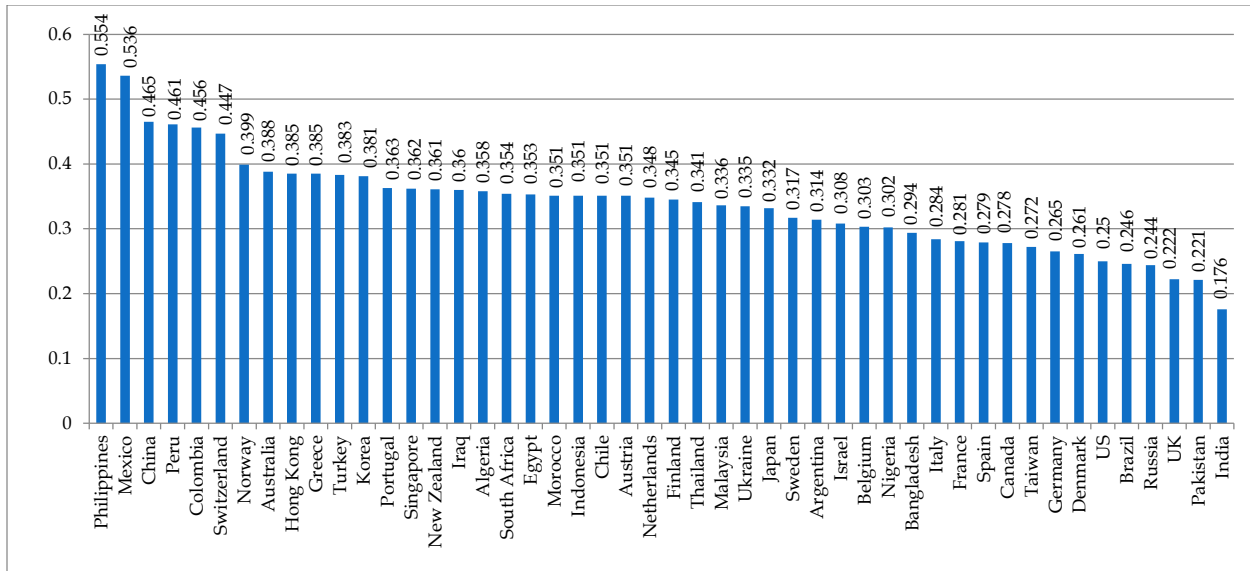
infrastructure that is absolutely critical for achieving national goals. As a result, the existing infrastructure will become inadequate and hence lead to customer service issues and poor networks.

The Indian Telecom market is vigorously competitive:

- a. The Indian telecom market is currently over-crowded (but still open for anyone and everyone) with intense competition already existing in the current market scenario and fresh competition from VNOs/MVNOs shall be highly un-warranted. Adequate competition exists with a higher than average number of TSPs across telecom services. Briefly stated:
 - There are 7-13 TSPs in each service area across the country. There are a total of 72 TSPs offering voice/data services on the 800MHz spectrum band and 167 on the 900/1800MHz spectrum band.
 - Out of the 350 licensed ISPs, 127 ISPs are offering internet/broadband services across the country. 23 ISPs are also offering Internet Telephony across the country.
 - Out of the 97 million cable TV connections, 24 million have already been digitized and digitization is scheduled to be completed very shortly. The cable industry is capable of offering data/broadband services to millions of customers.
 - 40 and 32 companies are holding Licence for providing NLD services and ILD Services respectively.
 - 10 VSAT operators currently offer services across the country.

All TSPs have invested significantly in the Indian telecom market and offer competitive services to their customers. The customer enjoys wide choice in each telecom segment and therefore, there is no cause of any regulatory intervention for introducing VNOs in the Indian telecom market.

- b. The HHI of the Indian mobile market is reflective of a market characterized by high competitive intensity and high fragmentation. Among 48 countries across the world, India has the least concentrated market in terms of telecom services. This is due to a relatively large number of operators who offer services at different coverage levels, including regional, pan-regional and national.



Source: BofA Merrill Lynch Global Research estimates (Q 3, 2013)

- c. As stated above, the entry of VNOs/MVNOs is justifiable in markets where the number of network operators is low (where the entry of network operator is decided only through regulatory intervention) and retail tariffs are relatively high due to inadequate competition and market concentration. In contrast, the Indian market does not exhibit any such signs. The table below reflects an analysis of the top 8 MVNO markets vis-a vis the Indian market.

S. No.	Country	ARPU (US \$)	RPM (US \$)	No. of Competitors	HHI Index	MVNO
1	Australia	40.13	0.068	3	0.388	44
2	Belgium	27.17	0.101	3	0.303	46
3	Denmark	24.11	0.066	4	0.261	60
4	France	29.94	0.069	4	0.281	60
5	Netherlands	33.81	0.141	4	0.348	70
6	Spain	25.23	0.103	4	0.279	36
7	UK	26.61	0.073	4	0.222	81
8	US	52.25	N.A.	4	0.25	109
9	India	2.76	0.006	7-13	0.176	0

Source: BofA Merrill Lynch Global Research estimates (Q 3, 2013)

One can infer the following from the above table:

- Despite the presence of VNOs/MVNOs in all the developed markets, their ARPU and RPM levels are significantly higher and less competitive than India. ARPU in Australia is 14.5 times the level in India, whereas its HHI is 120% higher. This shows that despite the

presence of 44 MVNOs, retail tariffs are far higher but the competition is much lower than that of the Indian market.

- The US, often termed as the most competitive, after the sustained presence of 109 VNOs also demonstrates a higher HHI than India. The Indian market is more competitive than the United States.
- d. Competition in the Indian telecom market is likely to intensify further with the launch of the Pan-India 4G operator. Moreover, many regional MNOs may expand their existing footprint by acquiring initial spectrum in the upcoming spectrum auctions.
- e. Given our goals to increase broadband penetration to the unconnected parts of India, as well as to continually enhance the level of services offered, it is obvious that massive amounts of investment would have to be committed towards enhancing the reach of networks as well as undertaking sizeable upgrades to already deployed infrastructure. We believe that reasonable entry barriers that limit competition beyond a threshold and market dominance that allows firms to charge prices over cost could facilitate innovation and dynamic efficiency for the entire industry. At a time such as this, additional competition from service providers who do not need to invest in infrastructure, who ride on the resources of incumbents and offer substitute retail services, would have a measurable negative impact on the financial health of the Indian Telecom industry.

We believe that there is no dearth of competition in the Indian telecom market and the introduction of VNOs, till such time that the market reaches a certain level of consolidation, is unwarranted and detrimental. It is unlikely that a VNO/MVNO would offer a type of service that an MNO would and could not itself cheaper. There is already intense competition and innovation in services, and competition amongst MNOs will continue to drive future growth.

