

**Comments of TSPs on Spectrum Cap**  
**(Letter No.103-3/2017-NSL-II dated 18<sup>th</sup> October 2017)**

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**Letter No. RP/FY 17 - 18/ 062/399**

**Date: 27.10.2017**

To,

**Sh. R. S Sharma**

**Chairman,**

Telecom Regulatory TRAI of India,

Mahanagar Door Sanchar Bhawan,

Jawaharlal Nehru Marg (Old Minto Road),

New Delhi - 110002

**Subject: Issues related to spectrum cap.**

**Ref.: TRAI letter dated 18.10.2017 bearing No. 103-3/2017-NSL-II**

Dear Sir,

We are writing in reference to your above referred letter, wherein the Authority has sought comments on reference received from the Department of Telecommunications (DoT) in respect to existing 50% cap of total assigned spectrum in a band for a LSA and the overall 25% cap of total spectrum assigned in a LSA across all bands.

In this regard, please refer below our comments on the issue:

**1. In-band spectrum cap of 50% of total assigned in a LSA:**

- Presently, the band wise spectrum cap has been fixed at 50% in order to ensure presence of at least two operators in any given band. In fact, the Authority in its recent consultation paper on "Auction of Spectrum" issued on 28th August 2017, has rightly acknowledged that the current intra-band spectrum cap of 50% has effectively ensured that in each LSA, at least two TSPs gets the spectrum. This rule clearly prohibits creation of monopoly in any specific spectrum band.
- In many spectrum bands such as 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz etc., the spectrum is fairly distributed amongst various operators including BSNL/MTNL. In effect, this will ensure that no single operator attains monopoly in these spectrum bands.
- However, the same is not true with regards to 800 MHz, 700 MHz band and other new bands, which are likely to be put for auction in future. A bulk of 800 MHz band, with a well-developed eco system for LTE services, is held by one TSP and the remaining spectrum is with other operators, who are under severe financial stress and looking to exit from the business. On the other hand, 700 MHz band is a completely new band and will be used for LTE services in future. Any proposal to remove the in-band spectrum cap of 50% will provide an opportunity to any one operator to monopolise these premium bands. As a matter of fact, while both these sub 1 GHz bands have excellent propagation characteristics, they have a completely different eco system for LTE services.



Therefore, monopoly in any of these bands would completely distort the competition and would eventually restrict the development of technology solely in the hands of one operator.

- Further, some bands are supposed to be allocated for newer services such as 5G, M2M, IoT etc. In case of removal of in-band cap and consequent acquisition of all available spectrum in that band by one operator, would enable that operator to attain a monopoly position in respect of those services, something that will go against the basic tenets of the regulatory principles enshrined in the TRAI act.
  - Present, band-wise cap of 50% is sufficiently large to ensure the presence of at least 2 operators in a particular spectrum band and therefore, acts as safeguard against creation of monopoly in any specific spectrum band.
  - Further, the in-band spectrum cap has worked well in past more than 5 years as all spectrum auctions, since 2012, have been conducted with the in-band spectrum cap of 50%. The spectrum provided through these auctions is fully liberalized and can be used for any technology including LTE. **Therefore, there is no technological development, which warrants any change in in-band spectrum cap of 50%.**
  - The existing operators have committed huge investments of around Rs. 2.5 Lakh crores on the basis of in-band spectrum cap rule followed in all spectrum auctions conducted since 2012. **Any change in in-band spectrum cap at this juncture would be changing the terms of all previous NIA and hence, would be illegal.**
  - **Therefore, in-band spectrum cap of 50% should be continued to protect fair competition in telecom industry as well as to protect the rights of operators, who procured spectrum on the basis of previous NIAs.**
2. Overall spectrum cap of 25% of total spectrum assigned in a LSA across all bands:
- It is important to take a note of fact that at the time of fixation of the overall spectrum holding cap at 25%, there were 7 to 12 operators in each LSA. Therefore, an overall cap of 25% was fixed to ensure that the number of operators would not go below FOUR.
  - An ongoing market consolidation is likely to result in four operators per service area. It is highly unlikely and impractical to assume that all operators will have exactly equal spectrum holding at 25% of the available spectrum. In case, any operator out of these four decides to possess less than 25% of total spectrum and no other operator is allowed to procure more than 25%, the scarce spectrum resource would remain unsold. **Therefore, mathematically, keeping a spectrum cap at 25% in a four operators market will be unsustainable and would result in inefficient utilization of available spectrum.**
  - Nevertheless, an overall spectrum cap of 25% is creating a dichotomy in the present policy structure on account of the fact that operators are allowed to hold 50% of market share under M&A guidelines and even more otherwise. The capping of spectrum holding at 25% will indirectly limit the operator's capability to reach the market share of 50% on account of practical challenges emanating from lower spectrum holding which unduly puts the pressure on operators' network resources. Eventually, it results into lower Quality of Services (QoS) and customer dissatisfaction.



- In view of above facts, an overall spectrum cap of 25% in a consolidated market will result in inefficient utilization of spectrum. Further, the present dichotomy in policy structure also needs to be addressed. Therefore, we propose that the **overall cap for spectrum holding should be increased from current 25% to at least 33%.**

**3. Timing to effect revised Spectrum Cap:**

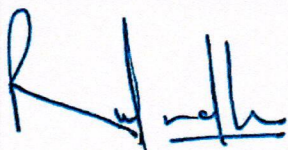
- The issue of spectrum cap was raised by Airtel persistently in 2016. , wherein Airtel was not allowed to trade spectrum in Odisha and Andhra Pradesh due to possible breach in overall spectrum cap by miniscule quantum as per the 'Notice Inviting Applications' (NIA) issued in 2015. Eventually, Airtel had to surrender the spectrum in Odisha to meet the spectrum cap requirement for spectrum trading.
- TRAI vide its recommendations dated 2<sup>nd</sup> July 2015 and 16<sup>th</sup> February 2016 had recommended for inclusion of unsold spectrum from previous auction for calculating the spectrum cap. While, the said recommendations on Spectrum Cap were accepted by DoT, but it restrained itself from declaring the revised caps till the issuance of NIA in 2016. We were allowed for spectrum trading only after publication of NIA-2016.
- In line with the existing practice, the spectrum cap as prescribed in last NIA (2016) should be continued, till it is amended through subsequent NIA. The Department of Telecommunications (DoT) has been following the same principle in respect of spectrum cap while analyzing any proposal for spectrum sharing, trading, M&A etc.
- It is further submitted that TRAI has already embarked on fresh consultation exercise for issuance of next NIA. Therefore, TRAI should include/deliberate issues related to spectrum cap in the ongoing consultation process, so that the terms and conditions of previous NIAs are not unduly altered.

We hope that our submissions will merit your kind consideration and the issue of spectrum caps will be dealt keeping in mind the industry structure and fair competition.

Thanking You.

