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Public inquiry on the access determination for the Domestic Mobile Terminating Access Service

Final report

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Executive summary

The ACCC has concluded its public inquiry into making a final access determination (FAD) for the mobile terminating access service (MTAS). This report sets out the ACCC's final position on price and non-price terms and conditions (NPTCs) to be included in the new MTAS FAD commencing on 1 January 2021 and expiring on 30 June 2024, having considered submissions made to this inquiry.

The ACCC's final position is to adopt an MTAS price of 1.19 cents per minute for the duration of the FAD and retain the current set of NPTCs.

The ACCC examined a number of complex and important issues relating to the pricing of the MTAS during the course of this inquiry. The ACCC's views on these issues supporting its final position on the price terms are set out below.

Cost-based approach to pricing MTAS

The MTAS has been regulated for nearly 20 years. Over that time, the regulated price has dropped from 21 cents to 1.19 cents reflecting reductions in the per unit cost of providing the service. Given the significant price decline over time, this inquiry saw some important issues being raised on how the MTAS should continue to be priced. In particular, strong views were expressed by some stakeholders that the MTAS price should be maintained at its current level as any further reduction would no longer promote competition and benefit downstream end-users. This view was raised despite indications that the unit cost of providing the service is likely to have declined significantly since the last FAD and as such raises the broader question whether a cost-based approach to pricing the MTAS continues to be appropriate.

The ACCC has considered this issue carefully during the course of this inquiry. It is apparent that submissions from the mobile network operators (MNOs) and other stakeholders differ significantly in relation to the potential impact of any MTAS price reduction. While the MNOs do not consider that further MTAS price reductions will impact retail markets materially, Commpete, MNF Group, Macquarie Telecom and the Australian Communications and Consumer Action Network (ACCAN) disagree and consider that further reductions will still benefit end-users by leading to more competitive retail offerings.

While the MNOs focus on the prevalence of fixed and mobile retail plans with unlimited calls, information available to the ACCC and views from ACCAN demonstrate that a significant segment of the market still pay high usage charges for calls to mobiles. This suggests that that a broad focus on retail offerings on the market may overlook actual end-user experience, and that further MTAS reductions may still potentially benefit a significant portion of the market in a material manner.

The ACCC also found that further MTAS price reductions will have differing impacts on different service providers. While the MNOs may not respond significantly to further MTAS price reductions, the MTAS price is likely to have much bigger impact on smaller fixed line operators and mobile virtual network operators (MVNOs). This is because the MTAS represents a direct and indirect cost for these providers in providing retail services. The ACCC considers that MTAS price reductions will reduce the overall costs of providing services for these operators, thus creating the environment for them to provide more competitive offerings in the downstream markets.

As such, the ACCC's final view is that further MTAS price reductions in line with reductions in cost will continue to be appropriate as they will better promote the long-term interests of end-users (LTIE) than rolling over the current MTAS price.

TSLRIC+ pricing approach using international benchmarking

The ACCC concludes that a cost-based price consistent with the total service long run incremental cost plus organisational-level costs (TSLRIC+) pricing principles is the most appropriate pricing approach having regard to relevant matters, including the long-term interests of end-users (LTIE). A TSLRIC+ pricing principle allows the recovery of common costs incurred in providing the MTAS as well as some organisational-level costs. The ACCC's view is that this is appropriate having regard to the legitimate business interests of access providers and is more likely to encourage efficient investments in mobile infrastructure. The TSLRIC+ pricing principle also entails that the relevant cost is the efficient cost that would be incurred by a hypothetically efficient operator deploying a mobile network using the best-in-use technology in Australia, rather than the actual costs incurred by the MNOs in practice.

While typically a cost model needs to be developed in order to produce the TSLRIC+ for the MTAS, it can be estimated using an international benchmarking exercise, by having regard to cost models developed by other jurisdictions. The ACCC decided to estimate the TSLRIC+ of providing the MTAS using an international benchmarking approach for the purpose of this FAD.

The ACCC acknowledges that a cost modelling approach is likely to produce the most accurate cost estimate for the MTAS and recognises that there is support for this approach. However, the ACCC considers that a cost model developed now would not be able to properly incorporate 5G technology, which would quickly make it obsolete. This means that the extensive investment in time and resources by all stakeholders involved cannot be justified at this time. Consequently, the ACCC considers that an international benchmarking approach provides a more practical pricing option for this FAD. The ACCC intends to explore the possibility of cost modelling once 5G deployment is more advanced, if the service continues to be declared.

The ACCC is aware that the intention to explore cost modelling comes at a time when the MTAS price continues to decline and the impact of the MTAS price on retail markets may become smaller over time. However, given inherently conflicting interests and views on the appropriate level of the MTAS price, the ACCC needs to ensure that its pricing exercise is rigorous and robust. For these reasons, the ACCC considers that if the MTAS continues to be declared, there is a case for exploring the development of a cost model for the MTAS to inform the next regulatory review.

Holistic review for fixed and mobile interconnection services

Some stakeholders have raised concerns regarding the relative price levels of the fixed terminating access service (FTAS) and the MTAS, with calls for the ACCC to adopt a common pricing approach to these services. The ACCC finalised the fixed line services FADs inquiry in 2019 and rolled over the FTAS price as part of that inquiry, as it did not consider it was appropriate to review the FTAS pricing in isolation of the pricing for the other declared fixed line services.[1]

Nevertheless, the ACCC recognises that this issue warrants further investigation. While the other declared fixed line services are only provided by Telstra over its customer access network (CAN), the fixed voice interconnection services are technology neutral and, as we understand, are provided by operators regardless of whether the voice calls are carried over the Public Service Telephone Network (PSTN) or next generation or Internet Protocol (IP) networks. Given this, the ACCC considers that it may be appropriate to separate out the fixed voice interconnection services and consider them with the MTAS in a holistic voice

[1] ACCC, *Inquiry into final access determinations for fixed line services: Final Decision*, November 2019, p. 15.

interconnection review. The ACCC considers that it may be appropriate to conduct such a review during the next regulatory review period.

