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Avoiding regret: how mobile phone companies (and others) can learn lessons from overbidding in spectrum auctions

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*Participating in auctions to acquire vital spectrum licences has become an increasingly important part of everyday business for mobile telecommunications companies. In his new open-access book, **Geoffrey Myers** demonstrates the importance of learning lessons from past mistakes.*

In the UK's 3G auction in 2000, after 150 rounds of bidding over 36 days, five mobile telecoms companies together spent £22.5 billion – adjusted for inflation, about £45 billion today – to win licences providing rights to use specific radio spectrum frequencies. As I explain in my new book, observers at the time were amazed as prices continued to go up and up to become the 'biggest auction ever'. News reports referred to 'staggering sums of money', which were an order of magnitude larger than the official pre-auction revenue forecast of only £1-3 billion.

The business executives involved in the auction had plenty of time to prepare in advance and to choose their bids during the auction. Yet Peter Bonfield, the chief executive of BT, one of the winning bidders, later said that the industry had 'spent £10 billion too much' (Richard, 2009, p. 166). What happened? With the benefit of hindsight, we can see a 'perfect storm' of exacerbating factors.

One reason was lack of experience in such set-piece, high-stakes auctions. The 2000 auction was the UK's very first spectrum auction, so all sides were learning from new experiences. It is now mainstream practice worldwide for governments to utilise auctions in order to award spectrum licences, but even today auction outcomes can be hard to predict – they can work out broadly as expected, be highly successful, or go embarrassingly wrong. However, there are some things that companies can control, and businesses learned hard lessons about overbidding in 2000, which they have generally avoided repeating in more recent auctions.

A second reason is that the auction was highly competitive and seen as a matter of business life and death. Suitable spectrum is essential to be 'alive' as a mobile network operator. In 2000 at the height of a telecommunications stock market boom, the prospects for new market entry seemed especially bright. Nine companies competed in the auction to win the licence reserved for a new entrant, ultimately

obtained by Three UK, which was the first to launch 3G services, symbolically, on 3/3/2003.

For the four incumbent mobile operators (BT, One2One, Orange, and Vodafone), the concern was to avoid being 'dead in the water'. Under the pressure of stock market expectations, they became convinced that their future viability depended on winning a 3G spectrum licence, which was regarded by some commentators at the time as heralding a new world of mobile internet. This may have led to incumbent operators being willing to bid up to their entire enterprise value in the mobile market, not just their incremental value for the spectrum actually being sold in the auction.

A third source of complication was uncertainty about the prospective commercial value of 3G, which would affect the ability of all winning bidders to earn profits from the 3G spectrum licences. Such a situation of 'common value uncertainty' can lead to a 'winner's curse' where companies win only because they overestimate the expected profits and so overbid. Experimental evidence has generally suggested that a winner's curse can still apply even to experienced business executives.

A fourth factor is behavioural explanations for the overbidding by the bid teams, as authorised by the companies' senior executives, such as bounded rationality, fear of losing, joy of winning, or managerial overconfidence. In this case, the overconfidence was about the commercial prospects of 3G technology and services, which subsequently failed to live up to the pre-auction hype.

Business executives and shareholders want to avoid experiencing regret after bidding billions of pounds in high-stakes auctions. Well-informed regulators try to avoid it as well, through their careful design of the auction's format and rules, because they are seeking to encourage participation and trust across a series of spectrum auctions (for instance, there have since been 4G auctions in the 2010s and 5G

auctions this decade). A good regulatory process helps all involved to learn the lessons from the past, such as the overly 'exuberant' bidding in the 3G auction. To paraphrase Oscar Wilde, to regret one auction may be regarded as a misfortune, but to do so again looks like carelessness.



Notes:

- *This blog post is based on the book **Spectrum Auctions: Designing markets to benefit the public, industry and the economy**, LSE Press (open access, 2023).*
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About the author



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Geoffrey Myers is Visiting Professor in Practice at LSE's School of Public Policy and formerly Director of Competition Economics at Ofcom, 2003-21. His book **Spectrum Auctions: Designing markets to benefit the public, industry and the economy** is published by LSE Press (open access, 2023).

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