Yours Sincerely

For **Bharti Airtel Limited**



**Ravi P Gandhi**

**Chief Regulatory Officer**

Copy to:

- 1) Chairman (TC) & Secretary DoT.
- 2) Member(s), Telecom Commission, DoT.
- 3) Member(s), TRAI.
- 4) Secretary, TRAI.
- 5) Pr. Advisor (NSL), TRAI.
- 6) Advisor (NSL), TRAI.





Aircel/TRAI/Corr/2017/117

27 October 2017

Shri S. T. Abbas,  
Advisor (Network, Spectrum & Licensing),  
Telecom Regulatory Authority of India  
MTNL Telephone Exchange Building  
Jawahar Lal Nehra Marg (Old Minto Road)  
New Delhi – 11 00 02

Subject: Response to Issues related to Spectrum Caps

Dear Sir,

This is Aircel Group's response on various topics viz. spectrum caps raised for Industry inputs vide your letter dated 18<sup>th</sup> October 2017. At the outset we are thankful to you as well as the licensor for taking this initiative to address the structural issues at this time when the Telecom sector is facing a massive financial stress.

Sir, Aircel has been in Telecom operations for 23 years now and has made significant investment to serve over 90 million subscribers over these years. We have in the process also faced various financial hardships, although at current juncture the hardships being faced have become extremely pronounced at industry level as well. Our position, at current juncture when entire industry is in financial stress has also further weakened. So we believe we are in a unique position to take a look at industry level challenges and also take a stance on those interventions which are positive for overall industry, subscribers and licensor without favouring any special interest groups or upsetting the well-established parameters of level playing field in the telecom sector. Aircel is supportive of various such interventions which are uniform for all operators in terms of applicability which might affect or improve the overall financial status of the telecom industry.

In respect of access spectrum holdings with various operators and caps being set within which an operator can own the right to use of spectrum, the regulator and licensor have over the years established various norms which have set level playing field and ensured competitive spirit within the industry. The caps have been set as intra-band level limit of up to 50% and inter-band limit of 25% of total holdings across all bands. Over the years, these caps have been further clarified as being based on entire spectrum available in a band (allocated, put for auctions, as well as surrendered etc.). The spectrum caps are thus based on factors which do not-usually reduce.

In respect to the band-specific caps as well as overall caps, the thresholds of spectrum caps have risen over the last couple of years. More spectrum bands have been added to available pool in planned auctions and activities such as spectrum harmonization have led to a known roadmap of release of extra spectrum within existing bands. The spectrum planned to be put to auction in next auctions is again expected to lead to increase in the threshold of spectrum caps.

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A handwritten signature in blue ink, appearing to read "Anand Kumar", is written over the bottom right portion of the corporate information.

Currently, while a number of consolidations are on-going in the telecom industry, it is essential to ensure that level playing field is not upset to address entity specific challenges with spectrum caps. Rather, as previously mentioned an organic increase by means of orderly release of additional spectrum leads to increase in thresholds of spectrum caps.

An intervention at this stage to the caps would be akin to being supportive of measures which only help in addressing financial challenges of a single operator or couple of operators intending to merge, while remainder operators which are servicing the subscribers within the established bounds would be now exposed to stronger competitors with holdings solely enabled by modifications to caps. Needless to say, it is likely to be beneficial to these select operators while having no benefits to remainder operators whose business plans did not depend such sudden modifications in long established norms. It is also pertinent to note here that when operators traded their spectrum with others, the recipient operator was asked to surrender the excess spectrum while an "accommodating" approach was not adopted that time.

Moreover, the NTP 2012 and the Authority while recommending the spectrum caps has undoubtedly recognized the need for sufficient competition. The premise for 25% overall cap and 50% in-band cap came from this very requirement of having adequate competition – at least 4 operators overall and at least 2 operators in each band.

Aircel would thus request the Authority to support measures which ensure the level playing field is not upset and all such increases in the threshold of spectrum caps flow from publicly known and widely anticipated processes of additional spectrum release.

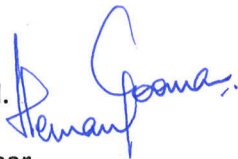
In the sub-GHz bands of 800MHz and 900MHz, which attract significant premium due to their multiple usage for 2G/3G and 4G technologies as well as excellent propagation characteristics, the established spectrum caps are even more essential for operators such as Aircel which operate in 2G and 3G technologies and are still to face challenges linked to renewal of their spectrum holdings in near future.

Revision in spectrum cap in these bands is likely to cause unplanned and unanticipated hardships to Aircel during upcoming auctions. When rest of the operators are consolidating and thus focusing on enhancement of their financial position, Aircel is likely to face substantial competition during bidding for spectrum held by it and being put to auction. No other operator has been put to such hardships of sudden change in spectrum cap rules while auction for spectrums held by it were anticipated.

Aircel would thus request Authority to ensure any proposals being put for relaxation in the spectrum caps do not cause such undue hardships and keep the sub-GHz spectrum caps unchanged.

Thanking you

For, Aircel Ltd.

  
Hemant Coommar,  
Assistant Vice President,  
Head – Regulatory Operations



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(भारत सरकार का उपक्रम)  
BHARAT SANCHAR NIGAM LIMITED  
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To,

Advisor (NSL),  
Telecom Regulatory Authority of India,  
Mahanagar Doorsanchar Bhawan,  
Jawahar Lal Nehru Marg,  
(Old Minto Road), New Delhi-02

(Kind attention: Sh. S.T. Abbas)

No: Regln/1-25/2013/Vol.II/


Dated: 30<sup>th</sup> Oct, 2017

Sir,

Sub:- Issues relating to Spectrum Cap- Reg.

Kindly refer to your office Letter No- 103-3/2017-NSL-II Dated 18<sup>th</sup> October, 2017 regarding Issues relating Spectrum Cap. In this regard, following is submitted for your kind consideration please:-

BSNL is in favor of Spectrum capping, applicable band-Wise spectrum cap of 50% of the total spectrum assigned in a band for an LSA and the over-all cap of 25% of the total spectrum assigned in an LSA across all bands should continue to maintain the healthy competition and ensuring no single operator, acquire maximum spectrum in subsequent mergers, or deals between operators. With the spectrum cap, no operators or group of operators should be able to monopolize the telecom market".

