

Counter Comments to TRAI Consultation Paper

Valuation and Reserve Price of Spectrum: Licences Expiring in 2015-16, 7th August, 2014

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Background

Note:

- 1. There is an urgent need to look at a roadmap of availability of spectrum across different bands (800 MHz, 900 MHz, 1800 MHz and 2100 MHz) for commercial services. It is imperative that there is a framework for refarming with timelines. Without additional spectrum being made available, and with the requirements of existing operators to continue their services, bidding could become distorted. If additional bands are made available, then there could be healthy competition between new entrants and existing operators. If additional bands are not made available, gaming by new entrants to raise the price of bids and then withdrawing could leave incumbents with high auction prices. .*
- 2. Consultation for award of spectrum should take place after the additional spectrum has been identified (especially from the MoD, more so the swapping in the 2100 MHz that has been discussed so much) and other government users) as without that effort and information, spectrum auctions would be done in a constrained manner. This would lead to distorted prices and regulatory concerns in the future.*
- 3. TRAI should consult on the institutional mechanisms for managing spectrum nationally in a strategic manner. TRAI should suggest formation of a Spectrum Committee/other organizational mechanism under the PMO that can take a strategic view of spectrum availability at the national level and sort out inter-ministerial/departmental issues*

The TRAI consultation paper ‘Valuation and Reserve Price of Spectrum: Licenses Expiring in 2015-16’ dated 7th August 2014 features issues related to the availability of limited contiguous spectrum and deals with the fixing of reserve prices in 900 MHz and 1800 MHz band. It also emphasizes the alternative approaches to evaluate and fix reserve price of the spectrum.

Counter Comments for the Consultation Paper on Valuation and Reserve Price of Spectrum: Licenses Expiring in 2015-16.

- 1. Please comment on the issue of making available additional spectrum in contiguous form (as discussed in Para 2.5 and 2.13) in the 900 MHz and 1800 MHz band.**

Refarming and making more spectrum available and making the existing non-contiguous spectrum into contiguous spectrum should be the first priority of the government. This will also release some spectrum from the existing guard bands that can become available as a consequence of making spectrum contiguous. Several countries have already done this exercise, especially when the licenses came up for renewal/re-auction. Some examples are Sri Lanka, USA, and Denmark.

An incentive for refarming could be compensation for costs incurred by existing operators in shifting, as is done in many countries (USA, UK). TRAI would need to work this out in details. This cost could be set-off against the auction price got by the additional spectrum released. If this is insufficient, then proceeds from future auctions should be used for compensation. This should be a part of the auction design. All user departments/defence should be encouraged to let go off the spectrum especially that is contiguous to the commercial bands say 800, MHz, 900 MHz, 1800 MHz and 2100 MHz etc.

If we do not bring about contiguity now, we will be saddled with higher operational costs and overall inefficiencies in allocations until the next licensing period.

- 2. Please comment whether only contiguous blocks of minimum 5 MHz spectrum should be put for auction.**

All spectrum that is possible to be refarmed should be first refarmed. Subsequently, the constraint on contiguity could be removed by re-arranging the spectrum assignments to operators.

It is not necessary to put up only contiguous block of 5 MHz, as operators who have some existing spectrum in these bands could opt for acquiring smaller block sizes.

- 3. What should be the block size to auction the spectrum in (a) 900 MHz band and (b) 1800 MHz band?**

Block sizes of 1/0.2 MHz could be put up for auction. Those bidders that require minimum 5 MHz could be required to win a minimum of 5/10 blocks. This methodology has been used in the past.

- 4. What should be the minimum quantum of spectrum in the 900 MHz and 1800 MHz that (a) new entrant and (b) an existing licensee should be required to bid for?**

Same as in Points 2 and 3.

In LSAs where the available spectrum is less than 5 MHz (West Bengal and North East), attempts should be made to refarm and make available at least 5 MHz to allow for the same level of competition as in other states.

- 5. Should the licensee whose licenses are due to expire in 2015 and 2016 be treated as an existing licensee or as a new entrant?**

All operators (whether new or existing) follow the same auction rules, so, it is not clear why this distinction is relevant. There may be operational issues in being classified as a new entrant or a renewed licenses, which need to be examined.

- 6. Should the valuation exercise for 1800 MHz spectrum be undertaken afresh for all the 22 LSAs?**

And

- 7. Should the prices revealed in February 2014 auction for 1800 MHz spectrum auction be taken as the value of 1800 MHz spectrum for the forthcoming auction in the respective LSA? Would the response be different depending on whether the forthcoming auction is conducted within one year of completion of last round of auction of February 2014 or later?**

And

- 8. If the prices revealed in the February 2014 auction for 1800 MHz spectrum are taken as the value of 1800 MHz for the forthcoming auction, would it be appropriate to index it for the time gap (even if this is less than one year) between the auction held in February 2014 and forthcoming auction? If yes, what rate should be adopted for the indexation?**

The valuation exercise need not be undertaken in all LSAs. In those LSA where the 1800 MHz was unsold, it indicates a lack of a business case. Here the valuation needs to be revised downwards.

- 9. What should be the criteria for defining a ‘market clearing price’? Can the auction determined price be considered as market clearing price, when (i) the demand for spectrum is greater than the supply and when (ii) the demand is greater than or equal to the supply? Can the auction determined price be considered as the market discovered price?**

No comments.

10. Should the valuation of spectrum and determination of reserve price be done only for those LSAs where market clearing price was not achieved for 1800 MHz spectrum in February 2014 auction?

Please see response to Question 8.

11. Should the auction determined price for LSAs where market clearing price was achieved in February 2014, be taken as equal to the value of spectrum?

