

Managing the bias in spectrum valuation

A discussion on the challenges of spectrum valuation when the valuation task is delegated to local business units

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A solution to the bias in valuations is to delegate the valuation task to an independent specialist like Coleago

A key challenge in spectrum valuation is managing an upward bias in the valuation process

There may be a difference in priorities between business units and the Group when it comes to spectrum valuation

The high cost of spectrum usually means that it is budgeted for differently to normal expenditure

Local management teams naturally prefer more spectrum to less

Local business units have an information advantage compared to the Group when it comes to valuing spectrum

Managing the bias in spectrum valuation

Over the coming years an increasing amount of spectrum is likely to be offered to the mobile industry through auctions. The process by which spectrum will be awarded will vary from market to market but, irrespective of the process, the regulator will almost certainly be seeking to raise potentially significant revenues from the award. The requirement to hand over large sums of cash to gain access to this valuable spectrum will require mobile operators to estimate their value for the spectrum to ensure they do not overpay.

Mobile groups will often delegate this task to the local business unit. This makes perfect sense as the local management team have a better understanding of the value of the spectrum to them compared to head office. The task of spectrum valuation can be extremely challenging and unfortunately the local business unit often lacks the skills and resources to perform an investment grade valuation exercise. However, the more significant issue for those at head office is how to manage the upward bias in spectrum valuation when the task is delegated to local management.

There are many factors that influence the price paid for spectrum at auction and these include the design of the auction itself, the number of bidders, the packaging of spectrum into lots and the prospect of additional spectrum being awarded in the future. The ultimate shareholders of mobile businesses will, of course, hope that the prices also reflect the value of the spectrum to the business and this is where bias in the valuation process can result in higher than expected prices.

Economists like to talk about the “principal–agent problem” which can occur when an agent (the management of a mobile business) make decisions (the value of spectrum and how much to bid), that affect the principal (the shareholders of the business). The problem arises when the agent is motivated to act in their own best interests, which are not aligned with that of the principal, and there is an asymmetry of information between the agent (who is better informed) and the principal, such that the principal cannot ascertain whether the agent is acting in their best interests or not. Coleago has been working with mobile businesses and their shareholders on spectrum valuation projects for 15 years we have on occasion encountered the principal–agent problem during the spectrum valuation process.

The amount of money spent by mobile operators at auction are often staggering. The money needed to pay for spectrum cannot usually be funded from the agreed capital expenditure budget of the business. As a result, spectrum payments are usually treated as a separate amount that does not impact the key performance Indicators of the business upon which the management team’s bonuses are often based.

However, the management team of a mobile business usually prefer to have more spectrum rather than less. The chief marketing officer prefers more spectrum than his competitors as it allows him to advertise a bigger, faster and better network which helps him achieve his sales target. The chief technical officer prefers more spectrum as it means he needs to build fewer sites to provide the same capacity and helps him achieve his capex to sales targets. The CEO is happy because the business is hitting its targets. The management team will typically prefer to win more rather than less spectrum at auction and winning more spectrum requires a high set of spectrum values to support a high bid limit with which to outbid your competitors.

The spectrum valuation process can be extremely complex especially when multiple bands are being auctioned simultaneously, there is uncertainty over future spectrum awards, existing spectrum can be re-farmed and there is uncertainty over demand and the development of the device ecosystem. The complexity of the process makes it inevitable that the management team have more insight into the true value of spectrum compared to the shareholders. It is therefore not surprising that the combination of poorly-aligned incentives and asymmetries in information can introduce a significant upward bias in the spectrum valuation process. In nearly every spectrum auction there will be an element of bias leading to upward pressure on prices.

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A key question for shareholders or the executives at group level managing a collection of mobile businesses is how to manage the principal-agent problem. A number of clients have hired Coleago and provided us with a very clear mandate to develop an unbiased and independent view of the value of spectrum in order to circumvent the principal-agent problem. However, the asymmetry of information remains and indeed we have observed local business units sometimes seeking to “game” the valuation process to support higher valuations. In these circumstances the spectrum valuation process requires a high degree of political, facilitation and persuasion skill on the part of the consultants to continue to provide an unbiased view of spectrum values whilst forging consensus between the group, the business unit and the consulting team to ensure the final valuations have full support. The process of building consensus is best achieved by adopting a spectrum valuation approach which seeks to minimise subjective judgements and which adopts an evidence-based approach to developing key assumptions. However, as long as shareholders continue to delegate the task of spectrum valuation to the business unit there will always remain a risk of an upwards bias in the valuation process.

About Coleago Consulting Ltd

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