  
30.10.17  
(Ved Prakash Verma)  
AGM (Regln-II)  
Mob:-9868254555

**Idea / RCA / RV / 2017-18 / 197**

**October 27, 2017**

**Advisor (NSL),  
Telecom Regulatory Authority of India  
Mahangar Doorsnachar Bhawan  
Jawahar Lal Nehru Marg,  
New Delhi – 110002.**

**Subject: TRAI letter no. F.No. 103-3/2017-NSL-II dated 18.10.2017 regarding Issues relating to Spectrum caps.**

**Kind Attention: Mr. S.T.Abbas**

**Dear Sir,**

This is with reference to your above-mentioned letter. In this regard, our views are as under:

**Urgent need to review spectrum caps**

- In India, the Industry has over the years made significant investments in the sector and these have borne immense benefits through the rapid adoption of mobile telecom services. From a low single digit penetration to a respectable over 90%, the primary beneficiary of these telecom investments has been the general public.
- Currently, the Indian telecom industry is at a critical juncture in its evolution. The sector is gradually metamorphosing from a pure voice market to a data driven market.
- Providing “Broadband to All” in line with the vision of the Hon’ble Prime Minister of India requires a significant expansion of service providers’ networks, with substantial investments in infrastructure development.
- Wireless broadband infrastructure is the bedrock to actualize the Digital India vision of Hon’ble Prime Minister of India. In order to be able to deliver high speed broadband across the length and breadth of the country, to over a billion Indians at affordable prices at world class quality of service and to adopt & deploy the advance technologies (like 5G) the Industry needs larger chunks of spectrum blocks.



**A. Rationale for Revision of overall spectrum cap**

- The existing Spectrum Cap policy (25% overall spectrum cap & 50% intra band cap) was designed during the regime wherein Voice Mobile services were the dominant offering and there were as many as 14 operators per LSA competing for limited spectrum. In that scenario spectrum caps ensured that every licensee managed to have sufficient spectrum.
- However, with the passage of time, the industry, faced with inevitable stress due to competitive pressures has started consolidating. As per industry experts and the consolidation/ exit of some of the operators during last 6 to 12 months, the market is likely to consolidate to 4 large players. Thus the rationale for keeping overall spectrum cap at 25% needs urgent revision, as all operators cannot be expected to have same quantum of spectrum. In view of this we suggest that overall spectrum cap should be revised to 35%.
- Further, with release of more spectrum in new bands / harmonization in existing bands, it is seen that currently there is sufficient spectrum available with the government for any licensee who requires more spectrum. This is evident from the trend of spectrum auctions as shown below –

Month / Year	Band	Spectrum Put to Auction (in MHz)	Unsold Spectrum (in MHz)
May10	2100 / 2300 MHz	1590	-
Nov12	1800 MHz	590	335
Mar13	800 MHz	190	130
Feb14	900/1800 MHz	862	156
Mar15	800/900/1800/2100 MHz	942	105
Oct16	700/800/900/1800/2100/2300/2500 MHz	3790	2550

- The above trend further strengthens the case for revision for overall spectrum cap to 35%.

**B. Rationale for Revision of intra band spectrum cap**

- Present band wise spectrum caps of 50% per service area, breaks harmonized spectrum of 5/ 10 MHz blocks into smaller lots, thus making it incapable of delivering broadband, and loads inefficiencies that do not allow the operators to provide a comprehensive portfolio of mobile services in the most economic and efficient manner.
- In these circumstances, when the Industry is facing a huge financial stress (which has also been enumerated in our previous submissions to the IMG), the current sector specific inefficiencies need to be reviewed and speedily addressed to allow the industry to take the next leap in a truly digital world.

- It is also a fact that in several countries across the globe, strict spectrum caps imposed for an earlier generation of technology and at an earlier stage of mobile market development have either been removed or implemented in much more flexible ways and increased substantially over their earlier levels. This is being done in order to address issues around techno-economic efficiencies and to address obstacles that an operator may face in offering a complete portfolio of narrowband and broadband services to its customers if the spectrum it can use is strictly limited.
- **In view of above, intra band spectrum cap should be removed.**

#### **C. Our Recommendations on spectrum caps issue**

Given that all the auctioned spectrum is liberalized and operators can deploy any technology as per their requirement, we would like to submit the following Recommendations

- **Revise the overall spectrum cap to 35% to reflect the changing industry structure and remove the existing individual band wise capping of 50% to ensure efficient utilization of spectrum by operators**
- **Alternatively, while revising the overall spectrum cap to 35% , if the TRAI/ DoT would like to have some form of band-wise capping, we suggest that the spectrum bands be first consolidated into broad categories based on frequency ranges as follows:**
  - i. Sub 1 GHz spectrum (700 MHz / 800 MHz/ 900 MHz) – Low Frequency
  - ii. Supra 1 GHz FDD spectrum (1800 MHz / 2100 MHz) – Medium Frequency
  - iii. Supra 1 GHz TDD spectrum (2300 MHz / 2500 MHz) – High Frequency

Post the above classification, the existing Spectrum Cap of 50% can then be applied to the above band clusters i.e. any operator should not be allowed to hold more than 50% of the combined spectrum quantum in that category. This will allow for much more efficient use of spectrum due to reduced spectrum fragmentation and thus prevent DoT being saddled with unsold and unutilized spectrum post-Auction.

**However, we would prefer acceptance of our first recommendation i.e. completely remove intra band spectrum caps while revising the overall spectrum cap to 35%. .**

#### **D. Additional suggestions on spectrum cap issue**

- ***Fragmented spectrum may need not be surrendered***

Issue of fragmentation of spectrum has been highlighted above. In view of technological requirements, the spectrum is only useful when provided for full carrier. No efficient broadband



can be provided if spectrum less than carrier size is available. Hence in case of spectrum surrender due to caps issue by any operator, the Government may not be able to get any financial value with fragmented spectrum. It was clearly demonstrated in Oct'16 auction where in for Bihar circle 4.6 MHz of spectrum was put to auction in 900 MHz frequency. However, since the spectrum was less than a broadband carrier of 5 MHz, there were no bids received for the same.

Hence it is recommended that in case spectrum has to be surrendered due to caps issue, then **only spectrum available as full carrier may be surrendered and any quantum of spectrum which is less than a full broadband carrier ( 5 / 10 MHz) may continue to remain with existing operator.**

- ***Refund/ Adjustment for spectrum surrendered due to caps issue***

It is pertinent to note that spectrum which is being surrendered due to caps issue, was originally paid for in full by the operator. In such scenario following should be ensured:

- The government should ensure that operator surrendering spectrum should be provided with refund/ adjustment for pro rata remaining period of spectrum adjusting for deferred payment obligation payable by the operator.
- This refund adjustment may be provided either at time of surrender or at time when surrendered spectrum is finally re-sold by the government in the auction.
- The operator should be allowed to use the spectrum, till the time it remains unsold.

It is submitted that a review of the Spectrum Caps on the lines suggested above shall also give Telecom operators adequate spectrum for broadband roll outs across the country, contribute positively to the overall investment climate and provide big boost to Prime Minister's vision of Digital India.

We look forward to your kind consideration and support.

Thanking you

For IDEA Cellular Limited

Rahul Vatts

Senior Vice President – Regulatory & Corporate Affairs

Cc : 1) Sh. R.S.Sharma, Chairman, Telecom Regulatory Authority of India, New Delhi – 110 002.