Declining financial health of the Industry:

- a. Hyper-competition in the sector has led to a significant deterioration of the balance sheets of TSPs and their ability to invest further in network infrastructure. The below sheet indicates that over the period of time (2007-08 to 2011-12) the financial indicators of Top 5 access service providers have been steadily deteriorating; and there has been a substantial reduction in the profitability of the access providers as shown below:

Statement of Revenue and Profitability of 5 Access Service Providers (Rs. in Crore)

Particulars	2007-08	2008-09	2009-10	2010-11	2011-12
Total Revenue	75,031	92,051	99,895	113,150	124,133
Opex	49,231	64,635	74,204	88,257	96,657
EBITDA	25,800	27,416	25,691	24,893	27,476
EBITDA Margin	34%	30%	26%	22%	22%
PBIT	14644	15213	11891	10111	9611
PBIT Margin	20%	17%	12%	9%	8%

Debt in Telecom Sector

Particulars	2007-08	2008-09	2009-10	2010-11	2011-12
Total Loans	71348	108796	109406	163793	170266
Total Debt to Equity ratio	1.08	0.9	0.84	1.27	1.52
Interest Coverage ratio: PBIT/Interest Charges	4.09	2.45	1.06	0.17	-0.41

TSP wise total Debt (Rs. in Crore)

	2007-08	2008-09	2009-10	2010-11	2011-12
Bharti	6758	7886	5039	11898	14129
Vodafone	14630	23161	25835	42135	45332
Idea	6515	7579	6526	10557	12096
Reliance	21864	40955	30645	35538	31195
Tata	11648	14690	15873	22303	23986

Source: TRAI's study paper on "Shareholding pattern, financing pattern and capital structure of Indian private telecom access service providers" dated 19th Nov 2013

b. As per TRAI 2013 analysis:

- Tata and Vodafone are highly indebted companies with total debt-equity ratio of 12.89 and 7.33 times respectively.
- The Industry's Debt to equity ratio has increased from 1.08 in FY 08 to 1.52 in FY 12.
- The EBITDA% has fallen with an average of 12% as compared from FY 08 to FY 12, despite decreasing cost figures.
- The PBIT margin has dropped to 8% in FY 12 as compared to 20% in FY 08. Besides that the Interest Coverage ratio has gone into negative from FY 08 to FY 12.

c. In fact, TRAI has consistently recognized the declining financial health of the sector, as reflected below:

- TRAI⁴ in its recommendations (6th January 2015) has stated that “.....The first option is constrained by the low margins – occasioned by hyper-competition – characteristic of the Indian telecom market and the large fixed cost outlays involved in asset creation. As such, a large chunk of the financing has to be by way of borrowings...
 - TRAI⁵ in its consultation paper (23rd July 2013) has stated that “.....because of a large number of operators in each LSA, there is cut-throat competition which has adversely affected the financial health of operators and the industry. Due to unsustainable pricing and slow revenue growth, their EBIDTA is under pressure. The current state of industry is not sustainable in the long term and measures like consolidation etc. might be required to improve its financial health.”
 - Again, TRAI⁶ in its recommendations (9th September 2013) stated that “The telecom sector has been going through financial duress over the past two years. Unrealistic pricing and indebtedness have taken a huge toll. Operating margins have fallen drastically. Some companies have negative operating margins; leave aside interest and taxation, they are not even able to cover depreciation and amortization charges. Commercial banks’ exposure to the sector has reached prudential limits precluding their ability (despite willingness) to further finance the sector.”
 - Thereafter, TRAI⁷ in its study report (19th November 2013) stated that “Low market tariffs and the presence of large number of service providers in each licence service area have caused profitability to decline and made the telecom sector less attractive for infusion of equity. New investments are therefore being financed through debt. Sector indebtedness is growing.... the declining profitability of the sector, which lies at the root of the inability to attract fresh investment, is a cause for deep concern.”
- d. The Industry needs massive investments to meet national objectives of creating “Broadband Highways” and fostering a “Digital India”. Today, the industry invests about Rs.25,000 crore a year into mobile networks. We will have to invest close to four times this level going forward. For this to happen, investments should be directed towards network infrastructure rather than for just procuring spectrum. In the last five years, almost Rs.1,80,000 crore of investment has been committed towards acquiring spectral resources, while infrastructure received only half of that amount. Few other estimates:
- As per E&Y⁸, Indian TSPs need to commit cumulative capex of ~INR 2,50,000 Crs. (minus spectrum cost) over the years 2013-20 to meet NTP 2012 targets of 100% tele density & 600mn Broadband connections.

⁴ TRAI’s recommendations on “Definition of Revenue Base (AGR) for the Reckoning of License Fee and Spectrum Usage Charge

⁵ TRAI’s consultation paper on “Valuation and Reserve Price of Spectrum”

⁶ TRAI’s recommendations on “Valuation and Reserve Price of Spectrum”

⁷ TRAI’s study paper on “Shareholding Pattern, Financing Pattern and Capital Structure of Indian Private Telecom Access Service Providers

⁸ E&Y ASSOCHAM Report on “Telecom Sector : Harbinger of inclusive growth” dated 20th March 2013

- As per our estimates, the Industry may have to spend approx. Rs.60,000 Crores in upcoming spectrum auction to extend their license along with their existing spectrum holdings.
 - As per projections of the Planning Commission's 12th plan – the Indian telecom sector is expected to invest Rs.943,899 Cr during this 5 year plan – and 92% of that is expected to come from the private sector.
- e. The sector has been plagued by low profitability, sluggish growth and an uncertain policy environment, and sufficient funds would be required to ensure regular operations, expansion of networks, acquisition of spectrum, introduction of new technologies and for acquiring and retaining customers.
- f. We believe that it would be impossible to attract such massive investments unless a robust regulatory framework and roadmap is in place to support the viability and sustainability of the industry. The entry of VNOs/MVNOs will not only disrupt the market structure, but would also lead to further deterioration in the financial health of the industry. The consequence: an industry in debt, poor financial health, poor customer experience, weak broadband networks and the lost economic potential of a compelling vision. This would have direct negative impact on the Consumer and in turn on the overall economy of the Country.