Please see response to Question 8.

12. Should the market determined price be taken as the value of spectrum in all LSAs?

Please see response to Question 8.

13. Should the value of spectrum in the LSAs where market clearing price was not achieved be estimated by correlating the sale prices achieved in similar LSAs where market clearing price was achieved with known relevant variables (paragraph 3.19)? If yes, please suggest which single variable is best suited for this purpose?

And

14. Can multiple regression analysis be gainfully employed for this purpose given the limited number of sample data points?

The meaning of 'similar LSAs' is not clear. Does it mean that the availability of spectrum, the tele-density, and GSDP per capita and other demographics are also similar? The number of sample data points in the TRAI paper is very small it may be difficult to detect assumption violations in the multiple regression analysis. With few data points, it may be hard to determine how well the fitted equation matches the data, or whether a different function would be more appropriate.

15. Should the value of spectrum in 1800 MHz band be assessed on the basis of producer surplus on account of additional spectrum?

And

16. Is there any need for a change/revision of any of the assumptions adopted by the Authority in producer surplus model in the Recommendations of September 2013? Justify with reasons.

Please see response to Question 8.

17. Should the production function model based on the assumption that spectrum and BTS are substitutable resources be used as a valuation approach (as was done in the earlier valuation exercise)? Please support your response with justification/calculations/relevant data and results.

Few concerns that arise while considering production function model are as follows:

- (i) BTS and spectrum are not completely substitutable. The expectation from TSP to continuously optimize their balance of base station and spectrum inputs is unreasonable.
- (ii) The relationship between spectrum and BTS as substitutable resources is not linear and depends heavily on the quantum of spectrum and the cost of BTS and associated infrastructure; further, the output elasticity of factor inputs is not constant.
- (iii) The Cobb-Douglas production function fails to take into account change in technology, it overlooks the impact of backhaul and other costs in providing mobile services. Moreover, this model is mostly applied in manufacturing industry where the market forces are very different from the current scenario.
- (iv) No single valuation method could be applied. Various methodologies adopted must be able to capture key aspects to come up with a range of solutions.

18. Should the revenue surplus approach be used to arrive at the value of 1800 MHz spectrum? Do you agree with the assumptions made?

No Comments.

19. Should the values contained in the Report of 8th February 2011 for spectrum up to 6.2 MHz be incorporated after indexation in the calculation of the average value of the 1800 MHz spectrum in the current exercise?

No Comments.

20. Should the prices revealed in the February 2014 auction for 1800 MHz spectrum auction be used as one of the values of 1800 MHz spectrum?

Yes. Please see response to Question 8.

21. Apart from the approaches discussed as above, is there any other approach for valuation of spectrum that you would suggest? Please support your answer with detailed data and methodology.

No comments.

- 22. Would it be appropriate to value 1800 MHz spectrum as the simple mean of the values thrown up in all the approaches? If no, please suggest with justification that which single approach should be adopted to value 1800 MHz spectrum?**

If auction values obtained in the previous auctions are used, then there is no need to model any further valuation. In case TRAI wishes to do a valuation, then since valuation is an estimation exercise and the variations in result are based on the underlying assumptions. Taking the mean when there is large variation could lead to distortions. In the last stage, a Delphi approach to assessing what are the valuations could be used.

- 23. Should the value of 900 MHz spectrum be derived on the basis of the value of 1800 MHz spectrum using technical efficiency factors (1.5 times and 2 times) as discussed above?**

The valuation of GSM based only on the linear technical efficiency factor is not alright. The key factors that influence the valuation of any band are availability of spectrum, contiguous blocks availability, spectral efficiency, propagation characteristics and technology to be deployed. The dot.econ database suggests a factor of 45% - 60% valuation of 1800 MHz vis-a vis 900 MHz, but removes outliers and does not take into account the specificity of auction situations.

If enough blocks are made available, and if there is sufficient competition, then lowering the reserve price from the estimate would not matter.

As suggested before, a Delphi approach could be used.

- 24. Should the economic efficiency approach as discussed above be used to calculate the premium for the 900 MHz spectrum, based on the additional CAPEX and OPEX that would be incurred on a shift from this band to the 1800 MHz band?**

The auction should reveal this premium. If the calculation is to be done for setting the reserve price, then please see response to Q 23.

- 25. Is there any other method that could be used for arriving at the valuation of the 900 MHz spectrum? Please support with detailed methodology.**

No comments.

- 26. As in the case of the September 2013 Recommendations and adopting the same basic principle of equi-probability of occurrence of each valuation, should the average valuation of the 900 MHz spectrum be taken as the simple mean of the valuations obtained from the technical and economic efficiency approaches (and any other method)?**

Please see response to Question 22.

- 27. Should the reserve price of 1800 MHz spectrum in the forthcoming auction be fixed equal to the realized price of 1800 MHz spectrum in the February 2014 auction? If not, what should be the ratio between the reserve price for the auction and the valuation of the spectrum?**

Reserve price is a mechanism for mimicking competition. The reserve price of 1800 MHz spectrum in the forthcoming spectrum auction could be linked and be lower than the realized price of 1800 MHz spectrum, as we expect that in the multiple round auctions, prices will increase and the realized price will be higher. In the situation, it is not higher, then in any case, the lower reserve price is the accepted market price.

- 28. If the realized prices in the February 2014 auction for 1800 MHz spectrum is taken as the reserve price of 1800 MHz for forthcoming auction, would it be appropriate to index it for the time gap (even if less than one year) between the auction held in February 2014 and forthcoming auction? If yes, what rate should be adopted for the indexation?**

Please see response to Question 8.