



14th August 2013

Mr. Arvind Kumar,
Advisor (NS&L),
Telecom Regulatory Authority of India,
Mahanagar Doorsanchar Bhawan,
Jawahar Lal Nehru Marg (Old Minto road),
New Delhi-110002

Subject: Tata Teleservices Response to TRAI Consultation Paper No 06/2013 on Valuation and Reserve Price of Spectrum dated 23rd July 2013.

Dear Sir,

With reference to your Consultation Paper dated 23rd July 2013 on 'Valuation and Reserve Price of Spectrum' seeking comments of the stakeholders, please find attached herewith the comments of Tata Teleservices Limited and Tata Teleservices (Maharashtra) Limited (together referred as TTL).

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,

Anand Dalal
Senior Vice President – Corporate Regulatory Affairs
Tata Teleservices Limited
And
Authorized Signatory
For Tata Teleservices (Maharashtra) Limited

Enclosure: As above

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**Tata Teleservices Response to TRAI Consultation Paper No 06/2013 on
“Valuation and Reserve Price of Spectrum” dated 23rd July 2013**

Q.1. What method should be adopted for refarming of the 900 MHz band so that the TSPs whose licences are expiring in 2014 onwards get adequate spectrum in 900/1800 MHz band for continuity of services provided by them?

And

Q.2. In case spectrum is to be “reserved” for such TSPs, should it be restricted to licences expiring in 2014 (metros) or include licences expiring afterwards (LSAs other than metros)?

TTL Comment:

- Refarming of entire spectrum in 900 MHz band in India was well debated and after thorough analysis it has been decided that entire 20 MHz in 900 MHz band should be refarmed without any reservation. The refarming was duly considered by TRAI well in advance of the expiry of the current license period in their recommendations, titled “Recommendations on Auction of Spectrum” dated April 23, 2012 and was duly approved by Telecom Commission and the Empowered Group of Ministers, headed by Finance Minister P Chidambaram (as per media report dated November 2, 2012).
- Even Hon’ble Minister of Communications & IT endorsed the necessity of 900 MHz band refarming in his press statement dated February 15, 2012. He had said, “The need for refarming of spectrum is accepted in-principle. Further steps will be taken after receipt of TRAI’s recommendations in this regard.” Also, in the **National Telecom Policy 2012** refarming is one of the policy points to make spectrum available for introduction of new technologies for telecom applications and hence entire 900 MHz spectrum band should be made available for new technologies.
- As the expiry of the licenses was nearing, we understand that the EGoM, in its meeting held on November 1, 2012 also finally decided that the 900 MHz spectrum should be refarmed. Based on this decision, DoT came out with NIA on January 30, 2013, wherein the complete 900 MHz band spectrum was put up for auction that would have been available in 2014 after the expiry of the licenses.
- The DoT in its letter dated July 10, 2013 has not sought any recommendation from the Authority on refarming.
- The Government has also taken the decision on the methodology of 900 MHz spectrum refarming i.e., such operators who are holding spectrum in 900 MHz band and their licences are expiring in November 2014 are to bid for the spectrum in 900 MHz band and a window of 18 months was for reconfiguration of network. In case, such operators do not wish to have the spectrum in 900 MHz band then they were



also given the equal opportunity to bid for 1800 MHz band. We strongly feel that there should be no change in the methodology as it has already been decided by the Government. This method is clearly stipulated in the NIA dated January 30, 2013.

- DoT vide its NIA dated 30th January 2013 for Auction of Spectrum in 900 MHz band has already provided the priority for retention of 2.5 MHz of spectrum in 900 MHz band for “Renewal Licensee” whose licences are coming up for renewal in November 2014 such that “if a bidder, who is categorized as a “Renewal Licensee” has submitted a bid for 4 blocks (5MHz) in 900MHz band, in which case 2 blocks (2.5MHz) for which the bidder is entitled for retaining, will be ranked on priority basis (ranked higher) as compared to the other categories of bidders who had submitted the bid at the same Clock Round Price.” Also, “It is to be noted that a “Renewal Licensee” has to participate and submit the bid at the Clock Round Price to avail the facility of Priority Ranking for that particular Clock Round Price.”
- The only pending concern could be about the continuity of the services to the subscribers of those licensees whose licenses are expiring in 2014. In this regard, we hereby submit that the license does not guarantee continuity of service beyond the validity period of the license. Also, the interest of existing subscribers would be served even if the license did not continue beyond 2014 because they can be migrated using MNP route to other operators. One such instance has already been facilitated by the Authority after 122 licenses were quashed by the Hon’ble Supreme Court. We strongly recommend that the Authority should follow the same procedure in case the existing incumbent operators fail to win the spectrum through auction.
- TTL would like to reiterate its consistent view that 900 MHz band should be completely refarmed. It should be auctioned immediately to ensure its most efficient utilization. Full refarming of 900 MHz spectrum will not only ensure level playing field creating equality in the highly competitive environment, but will also generate revenues for the exchequer.
- We agree with the Authority that **it will have a direct bearing on the availability of spectrum in the 1800 MHz band for auction**, in case spectrum in 1800 MHz is required to be reserved for refarming of the 900 MHz spectrum available with such TSPs. Government should immediately auction the spectrum including in 1800 MHz band made available after cancellation of 122 licenses by the Hon’ble Supreme Court vide its Judgment dated February 02, 2012 which remain unsold in 2G auctions that were held in November 2012 and March 2013.