Consolidation is the need of the hour:

- a. With fierce competition, which is not observed in any other country, many Indian TSPs struggle to achieve profitability, the only means of securing scale and financial sustainability will be through consolidation. This means that facilitating market consolidation should be an important policy focus. Recognizing this, TRAI⁹ has not only acknowledged the need for lesser TSPs in India, but also the need to promote consolidation. In this context, TRAI has already recommended that the government should allow spectrum trading and sharing. Such consolidation would be in line with global best practices where policymakers recognize that the competitive health of a market cannot be measured by the number of competitors alone, but rather the extent to which such competition delivers sustainable long-term socio-economic benefits. Globally, emphasis has always been on discouraging a high number of TSPs to avoid fragmentation of spectrum and ineffective utilization of resources.
- b. Therefore, in order to achieve the national objectives of 'Broadband Highways' and a 'Digital India' the Industry first needs policies that facilitate consolidation and promotes network investments instead of resellers such as MVNO/VNOs.

⁹ <http://telecom.economicstimes.indiatimes.com/news/policy/telecom-ma-guidelines-need-to-be-reworked-trai-chairman/43148769>

- c. Hence, the government should work with the mobile industry by designing policies and regulations that maximize long-term private sector investment. Only with a sustainable mobile industry, will India be able to reach the full socio-economic benefits envisioned in the NTP-2012. In order to invest, the industry needs clarity on the direction and the overall economic and regulatory environment that will be put in place to support this path.

To summarize, the Indian telecom market is extremely competitive and fragmented. In such a scenario, the introduction of VNOs/MVNOs will only lead to further disruption of the market structure and will not provide any additional benefits (such as new services or more affordable tariffs) to customers in a sustainable manner.

(b) If yes, is it the right time to introduce VNOs?

Airtel's Response:

- a. We believe that this is not the right time to introduce VNOs/MVNOs in the Indian telecom market due to the numerous reasons explained in our response to Q. No. 1(a).
- b. While the NTP-2012 provides for the delinking of networks from service delivery, it is important to note that the NTP is a 'vision document' for the next decade and does not specify timeframes for the implementation of policies. We believe that the current financial and market conditions do not support the entry of VNOs at this stage and the same may be deliberated after few years when:
 - ✓ The industry reaches a higher level of consolidation in line with international markets.
 - ✓ Adequate spectrum is available to all Indian TSPs as per global benchmarks and MNOs have adequate spare capacity to share with VNOs.
 - ✓ At least 70-80% market players are making adequate returns to support network investments.
 - ✓ Penetration of telecom services across the country reaches more than 100% and the telecom market saturates.
- c. Therefore, deliberations on the introduction of VNOs/MVNOs should be deferred till such time that the industry reaches a fair state of consolidation and maturity and network deployment achieves requisite scale to meet national targets of broadband penetration.

Q2. Will VNOs pose a threat to NSOs or will they complement their operations? Justify your answer.

Airtel's Response:

- a. As explained in our response to Q. No. 1, the current market structure does not support the entry of VNOs at least for a few years. Till an enabling Industry structure is in place, there is no regulatory intervention required on this front.
- b. The proponents of VNOs/MVNOs may argue that their entry will allow for niche markets to be tapped. However, it is important to take note of what differentiates the Indian market vis-a-vis others that have seen VNOs tapping into niche segments successfully. Telecom licensees are awarded circle specific licenses in India, and while some operators are licensed to offer services nationally, there are others who only offer services in specific circles. Even large operators, who have a national footprint, adopt local marketing, pricing and packaging strategies for these niche markets. Operators today offer numerous plans for different segments (students, housewives, family & friends, corporates, etc.) for different services (voice, data & roaming), and offer differentiated products across circles. The niche markets that VNOs are envisioned of tapping into are already adequately addressed by the 8 or so licensed operators across each circle. It is doubtful that the inclusion of VNOs will have any measurable impact on niche markets that licensed operators are adequately equipped and motivated to address.
- c. With minimal investments and low fixed costs, VNOs may cause a reduction in tariffs/prices of selected products/services and / or in niche areas, forcing MNOs to respond by reducing rates, often to below cost levels. Such competition will dis-incentivize investments, damage the profitability of MNOs and will force them to concentrate on high value urban areas rather than expanding to unchartered rural regions. The Industry has witnessed the same when in 2008-2010, we saw fly-by-night operators coming in and the presence of so many operators resulted in hyper competition and aggressive price cutting, which were in large part responsible for the current financial health of the Industry.
- d. The entry of VNOs/MVNOs through regulatory intervention will only distort the telecom market. The Industry simply cannot afford another irrational tariff war with the entry of fly-by-night operators. The need of the hour is to facilitate consolidation rather than further increase competition. Consolidation will not only improve the financial viability and sustainability of the sector, but will also attract massive investments critical for meeting the national objectives of 'Broadband Highways' and 'Digital India'.

- e. VNOs may complement the operations of network operators in other markets. However, it is important to take note of the fact that the supply dynamics of wholesale capacity are favorable in these markets, as can be observed from voluntary business arrangements between network and virtual operators. This is simply not the case for the Indian telecom sector.
- f. The success and phenomenal growth of the Indian Telecom sector can be largely attributed to the conscious decisions of the government and the regulator to introduce a licensing regime that promotes the creation of telecom infrastructure as well as ensures serious and long-term investments. Service based competition at the expense of network investments and infrastructure will fail to deliver any socio-economic benefits.
- g. Massive investments in a capital-intensive sector will be impossible to attract if investors do not feel confident of the ventures ability to deliver expected rates of return. While MNOs have invested heavily in establishing a large part of the telecom network, further expansion to match national goals will require increased amounts of investment from multiple sources.
- h. Allowing the entry of MVNOs, will dis-incentivize investments in core networks. Many studies have empirically demonstrated that the presence of VNOs decreases incentives to invest by creating investment spillovers in MNO networks. MVNOs require very low investments for entering the market, allowing the entry of non-serious or fly-by-night operators whereas only few would apply for MNO Licenses and undertake investments that are critical for the growth of the industry as a whole. With the entry of VNOs, investors would consider it more prudent to invest in VNOs/MVNOs ventures over MNOs as investments in VNOs/MVNOs would yield higher and faster returns than MNOs.
- i. Investing firms expect to appropriate financial benefits from their investments. A VNO with access to a network providers infrastructure indirectly but measurably derives benefits from investments towards replacing old facilities, adopting new mobile technologies or improving current infrastructure. Essentially, any improvements a network provider may make to its network would end up making the products or services offered by VNOs appear more attractive, and as a result diminish the network providers incentives to invest in such initiatives^{10 11 12}.

¹⁰ Foros, Ø. (2004). Strategic investments with spillovers, vertical integration, and foreclosure in the broadband access market. *International Journal of Industrial Organization*, 22(1), 1–24.