Benchmarking methodology

The ACCC commissioned Analysys Mason to undertake the international benchmarking exercise for this FAD. This exercise involved:

- selecting an appropriate benchmark set including publicly available cost models developed for mobile voice termination services, where the models could produce TSLRIC+ outputs, or can otherwise be adjusted to produce TSLRIC+ outputs;
- making appropriate adjustments to inputs and parameters to reflect Australia-specific cost drivers, with most adjustments made directly in the benchmark models, and some adjustments outside the models.

After considering stakeholder submissions on the benchmarking methodology, the ACCC's final views on various aspects of the benchmarking methodology are summarised in the table below.

Table 1 Final methodology adopted in the international benchmarking exercise

Aspect of benchmarking exercise	Methodology
Benchmark set	• East Caribbean • France • Mexico • Netherlands • Peru • Portugal • Spain • Sweden • United Kingdom
Adjustments	
Level of demand	A time series of total market demand for Australia has been developed based on information provided by the MNOs, information provided under the ACCC's Division 12 Record Keeping Rules, information from the Australian Bureau of Statistics website and Analysys Mason's research information.
Assumed market share	33.3% of market share is assumed having regard to the fact that there are currently three MNOs in Australia and this is unlikely to change in the foreseeable future.
Geography	The 2,200 Statistical Areas Level 2 (SA2) areas used in the Australian Communications and Media Authority's (ACMA) Mobile Network Infrastructure Forecasting Model is used as the basis for Australian geography implemented in each cost model. The definitions of geotypes in each benchmark model are used to classify each SA2 area.
Cell coverage radii	The cell coverage radii for spectrum used in the most rural geotype was first adjusted to reflect that used in the ACMA's Mobile Network

	Infrastructure Forecasting Model and has been further calibrated to align the modelled sites with the actual number in Optus' network.
Mobile technologies in use	2G technology is assumed to be switched off from 2019 (or reduced to a negligible deployment); 2G network costs are therefore assumed to be recovered prior to 2019. A network coverage profile has been developed based on that of Optus' coverage, as Optus' level of coverage is capable of supporting the assumed level of market share of 33.3 per cent.
Spectrum holdings	Nationwide spectrum licence holdings are assumed due to some benchmark models not able to accommodate regional licences. The following conservative assumption of holdings in each band are assumed: • 700 MHz: 2 x 10 MHz • 800 MHz: 2 x 5 MHz • 900 MHz: 2 x 10 MHz • 1800 MHz: 2 x 15 MHz • 2100 MHz: 2 x 10 MHz • 2500 MHz: 2 x 20 MHz
Spectrum costs	Spectrum costs were removed from the benchmark models in the first instance. The spectrum costs for the assumed spectrum holdings were then calculated using auction fees, recurring fees (for apparatus licences and spectrum licence tax), and renewal fees set by the Minister for Communications. The total spectrum costs were then allocated to a time series of traffic and a per minute cost has been derived and added onto the benchmark MTAS outputs separately.
Mix of backhaul solutions	The following mix of backhaul solution is assumed based on MNOs' information and implemented in the models: • Microwave: 20 per cent • Leased lines: 10 per cent • Fibre: 70 per cent.
Weighted Average Cost of Capital (WACC)	The following WACC values have been implemented in the models: • Pre-tax nominal: 4.996 per cent • Pre-tax real: 2.511 per cent.
Currency	Cost outputs from benchmark models has been converted to Australian currency using exchange rate, and the portion of non-tradable costs have been further adjusted for purchasing power parity (PPP).

The ACCC also considers that it is appropriate to include a 3 per cent uplift to the cost outputs to account for potentially higher transmission costs arising from the longer average lengths of transmission links in Australia compared with benchmark jurisdictions.

Consideration of benchmarking results

After implementing the methodology described above, each of the nine models produced a cost output for each of the years 2020 to 2024. Apart from examining the spread of the cost outputs from all nine benchmark models across the years, the assessment of the benchmarking results also involved an investigation of the reasons for any significant variance in the cost outputs across the models, a comparison of the site numbers generated by the models with the number actually deployed and responses of the models to various sensitivity tests.

After considering the benchmarking results and Analysys Mason's recommendations, the ACCC has decided to exclude four models from consideration (Mexico, East Caribbean, Netherlands and Spain) on the basis that they either do not respond properly to sensitivity tests or that they overstate the site requirements in Australia.

The ACCC considers that, while the remaining five models should all be considered, the greatest weight should be given to the models of Sweden, Peru and Portugal on the basis that, with the same inputs, they generate a similar level of total economic costs and appear to allocate a comparable portion of the costs to voice services. The ACCC considers that the models of the UK and France should be given less weight as their cost outputs are significantly lower, which are due to specific modelling design and input assumptions used in these models.

For these reasons, the ACCC has determined an upper bound which reflects the average cost outputs from the Sweden, Peru and Portugal models, and a lower bound which reflects the average cost outputs from all five models in consideration (Sweden, Peru, Portugal, UK and France). The derived upper and lower bounds reflect the highest and lowest values that the ACCC considers a reasonable MTAS cost estimate would be at, having regard to the benchmarking outcome. The established range then provides the basis for the ACCC in determining the new MTAS price.

A conservative approach has been taken in determining the MTAS price

Stakeholders have various views on how the ACCC should determine the MTAS price based on the established cost range. While Telstra and Vodafone Hutchison Australia (VHA) support a conservative approach, Commpete, MNF Group, Macquarie Telecom and ACCAN consider that the mid-point of the cost range is more appropriate.

Having carefully considered the submissions, the ACCC has come to the view that a conservative approach to picking a price point within the cost range is appropriate, which entails selecting a price point towards the upper bound.

The ACCC has formed this view based on the results of the benchmarking exercise which shows clear variance in the cost outputs due to the different modelling assumptions and designs used. As such, while the ACCC considers that the benchmarking exercise produces a reasonable estimated range for the cost of the MTAS, the ACCC cannot assess with certainty which point on that range would be closest to what a cost model developed for Australia would produce. For this reason, the ACCC considers that it is appropriate to take a conservative approach to determining the MTAS price.