- It is understood that a significant portion of the 900 MHz spectrum comes up for renewal in the next 3 years. In that context it is recommended that the Authority “reserve” spectrum now for refarming even in those circles.
- **We therefore recommend that the complete 900 MHz should be refarmed and in the interest of level playing field, the Authority should ensure that any telecom service provider (irrespective of the date of expiry of its licenses) can participate and obtain the desired quantum of spectrum necessary for its operations. Renewal Licensees should be granted priority for retention of 2.5 MHz in 900 MHz as envisaged in the NIA dated 30th January 2013, provided they participate and submit the bid at the Clock Round Price.**

Q.3. Is any restriction required to be imposed on the eligibility for participation in the proposed auction?

TTL Comment:

- There should be no artificial restriction on participation in the auction that needs to be imposed. The auction of spectrum should be open to all. The eligibility criteria as stipulated by DoT for the March 2013 auction¹ should continue to be adopted by the Government.
- In the interest of level playing field, the Authority should ensure that any telecom service provider (irrespective of the date of expiry of its licenses) may participate and obtain the desired quantum of spectrum necessary for its operations, subject to the capping on the quantum of spectrum prescribed by the Government, through participation in auction
- However, the existing spectrum Caps i.e., ceiling of 25% of the ‘total spectrum assigned’ in all bands put together and 50% within a given band in each service area should continue.
- **We recommend that there should be no artificial restriction on participation in the auction that needs to be imposed. The auction of spectrum should be open to all.**

¹ Eligibility criteria to participate in the Auctions:

(i) Any licensee that holds a UAS/ CMTS/ UL(AS) licence; or

(ii) Any licensee that fulfils the eligibility for obtaining a UL(AS)/Unified License; or

(iii) Any entity that gives an undertaking to obtain a Unified Licence (Access Services)/ Unified License through a New Entrant Nominee as per the DoT guidelines / licence conditions before starting telecom operations



- Q.4. Should India adopt E-GSM band, in view of the diminishing interest in the CDMA services? If yes,
- a) How much spectrum in the 800 MHz band should be retained for CDMA technology?
 - b) What are the issues that need to be addressed in the process?
 - c) What process should be adopted for migration considering the various issues involved?

TTL Comment:

- The E-GSM band 880-915 MHz/ 925-960 MHz is **not** a globally harmonized band. Standard definition of harmonization as meant by WRC of ITU is large scale adoption by a majority of Global operators across the continents leading to highest order of scale of global adoption. Such high scales of adoption due to such global harmonization leads to large leading vendors making Industry standard infrastructure equipments like BTSs Repeaters, Relays, Micro BTSs family of products and also stimulating the growth of GSM handhelds. ***And this is not the case for the proposed band with respect to Global harmonization.***
- There are four existing CDMA operators in India, who are providing their services in the limited availability of effectively only 17 MHz spectrum in 800 MHz band. All 4 operators hold spectrum and provide services in the E-GSM band today in one or more circles. The licenses expire as late as 2024. As per the current allocation and even with the declining demand for CDMA spectrum, there is not enough spectrum in the CDMA band to achieve a meaningful E-GSM deployment.
- If existing operators have to vacate their current holdings so as to facilitate E-GSM, then an alternate band for current CDMA services has to be found for licenses that expire as late as 2024. The basic complaint of the CDMA operators over the last 15 years has been the lack of adequate spectrum to grow their operations and the discrimination in allocation of spectrum (approximately half for the same number of subscribers) against their counterparts in GSM. Both 1900 MHz and 450 MHz bands have been talked about in the past but no implementation has happened to make it available to CDMA operators. It could take several years for an alternate band of adequate capacity to be allotted, for networks to be rebuilt in the new bands and for customers to be migrated from one band to the other.
- Even if the operators were willing to make this change the costs would be significant and that too at a time when the business in CDMA is declining. To be given a totally new band at this stage of the licenses (say 1900 MHz), to find suppliers willing to supply new gear in 1900 MHz in CDMA and to change the handsets of all the existing customers who are currently on 800 MHz to 1900 MHz would make this a non-starter. Contrasted with this is the GSM segment where operators have been