2) Sh. Anil Kaushal, Member, Telecom Regulatory Authority of India, New Delhi – 110 002.

3) Sh. H.Pradeep Rao, Member, Telecom Regulatory Authority of India, New Delhi – 110 002.

4) Sh. S.K.Gupta, Secretary, Telecom Regulatory Authority of India, New Delhi – 110 002.

5) Sh. U.K.Srivastava, Principal Advisor (NSL), Telecom Regulatory Authority of India, New Delhi-110002



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**RCL-RTL/TRAI/LT/17-18/5828**

**27<sup>th</sup> October, 2017**

**Shri S. T. Abbas**  
**Advisor (NSL-II)**

**Telecom Regulatory Authority of India**  
**Mahanagar Doorsanchar Bhawan,**  
**Jawaharlal Nehru Marg,**  
**New Delhi-110002**

**Subject: Issues relating to Spectrum Cap-reg.**

**Reference: TRAI letter F. No. 103-3/2017-NSL-II dated 18<sup>th</sup> October, 2017**

Dear Sir,

This is with reference to the above mentioned letter of TRAI wherein TRAI has sought our views on the points raised in the letter regarding spectrum cap.

2. At the outset, RCOM welcomes the opportunity to provide its suggestions to TRAI on this important and critical issue of spectrum cap.
3. The telecom sector has shifted from being voice centric to data centric and all services are gradually becoming applications over the underlying data network. To support this vast use of data for different applications, building a network with substantial capacity would be required and for that quantum of spectrum holding will play a vital role.

However, the existing DOT guidelines have a cap of 50% holding in a spectrum band and 25% of the total spectrum holding in all bands in a licensed service area for an operator. This is applicable even in case of spectrum sharing.

4. Since 2010, the allotment of the spectrum has been done through the auction and these auction acquired spectrum is liberalised and can be used to deploy any technology. Currently, the spectrum holding of the operators are mostly liberalised and can be used to roll out any technology using any band. Thus, in this technology agnostic scenario; the intra band cap is turning out to be counterproductive for the operators as it restricts the operator to expand its network using the same band by acquiring more spectrum or by way of sharing of spectrum with other operator.

5. Technology now allows the operators to combine various bands to provide a particular service to the consumers. The intra band capping is actually forcing the operators to deploy their network using combination of bands hence making the network more complex. This not only denies the operator to provide the services to the consumers with higher channel bandwidth in a particular band but also reduces the efficient utilization of the spectrum as smaller block of multiple spectrum bands leads to inefficient utilization of available channel bandwidth.



6. The issue becomes more acute in 800 MHz and 900 MHz spectrum bands where the availability of spectrum in these bands is low i.e. around 20 MHz and 25 MHz respectively. Since, the existing guidelines don't allow an operator to hold more than 50% of spectrum individually or in a spectrum sharing scenario, it leads to inefficient use of spectrum.

7. The existing sharing guidelines provides that if two operators are sharing their spectrum in a band then for the purpose of calculating the spectrum holding, the 50% of other operator spectrum holding along with the operator's own holding of spectrum quantum will be considered for verifying the cap. This provision has restricted the operators' ability to enter into sharing arrangement specifically in 800 and 900 MHz as the spectrum cap for these bands are less due to the total quantum of the spectrum available in these bands in a licensed service area. Thus, the intra band cap is also creating a bottleneck even in cases where the operators want to effectively utilise the spectrum through sharing arrangement.

8. The financial health of the sector is abysmal and the telecom service providers are facing immense financial stress. In this scenario, the operators are consolidating their business by way of Merger & Acquisition. The M&A will help the operators to continuing the services to their subscribers and also help into the growth of their businesses. Alternatively, the financially stressed operators can reduce their debts by way of trading of their existing spectrum holding. However, the intra band cap (50%) and Inter band cap (25%) are creating artificial barrier in this consolidation and/or trading process. Hence, removal of these band caps is necessary in order to the growth and smooth functioning of the telecom services.

9. In view of the above, it would be in the interest of the telecom sector and the consumers to remove these band caps. This will allow the operator to own the spectrum as per their business plan and ensure the effective utilization of their network resources. It will eventually lead to better quality of service to the consumers.

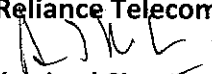
**Our Submission:**

- The existing band caps are creating artificial barriers in the M&A and trading/sharing process.
- Spectrum cap is creating bottleneck in better utilization of network resources and further improvement in the quality of services.
- The spectrum cap of 50% within the same band in a licensed service area and the cap of 25% on the total holding in all the bands in a licensed service area should be removed.

With Regards

For Reliance Communications Ltd.

Reliance Telecom Ltd.

  
(Authorized Signatory)

Please reply to: Amit Mathur

Executive Sr. Vice President

Fax: 011-3033 1781



RJIL/TRAI/2017-18/533

27 October, 2017

**Shri S. T. Abbas**

**Advisor (NSL)**

**Telecom Regulatory Authority of India,**

**Mahanagar Doorsanchar Bhawan,**

**Jawahar Lal Nehru Marg**

**New Delhi 110002**

**Subject: Issues relating to Spectrum Cap - Reg.**

**Reference: TRAI letter No. : 103-3/2017- NLS-II dated 18<sup>th</sup> October 2017**

Dear Sir,

1. This is with reference to your aforementioned letter whereby Reliance Jio Infocomm Limited ("RJIL") has been requested to furnish comments and suggestions on whether existing applicable band-wise spectrum cap of 50% of the total spectrum assigned in a band for an LSA and the overall cap of 25% of the total spectrum assigned in an LSA across all spectrum bands should continue or needs review.
2. We submit that Inter-Ministerial Group (IMG) has rightly identified that the issue of spectrum caps is vital for the financial health of the sector as the prevalent fragmented spectrum holdings hamper the efficiency of modern telecom operations. We thank the Department of Telecommunications ("DoT") and the Authority for giving us the opportunity to submit our views before forming any opinion on this vital issue.
3. At the outset, we submit that the concept of spectrum caps and especially that of in-band spectrum cap are outdated and without any relevance in the current scenario. Data is becoming a critical component of the modern-day telecom networks. Under this emerging scenario, soon all services would essentially become different applications only to be provided on data networks. This is a clear and undeniable reality that the networks of the future will be only IP-based data networks. Further, the growth in consumption of data in the country has increased multifold in the last few months. To catch up and meet with the demands of this trend in accelerated growth in data consumption in foreseeable future, the service providers need to



**Reliance Jio Infocomm Limited, CIN: U72900MH2007PLC234712**

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build substantial and reliable capacities. The quantity of spectrum holdings, the contiguity of the spectrum holding and the channel width will play a critical role in developing such capacities.