In reaching this position, the ACCC has also had regard to the possibility of conducting a holistic review for the fixed voice interconnection services and the MTAS and a potential cost modelling exercise at the next regulatory review. Both of these developments will significantly impact the way in which the MTAS is priced. Specifically, the holistic review of the fixed voice interconnection services and the MTAS would examine, among other things, whether there are pricing relativities between the services and whether a common pricing

approach should be adopted. A cost modelling exercise would fully take into account the Australian conditions for deploying a mobile network and would produce a more accurate and robust cost estimate than international benchmarking.

For these reasons, and in light of our view that the FAD will commence on 1 January 2021, the ACCC has determined that the new MTAS price is calculated by averaging the 75th percentile values of the derived lower and upper bounds for years 2021–2024. This produces a new MTAS price of 1.19 cents per minute, which represents a 30 per cent reduction from the current MTAS price of 1.7 cents per minute.

1. Introduction

1.1. Background

The mobile terminating access service (MTAS) is a wholesale service provided by an MNO to fixed line operators and other MNOs to connect or 'terminate' a call on its mobile network. It is an essential wholesale interconnection service which enables subscribers from a mobile or fixed line network to make calls to subscribers on a different mobile network.

Each MNO has exclusive access to subscribers on their network. In the absence of regulation, an MNO has the incentive and ability to set unreasonable terms of access to terminating voice calls on its network, including by setting high prices that are not based on the efficient costs of providing voice termination services. For this reason, the ACCC has historically regulated mobile voice termination by making the MTAS a declared service. It was deemed a declared service in June 1997 and since then the declaration has been varied and extended in 2002, 2004, 2009, 2014 and 2019.

The ACCC has also set regulated prices for the MTAS by making final access determinations (FADs). The table below sets out the regulated MTAS voice price since 2004.[2]

Table 2: Regulated MTAS voice prices (nominal) set by the ACCC[3]

Time period	Voice (cent/min)
1 July 2004 – 1 December 2004	21
1 January 2005 – 31 December 2005	18
1 January 2006 – 31 December 2006	15
1 January 2007 – 30 June 2007	12
1 July 2007 – 31 December 2011	9
1 January 2012 – 31 December 2012	6
1 January 2013 – 31 December 2013	4.8
1 January 2014 – 30 December 2015	3.6
Since 1 January 2016	1.7

On 28 June 2019, the ACCC finalised its MTAS declaration inquiry and decided to extend MTAS voice declaration but remove SMS termination from the MTAS.[4]

The current MTAS FAD was due to expire on 30 June 2019 but was extended until the day immediately before the day on which the new FAD comes into force.[5] On 6 June 2019, the

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2 For a discussion of the ACCC's approach to setting the MTAS price in the past, see ACCC, *Public inquiry on the access determination for the Domestic Mobile Terminating Access Service: Discussion paper*, August 2019, p. 6. SMS termination was included in the MTAS declaration from 2014 to 2019.

3 ACCC, *MTAS Final Access Determination — Final Decision (MTAS FAD)*, August 2015; ACCC, *Inquiry to make a final access determination for the MTAS — Access Determination Explanatory Statement (MTAS FAD — Explanatory Statement)*, 7 December 2011; ACCC, *MTAS Pricing Principles Determination and indicative prices for the period 1 January 2009 to 31 December 2011*, March 2009; ACCC, *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008: Report*, November 2007; ACCC, *Mobile Services Review: Mobile Terminating Access Service Final Decision on whether or not the Commission should extend, vary, revoke its existing declaration of the MTAS*, June 2004.

4 ACCC, *Domestic Mobile Terminating Access Service Declaration Inquiry: Final report*, June 2019.

5 See notice of extension on the ACCC website at: https://www.accc.gov.au/public-registers/telecommunications-registers/s152bcw-access-determinations-register/final-access-determination-no-1-of-2015-for-the-mobile-terminating-access-service-mtas.

ACCC commenced a public inquiry into making a new FAD for the MTAS.[6] Due to the removal of SMS termination from the MTAS declaration, this public inquiry considers the price and non-price terms for access to only the mobile voice termination service.

In December 2019, the ACCC published a written notice on the ACCC website extending the decision-making period for the inquiry by six months.[7] In May 2020, the ACCC further extended the decision-making period for another six months until 6 December 2020.[8]

1.2. Inquiry and consultation process

On 30 August 2019, the ACCC released a Discussion Paper[9] which considered relevant market developments since the previous MTAS FAD was made, and discussed a number of pricing options for stakeholder comment. In particular, the ACCC identified three possible cost-based pricing options (i.e. cost modelling, international benchmarking and a simple adjustment to the current price) and two non-cost based pricing options (rolling over the existing price and bill-and-keep). The ACCC received seven submissions in response to the Discussion Paper.

After considering these submissions, the ACCC came to the preliminary view that international benchmarking is the most appropriate pricing option for this MTAS FAD and engaged Analysys Mason to undertake this exercise.

On 18 December 2019, the ACCC released a Position and Consultation Paper[10] setting out the ACCC's reasons for adopting the international benchmarking pricing approach and outlining the proposed benchmarking methodology for consultation. The ACCC also published a report prepared by Analysys Mason providing details of its proposed benchmarking methodology (Draft Methodology Report).[11] The ACCC received five submissions in response to the Position and Consultation Paper. The ACCC also sought information from the MNOs necessary for the implementation of the benchmarking exercise.

On 15 May 2020, the ACCC released a Draft Report[12] setting out the ACCC's draft position on the benchmarking methodology after having considered stakeholders' feedback to the Position and Consultation Paper. The Draft Report also set out the ACCC's draft position on the price and non-price terms to be included in the new MTAS FAD. The ACCC reached its draft position on the price terms having regard to a report prepared by Analysys Mason, *Report for the ACCC – Benchmarking the cost of providing the MTAS in Australia* (Draft Benchmark Report).[13] The ACCC received seven submissions in response to the Draft Report.

