Why 5G Spectrum Price of Other Markets Much Lower Than India?

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The table below summaries the prices of 5G spectrum auctions held in various countries recently.

5G Spectrum Auctions				
Country	**Auction Date**	**Spectrum Band**	**Qty Auction (MHz)**	**Price/MHz (Rs Cr)**
South Korea	Jun-18	3.5 GHz	180	69.62
Spain	Jul-18	3.7 GHz	200	20.23
UK	Apr-18	3.4 GHz	150	71.35
Italy	Oct-18	3.7 GHz	160	174.40
Finland	Oct-18	3.5 GHz	390	1.89

Note that these are average prices and the validity of the auctioned spectrum varies between 10 to 19 years. If we take Finland out of the mix, the average price comes out to be **Rs 84 Cr/MHz.**

Also, note that TRAI recommended price for the same band is **Rs 492 Cr/MHz (5 to 6 times higher).**

Why is the TRAI's price so high?

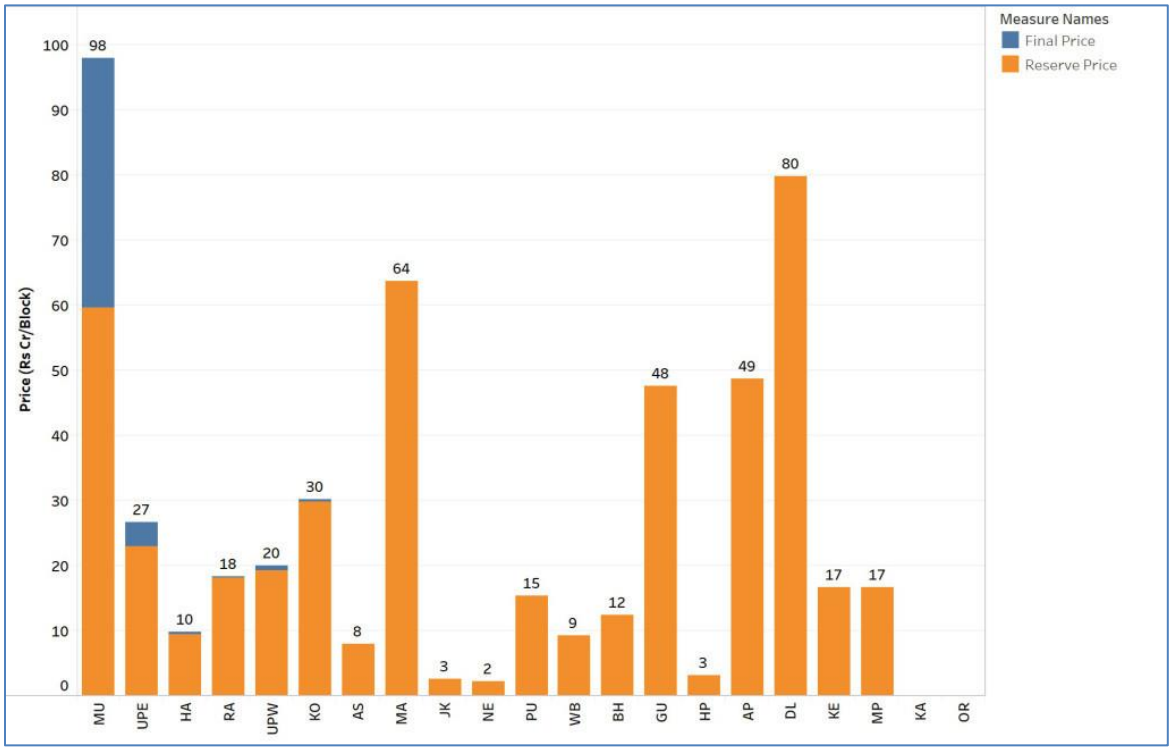
The reason is simple, it has used the indexed price of the 1800 MHz band (of the 2016 auction) to arrive at the price of 3.5 GHz band. As the last auction price was available, and therefore the **ground up valuation (output of the pricing models) was rejected by TRAI, even though these numbers were significantly lower than the last auction price**. See my earlier note - TRAI's Spectrum Pricing Model: It is biased towards last bid value?

What is wrong with that?