4. At present, majority of spectrum available with service providers is liberalized, suitable to deploy any technology. However, the spectrum holdings are scattered over multiple spectrum bands leading to operational inefficiencies. This situation is primarily caused by two issues. The first one being the legacy concept of technology linked spectrum requirement and the consequent allocation of administered spectrum. The second is linked to the issue of intra-band spectrum cap policy currently in place.
5. We submit that the intra-band spectrum cap was relevant only when spectrum allocation was for a particular technology. However, with the present liberalized regime of spectrum holding as well as license, any spectrum band acquired by any service provider can be used for deployment of any technology with maximum flexibility and without any restriction whatsoever. Further DoT has already issued guidelines for liberalization of spectrum that was allocated administratively to the respective licensees. Given this, combined with technological evolution and the need for larger spectrum channels to deliver optimum capacities, the intra-band spectrum cap policy has lost its relevance and in fact has become a hindrance.
6. Intra-band spectrum caps in fact constrain the service providers from deriving efficiencies by forcing them to deploy same technology on multiple spectrum bands, as is being currently experienced with the prevailing intra-band caps. With technology neutrality regime in place and access spectrum allocation only through auction route, all service providers are equally placed to acquire spectrum in any band and deploy any technology. However, the present intra-band spectrum caps force the service providers to opt for multiple spectrum bands owing to restriction of amount of spectrum and desired channel width in the specific spectrum bands, thereby denying the benefits of higher quantum of spectrum within the same band for mobile broadband services forbidding enhanced spectral efficiencies.
7. This phenomenon is more apparent in the sub 1-GHz bands and 2300 MHz & 2500 MHz bands, where the spectrum availability is low leading to an acute situation of fragmented spectrum holdings within the respective bands which is contrary to the policy objectives of efficient and gainful utilization of access spectrum. Further removal of intra-band spectrum cap will facilitate wider participation of service providers in the spectrum auctions across all bands, which otherwise are constrained due to this cap. This will ensure enough competition across all spectrum bands,



reduced chances of spectrum remaining unsold and higher revenue proceeds for the Government.

8. The Authority is well aware of the benefits of wider contiguous spectrum channels for generating higher network capacity as the gain is considerably higher with wider channels, which is a critical requirement given the growing demand for data services in the country.
9. In fact, continuation of intra-band cap is anti-competitive and anti-consumer as it leads to sub-optimal / inefficient use of spectrum and network resources. The present intra-band caps limit service providers' ability to have larger carriers in one particular spectrum band and they are forced to acquire smaller blocks across different spectrum bands further limiting their ability to effectively compete in the market place, by this customers are also denied efficiency benefits of larger spectrum bands.
10. We further submit that the primary objective of maintaining sufficient competition in the market is well served by the prescribed regulation on overall spectrum cap limit. The Indian market is already hyper-competitive and the overall spectrum cap of 25% of the total spectrum in a particular service area may be continued to guard against monopolies or concentration of spectrum with only one or two service providers. Once such adequate policy controls are put in place, service providers should be allowed flexibility to develop their own spectrum band portfolios as per business requirements, rather than forcing them to go for fragmented spectrum holding on account of policy restrictions. Consequently the intra-band spectrum caps should be completely done away with for all spectrum bands.
11. Such cap removal will also help existing smaller service providers undergoing financial stress, as it will open up more options for trading and sharing of excess spectrum. This will help them fetch better value for un-utilized spectrum, which is not the case in today's scenario. These service providers have limited options with only one or two eligible service providers due to the current restriction of intra-band spectrum cap. Such move will also facilitate merger and acquisitions in the sector as service providers would not be required to surrender excess spectrum on account of this limitation.
12. Removal of intra-band cap is also consistent with Government's objective of One-Nation-One-License regime migration, as this move will require spectrum rearrangement and harmonization (in terms of carriers as well as quantum of spectrum) across existing service areas. Continuation of current restriction for intra-



band spectrum cap will act as major impediment as present intra-band spectrum caps continue to be at different levels across LSAs.

13. In view of the above, we submit that the Authority may recommend discontinuation of the intra-band spectrum cap policy forthwith. Further, the Authority may reserve a right to review the overall spectrum cap policy in one years' time. We trust that our submissions will be helpful in forming the Authority's opinion on this vital matter.

Thanking You,

Yours sincerely,

For **Reliance Jio Infocomm Limited**,



**Kapoor Singh Guliani**  
Authorised Signatory



**Copy to:**

1. **Shri S. K. Gupta, Secretary, TRAI, New Delhi- 110002**
2. **Shri U. K. Shrivastava, Pr. Advisor, TRAI, New Delhi- 110002**



06 November, 2017

**Shri S.T.Abbas**

Advisor (Network, Spectrum & Licensing)  
Telecom Regulatory Authority of India  
Mahanagar Doorsanchar Bhawan  
Jawahar Lal Nehru Marg  
New Delhi 110002

**Subject: Issues relating to Spectrum Cap- Reg.**

Dear Sir,

This is with reference to TRAI letter No. 103-3/2017-NSL-II dated 18.10.2017 regarding review in-band cap of 50% and overall cap of 25% across all spectrum bands in a LSA.

In this regard, we would like to place following submissions for your kind consideration –


1. In-band spectrum cap of 50% of total assigned in a LSA:

- The existing provision ensures presence of at least two TSPs in any given band and clearly prohibits creation of monopoly in any specific spectrum band.
- The current spectrum holdings of TSPs depict fair distribution of spectrum in majority of the bands. However, this doesn't hold true for 800 & 700 MHz band and other new bands, which are likely to be put for auction in future. The 800 MHz spectrum has good ecosystem for LTE which is majorly held by single TSP and the remaining spectrum is with other TSPs, who are under severe financial stress and looking to exit from the sector. On the other hand, 700 MHz band is a completely new band and will be used for LTE services in future. Thus, any proposal to remove the in-band spectrum cap of 50% will provide an opportunity to any one TSP to monopolise these premium band resulting into complete distortion of the competition.
- TRAI vide its recent spectrum consultation paper has indicated earmarking of some spectrum bands for 5G services, M2M & IOT services etc. which will going to open newer revenue streams for the industry. However, in case of removal of in-band cap, it may lead to a monopoly position in offering these services, if a single TSP is able to get entire / major portion of spectrum in these bands which will be against the principle of level playing field and policy of promoting healthy competition.
- TSPs have been acquiring the spectrum through auctions basis the current rule of 50% in-band spectrum cap. Any change in in-band spectrum cap in midst of the validity spectrum would be changing the terms of all previous NIAs and hence, would jeopardize TSPs investments already made basis the 50% in-band spectrum rule.

In view of above submissions, **in-band spectrum cap of 50% should be continued to ensure fair competition and level playing field across the TSPs** as well as to protect the rights of operators, who procured spectrum on the basis of previous NIAs.