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6 See notice of the inquiry on the ACCC website at: https://www.accc.gov.au/regulated-infrastructure/communications/mobile-services/mobile-terminating-access-service-access-determination-inquiry-2019/notice-of-mtas-fad-inquiry.

7 Pursuant to subsection 152BCK(3) of the CCA. The notice of extension is available on the ACCC website at: https://www.accc.gov.au/regulated-infrastructure/communications/mobile-services/mobile-terminating-access-service-access-determination-inquiry-2019/extension-of-decision-making-period.

8 Pursuant to subsection 152BCK(3) of the CCA. The notice of extension is available on the ACCC website at: https://www.accc.gov.au/regulated-infrastructure/communications/mobile-services/mobile-terminating-access-service-access-determination-inquiry-2019/further-extension-of-decision-making-period.

9 ACCC, *Public inquiry on the access determination for the Domestic Mobile Terminating Access Service: Discussion paper*, August 2019. (Discussion Paper)

10 ACCC, *Public inquiry on the access determination for the Domestic Mobile Terminating Access Service: Position and consultation paper*, 18 December 2019 (Position and Consultation Paper).

11 See Analysys Mason, *Approach to benchmarking the cost of providing MTAS in Australia*, 13 December 2019.

12 ACCC, *Public inquiry on the access determination for the Domestic Mobile Terminating Access Service: Draft Report*, May 2020. (Draft Report)

13 Analysys Mason, *Report for the ACCC — Benchmarking the cost of providing MTAS in Australia*, May 2020 (Draft Benchmark Report), available at: https://www.accc.gov.au/regulated-infrastructure/communications/mobile-services/mobile-terminating-access-service-access-determination-inquiry-2019/draft-report.

This final report sets out the ACCC's final position on the price and non-price terms and conditions (NPTCs) to be included in the new MTAS FAD after considering submissions in response to the Draft Report. In reaching its final view on the price terms, the ACCC has had regard to Analysys Mason's revised *Report for the ACCC – Benchmarking the cost of providing MTAS in Australia* (Final Benchmark Report).[14]

1.3. Outline of Final Report

This final report of the MTAS FAD inquiry sets out:

- the legislative framework under which the ACCC may make an access determination for the MTAS (chapter 2),
- the ACCC's final view on the pricing approach for the MTAS having regarding to the matters listed under relevant legislative provisions (chapter 3),
- the ACCC's final view on the methodology for the international benchmarking exercise undertaken to estimate the cost of the MTAS, the results of the benchmarking exercise and the ACCC's final view on the price terms for the new MTAS FAD (chapter 4),
- the ACCC's final view on the NPTCs for the new MTAS FAD (chapter 5), and
- the ACCC's final views on other non-price issues (chapter 6).

The FAD instrument is provided at **Appendix D**.

Chapters 3 to 6 of this final report first set out the ACCC's position from the Draft Report and responds to submissions from stakeholders before setting out the ACCC's final view, having regard to the legislative criteria listed in chapter 2.

[14] Analysys Mason, *Report for the ACCC — Benchmarking the cost of providing MTAS in Australia*, September 2020 (Final Benchmark Report), available at: https://www.accc.gov.au/regulated-infrastructure/communications/mobile-services/mobile-terminating-access-service-access-determination-inquiry-2019/final-report.

2. Legislative framework

The telecommunications access regime in Part XIC of the *Competition and Consumer Act 2010* (CCA) gives the ACCC the power to, among other things, make a written determination relating to access to a declared service.[15] If the ACCC makes an access determination which specify terms and conditions on access to the declared service, the terms and conditions specified must include terms and condition relating to price or a method of ascertaining a price.[16]

A FAD provides a base set of terms and conditions that access seekers can rely on if they are unable to come to a commercial agreement with an access provider on the terms and conditions of access to a declared service. If parties come to an agreement on terms and conditions of access, their access agreement will prevail over the FAD to the extent of any inconsistency.[17]

The ACCC must take into account a range of matters when making a FAD, including:

a) whether the determination will promote the long-term interests of end-users (LTIE) of carriage services or services supplied by means of carriage services,

b) the legitimate business interests of a carrier or carriage service provider (CSP) who supplies, or is capable of supplying, the declared service, and the carrier or CSP's investment in facilities used to supply the declared service,

c) the interests of all persons who have rights to use the declared service,

d) the direct costs of providing access to the declared service,

e) the value to a person of extensions, or enhancement of capability, whose cost is borne by someone else,

f) the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility, and

g) the economically efficient operation of a carriage service, a telecommunications network or a facility.[18]

The ACCC may also take into account any other relevant matters.[19]

In considering whether the determination will promote the LTIE, the ACCC must have regard to the extent to which the determination is likely to result in:

- promoting competition in markets for listed services,
- achieving any-to-any connectivity, and
- encouraging the economically efficient use of, and the economically efficient investment in, infrastructure by which listed services are supplied.[20]

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15 Subsection 152BC(1) of the CCA.

16 Subsection 152BC(8) of the CCA.

17 Section 152BCC of the CCA.

18 Subsection 152BCA(1) of the CCA.

19 Subsection 152BCA(3) of the CCA.

20 Subsection 152AB(2) of the CCA.

More detail of how the ACCC takes the above matters into account is at **Appendix A**.

Section 152BCB of the CCA sets out a number of restrictions regarding the matters that could be included in an FAD. The ACCC is satisfied that none of the matters listed in those restrictions apply in the present case.

Compliance with a FAD is both a carrier licence condition and a service provider rule[21], a breach of which may lead to a pecuniary penalty of up to $10 million for each contravention.[22] Private enforcement of a FAD is available in the Federal Court.[23]

[21] Sections 152BCO and 152BCP of the CCA.

[22] Section 570 of the *Telecommunications Act 1997* (Cth).

[23] Section 152BCQ of the CCA.

3. The pricing approach

This chapter sets out the pricing approach the ACCC has adopted for the MTAS FAD. It first sets out the ACCC's view as previously expressed in the Draft Report before summarising stakeholder submissions on this issue. We then set out our final view, having regard to submissions received and the legislative criteria.