running on 900 MHz and 1800 MHz for nearly 20 years, the handsets work on both bands and there is a strong ecosystem of network suppliers to provide new telecom gear at competitive prices.

- The right approach would be to follow the same process as in 900 MHz. At the time of renewal, take back the 800 MHz spectrum for re-farming letting the operator have a right to retain 2.5 MHz if he so chooses. Till licenses expire, it would not be feasible to attempt to migrate CDMA customers on to another band and to re-deploy the vacated 800 MHz spectrum in E-GSM.
- **In view of the above, the 880-890 MHz band should not be made available for E-GSM services by the Authority till the time of license renewal when the spectrum should be refarmed as is being done for 900 MHz.**

Q.5. Should roll out obligations for new/ existing/ renewal/ quashed licenses be different? Please give justification in support of your answer.

And

Q.6. Is there a need to prescribe additional roll-out obligations for a TSP who acquires spectrum in the auction even if it has already fulfilled the prescribed roll-out obligations earlier?

TTL Comment:

- Rollout obligations are necessary to ensure that scarce resources like spectrum are put to use for public good and not hoarded. That being said it does become difficult in the new regime of technology neutrality or “any band of spectrum can be used to provide any service” to determine how rollout obligations need to be set – by spectrum, by service etc.
- If we go by service, then, as an example, one operator may use part of 1800 MHz for 2G services and another part for 4G LTE and the conclusion would be that there would be two separate rollout obligation across 2G and 4G for the same spectrum band. If one follows the approach of setting different rollout obligations based on spectrum, then an operator who uses both 2100 MHz and 800 MHz for 3G services would need to roll out separate networks for 3G on each of 800 MHz and 2100 MHz which would not necessarily be optimal. Either way is sub-optimal from either the Governments or operators point of view.
- Also whatever methodology is to be adopted has to stand the test of time of the next 20 years of license period and should not cause fresh regulation every few years disrupting the business cases of operators and bringing back uncertainty.



- We recommend that rollout obligations should be generic and linked to offering any of the services possible under the license in that geography. Since that service would be provided with spectrum bought in a market process, the operator would be incentivized to use it effectively. However, this can be supplemented by Roll out obligations as specified in the existing UASL license² and that too in one service/ technology. The rollout obligation should be completed by the operator only once. Any further coverage beyond the existing roll out obligations should be left to the operator as per their business plan.
- This objective of efficient use of national resources can be better achieved by supplementing the above with 2 other initiatives:
 - Allow spectrum trading – in a limited way today but opening up over time (please see response to question no 8)
 - Some time ago it was proposed that the TRAI should have the ability to audit the use of spectrum and to take actions if it was found that the spectrum was not adequately being utilized. This should be implemented
- **We recommend that rollout obligations should be generic and linked to offering any of the services possible under the license in that geography. The rollout obligation should be completed by the operator only once. We also recommend that the spectrum, whether acquired by a new entrant or an existing licensee, should carry the same set of existing UASL roll-out obligations.**

² “LICENSEE shall ensure that:

- (i) *Atleast 10% of the District Headquarters (DHQs) will be covered in the first year and 50% of the District Headquarters will be covered within three years of effective date of Licence.*
- (ii) *The licensee shall also be permitted to cover any other town in a District in lieu of the District Headquarters.*
- (iii) *Coverage of a DHQ/town would mean that at least 90% of the area bounded by the Municipal limits should get the required street as well as in-building coverage.*
- (iv) *The District Headquarters shall be taken as on the effective date of Licence.*
- (v) *The choice of District Headquarters/towns to be covered and further expansion beyond 50% District Headquarters/towns shall lie with the Licensee depending on their business decision.*
- (vi) *There is no requirement of mandatory coverage of rural areas.”*



Q.7. What should be the framework for conversion of existing spectrum holdings into liberalised spectrum?