**Registered Office:**

DBS Business Center, First Floor, World Trade Tower,  
Barakhamba Lane, Connaught Place, New Delhi-110001.  
CIN: U64200DL2012PTC231991





2. Overall spectrum cap of 25% of total assigned in a LSA across all bands:

- When the rule of overall spectrum cap of 25% was made, there were 7 to 12 TSPs in each LSA. It was fixed to ensure that the number of TSPs would not go below four.
- An ongoing market consolidation is likely to result in 3-4 TSPs per LSA. It is highly unlikely and impractical to assume that all TSPs will have exactly equal spectrum holding at 25% of the available spectrum. In case, any TSP out of these four decides to possess less than 25% of total spectrum and no other TSP is allowed to procure more than 25%, the scarce spectrum resource would remain unsold and would result in inefficient utilization of available spectrum.
- Nevertheless, an overall spectrum cap of 25% is creating a dichotomy in the present policy structure on account of the fact that TSPs are allowed to hold 50% of market share under M&A guidelines and even more otherwise. The capping of spectrum holding at 25% will indirectly limit the TSPs capability to attain the market share of 50% on account of practical challenges emanating from lower spectrum holding which unduly puts the pressure on operators' network resources. Eventually, it results into lower QoS and customer dissatisfaction.
- Therefore, we **propose that the overall cap for spectrum holding should be increased from current 25% to at least 33%.**

3. Implementation time for modified spectrum cap:

- In line with the existing practice, the spectrum cap as prescribed in last NIA (2016) should be continued, till it is amended through the subsequent NIA. The DoT has been following the same principle in respect of spectrum cap while analyzing any proposal for spectrum sharing, trading, M&A etc.
- TRAI has initiated fresh consultation exercise for issuance of recommendations which would be the basis for NIA of next Auction. Therefore, **TRAI should include/deliberate issues related to spectrum cap in the ongoing consultation process**, so that the terms and conditions of previous NIAs are not unduly altered.

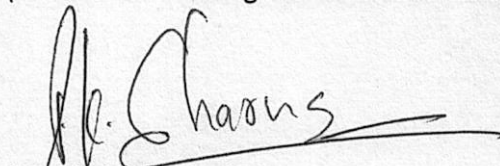
We hope that the TRAI will find our response useful and consider our inputs while finalising the recommendations on this subject.

Thanking you,

Yours sincerely,

**For Telenor (India) Communications Pvt. Limited**

*(Erstwhile Telewings Communications Services Private Limited)*



**(Pankaj Sharma)**

Chief Corporate Affairs Officer





30<sup>th</sup> October 2017

Shri S. T. Abbas,  
Advisor (Networks, Spectrum & Licensing),  
Telecom Regulatory Authority of India,  
Mahanagar Doorsanchar Bhawan,  
Jawahar Lal Nehru Marg (Old Minto road),  
New Delhi - 110002

Subject: Tata Teleservices Response to TRAI letter No 103-3/2017-NSL-II dated 18.10.2017 on  
"Issues Relating to Spectrum Cap"

Dear Sir,

This has reference to your letter No 103-3/2017-NSL-II dated 18.10.2017, on "Issues Relating to Spectrum Cap", seeking comments of the stakeholders. Please find below the comments of Tata Teleservices Limited and Tata Teleservices (Maharashtra) Limited (together referred as TTL).

**A. Increase in Spectrum Cap "In band" as well as Total Assigned:**

- In the current hyper-competitive environment, encouraging consolidation among players through M&A and monetisation of spectrum through trading would be of benefit to Government, industry and the consumer. Though the current M&A guidelines as well as spectrum trading are progressive, one of the major hurdles being faced by TSPs in this process is breach of spectrum cap.
- The existing spectrum cap is 25% of the 'total spectrum assigned' in all bands put together and 50% within a given band in each service area. The objective of placing this restriction was to ensure that there was an adequate distribution of spectrum to all players in the market and there was no situation of concentration of spectrum with just a few operators.
- We believe that in the current scenario of increased consolidation, these spectrum caps are no longer relevant and the Government should do away those.
- We therefore request that spectrum caps as currently defined "ceiling of 25% of the 'total spectrum assigned' in all bands put together and 50% within a given band in each service area" be done away with.

While the Authority in its letter referred to above has not asked for inputs on other issues, we are taking the liberty of presenting for the Authority's kind consideration, some additional points that we believe are both related and relevant to the broader issues of industry sustainability of which the issue of spectrum caps clarified above was an important part.

Page 1 of 2

**TATA TELESERVICES LIMITED**

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Tel.: 91-11-66558666, 66558555 Fax : 91-11-66558908, 66558909 website : [www.tatateleservices.com](http://www.tatateleservices.com)  
Registered Office : 10th Floor, Tower 1, Jeevan Bharati, 124 Connaught Circus, New Delhi-110001  
CIN - U74899DL1995PLC066685 E-mail : [listen@tatadocomo.com](mailto:listen@tatadocomo.com)






**B. Removal of Ban of Two Years on Spectrum Trading:**

- As per the current spectrum trading guidelines a TSP is allowed to trade auction acquired spectrum only after two years from the date of its acquisition. This stipulation was imposed to discourage non-serious TSPs from acquiring spectrum and making quick money by trading it.
- In the current situation of acute competition, most TSPs are making huge losses and are constantly re-visiting their business plans. Some TSPs have even chosen to exit. In such a situation the 2 year embargo on trading becomes an exit barrier which prevents scarce spectrum from being put back into use by some other operator.
- Therefore, it is requested that minimum holding requirement of two years under Spectrum Trading Guidelines may be waived off, with immediate effect.

We hope that our views will be given due cognizance. We would be grateful to address any further query in this regard.

Thanking you and assuring you of our best attention always.

Yours sincerely,  


Arun Kumar Singh  
Additional Vice President – Corporate Regulatory Affairs  
Tata Teleservices Limited  
&  
Authorized Signatory  
For Tata Teleservices (Maharashtra) Limited



27 October 2017

**Shri S.T. Abbas**

Advisor (Network, spectrum & Licensing)

Telecom Regulatory Authority of India

Mahanagar Doorsanchar Bhawan

J.L. Nehru Marg, (Old Minto Road)

New Delhi – 110002

Dear Sir,

Please find enclosed Vodafone's Response to TRAI Letter dated 18 October 2017 on Issues Related to Spectrum Caps.

We hope that our submissions will merit your kind consideration and support.

Warm regards

A handwritten signature in black ink, appearing to be 'P. Balaji'.

P. Balaji

Director – Regulatory, External Affairs & CSR  
Vodafone India Ltd



## **Vodafone Response to TRAI Letter dated 18 October 2017 on Issues Related to Spectrum Caps**

We thank the TRAI for initiating this important short consultation on spectrum caps.

### **Background**

It is our understanding that the principles laid down by the Government for the calculation of spectrum cap, approved by the Cabinet on 20 June 2016 and incorporated into the Notice Inviting Application dated 8 August 2016 will continue to be applicable and that the present consultation is only reviewing the current limits of 50% of total spectrum assigned in a band in an LSA and overall cap of 25% of total spectrum assigned in an LSA across all bands.

