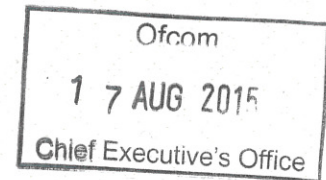




LIFE IS FOR SHARING.

**DEUTSCHE TELEKOM AG**  
**THOMAS DANNENFELDT**  
Chief Financial Officer

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Chief Executive Officer  
Ofcom  
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Bonn, 13 August 2015

**CONFIDENTIAL**

Dear Ms White,

#### 2015 German multiband spectrum auction

I was recently made aware that Ofcom is in the process of setting revised licence fees for 900 MHz and 1800 MHz spectrum in the UK to reflect the market value of those spectrum bands. I understand that Ofcom's current view is that the results from the recently concluded German multiband spectrum auction, may provide relevant evidence for the purposes of estimating the market value of spectrum in the UK. As someone that was heavily involved in preparing Deutsche Telekom's bidding strategy for the recent German auction, I felt that it was important to share with you some relevant insights into the auction that you may find helpful.

There are a number of specific features of the German auction, which mean the results of the auction are unlikely to provide useful insight into the UK market values of 900 MHz and 1800 MHz spectrum and should therefore be treated with caution.

As you may be aware, in the German auction the German Regulatory Authority, BNetzA, imposed a restrictive spectrum cap on qualified bidders for the available 900 MHz spectrum. This was intended to ensure that each bidder would gain sufficient spectrum to maintain their existing GSM infrastructure. This spectrum cap undoubtedly reduced bidders' ability to compete for the available 900 MHz spectrum. It is also likely to have lowered bidders' valuations of the spectrum, as the cap prevented bidders from acquiring the necessary amount of spectrum to provide LTE services, particularly given that, in contrast to the UK, all three mobile operators in Germany require 900 MHz spectrum for GSM (and this will continue for the coming years). Both of these factors depressed final prices in the band to the extent that the prices understate the market value of the spectrum.

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There is also evidence that the final prices paid for 900 MHz and 1800 MHz spectrum in the auction were affected by strategic bids that were placed by all three bidders during the auction. In particular Vodafone placed a number of bids in the latter rounds of the auction that do not appear to have had any value-based rationale, and resulted in the auction effectively coming to its conclusion earlier than it may otherwise have done. This undoubtedly affected the final auction prices of 900 MHz and 1800 MHz spectrum and as a result the prices are unlikely to be reflective of the market value of the spectrum in Germany, never mind the UK.

In addition, the price for 1800 MHz spectrum in the auction was driven up significantly due to uncertainty around the outcome of BNetzA's investigation into Telefonica's 2100 MHz spectrum holdings, following Telefonica's acquisition of E-Plus. The investigation, which was ongoing at the time of the auction, could result in Telefonica being forced to relinquish its 2100 MHz spectrum holdings. In order to manage the risk of foregoing its 2100 MHz spectrum, Telefonica bid on more 1800 MHz spectrum than it otherwise would have needed. This had the effect of driving up the prices for 1800 MHz spectrum in the auction. This is clearly a case of the threat of regulatory intervention affecting the final outcome of the auction.

Furthermore the relative prices paid for 900 MHz and 1800 MHz spectrum are also highly unusual. Certainly this is the first case that we are aware of, in which 1800 MHz spectrum cleared at a higher price than 900 MHz spectrum in the same country. We consider that this result is more likely to be symptomatic of specific features in the German auction, such as the prevalence of strategic bidding, rather than reflective of the relative market value of these spectrum bands.

On this basis, we consider that the results from the auction, are very unlikely to be representative of the market value of spectrum in the UK, and should be interpreted with caution.

I hope you find these first hand insights of use to your ongoing work on setting spectrum licence fees.

Yours sincerely,

Thomas Dannenfeldt  
Chief Financial Officer, Deutsche Telekom AG