TTL Comment:

- The NIA dated 30th January 2013 for the auction held in March 2013 stated the following:

“Existing Licensees will be allowed to use the additional spectrum block(s) allotted through this auction to deploy any technology by combining with their existing spectrum holding in the same band after converting their entire existing spectrum holding into liberalised spectrum in the same band as per the terms and conditions to be specified.

Existing CMTS/ UAS/ UL(AS) licensees can liberalise their existing spectrum holding in 1800MHz band after payment of auction determined price.”

- **We recommend that in the forthcoming NIA, the 800 MHz and 900 MHz band should be added i.e., the condition should read as:**

“Existing CMTS/ UAS/ UL(AS) licensees can liberalise their existing spectrum holding in 800MHz/ 900 MHz/ 1800MHz band for remaining period of licenses after payment of auction determined price.”

Q.8. Is it right time to permit spectrum trading in India? If yes, what should be the legal, regulatory and technical framework required for trading?

TTL Comment:

- In today’s context where we have a mix of both allocated and auction purchased spectrum, spectrum trading on any scale will only lead to speculation and distortion in distribution of spectrum. This is further aggravated by the fact that operators don’t hold comparable spectrum leading to a non-level playing field. Any large scale spectrum trading at this point will only further distort the level playing field and is not recommended.
- We recommend that the spectrum trading should be limited to return of unwanted spectrum bought at market prices to DoT by an operator or sold on a bilateral negotiated basis to a prospective buyer. Free trading as in an exchange with the ability of speculators to “hold” spectrum etc should be brought in only when market forces have been clearly established and all operators are competing on a more comparable footing.



Q.9. Would it be appropriate to use prices obtained in the auction of 3G spectrum as the basis for the valuation in 2013? In case the prices obtained in the auction of 3G spectrum are to be used as the basis, what qualifications would be necessary?

TTL Comment:

- We are of the view that the Reserve Price should be reasonably attractive but enough to ensure a fair market price discovery. There should be scope to discover true economic value and as the 3G/ BWA auctions showed, if there is a demand and value in the spectrum final bid prices can be multiples of a reserve price. The auction price of 3G spectrum arrived at in May 2010 is not a correct basis for the valuation of 1800 MHz and 800 MHz as the market has undergone drastic changes over the last three years and it is essential to make a fresh valuation in sync with the current market reality.
- Prices obtained in each auction are independent of each other. One auction cannot be the basis for the next as market conditions would have changed over time.
- Also since each auction is unique, there is no adjustment or refund if in subsequent auctions, the price discovered is lower.
- **We therefore do not support the adoption of the price obtained in the auction of 3G spectrum as the basis for the valuation in 2013 as correct.**

Q.10. Should the value of spectrum for individual LSA be derived in a top-down manner starting with pan-India valuation or should valuation of spectrum for each LSA be done individually?

TTL Comment:

- India has a service area-wise telecom licensing framework. There are 22 service areas. These circles are further categorized into four groups: Metro, type A circle, type B circle and type C circle. Each LSA is distinct from the point of view of telecom related parameters such as tele-density, level of competition amongst market players, cost structure of operations etc., all of which are likely to have an impact on the price of spectrum in the LSA. Further, LSAs differ in terms of population size, population density, economic growth, per capita income, average household expenditure, nature of terrain, climate and geographical location etc.
- We are of the view that the valuation of spectrum and the reserve price should be based on LSA. Also, in any case by adding the individual valuations of all the 22 LSAs, one can always compute the pan-India value of spectrum. TRAI has all the information filed by operators in accounting separation filings done every year.



- We therefore recommend that the Authority should adopt a bottom-up valuation of spectrum capturing the unique potential of each individual LSA.

Q.11. Is indexation of 2001 prices of 1800 MHz spectrum an appropriate method for valuing spectrum in 2013? If yes, what is the indexation factor that should be used?

TTL Comment:

- No, the indexation of 2001 pricing cannot be taken as an appropriate method for valuing spectrum in 2013. Whatever price was allocated in the year 2001 is reflective of demand conditions and economic prospects at that point of time viz. about 12 years ago. The telecom sector as well as the Indian economy has undergone major changes since then. There have been significant advances in technology that have led to new ways of using spectrum and new services for which it can be used. The telecom industry has undergone radical change from the voice-centric usage paradigm to the data-driven and value added services model. The growing economy has set higher benchmarks and desire for services that has driven the growth of the telecom sector and also opened up new areas of expansion. Also on the other hand, competitive intensity has gone up significantly during this period. These various developments clearly indicate that merely indexing the prices of 2001 is really not reflective of all the changes that have occurred in the intervening period. Indexing may be good for measuring valuations over a shorter time period, not over a long-haul such as 2001 to 2013 and forward looking for the next 20 years.