In summary, the ACCC's final view is that an MTAS price based on the efficient cost of providing the service using a total service long run incremental cost plus organisational level costs (TSLRIC+)[24] pricing principle is appropriate. Specifically, the ACCC considers that, as TSLRIC+ allows the access providers to recover the common costs incurred in providing the MTAS as well as a portion of organisational level costs, it is an appropriate method of allocating the costs of deploying a mobile network having regard to the legitimate interests of the access providers and is more likely to promote efficient investments in mobile infrastructure.

In adopting the TSLRIC+ pricing principle for estimating the unit cost of the MTAS, the ACCC has assessed the efficient cost incurred by a hypothetically efficient operator in deploying a mobile network in Australia using the best-in-use technology, rather than the actual costs of providing the service by the MNOs in practice.

The ACCC has also come to the final view that, for the purpose of this inquiry, estimating the MTAS cost by using an international benchmarking approach rather than developing a cost model is the most appropriate approach to take at this time. While a cost model is likely to produce the most accurate estimate, a cost model developed at this point in time could not properly include 5G technology, making it difficult to justify the resources required to develop a cost model that would likely become obsolete for the purpose of this FAD.

3.1. ACCC draft view

Consistent with our preliminary position in the Position and Consultation Paper released in December 2019, the Draft Report set out the ACCC's draft view that an international benchmarking exercise based on TSLRIC+ pricing principles is the most appropriate pricing option for this MTAS FAD. In reaching this view, the ACCC specifically considered the relative merits of using an international benchmarking approach as opposed to developing a cost model for Australia, as well as whether rolling over the current MTAS price, as advocated by some stakeholders, is justified. In the Draft Report, the ACCC detailed its considerations of these pricing options in light of the relevant matters listed under subsection 152BCA(1) of the CCA, and other matters that it considered relevant such as the time and cost involved in implementing the pricing options, risk of regulatory error and regulatory certainty and consistency.

In summary, the ACCC reached its draft view on the pricing approach for the following reasons[25]:

- Any MTAS price reduction in line with the decline in efficient cost is likely to promote competition in the fixed and mobile services markets, by creating the environment for more competitive retail offerings. In particular, the ACCC considered that reduction in the MTAS price would likely reduce the wholesale costs for smaller fixed line network operators and mobile virtual network operators (MVNOs) and enable them to provide

[24] TSLRIC+ refers to total service long run incremental cost plus organisational level costs. It is a pricing principle whereby the relevant increment is widely defined as total network traffic, rather than just terminating voice traffic. It allows the recovery of common network cost via the price of the MTAS plus a mark-up for organisational level costs.

[25] See Draft Report, pp. 12–19.

more competitive offerings in the retail markets. The ACCC was not convinced by arguments that further reductions in the MTAS price would have no impact on the retail markets.

- An MTAS price that is based on the efficient cost of providing the service will encourage the economically efficient use of and investment in infrastructure, and balance the legitimate business interests of the access providers and the interests of all other persons that have a right to use the service.
- A cost-based approach based on TSLRIC+ principles also promotes regulatory certainty and consistency, while, on the other hand, rolling over the current MTAS price without a costing exercise could result in maintaining an MTAS price that is above the efficient cost of providing the service, and give risk to a risk of regulatory error. This would not promote competition in the relevant markets or achieve the objective of encouraging economically efficient use of and investment in infrastructure. Further, an above cost MTAS price would clearly undermine the interests of all persons who have a right to use the service.
- In ascertaining the efficient cost of providing the MTAS, the ACCC considered that generally cost modelling is likely to produce the most accurate cost estimate and the time and costs involved in developing a cost model may be justified. However, the timing of the cost modelling exercise needs to be carefully considered, The ACCC noted that it would not be possible for a cost model developed at this point in time to properly incorporate 5G technology which means that it would not be justifiable to invest in the time and resources required to develop a model for this FAD. The ACCC considered that international benchmarking is a more pragmatic approach to use in the interim while the ACCC further explores the possibility of cost modelling when 5G deployment is more advanced in Australia.

3.2. Submissions to the Draft Report

The following stakeholder comments were received in response to the pricing approach for the MTAS FAD in the Draft Report.

Telstra supports the ACCC's draft view that a price that reflects the efficient cost of supplying the MTAS is likely to promote competition in the fixed and mobile services market. While Telstra considers that there is a growing disconnect between the MTAS rate and retail services, Telstra notes that on balance it considers the Draft Report's proposed MTAS price of 1.22 cents per minute would in no way harm competition.

Telstra also supports the ACCC's draft view that an MTAS price based on the efficient cost of providing the service would assist in achieving any-to-any connectivity and encourage the efficient use of and investment in infrastructure. In the latter case, Telstra does not consider a reduction termination revenue as a result of a reduction in the MTAS price would adversely affect investment in mobile voice services. Telstra notes that net MTAS payments only make up a very small proportion of revenue relating to mobile services and does not believe that proposed MTAS price would have a negative effect on efficient investment.[26]

Optus reiterated its view that the current MTAS price should be rolled over as it does not consider that the proposed international benchmarking approach would better promote the LTIE compared with rolling over the price. Optus summarised its views as follows:

[26] Telstra, *Public inquiry on the access determination for the Domestic Mobile Terminating Access Service — Draft report*, 10 July 2020, pp. 2–3 (Telstra submission).