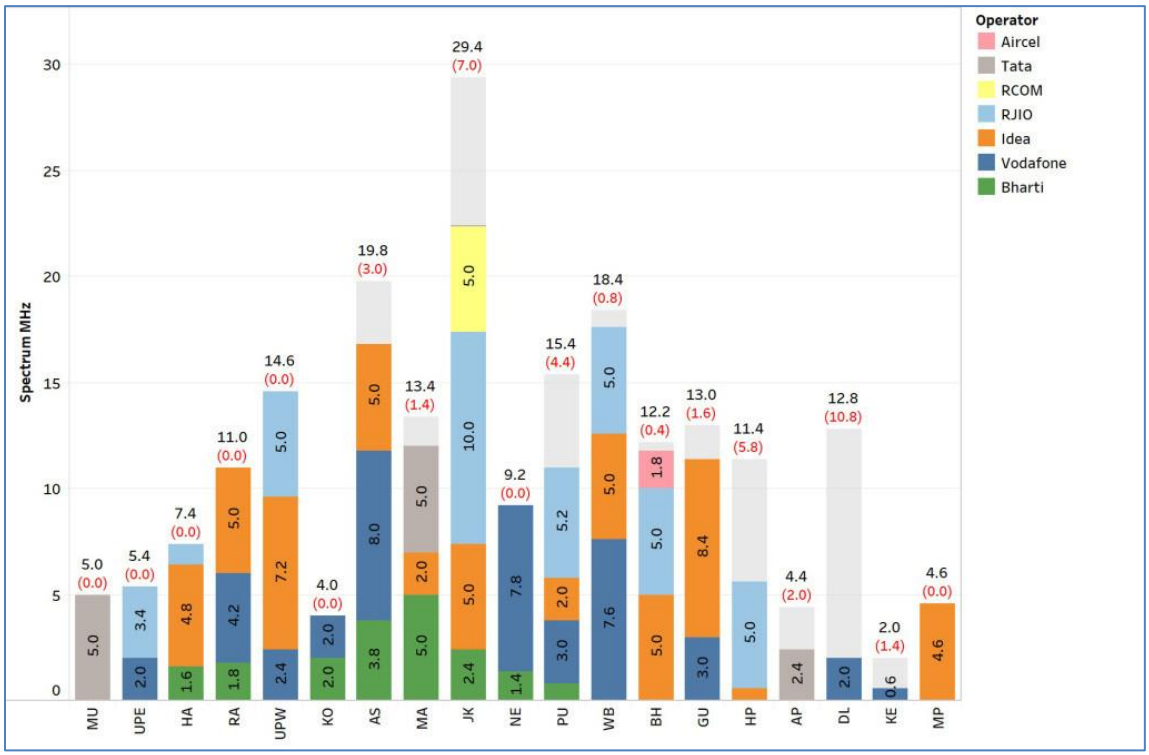
The reserve price of the 1800 MHz band of 2016 was linked with the auction price of 2015, and was appropriately indexed with an escalation factor. And the same was linked with 2014 price. See link : https://paragkar.wordpress.com/comparison/

Also note that 2014 and 2015 were renewal auctions, and therefore bids went very high, and most players (instrumental in raising auction price), are no longer in business. That is why except in Mumbai (with only 5 MHz), where Tata had bid very aggressively (and now out of business), the rest of the circles went at reserve price and with a large quantum remaining unsold. See figures below.

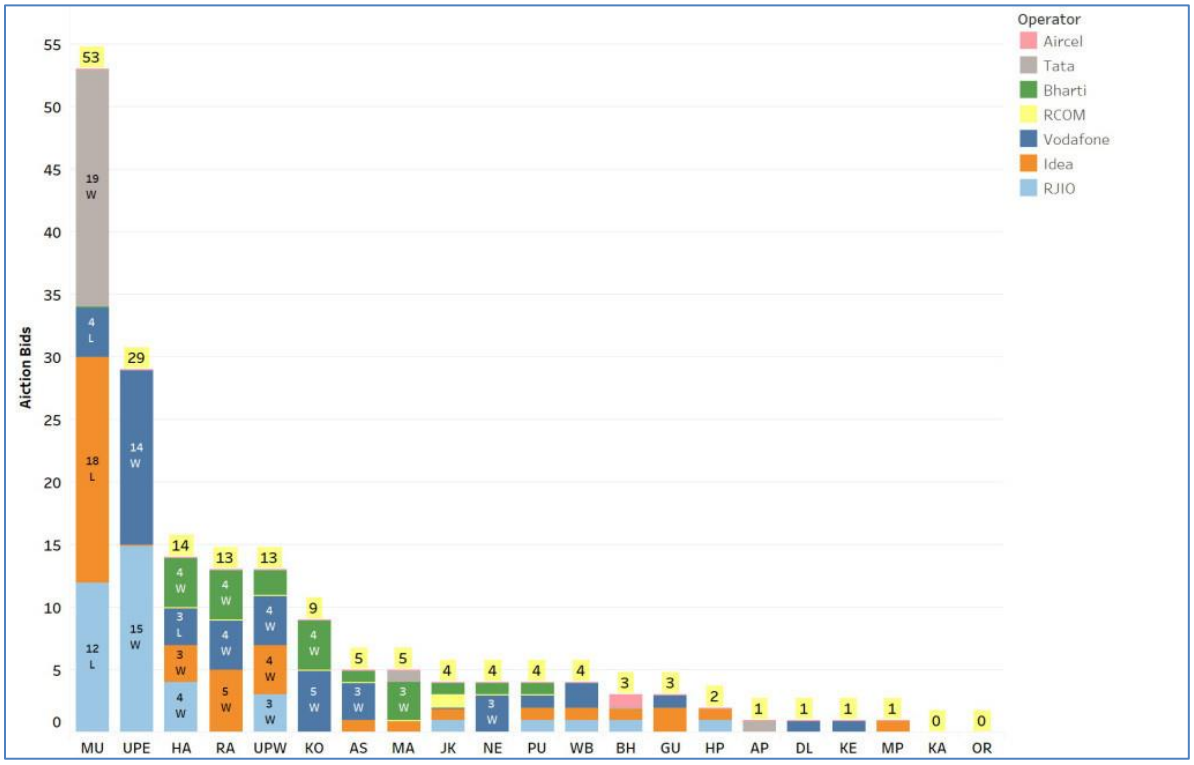
1800 MHz Auction (Final vs Reserve)



1800 MHz Auction (Offered vs Sold)



1800 MHz Auction (Number of Bids)



One can clearly see that the bidding intensity is very high in those circles where the offered spectrum was lower.

Conclusion

Reserve price of future auctions should not be linked with past auctions. As the final price is an outcome of a) Quantum of Spectrum offered; b) Number of Interested Bidders; c) Fragmentation of Spectrum (whether offered in blocks of 5 MHz or not); d) Desperation of the Bidders (the threat of getting driving out of business) etc.

The best approach is to do ground up valuation using a number of methods (pricing models) and take the discounted average to arrive at the reserve price.