

SPECTRUM COMMITTEE

Meeting date: 11 October 2024

Agenda number: 2b

[REDACTED]

EXPIRING SPECTRUM LICENCES (ESL) – PRICING APPROACH

Introduction

1. The purpose of this Spectrum Committee paper is to present staff considerations and to seek views regarding the approach we intend to take to deliver preliminary views on expiring spectrum licence (ESL) pricing.
2. The approach is based on expert consultancy advice commissioned by the ACMA over the past 2 years. We provide a detailed breakdown of the considerations for using a benchmarking methodology and how the benchmarking methodology would work at **Attachment A**, while summaries of the expert consultancy reports that have informed the methodology are at **Attachment B**.
3. Incumbent licensees have expressed strong interest in the ESL pricing approach and have provided a range of views. In some cases, stakeholders have commissioned economic consultancy reports to support their views. [REDACTED]

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4. While this paper is focused on the methodology for determining ESL prices, [REDACTED]
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Background

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consequently commissioned further expert advice in 2024 to mitigate these challenges and improve our understanding of the following matters:

- How to apply direct and adjusted benchmarking methodologies
 - How to consider varying relevance of benchmarks and apply weightings
 - The most appropriate financial inputs and approach for adjusting spectrum valuations for different durations and timings.
17. We obtained a report from Plum Consulting that primarily considered the first 2 matters, as well as 2 separate reports on the last matter from Ian Martin Advisory and Frontier Economics. The reports are:
- Plum Consulting, 'Topics in spectrum valuation benchmarking', July 2024 (the 'Plum 2024 report') (**Attachment F**)
 - Ian Martin Advisory (with Flat Rock Consulting), 'The financial inputs required to appropriately adjust domestic and international spectrum prices and benchmarks', June 2024 (the 'IMA 2024 report') (**Attachment G**)
 - Frontier Economics, 'Financial adjustments for benchmarking analysis', June 2024 (the 'Frontier report') (**Attachment H**).
18. The Plum 2024 report effectively provides an all-encompassing manual for how to apply benchmarking. It explains how to perform adjusted benchmarking, different methods for weighting various benchmark prices (e.g. grouping countries into cohorts based on common characteristics and applying the analysis to each cohort), and different methods for duration and payment timing adjustments. The report uses case studies in part to explain how the methodology has been implemented previously. Together, the reports provided by Plum Consulting in 2023 and 2024 can helpfully guide our overall approach to ESL pricing.
19. The IMA 2024 report and the Frontier report specialised in duration adjustment matters and carrying forward valuations to future licence expiry dates. The respective authors approached our questions with different lenses – the IMA 2024 report reflected a telecommunications analyst background while the Frontier report reflected a pure theoretical economics background. The 2 reports ultimately came to similar views regarding an appropriate weighted average cost of capital (WACC) rate, with slight differences in views on duration adjustments and how to carry forward values.
20. Summaries of the expert consultancy reports procured in 2024 are at **Attachment B**.

ESL pricing approach – benchmarking methodology

21. Staff have formulated a benchmarking approach for this ESL pricing project that has been informed by the abovementioned expert consultancy reports and considers stakeholder views.
22. We intend to use **direct benchmarking** to the extent possible. This involves compiling data for a range of benchmark prices for a given spectrum band, converting all benchmark prices to a common currency/duration/timing, weighting benchmarks by their relevance to the Australian ESL context, then using the outputs to find a particular price (or range of prices) for a spectrum band.
23. There may be circumstances where we do not have relevant domestic price benchmarks and the international benchmarks are from countries that have very different characteristics to Australia. In such cases, we intend to supplement the

analysis with **adjusted benchmarking**. This is similar to direct benchmarking but considers value relationships between bands rather than direct prices.¹

24. It should be noted that staff propose to determine a '\$ per MHz per pop' price for each spectrum band based on its likely payment due date (e.g. licence renewal date). The renewal price for a given licence would be the result of multiplying the \$/MHz/pop price for the band by the bandwidth (in MHz) and the population coverage of the licence.² It has been common practice to use \$/MHz/pop prices to reflect the value of spectrum both domestically and internationally, and will help ensure prices within a given spectrum band (or group of substitutable bands) will reflect similar values even if the bandwidth and population coverage of renewed licences differs.
25. It is important to note that the benchmarking approach intends to use valuations based on wireless broadband use of the spectrum, which means it is unlikely to be suited to TOB or rail safety use. The potential pricing of bands for these uses can potentially be based on a combination of opportunity cost principles and public interest discounts (e.g. discounts applied by reference to the benchmarking valuation for rail safety, or equivalence to apparatus licence pricing for TOB). Further information is provided in the section starting at paragraph 33 of this paper.
26. **Attachment A** outlines the approach in detail and steps through a stylised example to help make it more understandable.