- retail prices are more heavily influenced by infrastructure-based competition rather than a reduction in the MTAS price,
- a narrow focus on segments such as MVNOs and fixed line operators gives an artificial result rather than taking into account the overall impact on the market as a whole, which is what an LTIE assessment should do,
- MVNO contracts are more likely to be influenced by MNO competition, rather than a reduction in MTAS price,
- efficient use of an investment in infrastructure is now subject to some uncertainty and the approach that best take this into account would be a rollover of existing MTAS price, and
- the benchmarking exercise does not represent TSLRIC+ and therefore is not the approach that will best promote the LTIE.[27]

Macquarie Telecom submitted that it remains concerned by the ACCC's preference for TSLRIC+ rather than pure LRIC for the costing of the MTAS. Macquarie Telecom contrasted the position with Europe in which pure LRIC has been used for over a decade.[28]

MNF Group reiterated the importance of the MTAS as a cost to MNF Group both as a fixed line network operator and an MVNO.[29] MNF Group reiterated its view that the option of rolling over the current MTAS price should be rejected by the ACCC. MNF Group submitted that given the clear downward trend in the MTAS price, were the ACCC to take the rollover option, it would arguably be failing its statutory responsibility to protect competition and as such would establish a dangerous precedent. MNF Group also submitted that rolling over the current MTAS price would forgo the opportunity for the MTAS price reductions to promote competition in fixed and mobile markets because cost savings would be passed through to consumers.[30]

MNF Group supports the use of an international benchmarking approach to estimate the MTAS price as being a practical and sensible alternative to the development of a cost model. MNF Group also noted that it welcomes the ACCC's intention to explore cost modelling but urges the ACCC to make provision for such an exercise in order to ensure that its work may be completed before the expiry of the next MTAS FAD.[31]

3.3. ACCC final view

The ACCC has considered submissions in response to the Draft Report from stakeholders on the appropriate pricing option for this MTAS FAD. The ACCC remains of the view that a price based on the efficient cost of providing the MTAS consistent with TSLRIC+ pricing principles is appropriate having regarding to the relevant matters under subsection 152BCA(1) of the CCA. The ACCC also remains of the view that, at this point in time, it is more appropriate to estimate the efficient MTAS cost using an international benchmarking approach instead of developing a cost model.

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27 Optus, *Submission in response to the ACCC Draft Report: Public inquiry on the access determination for the Domestic Mobile Terminating Access Service*, July 2020, p. 4 (Optus submission). See also Optus submission, pp. 6–9.

28 Macquarie Telecom, *Submission to the ACCC regarding the draft access determination for the Domestic Mobile Terminating Access Service*, 10 July 2020, p. 2 (Macquarie Telecom submission).

29 MNF Group, *Further Submission to the ACCC's Inquiry on the Access Determination for the Domestic Mobile Terminating Access Service*, 10 July 2020, pp. 3–4 (MNF Group submission).

30 MNF Group submission, p. 4.

31 MNF Group submission, p. 5.

The ACCC has formed these views having regard to the relevant legislative matters as discussed below.

The long-term interests of end-users – promoting competition in relevant markets

Consistent with the view expressed in the Draft Report, the ACCC considers that any MTAS price reduction in line with the decline in efficient cost is likely to promote competition in the fixed and mobile services markets, by creating the environment for more competitive retail offerings.[32]

The ACCC notes Optus' comments that retail prices are more heavily influenced by infrastructure-based competition, and that MVNO contracts are more influenced by MNO competition than a reduction in the MTAS price. The ACCC agrees that infrastructure competition among the MNOs is an important determinant of prices in the wholesale and retail mobile services markets. However, the ACCC also considers that a reduction in the MTAS price, being a reduction in the cost of providing voice calls to mobiles, creates a condition precedent for cost savings to be passed onto wholesale and retail customers while observing that the extent of the pass-through is likely to be influenced by the extent of infrastructure competition amongst the MNOs. Therefore, the ACCC does not agree with Optus that a further reduction in the MTAS price will not promote the LTIE, as it will create the environment in which service providers could provide more competitive retail offerings.

The ACCC also notes Telstra's comment that there is a growing disconnect between the MTAS price and the retail market and that the MTAS price is not a barrier to offering greater value in retail plans. As the ACCC acknowledged previously, the impact of further reductions in the MTAS price may have become smaller given the historical reductions over the years. However, there is still a significant proportion of end-users who do not have access to unlimited calls on their plans and are still paying relatively high usage charges for calls to mobiles.[33] As calls to mobiles are generally offered as part of a bundle of services in both the mobile and fixed line services markets, there are many ways in which service providers could pass on cost savings due to lower MTAS prices. For instance, this could be in the form of lower usage charges for calls to mobiles, lower access charges generally or even non-price related improvements in retail offerings.[34] While the extent to which the cost savings would be passed on to end-users would depend on the extent of competition in the relevant markets, reduction in the MTAS price would establish the conditions by which improvements in retail offerings would be more likely to occur.

The ACCC does not agree with Optus' view that the ACCC's assessment on the impact of MTAS price reductions focuses narrowly on segments such as the MVNOs and fixed line operators and does not take into account the overall impact on the market as a whole. As discussed in the December 2019 Position and Consultation Paper, the ACCC considers that further reductions in the MTAS price will likely have different impacts on the MNOs and other service providers. In particular, the ACCC considers that the net impact on the MNOs may have become small as the MTAS represents both a cost and a revenue. On the other hand, the MTAS may have a more significant impact on fixed line network operators and MVNOs,

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[32] Draft Report, p. 13.

[33] Position and Consultation Paper, p. 18; See also, Discussion paper, pp. 9–10.

[34] As observed by the Australian Competition Tribunal in *Application by Vodafone Network Pty Ltd and Vodafone Australia* Limited [2007], ACompT 1, [289]–[290], how a service provider passes on savings from the reduction of the price of mobile voice termination may not be transparent, and mandating a pass-through mechanism would restrict a service provider's ability to flexibly determine how it chooses to pass on its cost savings and limit (or even negate) potential improvements in the quality and range of retail services.

as it represents a direct and indirect cost, not a revenue.[35] This observation is supported by the submission from MNF Group.[36] The ACCC is satisfied that further reductions in the MTAS price will likely continue to promote competition in the relevant downstream markets, mostly by enabling fixed line network operators and MVNOs to provide more competitive offerings.