¹¹ Kotakorpi, K. (2006). Access price regulation, investment and entry in Telecom. *International Journal of Industrial Organization*, 24(5), 1013–1020

¹² Woroch, G. A. (2004). Open access rules and equilibrium broadband deployment. In G. Madden, & R. Cooper (Eds.), *Frontiers of broadband, electronic and mobile commerce* (pp. 221–246). Heidelberg: Physica-Verlag

- j. This risk of dampening network investment and network based competition was recognized and accepted by OFTEL¹³ in its consideration of 2G MVNOs:

“OFTEL accepts that depending on the form of MVNO, the incentives to invest in infrastructure may decline, diluting the benefits of infrastructure competition.”

“Investment in network coverage may decline as a result of MVNO entry; existing network operators will not face the same incentives to build out their network.”

- k. Therefore, the focus of the government and the regulator should be to introduce policies that promote the growth of telecom networks across the country and attract investors to invest in network telecom companies rather than introducing resellers.

Q27. Should an NSO be mandated to provide access to its network to a VNO in a time-bound manner or should it be left to their mutual agreement.

- a. We strongly oppose any form of mandated access between MNO and VNOs. Each VNO/MVNO will be different in terms of its business model and the extent of access and services it will seek to acquire from an NSO/MNO.
- b. The degree to which invested capital can be recovered varies by industry and affects the irreversibility of any capital expenditure. Investments in both fixed and mobile networks require significant cost recovery, especially since network operators are licensed spectrum holders exposed to numerous government regulations. Virtual operators by the very nature of their business model are not required to make such irreversible investment as are absolutely critical for the network operators (Radio spectrum, infrastructure etc). Access regulation that would provide VNOs with investment flexibility, especially with respect to mandated access at regulated prices, would further distort the allocation of risk between Network operators and Virtual operators. If market conditions are unfavorable, VNOs would choose not to enter, and would participate with vigor if the opposite were true. Essentially VNOs would share in upside benefits and avoid all downside risk because of such asymmetric allocation of risks.^{14 15}
- c. Moreover, any kind of regulated transfer prices would provide ample scope for ambiguity and may well lead to legal disputes. Any mandated access at a regulated price would disincentivize MNOs and cause them to run their networks with minimal investments. Since such

¹³ <http://www.ofcom.org.uk/static/archive/oftel/publications/1999/consumer/mvno1099.htm>

¹⁴ Jorde, T. M., Sidak, J. G., & Teece, D. J. (2000). Innovation, investment, and unbundling. *Yale Journal on Regulation*, 17(1), 1–38.

¹⁵ Guthrie, G. (2006). Regulating infrastructure: The impact on risk and investment. *Journal of Economic Literature*, 44(4), 925–972.

regulated price may change with the intervention of the regulator at any given point of time, MNOs would never feel confident in making massive investments.

- d. A “hands-off” regulatory approach to MVNO access to MNO networks is consistent with the regulatory approach taken in most overseas jurisdictions. As far as we are aware, no regulator has mandated access to MNO networks for MVNOs. The rights of access to MNO networks and the price for such access have been left to commercial negotiation. For example:
- In the UK, OFTEL has not mandated access for MVNOs to 2G MNO networks or 3G MNO networks.
 - In Australia, the ACCC has not sought to declare access to 2G MNO networks or 3G MNO networks.
 - In Singapore, MNOs may commercially enter into wholesale arrangements with MVNOs.
- e. It is not possible to predict in advance what form or shape a potential VNO/MVNO will take and the type of access and/or services it may need to acquire. Any access and services provided by a MNO to a MVNO/VNO should be driven solely on the merits of commercial negotiations between MNOs and potential MVNOs/VNOs.
- f. MVNOs may take many varied shapes and forms. The type of technical issues will depend largely on the “flavor” of the MVNO. It is impossible to predict specific technical issues, however, in terms of some broad categories some examples include:
- network coverage and quality;
 - forecasting and provisioning;
 - sim card issues;
 - activation and de-activation of features and functionality;
 - MVNO’s customer porting;
 - interconnection and interoperability between the MVNO and MNOs (other the host);
 - network integrity;
 - network security;
 - fault handling;
 - customer billing;
 - inter-operator billing and settlement;
 - will depend on the MVNO and the commercial negotiations between the MNO and the MVNO;
 - demarcation and responsibility between the MNO and the MVNO.

- g. A policy for regulatory intervention and mandated access obligations would essentially disincentivize parties from bringing forth a commercially negotiated outcome. There is a high risk that intervention to establish a pricing approach will distort the market. In any event, an MNO should be able to price access and services at levels that reflect risk and deliver a commercial rate of return.
- h. The case of local loop unbundling for the fixed line internet market in the United States clearly demonstrates the trade-off that exists between the regulatory effects on the short-run market and long run facilities based investment. Unbundling policies were heavily focused on allowing for the entry of service based operators, with little, if any attention paid to investment incentives. It is well established that unbundling of network elements diminishes the incentives for both service and facilities based operators to invest in existing facilities and new technologies¹⁶, and regulation on unbundling has been shown to have a significant negative impact on investment¹⁷. While there may be some dissent on the actual financial impact of unbundling regulation, most research points unequivocally to the fact that unbundling at regulated prices reduces the incentives to invest in advanced network infrastructure.

Q3. How can effective utilization of existing infrastructure be improved? Can VNOs be a solution to achieve targets defined in NTP-2012 for rural density?

Airtel's Answer:

- a. Presently, our network usage is more than optimal and spectrum utilization is almost 100%. MNOs are already struggling to increase their network capacity.
- b. As far as existing infrastructure is concerned, MNOs are sharing telecom infrastructure with each other, as permitted in the policy.
- c. We believe that effective utilization of existing infrastructure can be improved by way of permitting active infrastructure sharing, spectrum sharing and trading, for all of which, the entry of VNOs is not a necessary condition. Globally, VNOs act as resellers of MNOs' services/products and do not create their own infrastructure.

¹⁶ Jorde, T. M., Sidak, J. G., & Teece, D. J. (2000). Innovation, investment, and unbundling. *Yale Journal on Regulation*, 17(1), 1–38.