Current stakeholder views – overview

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- **Methodology**

- The MNOs each advocate for distinct methodologies but with a common outcome of prices being set conservatively, with a common theme of asymmetric risk – i.e. over-pricing risk outweighs under-pricing risk.
- Telstra suggests a benchmarking approach; Optus suggests a nominal cost recovery pricing approach; and TPG suggests a progressive fee structure based on metrics like mobile service revenue.

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¹ For example, if we are seeking a 2.3 GHz band valuation, a price for 2.3 GHz in Taiwan may not be relevant due to its massive population density leading to higher \$/MHz/pop prices that are not relevant to Australia. However, the relative value of 2.3 GHz to 3.4 GHz in Taiwan may be able to help us use our domestic 3.4 GHz benchmarks to infer a valuation for 2.3 GHz via adjusted benchmarking.

² For example, the \$/MHz/pop renewal price for a spectrum band may be \$0.50/MHz/pop. The renewal price for a licence with 40 MHz and a population coverage of 10,000,000 would be $0.50 \times 40 \times 10,000,000 = \$200,000,000$. If the bandwidth or the population coverage halved, then the price would be halved (e.g. $0.50 \times 20 \text{ MHz} \times 10,000,000 = \$100,000,000$).

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30. While Telstra recommends a benchmarking methodology similar to our proposals, Optus and TPG present different views. Below we provide a summary of staff commentary on these views.
31. Optus' case for cost recovery pricing is formed on the basis that pricing is not needed to incentivise the efficient allocation or use of the spectrum, with the assumption that spectrum was already allocated efficiently in previous market-based allocations. There are several counterarguments that can be made against Optus' view:
 - Previous market-based allocations may reflect efficiency in the context of the policy settings, market conditions and technology at that point in time. They do not imply ongoing economic efficiency, particularly beyond the expiry of the licence that was originally allocated.
 - Cost recovery pricing could create distorted incentives for spectrum use, such as spectrum hoarding. While Optus contends that pricing is not needed to incentivise efficient use, we are unable to have certainty that it would improve the public benefit – licensees may for example use the cost savings to generate windfall gains rather than increasing investment or decreasing prices.
 - Cost recovery pricing would be inconsistent with the general spectrum pricing principles the ACMA has historically observed – i.e. opportunity cost pricing that reflects the market value of the spectrum. Cost recovery prices would likely put prices paid below the value placed on the spectrum by some alternative prospective users, which have demonstrated a strong willingness to pay for spectrum (e.g. for regional spectrum in the 850/900 MHz auction).
32. TPG's case for progressive pricing is based on levelling the competitive playing field between MNOs. Staff consider there are several counterarguments that can be made against TPG's pricing proposal:

- Progressive pricing would run counter to incentivising the efficient use of spectrum, as it would penalise licensees for being more productive with the spectrum. While TPG states that it would reflect the value of the spectrum over time, it would not reflect opportunity cost pricing.
- The pricing for each spectrum band would not necessarily reflect how the value of that spectrum correlates to how each operator generates mobile service revenue (MSR). For example, Optus may end up paying more for each ESL band due to higher MSR that is the consequence of its access to the non-ESL 900 MHz band spectrum, for which it recently paid \$1.48 billion for a spectrum licence.

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Next steps

39. Based on guidance from this Spectrum Committee meeting, we will progress our ESL price benchmarking work with a view to providing preliminary views on prices for a selection of representative spectrum bands in a further Spectrum Committee paper at the December 2024 meeting.

Attachments

- A ESL pricing – proposed benchmarking methodology
- B Summary of ESL pricing expert advice in 2024
- [REDACTED]
- [REDACTED]
- E Plum Consulting – International best practice in spectrum valuation methodologies (2023)
- F Plum Consulting – Topics in spectrum valuation benchmarking (July 2024)
- G Ian Martin Advisory / Flat Rock Consulting – The financial inputs required to appropriately adjust domestic and international spectrum prices and benchmarks (June 2024)
- H Frontier Economics – Financial adjustments for benchmarking analysis (June 2024)

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