In this respect, the ACCC is not persuaded by Optus' argument that MTAS price plays no role in MVNO pricing or that MTAS price reductions will in fact result in reduced competition and higher prices for the MVNOs.[37] As noted in the Draft Report, should an MNO decide to raise their wholesale prices as a result of reduction in termination revenue, an MVNO could simply switch to a different MNO. Any difficulties in switching in this respect would indicate structural issues in the wholesale market or anticompetitive conduct which would require separate investigations under the CCA.[38]

The long-term interests of end-users – achieving any-to-any connectivity

Consistent with the view expressed in the Draft Report, the ACCC considers that any-to-any connectivity is largely achieved by the MTAS declaration which requires access providers to comply with the Standard Access Obligations (SAOs) and provides access to the MTAS upon request.[39] For the purpose of the FAD, the ACCC considers that an MTAS price based on the efficient cost of providing the service does not create any obstacles to achieving this objective. This is because this approach allows access providers to recover their costs of providing the service and therefore does not impede their ability to provide the service to access seekers.

The long-term interests of end-users – encouraging the economically efficient use of, and investment in, infrastructure

The ACCC considers that a regulated price based on the TSLRIC+ of providing the service promotes economic efficiency, particularly dynamic efficiency[40], including incentives for the access providers to make efficient investment in infrastructure used to provide the service, as well as leading to more efficient use of the infrastructure by end-users. Nevertheless, the ACCC recognises that it is important that regulatory settings do not hinder or discourage investment to improve the quality of the service offered.[41]

Optus submitted that efficient use of an investment in infrastructure is now subject to some uncertainty due to the COVID-19 pandemic and the approach that best take this into account is a rollover of existing MTAS price.[42] Optus mentioned several types of investments in this regard, including continual investment needed to provide the coverage and capacity the Australian public need, investments needed to improve network resilience and infrastructure redundancy or to ensure recovery of services in areas impacted by natural disasters, and deployment of 5G networks.

As discussed in the Draft Report, the ACCC does not consider that a reduction in the MTAS is likely to impact the MNOs' incentives to investment in 5G networks, because these

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35 Position and Consultation Paper, p. 19.

36 See MNF Group submission, pp. 3–4.

37 Optus submission, p. 7.

38 Draft Report, p. 13.

39 Section 152AR of the CCA.

40 Dynamic efficiency is achieved when industries make timely changes to technology and products in response to changes in consumer tastes and in productive opportunities. See **Appendix A** on page 73.

41 See for example, ACCC, *Domestic Mobile Roaming Declaration Inquiry: Final report*, October 2017, pp. 83–88.

42 Optus submission, pp. 8–9.

investments are driven by the need to provide additional data capacity in the short term and new revenue opportunities in the medium to long term.[43]

On the other hand, the ACCC acknowledges the importance of investments in improving network resilience and infrastructure redundancy. VHA submitted in response to the Position and Consultation Paper that costs associated with improving network resilience should be taken into account in the international benchmarking exercise as Australia is likely to have a higher cost profile than the benchmark countries due to natural disasters.[44] The ACCC indicated in the Draft Report that it would consider evidence on how an uplift on the costs of a hypothetically efficient operator may be appropriate and the extent of such uplift.[45] In contrast, the ACCC does not consider that rolling over the current MTAS price would be an appropriate or proportionate response to this issue. The ACCC does not accept that simply improving the financial position of some MNOs, in the form of termination revenue, would promote efficient investments in or use of infrastructure.

Legitimate business interest of a carrier or carriage service provider

Consistent with the view expressed in the Draft Report, the ACCC considers that, having regard to the legitimate business interest of the access provider, it is important that the regulated price for the declared service enables the access provider to recover the cost of providing the service, as well as earn a normal rate of return on its investment in the infrastructure used to provide the service. The ACCC considers that an MTAS price based on the efficient cost providing the service is appropriate having regard to the access provider's legitimate business interests. In particular, the ACCC considers that a cost-based approach consistent with TSLRIC+ principles is appropriate, as it allows access providers to recover the common costs incurred in providing the declared service and other services and organisational level costs.

In undertaking the benchmarking exercise to estimate the efficient MTAS cost, the ACCC has also had regard to the need for the access provider to recover the cost of providing the service and to earn a normal rate of return. Further details on the benchmarking exercise and results are discussed in chapter 4.

Interests of all persons who have a right to use the declared service

The MTAS is an essential input used by access seekers to provide retail services in downstream markets. As such, it is important that access seekers' ability to compete in the downstream markets is not inhibited by an MTAS price that is above the efficient cost of providing the service. Consistent with the view expressed in the Draft Report, the ACCC considers that an MTAS price that is based on the efficient cost of providing the service and which would allow any reduction in the cost to flow through to benefit access seekers, is appropriate. On the other hand, rolling over the current MTAS price, without an investigation into the cost of the service, is likely to undermine the interests of access seekers.

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43 Draft Report, p. 15.

44 See VHA, *Access determination for the mobile terminating access service: Submission to the Australian Competition and Consumer Commission*, February 2020, pp. 15–16 (VHA submission to the Position and Consultation Paper).

45 Draft Report, p. 37.

Direct costs of providing access to the declared service

Consistent with the view expressed in the Draft Report, the ACCC considers that an MTAS price based on the efficient cost of providing the service is consistent with allowing the access provider to recover the direct costs of providing access to the declared service.[46]

Economically efficient operation of a carriage service, a telecommunications network or a facility

The ACCC has had regard to the economically efficient operation of the retail services provided by access seekers using the MTAS and the telecommunications networks and infrastructure used to provide these services.[47] Consistent with the view expressed in the Draft Report, the ACCC is of the view that an MTAS price based on the efficient cost of providing the service is more likely to lead to efficient pricing for the retail services that depend on the MTAS as an input. While the MNOs provide a range of services using their telecommunications networks and infrastructure, the economically efficient operation of these networks and infrastructure are more likely to be enhanced in the long run, if bottleneck inputs, such as the MTAS, are priced at the efficient cost of providing the service.

Any other relevant matters

As noted in the Draft Report, the ACCC has in the past had regard to matters such as the time and costs involved in implementing pricing options, the feasibility of implementing different methodologies and the risks of regulatory error in determining the appropriate pricing approach.[48] The ACCC also considers that regulatory certainty and consistency is important when determining the terms of an FAD. The ACCC considers that these factors are particularly relevant in its decision to adopt an international benchmarking approach instead of cost modelling to estimate the MTAS cost for this FAD inquiry. Our reasoning is set out below.