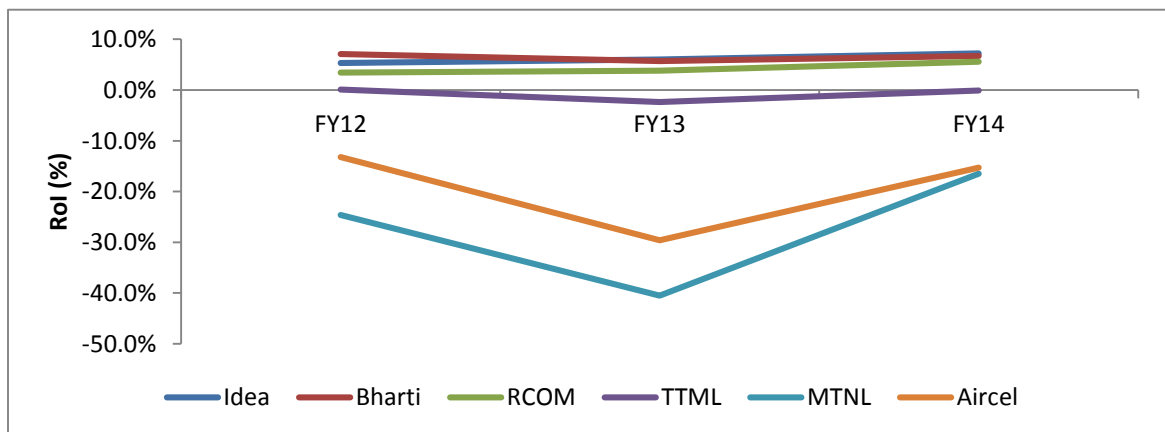
¹⁷ Waverman, L., Meschi, M., Reillier, B., & Dasgupta, K. (2007). Access regulation and infrastructure investment in the Telecom sector: An empirical investigation. London: Law and Economics Consulting Group.

- d. Presently, rural penetration stands at about 45% and to achieve 100% rural wireless teledensity, the sector requires incremental capex of INR 80,000-90,000 Crore by 2020. MNOs are making serious efforts to enter previously unchartered regions. Rural India would benefit more from basic telecom services and not enhanced services for which MVNOs are popularly known. We, therefore, do not believe that VNOs would play a role in stimulating the proliferation of basic telecom services in rural areas. In fact, VNOs, if introduced, would only target high end customers in metros and large cities than going to rural areas. Providing telecom services in rural areas is a high cost proposition in comparison to urban areas with low ARPUs and hence, there would not be any business case for VNOs.
- e. However, the entry of VNOs and over-emphasis on urban markets will certainly force MNOs to focus and invest more in urban areas over rural areas, which will compromise rural penetration.

Q4. Does there exist a business case for introduction of VNOs in all segments of Voice, Data and Videos?

Airtel’s Response:

- a. Currently, all MNOs are struggling to find a viable and sustainable business case for their own services/products, which is evident from the declining profitability and financial health of the Industry. Due to lower retail tariffs, the Return of Capital Employed (RoCE) of Indian MNOs has declined significantly. The values are extremely low, even negative in many cases, and indicate that firms are unable to earn returns that would help them to recover investments, as illustrated below:



Source : COAI data

- b. We do not believe that there is a stand-alone business case for the introduction of VNOs in all segments as MNOs would be forced to match their offerings, as witnessed in the past where large players with relatively higher fixed costs matched their tariffs/products as offered by small operators. This leads into irrational and unsustainable tariff wars and has reduced the profitability of all TSPs and left them with little to reinvest in network expansion and upgrades.
- c. Therefore, the entry of VNOs will certainly escalate the irrational price war and distort the Indian telecom market, which is still trying to revive.

Q5. Whether VNOs be introduced in all or some of the services notified in the UL? Please name the services and the justification.

Airtel's Response:

- a. As explained in our response to Q. No. 1, there is adequate competition in all segments of the telecom services with a high number of TSPs. There is no evidence, either directly or indirectly, which indicates that there is a lack of competition in any segment of telecom services in India.
- b. The existing Unified Licence regime / licensing regime allows TSPs to operate in niche markets as there are no minimum rollout obligations attached to any type of licence and only limited to spectrum.
- c. There are many regional and pan-India mobile operators who provide mobile services to millions of customers.
- d. There are many long distance carriers who have specifically obtained NLD and ILD Licences to provide services to enterprises services to multi-sited corporations, Indian BPO outsourcing and ITES sector operating global networks. Today, ILD operators can also offer calling cards, which is nothing but a sort of VNO riding on other operators' networks.
- e. There are many ISPs who are providing internet services in niche markets (from a few hundred to a few thousand customers).

Therefore, we are of the view that VNOs should not be introduced in all or some of the services notified in the UL till favorable market conditions are in place (in line with our response to Q. No.1)

Q6. Is there sufficient infrastructure (active and passive including access spectrum) available with a TSP to meet its own requirements? Can TSPs spare available infrastructure for VNOs?

- a. Globally, MVNO/VNOs have been permitted in those markets where MNOs have ample spectrum and capacity in an over-saturated market. In contrast, in India, the most serious and large MNOs are struggling for spectrum and are unable to cater the growing needs of data services of their own customers. MNOs are consistently investing in the telecom infrastructure to meet their own requirements. Hence, the current telecom infrastructure including spectrum is barely sufficient to meet the needs of the TSPs and therefore, it is unlikely that there will be any surplus capacity to cater to a VNOs even if introduced.
- b. VNOs are popular for offering premium services in niche market bundled with other product/services. For this, they would have to partner with MNOs that offer good QoS and superior network coverage. While small TSPs may hold some spare capacity, they lack good QoS and coverage. Therefore, VNO services will not be successful if they partner with small TSPs who can neither ensure QoS or network coverage.
- c. The Indian telecom sector is growing rapidly. The NTP-2012 has set the bold targets of 600 million broadband customers (at minimum 2 Mbps download speed and making available higher speeds of at least 100 Mbps on demand) and 100% rural penetration by 2020.
- d. The government should first address the structural issues associated with the Indian telecom sector and make adequate spectrum available to accelerate growth in the voice and data markets. Once those issues are resolved, the entry of VNOs/MVNOs could be considered keeping in view the telecom policy of the Country.

Q7. If any TSP is able to share its infrastructure with VNOs, what should be the broad terms and conditions for sharing the infrastructure?

- a. Presently, all TSPs are sharing passive (building, tower, dark fibre etc.) and active infrastructure (antenna, feeder cable, Node B, Radio Access Network (RAN) and transmission system only) with each other and also entering into intra-circle roaming arrangements. All infrastructure sharing arrangements are mutually negotiated and closed without any regulatory intervention. In fact, in its recent recommendations on spectrum sharing and trading, TRAI has suggested the terms of sharing and trading to be mutually negotiated on commercial basis.

- b. Therefore, we suggest that any form of infrastructure sharing between two TSPs should continue to be mutually decided without any regulatory intervention.

Q8. Should VNOs be allowed to create their own infrastructure to reach out to niche markets? If yes, to what extent?