These principles for the calculation of overall and band wise caps for an LSA are as below:

- i. All spectrum assigned to TSPs, including quantity of spectrum whose rights to use were put to auction but remained unsold, spectrum whose rights to use were assigned but subsequently surrendered by the TSPs or taken back by the licensor and quantity of spectrum whose rights to use are being put to auction would be counted for the purpose of the spectrum cap.
- ii. The spectrum which may become available to DoT for commercial use after its refarming from other uses (such as defence) at different points of time would not be counted for determining the spectrum caps until its rights to use are put to auction.
- iii. In case a situation arises where due to any subsequent assignment of spectrum to defence/ non-commercial usage, spectrum cap is affected adversely, no TSP would be asked to surrender right to use of any spectrum which it already holds. For the sake of level playing field among Telecom Service Providers (TSPs), the same spectrum cap shall be made applicable for all the telecom service providers in that LSA.

The presently applicable caps are those that have been prescribed in the NIA of 2016. These cannot be reduced under any circumstances. Further, once the caps are published in an NIA, these caps are applicable to all the telecom service providers in that LSA.

### **Removal of In-Band Spectrum Caps**

We have in principle supported an increase in spectrum caps over time and we believe that the time has come to significantly relax or even remove spectrum caps, more so in case of in-band caps for a number of reasons, which are enumerated below:

1. The spectrum caps were set at a time when the market had up to 12 players in every service area. There market is seeing some very significant consolidation in recent times, which is likely to result in number of players going down from 12 to only about 4-5 players in every service area. Clearly, a spectrum cap set for a 12 operator market cannot be applied in a 4-5 operator market and the same will have to be reviewed upwards as otherwise there is a risk of spectrum remaining unsold with the Government.
2. The TRAI will see that over time, players have acquired and built their networks in a specific set of capacity and coverage bands, which has led to a degree of affinity/preference for a certain set of bands for respective operators. In band spectrum caps need to take account of the reality that all bands are





not equally attractive to all players and if an in-band cap is set based on equitable distribution approach, there is a risk of spectrum remaining unsold as operators desirous of expanding their footprint in an existing band holding would be hampered by spectrum ceilings, whilst operators who have invested in an alternative coverage/capacity spectrum combination may not be interested in acquiring spectrum in a new band.

3. If we look at the key players in the market, who are likely to participate in future auctions, we will see a clear band/combination that is evident for respective players.

Operator	Coverage		Capacity FDD		Capacity TDD	
	800	900	1800	2100	2300	2500
Airtel	x	✓	✓	✓	✓	x
RJIL	✓	x	✓	x	✓	x
Vodafone	x	✓	✓	✓	x	✓
Idea	x	✓	✓	✓	x	✓

4. It is evident from the above, that most bands are likely to see interest only from two operators, and if one of them is constrained due to in-band spectrum caps, the other acquires the spectrum at reserve price. It may also happen that if one of them is not interested then spectrum is left unsold because of a breach of the spectrum cap by the other.
5. The potential number of players that may purchase spectrum in any band is limited by a variety of factors:
  - a. Different band preferences of operators noted above. These band preferences are further accentuated by complexity of network rollout on multiple bands
  - b. BSNL/MTNL have never purchased spectrum in an auction and leaving at best two potential buyers for most bands.
  - c. In FDD bands (except in 1800MHz) 5 MHz spectrum is minimum that operators without existing holding in that band are allowed to purchase – in any case such an operator will not be interested in less than 5MHz. DoT often has less than 5MHz of unsold spectrum in the 800 and 900 MHz bands.
  - d. After application of the above constraints the few buyers allowed to buy and interested in buying spectrum in a specific band are often constrained by current in-band spectrum caps. Even if two buyers qualify and only one is cap constrained, the success of the auction depends on a single operator. **We estimate spectrum priced at least ~ Rs. 18,000 crores in 900MHz and 2500MHz bands alone, (based on last auction prices) to be at risk of becoming unsaleable if the current intra-band spectrum caps are not lifted.**

#### **900 MHz spectrum**

In three circles, the unsold spectrum with DoT is less than 5 MHz and therefore operators who don't already have 900MHz are neither allowed to buy nor will be interested. There will be only one private sector operator with 900MHz holdings in each of these circles and that operator will be barred by the current spectrum caps from buying any spectrum in the band (except for a small quantity that Airtel is allowed to buy in Bihar).



We estimate that spectrum worth Rs 4,327 crores (based on last auction prices) in the 900 MHz band will be unsaleable unless the current in-band spectrum caps are lifted.

Circle	Unsold supply	Current Holdings			Total Assigned Spectrum	Existing Cap @ 50% of Total	Only buyers possible	Unsaleable with current caps	Value at last auction price (Rs. Cr.)
		VF + Idea	Airtel	BSNL					
BHR	4.60	-	7.80	6.20	18.60	9.30	VF + Idea	3.20	1,421
GUJ	3.00	11.00	-	6.20	20.20	10.10	Airtel	3.00	2,019
UPW	1.20	11.20	-	6.20	18.60	9.30	Airtel	1.20	887
<b>Total</b>	<b>8.80</b>							<b>7.40</b>	<b>4,327</b>

Note: above illustration assumes that the auction takes place after VF + Idea have completed their merger.

### 2500 MHz spectrum

In 8 circles, there is 10 – 40 MHz of unsold 2500 left after the last auction. In these circles no other operator other than Vodafone and Idea has this spectrum - nor has any other operator placed a single bid for this band anywhere in the country despite the entire supply of a similar band, 2300MHz, being sold out.

As shown earlier, due to ecosystem differences, it is unlikely that 2500 sees any interest from a new entrant, leaving Vodafone and Idea as the only potential buyers for this spectrum. However Vodafone and Idea, as a result of their merger, will be constrained by the in-band spectrum caps and will not be able to purchase the entire unsold supply. This would leave some or all of the unsold spectrum unsaleable.

We estimate that spectrum priced at Rs 13,370 crores (based on last auction prices) in the 2500 MHz band could be rendered unsaleable unless the current in-band spectrum caps are lifted.

Circle	Unsold supply	Current Holdings		Total Assigned Spectrum	Existing Cap @ 50% of Total Assigned	VF + Idea allowed to buy	Unsaleable unless a new entrant purchases	Value at last auction price (Rs. Cr.)
		VF + Idea	BSNL					
AP	30.00	10.00	-	40.00	20.00	10.00	20.00	1,360
Del	20.00	20.00	-	40.00	20.00	-	20.00	2,860
Guj	10.00	30.00	-	40.00	20.00	-	10.00	390
Kar	40.00	-	-	40.00	20.00	20.00	20.00	1,960
Kol	20.00	20.00	-	40.00	20.00	-	20.00	660
MH	10.00	30.00	-	40.00	20.00	-	10.00	580
Mum	20.00	20.00	-	40.00	20.00	-	20.00	2,920
TN	40.00	-	-	40.00	20.00	20.00	20.00	2,640
<b>Total</b>	<b>190.00</b>						<b>140.00</b>	<b>13,370</b>

Note: above illustration assumes that the auction takes place after VF + Idea have completed their merger.