Indexation is premised on the assumption that as time progresses prices rise linearly. This does not hold true for all circumstances as experience has shown that price both increase and decrease depending on a variety of factors. In telecom specifically, the valuation of spectrum is a function of an assortment of complex factors and their interplay.

- Hence, the indexation of 2001 pricing cannot be taken as an appropriate method for valuing spectrum in 2013.



Q.12. Should the value of spectrum in the areas where spectrum was not sold in the latest auctions of November 2012 and March 2013 be estimated by correlating the sale prices achieved in similar LSAs with known relevant variables? Can multiple regression analysis be used for this purpose?

TTL Comment:

- The areas where spectrum was not sold in the last auction in November 2012 and March 2013 may not have co-relation with the sale price in similar LSAs. Co-relation of sale price amongst others in similar LSA, does not capture the effect of Technological changes, Market expectations and Unique characteristics of specific LSAs, etc.
- **We therefore do not agree to the view that the value of spectrum in the areas where spectrum was not sold in the latest auctions of November 2012 and March 2013 be estimated by correlating the sale prices achieved in similar LSAs with known relevant variables.**

Q.13. Should the value of spectrum be assessed on the basis of producer surplus on account of additional spectrum? Please support your response with justification. If you are in favour of this method, please furnish the calculation and relevant data along with results.

TTL Comment:

- The producer surplus approach hinges on the inverse relationship between the quantum of spectrum available with an operator and the costs incurred in servicing the subscriber base. As it assesses the network cost elements by factoring the spectral efficiency of the spectrum band under consideration, it provides the engineering value of the spectrum.
- Engineering value may not always be a good indicator of the prices eventually discovered through auctions – one good example being Sweden’s experience of 800 MHz and 2.6 GHz auctions held in 2011 and 2008, respectively. In both these auctions, the value discovered through auctions was a fraction of the engineering value estimated for the spectrum. The deviation between the engineering value and auction prices ranged from a factor of 1.5 to as high as a factor of 10.
- Further, engineering value may not be an appropriate representation of the full economics of cellular business. Mobile business valuation depends on a host of parameters including existing and potential tele-density, mobile subscriber base, competitive intensity, voice & data revenue, capital expenditure on network and other elements, operating expenses including non-network related expenses such as



personnel and marketing, etc. A player looking to enter the cellular business would evaluate all these parameters together to estimate the price it can pay for the spectrum. While the producer surplus approach offers close assessment of the network requirements and costs thereof, it overlooks the revenue potential of the market under consideration, as well as the non-network costs of running a wireless business. Hence, it provides only a limited view of the business dynamics and consequent price an operator would be willing to pay for spectrum.

- **We are of the view that the value of spectrum should not be assessed on the basis of producer surplus on account of additional spectrum as it provides only a limited view of the business dynamics and consequent price an operator would be willing to pay for spectrum.**

Q.14. Should the value of spectrum in the 1800 MHz band be derived by estimating a production function on the assumption that spectrum and BTS are substitutable resources? Please support your response with justification. If you are in favour of this method, please furnish the calculation and relevant data along with results.

TTL Comment:

- No, the value of spectrum in 1800 MHz cannot be derived by estimating a production function on the assumption that spectrum and BTS are substitutable resource due to various factors and parameters.
- The Cobb-Douglas function seeks to identify the relationship between the inputs to provide mobile services and the output of the same. The inputs viz., amount of spectrum available with an operator and the number of access nodes required, are assumed to be substitutes over a given range of output (mobile traffic or Minutes of Usage). The method estimates the coefficients of the production function and applies these along with the price of BTS to calculate the price of spectrum. As per the method description provided by the authority, the equation seems to ignore the future expectations of BTS prices which include the escalating network operating expenses associated with a cell site. This limits the application of the production function in estimating the spectrum price over a twenty year period.
- Further, the spectrum value calculated based on the production function is based on the relationship between network inputs, and is indicative of the engineering value of spectrum. While the production function looks at the input substitutability relation and seeks to value spectrum using the cost of base stations, it overlooks the impact of revenues and other costs in providing mobile services. As such, it provides only a limited view of the spectrum price. In practice, the commercial value of spectrum would be dependent on the revenue expectations of operators driven by various



factors including the competitive environment and a desired return on investment after considering all costs involved in providing mobile services.