Airtel's Response:

- a. For the reasons mentioned herein, we do not support the entry of VNOs/MVNOs at this stage till an enabling market environment is in place (in line with our response to Q. No.1).
- b. Nevertheless, the current licensing regime does not restrict any TSPs to offer their services in niche markets with minimal infrastructure as minimum rollout obligations are no longer associated with the licence, and apply only to spectrum.
- c. Under the UL regime, if any TSP wants to create minimum infrastructure on their own, there is no hindrance for the same. TSPs can use the infrastructure of other TSPs in the form of billing platform, distribution network, towers, fibre, etc.

Q9. Should Local Cable Operators (LCOs) or Multi System Operators (MSOs) with cable networks be permitted to share infrastructure with VNOs to provide last mile connectivity?

Airtel's Response:

We support the infrastructure sharing between LCOs/MSOs with a TSP.

Q10. Does the adoption of the VNO model requires an entirely new licensing regime or will a chapter or a separate section for VNOs added to the existing UL suffice?

Airtel's Response:

- a. We do not support the entry of VNOs/MVNOs at this stage till an enabling market environment is in place (in line with our response to Q. No.1).
- b. Therefore, we do not support introducing a new licensing regime or adding a separate section for VNOs in Unified Licence at this stage.

Q11. Comment on what measures are required to ensure that the existing or new licensing regime takes care of future requirements of technological development and innovation and provides a clear roadmap for migration to existing service providers.

Airtel's Response:

- a. The existing license regime, along with spectrum, is technology and service neutral, which has supported the evolution of technology smoothly in telecom sector. There is no direct or indirect evidence to indicate a failure in the current regime and there are no signs of hampered growth in technology.
- b. For example, the current status of telecom networks in India is a combination of the legacy circuit switched (TDM infrastructure) and packet switched (IP based switches) networks. Major TSPs in India have already installed IP based core transport network for carrying voice and data traffic. In some cases, fixed line service providers have replaced their Tandem/Tax switches with NGN soft switches and interfaced with existing network through Media Gateways. In some cases IP/Ethernet elements have extended to access and aggregation networks. Data networks are already IP/MPLS based with major parts of the network being optical (DWDM or Ethernet instead of SDH). In mobile, core networks are primarily IP-based and supported by an all-IP intra-soft-switch, MPLS-based backbone.
- c. Hence, we do not foresee the need to migrate to a new licensing regime as a prerequisite to adopt new technologies and carry out innovation.

Q12. In view of the complexity in the existing licensing regime as explained in Para 3.16 to 3.18, Should India move towards NSO and VNO based licensing?

Airtel's Response:

- a. We strongly believe that there is no complexity in the existing licensing regime, which has been in existence for more than 14-15 years. There is no visibility over the associated benefits of introducing a new licensing model of NSOs and VNOs, especially since the existing framework is quite capable of supporting and stimulating growth.
- b. Any deliberation over a new licensing model of NSO and VNO seriously undermines the new Unified Licence regime, which was announced in August 2013 after holding a detailed consultation process.

- c. In May 2010, TRAI had recommended that under a new licensing regime, all future licenses should be Unified licenses and that spectrum be delinked from the licence. The licensing regime with the model of Network Service Operator (NSO) and Service Delivery Operator (SDO) was, for the very first time, proposed by DoT in the draft NTP 2011 without prior consultation with stakeholders or TRAI. In fact, in March 2012, while giving its views on the draft NTP 2011, this licensing model was not recommended by TRAI to DoT.
- d. Following a reference from DoT, TRAI conducted a consultation process for Unified Licence and made its final recommendations in May 2012. This recommendation was made after due consideration to the licensing regimes of other countries and their relevance in the Indian context. While making these recommendations, TRAI did not consider the regime of NSO and SDO as a substitute of the Unified Licensing regime.
- e. Thereafter, in August 2013, DoT announced guidelines for the grant of Unified Licences. Under this new regime, spectrum would be delinked from the licence and all future licences (including existing licences, which would be due for extension) would be granted under the Unified framework.
- f. During the last few spectrum auctions, TSPs have acquired spectrum worth thousands of crores with the expectation that they would be granted a Unified Licence in its current form, valid for 20 years. Some TSPs have already signed the Unified Licence and some existing TSPs are in the process of migrating to the new regime. Therefore, a consultation process on a new licensing framework would not only be premature at this stage, but would also undermine the recently introduced Unified Licensing regime. Frequent changes in the licensing regime, especially at this stage may risk existing and future investments as well as the rollout plans of operators.
- g. In fact, the same has also been recognized by TRAI in its consultation paper, which inter-alia states “For the telecom sector, which is highly capital intensive and where pay-offs are realized over a long time period, it is necessary that regulatory policies are predictable and stable. **This reference from DoT has the potential to change the entire licensing framework in India. Since the UL has been introduced only recently, it was not very clear as to why such a reference has been made so soon after the UL was introduced. The rationale for changing the licensing regime was not apparent.** (Emphasis added)
- h. To encourage massive investments, a stable and predictable licensing regime is critical. Hence, an appropriate approach would be to continue with the existing Unified Licence

regime to avoid risks to critical investments and to achieve the objective of 'One Nation One license'.

- i. Therefore, we are of the view that the consultation process on the licensing model of NSO and SDO is premature and discussions on the same should be deferred till an enabling industry structure is in place in line with other developed markets.

Q13. If yes, whether existing licensees may be mandated to migrate to NSO & VNO based new licensing regime? What challenges will arise in the migration to the two types of licensing framework?

Airtel's Response:

- a. As explained in our response to Q. No. 1 and 12, we do not support the entry of VNO/MVNOs and the licensing regime of VNO/NSO at this stage.
- b. Infrastructure investors, including those in Telecom networks, take on large risks in making long term investments. For example, investors may be vulnerable to loss of value through changing policy or regulation. When making a business decision, investors will normally expect to recover their capital with appropriate compensation for the risks they run. Policymakers and regulators can indirectly lower the cost of capital by limiting unanticipated policy changes and by providing stability in regulation.
- c. In the past, neither the government nor the regulator has forced operators to migrate to a particular license regime. For example:
 - In 1999, the licensing regime was shifted from 'fixed licence fee' regime to 'revenue share' regime. However, no operator was forced to migrate to new license regime.
 - In 2003, the government announced UASL regime. However, no operator was forced to migrate its CMTS or basic Licence to UASL.
 - In 2013, the government announced Unified Licence regime. Pursuant to UL regime, operators had to migrate all their licenses to UL on expiry of one in any of their circles. However, later on, the DoT withdrew this clause.
- d. Any forceful migration to a new license regime will only undermine the existing licensing regime and create uncertainty in the Industry and more so among investors. Such an act will be counterproductive to a stable licensing framework that is absolutely critical for attracting

massive investments. Also, forceful migration would be counter-productive and also against the fundamental principles and rights.