- The spectrum bands can be clearly distinguished on the basis of their propagations characteristics – of coverage and capacity. Each operator has invested in both coverage and capacity bands for the establishment of a hierarchical network architecture. As submitted above, there is a specific preference that has evolved for respective operators in terms of coverage and capacity bands that should be taken into account while reviewing the spectrum caps. For example, an operator with 900MHz spectrum, would have little/lower interest in acquiring 800MHz and vice versa. Similarly, we can see that the preference for 2300MHz and 2500 MHz is clearly distinguishable across various operators.



7. The recent spate of consolidations in the market is also resulting in a consolidation of spectrum that is leading to a breach of the existing in-band caps in some cases. Compliance with existing caps could destabilize existing running networks, which could impact quality of service and public interest. It can also lead to a situation of sub-optimal use of spectrum since any excess spectrum will be in fragmented chunks, which in existing use is of immense importance, but in case of trade or surrender may not be of any use/value at all. In some cases, it is possible that the spectrum may not find a buyer at all – either in case of trading or even if returned to Government and put to auction.
8. Considering the consolidations, it is appropriate that the caps should be reviewed upwards now. In any case, in respect of mergers and acquisitions, if the merged entity exceeds the prescribed spectrum cap limits, surrender/trading would not be required, if the merged entity is in compliance with the caps applicable as on one year from the merger permission granted by the Licensor. Further, in the event that surrender of spectrum is required, the liability for any such excess spectrum will be only up to the date of surrender.
9. Spectrum is now technology neutral and several technologies are supported in a band and across multiple bands; in view of this also the spectrum caps need to be reviewed and relaxed/removed:
  - a. If existing in-band caps are continued with, it could lead to the risk of spectrum remaining unsold with the Government as existing holders will not be able to acquire the spectrum on account of breaching the cap, whilst other players may not be interested in that spectrum, either because they are not interested in the band or the quantum available may not be usable by them [for example, if it is less than a block size required by a new entrant].
  - b. This can also result in situations where there is only one bidder in the market, thus leading to spectrum being sold at reserve prices, thereby not allowing fair market discovery.
  - c. Intra band spectrum caps will hamper operators in achieving higher spectrum efficiencies in offering mobile broadband services, which require larger bandwidth allocations.
  - d. Holding limited quantities of spectrum in multiple bands for offering the same service also increases operational costs for operators.
  - e. Some possible consequences of not reviewing the in-band cap are illustrated below:
    - i. In the case of 2300 and 2500MHz spectrum, TRAI will note that different players have shown a preference for either 2300MHz or 2500MHz, not for both. With the market evolving to a 4-5 operator market, with operators being interested in either 2300MHz or 2500MHz band, a 50% in band cap between two operators is undesirable and impractical.
    - ii. To illustrate, the 2300MHz band is likely to find interest only from Airtel and Rjio, in case one of them is not interested in acquiring additional spectrum, the other operator is likely to be able to pick up this spectrum at reserve price, or in cases, where it already holds 50%, could result in this spectrum remaining unsold.





- iii. In 2500MHz band, this spectrum was picked up in October 2016 only by Vodafone and Idea. With the ongoing merger, it is likely that this band, in future could have only one bidder, which would result in 50% of the spectrum remaining unsold.
- iv. There are also cases, where limited quantum of spectrum is available, that would not be of interest to a new entrant. A classic case in this point could be the 900MHz spectrum, which in most service areas, is available in block sizes of less than 5MHz. With the PSU operator unlikely to acquire any spectrum through auctions, it is likely that this spectrum can be acquired only by one operator, thus, defeating the very purpose of an auction.
- v. A similar problem will also arise in 800MHz, where there is likely to be only one buyer for 800MHz, and even that operator may not be able to acquire spectrum in several service areas, on account of breaching the in-band cap.

**10. In view of the above, we believe that there is a strong case for removal of the in-band cap altogether as in-band cap has become redundant and will actually lead to adverse consequences as highlighted above.**

**Relaxation of Overall Spectrum Cap to 30%**

- 11. The overall cap of 25% also needs to be reviewed as in a 4-5 operator market would tantamount to a mandated near equi-distribution of spectrum, which may not be a practical market outcome as different players are at different stages with different growth plans and spectrum requirements. More importantly, this would again risk spectrum remaining unsold in the market as spectrum not wanted by one operator, would be denied to another, who would be constrained because of the spectrum caps.
- 12. In respect of overall band caps, we believe that there is a good case to relax the overall band cap from 25% to 30%.**
- 13. We have also gone through the spectrum holdings that have been shared as a part of the DoT reference and we have noted a few discrepancies, which are listed in Annexure-1. These may kindly be verified.

**New Delhi  
27 October 2017**



**Annexure-1**

**Discrepancies noted in the Spectrum holdings shared as a part of the DoT Reference**

**800 MHz**

- **Kolkata:** As per us, RJIL holdings are shown 2.50 MHz [2x1.25MHz] lower than their actual holdings while RCOM (including SSTL) have been shown with 2.50 MHz [2x1.25MHz] more. This may kindly be re-verified.
- **Rajasthan:** We note that SSTL has been shown with 5.0 MHz spectrum in 800MHz, which is incorrect as this spectrum was not re-acquired by SSTL on expiry. This spectrum has been acquired by RJIL, thus, there appears to be a double counting in this regard.

**900 MHz**

- **J&K:** As per our understanding, BSNL has 16MHz [2x8MHz] in J&K, whilst the spectrum holding has been shown as 12.40 MHz [2x6.2MHz]. This may kindly be re-verified.

**1800 MHz**

- **Assam:** We note that Bharti Airtel's holdings are being shown as 18.9MHz [2x9.45MHz], we believe that this may be on account of the fact that they have not opted for ARFCN completion which would take their holdings to 19.2 MHz [2x9.6MHz]. This may kindly be re-verified.
- **ROTN:** We believe that Bharti Airtel has 28.8 MHz [2x2x14.4MHz] in ROTN and not 28.4 [2x14.2MHz] as shown in the letter. This difference of 0.4 MHz. may kindly be re-verified

**2100 MHz**

- **Mumbai & Delhi:** We note that MTNL has 10 MHz [2x5MHz] each in Mumbai and Delhi that has not been shown in letter. The total holdings in these two circles are also lower by 10 MHz [2x5MHz]. This may kindly be re-verified.

**2300 MHz**

- **Haryana:** Both Airtel and RJIL Jio have been shown with additional 10 MHz in Haryana Service Area. The total also higher by 20 MHz. This may kindly be re-verified