- **We therefore recommend that the value of the spectrum in 1800 MHz band cannot be derived by estimating a production function on the assumption that spectrum and BTS are substitutable resource.**

Q.15. Apart from the approaches discussed in the foregoing section, is there any alternate approach for valuation of spectrum that you would suggest? Please support your answer with detailed data and methodology.

TTL Comment:

- **We recommend a reasonably attractive Reserve Price but enough to ensure fair market price discovery of spectrum. We also recommend that the Authority should come out with a clear road map of how much spectrum will be auctioned in future, in what all years and in what all bands as the UL will be valid for a 20 year period. This clear road map will benefit the Government and the operators. This road map will also help operators to mitigate their risks accordingly.**

Q.16. Should the premium to be paid for the 900 MHz and liberalised 800 MHz spectrum be based on the additional CAPEX and OPEX that would be incurred on a shift from these bands to the 1800 MHz band?

TTL Comment:

- Ideally the premium to be paid for 800/900 MHz over 1800 MHz should not be based only on the differential capex and opex. This would assume that the same services are to be provided by the bands in question and totally ignores the new services and products that the 800/900 MHz bands allow us to offer in the market.
- We believe that a methodology that factors in the intrinsic value of spectrum for the type of services that it enables and consequently the market opportunity and business case it will support is the best way to determine the reserve price of any spectrum band including in this case the 800/900 MHz bands.
- Given that these bands also support 2G, a multiple of the 1800 MHz can be a base for such a reserve price and there is enough data on the capex/opex savings as well as the competitive advantage that 900 MHz offers over 1800 MHz in the 2G space.



- **TTL recommend the valuation of 900 MHz should be at least 2 times the valuation of 1800 MHz band.**

Q.17. Should the valuation of spectrum and fixing of reserve price in the current exercise be restricted to the unsold LSAs in the 1800 MHz band, or should it apply to all LSAs?

TTL Comment:

- **We recommend that the valuation of spectrum and fixing of reserve price in the current exercise should be applied and fixed ab-initio to all LSAs.**

Q.18.

- a) Should annual spectrum usage charges be a percentage of AGR or is there a need to adopt some other method for levying spectrum usage charges? If another method is suggested, all details may be furnished.**
- b) In case annual spectrum usage charges are levied as a percentage of AGR, should annual spectrum charges escalate with the amount of spectrum holding, as at present, or should a fixed percentage of AGR be applicable?**
- c) If your response favours a flat percentage of AGR, what should that percentage be?**

TTL Comment:

- The Spectrum Usage Charge (SUC) is paid for the use of spectrum and the amount of this SUC has also been varying from time to time. The latest revision for SUC was made by the DoT on 25th February, 2010.
- We have already submitted in past that any recommendation on flat rate of SUC is incorrect, illogical and would lead to huge financial loss to the Government.
- We understand that the current system of slab-wise spectrum usage charge percentage akin very much to the income tax rate slab methodology is being used for the following reasons:-
 - As the amount of spectrum holding increases due to increased trunking efficiency, the benefit derived from the spectrum also are higher as with larger chunks of spectrum, there will be larger SUC percentage.
 - Graded system also creates a barrier to an operator holding / hoarding excessively large amount of spectrum that it does not really need.



- As the variable/ graded SUC provides level playing field to all operators - existing as well as new, we have the following submission:
 - Annual Spectrum Usage Charge should be levied as the percentage of AGR.
 - SUC should escalate (slab-wise) with the amount of spectrum holdings.
 - Since the revenue earned from the spectrum obtained administratively and through auction in different bands cannot be segregated, the cumulative amount of 900 MHz and 1800 MHz spectrum allocated administratively and through auction should be counted for calculating the slab of the total spectrum holding by a service provider for levy of spectrum usage charges for GSM services. Similarly, the cumulative amount of 800 MHz spectrum allocated administratively and through auction should be counted for calculating the slab of the total spectrum holding by a service provider for levying of spectrum charges for CDMA services.
 - For an operator who has obtained spectrum only through auction, the spectrum usage charge should be as per the charges defined on slab basis for an existing operator.
- **We therefore recommend that the existing slab base Spectrum Usage Charges should continue.**

Q.19. What should be the ratio adopted between the reserve price for the auction and the valuation of the spectrum?

TTL Comment:

- **We would recommend a ratio between the reserve price for the auction and the valuation of the spectrum at 0.5.**