Q14. Should a VNO be issued a license at the National Level, or for LSAs as in the case of UL or should it be based on the host NSO license areas?

Airtel's Response:

- a. The existing UL regime allows authorization of access services, both nationally and service area wise.
- b. It would be unfair to force any company to acquire a national licence if that company only wishes to provide telecom services in a particular region.
- c. Therefore, the company should be allowed to acquire licences as per the current framework of Unified Licence.

Q15. What should be the duration of a VNO's license? Should it be linked with the license of the NSO or should it be for 20 years, as in the case of UL?

Airtel's Response:

- a. Once the market and financial conditions of the sector allow (in line with our response to Q. No.1) for the entry of VNO/MVNOs, they would be able to hold a valid telecom licence independently. The licence in the case of VNOs also should have a validity for an initial period of 20 years, with a further extension of 10 years at a time.
- b. There is no reason for linking the duration of VNO licence with MNO licence as both would be holding valid telecom licences independently. Moreover, one VNO can always move from one MNO to another MNO in the same service area based on commercial agreements.

Q16. Should there be any cap on the number of VNOs in a service area for a particular service? If yes, what should be the number? Please provide (a) service wise and (b) service area-wise numbers with justification.

Airtel's Response:

- a. The Indian telecom market is currently the most competitive market in the world with a high number of TSPs in all segments of telecom services. However, the sector is still open for anyone and everyone.
- b. India is already witnessing the negative effects associated with a high number of TSPs and its adverse impact on the financial health of the sector. Both the regulator and Industry favor consolidation in the sector and consider it a precursor for future growth.
- c. Therefore, the issue of 'cap on number of operators' is a larger issue and should not be deliberated only in the context of VNOs/MVNOs.

Q17. Should there be restriction on number of VNOs parented to a NSO? Justify your answer.

Q18. Alternatively, should one VNO be permitted to parent more than one NSO per LSA?

Airtel's Response:

- a. We do not support the entry of VNOs/MVNOs at this stage. However, once the market and financial conditions of the sector allow for their emergence (in line with our response to Q. No.1), it is critical that only serious and not fly-by-night companies enter the market and offer telecom services to end customers.
- b. Therefore, we suggest the following:
 - As a start, only one VNO should be allowed to parent with one MNO for all services and vice versa so that both parties can select each other carefully.
 - If not feasible then there should be no restriction on the number of VNOs/MVNOs attached to a MNO so long as the MNO has adequate infrastructure/spectrum to share with one or more MVNOs and meet the QOS requirements for its own subscribers and the SLAs entered into with MVNO(s). However, VNO/MVNO should not be allowed to parent with more than one MNO in a particular service area.

- There might be a view that VNO should be permitted to parent with multiple MNOs as one MNO may not be holding spectrum in all bands say 2G, 3G and 4G and therefore, a VNO may align with one MNO for 2G and 3G services and with another MNO for 4G services. Any restriction on VNO to parent with only one MNO would restrict their ability to offer full-fledged services to their customers.

A VNO should pay licence fee and SUC to the government. Based on the principle of deduction of pass through revenues followed for IUC charges for arriving at the AGR, the charges payable to MNO by VNO/MVNO should be allowed as deduction from the total revenues of the VNO/MVNO for arriving at the AGR, so as to avoid double taxation. If a VNO is allowed to partner with multiple MNOs in a particular service area then the segregation of revenue, which is to be treated as deduction for different MNOs, would always be disputed.

- c. Therefore, the best approach would be to wait for the entry of VNO/MVNO till the market reaches higher levels of consolidation and all MNOs have adequate spectrum in all bands.

Q19. What should be the eligibility conditions for becoming a VNO?

Airtel's Response:

- a. Under the current Unified Licence regime, spectrum and licence are delinked. The eligibility conditions for different service authorizations under Unified Licence (without spectrum) have been prescribed by DoT after detailed consultations and are quite rational.
- b. Since VNO/MVNO will not hold any access spectrum, the eligibility conditions as prescribed for different service authorizations under Unified Licence (without spectrum) may also be applied for VNO/MVNO (without spectrum) once the market is ready for the emergence of VNO/MVNO.

Q20. Whether an existing Unified Licensee with authorisation to provide all services shall be eligible to become a VNO of another Licensee in the same or other LSA? Or, will it need separate/additional authorization to work as a VNO for delivering services for which it does not have access spectrum?

Airtel's Response:

- a. We believe that the existing Unified Licence enables one TSP to use the infrastructure of another TSP.
- b. Currently, one TSP (holding spectrum in 900/1800MHz) offers access services by using the spectrum of another TSP (holding spectrum in 2100MHz), through intra-circle roaming arrangement in a particular service area. However, such services are offered through the agreement between two network operators and not between one MNO and MVNO/VNO.
- c. A VNO will not hold any access spectrum in any band and hence, a regulatory distinction between MNO-VNO and prevailing intra-circle roaming arrangement is to be kept in mind.

Q21. Should there be any cross-holding restriction between a NSO and VNOs? If yes, please quantify the same with justification.

Airtel's Response:

- a. Under the Unified Licence, in the event of holding/obtaining Access spectrum, no licensee or its promoter(s) directly or indirectly shall have any beneficial interest in another licensee company holding "Access Spectrum" in the same service area.
- b. However, there is no such restriction between two TSPs if either both of them or one of them is not holding access spectrum.
- c. We support the existing cross-holding norms and the same may continue to be in force.

Q22. What should be the financial obligations of VNOs in the form of a) Equity & Network b)Entry Fee c)PBG and d)FBG etc.? Please quantify the same with justification.

Airtel's Response:

- a. The DoT has prescribed eligibility conditions including financial obligations for obtaining Unified Licences for different service authorizations.
- b. Since these conditions have been prescribed after detailed consultations and are quite rational, the same may continue.

Q23. Should a VNO utilise numbering resources, Network Codes and Locational Routing Number (LRN) of the NSO? Or, should the Licensor allocate separate numbering resource, Network Codes and Locational Routing Number(LRN) directly to a VNO?

Q24. What operational difficulties could arise in the above arrangements?

Q25. In case your reply is that the Licensor allocates numbering resource to the VNO, then how can it be ensured that the resources allocated to a VNO are efficiently utilised? Should any obligation be placed on VNOs for efficient utilisation of resources?

Airtel's Response:

- a. Ideally, numbering resources should be directly allocated by MNO to VNOs as a part of mutually negotiated commercial arrangements.
- b. This issue may be discussed at the appropriate time once the entry of MVNO/VNO is decided after favorable market and financial conditions (in line with our response to Q. No.1).

Q26. Should the LF and SUC applicable to the VNO be as per stipulated conditions of authorisation in UL? Or, should it be treated differently for VNO? Please quantify your answer with justification.

Airtel's Response:

- a. We do not support the entry of VNOs/MVNOs at this stage. However, once the market and financial conditions of the sector allow (in line with our response to Q. No.1), we believe that the services offered by MNOs and VNOs would be similar in nature, if not the same. While a VNO would not hold any spectrum, it would use the spectral resources of MNOs and would earn revenue from the services using spectrum.

- b. It is important that the revenues accruing to the government should not be reduced due to accounting juggleries and cross-booking of revenues between VNOs and MNOs. Therefore, it is logical and rational that the annual license fees and SUC for VNOs/MVNO should be the same as for MNO. Currently MNOs are paying differential SUC based on their quantum of spectrum and band. If any VNO parents with multiple MNOs then the VNO should pay the highest SUC on the entire revenue as being charged from one of the parented MNOs.
- c. Keeping licence fee and SUC on VNOs at levels lower than those imposed on MNOs will create arbitrage opportunities in the telecom sector. In such a situation, many MNOs may create their own VNOs and sell bulk minutes at below-cost to save licence fee and SUC.

Q28. How can MNP be facilitated in the VNO/NSO model? Can the VNO be treated separately for MNP purposes? Or, should MNP be facilitated only through the network of the NSO?

Airtel's Response:

- a. We do not support the entry of VNOs/MVNOs at this stage. However, once the market and financial conditions of the sector allow (in line with our response to Q. No.1), porting should be permitted between two VNOs, between one VNO and a MNO, and between one VNO and any other MNO in the service area.
- b. Today, a mobile customer is free to port from one TSP to another TSP. If any customer uses the services of any VNOs/MVNOs, he should enjoy the same rights of porting as enjoyed by customers of MNOs. VNO/MVNO should not be treated differentially.
- c. Since the Numbering scheme will be owned by the MNO, a VNO/MVNO can request the MNO to port their customers to other service providers as a part of their commercial arrangements. However, for any porting request and other related aspects, the customer should interface with VNOs/MVNOs and not the parent NSOs/MNOs.

Q29. Who is to be held responsible for CAF verification and number activation, the NSO, the VNO or both?

Airtel's Response:

- a. Any TSP, who develops their own tariffs/products/services, and offers services to end customers directly, should be responsible for the compliance of CAF verification, subscriber verification and other guidelines related to national security.

- b. Since that TSP will serve the customer directly, these compliances cannot and should not be shifted to another.

Q30. Should an NSO or VNO or both be responsible for maintaining QoS standards as per TRAI's regulations?

Airtel's Response:

- a. Any TSPs, who develops their own tariffs/products/services and offers to end customers directly, should be responsible for the compliance of QoS norms as prescribed by TRAI.
- b. As is currently being practiced, if any TSPs offer service by using the infrastructure of another TSP, then both are not responsible for ensuring QoS.
- c. It is also important to ensure that QoS to customers is not compromised. In order to achieve this, VNO/MVNO may have certain service level agreements (SLA) with the parent MNO. However, the ultimate responsibility of the QoS to its subscribers shall remain with the MVNO.

Q31. How should Mergers & Acquisitions be dealt with in the VNO/NSO licensing model? Should the recently announced M&A guidelines issued by the Government for existing players be extended to cover VNOs? Or, should their M&A be treated separately?

Airtel's Response:

- a. The current merger guidelines cover only those licensees who hold access spectrum. To avoid market and spectrum concentration, the merger guidelines prescribe a market share (revenue and subscriber) and a spectrum cap.
- b. We do not support the entry of VNOs/MVNOs at this stage. However, once the market and financial conditions of the sector allow (in line with our response to Q. No.1), then a merger is possible between two VNOs, between one VNO and a MNO, and between one VNO and any other MNO in the service area.
- c. Since the VNOs would only hold an access customer base (and not access spectrum), in the event of a merger, the relevant market cap as prescribed in merger guidelines could be applied.

- d. For other telecom services (except mobile and fixed line services), merger is permitted as per the provisions of respective licence agreement. If any VNOs offer telecom services, which do not use access spectrum, then mergers can be allowed under the provisions of respective licence agreements.

Q32. Should the VNO be treated equivalent to the NSO/ existing TSPs meeting obligations arising from Tariff orders/regulations /directions etc. issued by TRAI from time to time?

Airtel's Response:

Any TSPs who develops their own tariffs/products/services and offer services to end customers directly, should be responsible for the compliance of TTOs and tariff related requirements as prescribed by TRAI.

EBITDA , EBITDA Margin and PBIT						
TSPs		2007-08	2008-09	2009-10	2010-11	2011-12
Bharti	Revenue	27281	36479	38393	41139	45656
	EBITDA	11447	14143	14954	14448	15441
	EBITDA Margin	42.0%	38.8%	39.0%	35.1%	33.8%
	PBIT	7852	10557	10580	9516	9159
Vodafone	Revenue	19063	21997	26080	30119	32012
	EBITDA	6247	5651	6228	5798	4248
	EBITDA Margin	32.8%	25.7%	23.9%	19.3%	13.3%
	PBIT	3473	2682	2615	2514	27
Idea	Revenue	6738	9876	11933	15386	19323
	EBITDA	2272	2780	2895	3128	4313
	EBITDA Margin	33.7%	28.2%	24.3%	20.3%	22.3%
	PBIT	1395	1538	1375	1155	1750
Reliance	Revenue	14786	15748	14789	15000	14510
	EBITDA	5175	4085	1507	984	3018
	EBITDA Margin	35.0%	25.9%	10.2%	6.6%	20.8%
	PBIT	3118	1764	-194	-921	950
Tata	Revenue	7163	7952	8699	11505	12632
	EBITDA	659	757	107	535	456
	EBITDA Margin	9.2%	9.5%	1.2%	4.7%	3.6%
	PBIT	-1194	-1328	-2485	-2153	-2275
Total	Revenue	75031	92051	99895	113150	124133
	EBITDA	25800	27416	25691	24893	27476
	EBITDA Margin	34.4%	29.8%	25.7%	22.0%	22.1%
	PBIT	14644	15213	11891	10111	9611
	PBIT %	19.5%	16.5%	11.9%	8.9%	7.7%

Source: TRAI's study paper on "Shareholding pattern, financing pattern and capital structure of Indian private telecom access service providers" dated 19th Nov 2013