Time and cost involved in implementing pricing option

Consistent with the view expressed in the Draft Report, while the ACCC recognises that cost modelling is a more time and resource intensive exercise, the time and cost involved may still be justified having regard to the overall advantage of this approach. That is, a cost model developed for Australia could fully take into account the specific circumstances around deploying a network in Australia, some of which could not be reflected in a benchmarking exercise, and therefore produces a more accurate cost estimate for the MTAS. The ACCC also recognises that in response to this inquiry there appears to be some support for a new cost model to be developed given that it has been over a decade since the ACCC last developed a cost model for the MTAS.

However, the significant investment in time and resources does mean that timing of developing a cost model needs to be considered carefully. There are two aspect to this consideration.

First, if a cost model is to be developed for the purpose of this inquiry it would not be possible for it to properly incorporate 5G technology given deployment is still nascent. This means that the model would become obsolete very soon. As such, the ACCC considers that

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[46] Under the TSLRIC+ pricing principle, the access provider will also be able to recover the indirect costs of providing the MTAS (i.e. organisational level costs), which the ACCC considers appropriate having regard to the legitimate business interests of the access provider.

[47] For more discussion about this listed matter, please see **Appendix A** on page 76.

[48] See Draft Report, p. 16; See also ACCC, *MTAS FAD — Final Report*, August 2015, pp. 9–10.

it would not be justifiable to make the relevant investment to develop a cost model at this point in time. Instead, the ACCC considers that international benchmarking is a more appropriate approach that could be used in the interim while the ACCC further explores the possibility of cost modelling when 5G deployment is more advanced.

Second, the ACCC is aware that the intention to explore cost modelling comes at a time when the MTAS price continues to decline and the impact of MTAS prices on retail markets may have become smaller. This may give rise to concerns that cost modelling may not be a proportionate pricing approach for this declared service. The ACCC also considers that it becomes increasingly necessary to explore the circumstances under which the MTAS may no longer need to be declared, e.g. when the increasing use of over-the-top (OTT) services means that the provision of the MTAS is no longer a competitive bottleneck, in the same way that it has provided the justification for deregulating SMS termination in 2019. If there is likely to be a case for the MTAS to be deregulated in the foreseeable future, then the utility of developing a cost model would be significantly undermined.

The ACCC recognises the importance of the MTAS as a declared service in light of the critical role Part XIC plays in facilitating access to telecommunications services on reasonable terms. A FAD, including the regulated price for the declared service, provides an important fallback for parties when they cannot otherwise reach commercial negotiation. The ACCC considers that the submissions received from stakeholders in this inquiry clearly show that despite significant falls in the MTAS price over the years, it is difficult for industry to agree on an MTAS price without ACCC intervention. This is demonstrated by the fact that some stakeholders consider there is no case for further decline in the price whereas others consider the MTAS price should continue to fall. In these circumstances, the ACCC must ensure that the pricing approach is rigorous and is capable of producing a reasonable MTAS price that takes the various interests into account.

Having regard to stakeholder views on the other pricing options identified earlier in this inquiry[49] as well as the relative merits of cost modelling and international benchmarking exercise discussed above, the ACCC's current view is that, if MTAS continues to be declared, there is a case for developing a new cost model for the MTAS in the future.

The ACCC notes MNF Group's submission that the ACCC should make provision for a potential cost modelling exercise in order to ensure that this work may be completed before the expiry of the next MTAS FAD. As a cost modelling exercise could take significant time to complete, the ACCC's intention is to start undertaking some preparatory work before the commencement of the next declaration review. This is discussed further in section 6.3.

Risk of regulatory error

The ACCC has acknowledged in the past that the use of international benchmarking gives rise to some inherent risk of regulatory error, particularly compared with a cost modelling approach which is more precise in estimating the cost of providing the MTAS in Australia. The risk of error arises because there are limitations in how an international benchmarking exercise can fully take into account the Australian conditions under which a mobile network is deployed, and has to rely on cost models developed for other countries. However, the ACCC has noted that the impact of any inherent regulatory error, due to the cost estimate deviating from a more precise measure from a cost modelling exercise, may have become

[49] Specifically, stakeholders did not consider that simply applying a downward adjustment to the MTAS price is appropriate as it would not involve a rigorous analysis of the cost of the service. It also appears that industry does not consider that bill-and-keep would be an appropriate end-game for the MTAS regulation, based on concerns regarding unsolicited communications that may arise.

smaller given the significant reduction in the MTAS price over the years.[50] Nonetheless, the ACCC has had regard to this risk when considering the outcome of the international benchmarking exercise and in setting an MTAS price based on that outcome (see sections 4.12 and 4.13).

As mentioned, the ACCC considers that the alternative option of rolling over the current MTAS price without adjustment gives rise to a higher risk of regulatory error. This is because there would be no inquiry as to whether the efficient cost of providing the service was reflected in the current MTAS price.

Regulatory certainty and consistency

The ACCC considers that the use of a cost-based approach consistent with TSLRIC+ pricing principles for the MTAS promotes regulatory certainty and consistency.

In considering regulatory certainty and consistency, the ACCC is not required to take the same pricing approach for all declared services. The ACCC has taken different approaches to pricing the various declared services, such as the MTAS, the fixed line services, and the domestic transmission capacity services (DTCS) having regard to the relevant matters under subsection 152BCA(1) of the CCA in light of the specific circumstances that apply to the provision of each declared service.

The ACCC notes VHA's further submission on the need to review the pricing approach to the FTAS.[51] The ACCC has, in the previous and current MTAS FAD inquiries, expressed the view that it is appropriate to use the Building Block Model approach for the fixed line services including the FTAS, and a TSLRIC+ pricing approach for the MTAS.[52] While the other declared fixed line services decline in significance as the NBN rollout nears completion, the FTAS, and possibly the FOAS, are likely to remain a bottleneck because it will still apply to the termination of all voice calls, regardless of underlying network. Therefore, as stated in the ACCC's 2019 Fixed Line Services FAD final decision[53], pricing for fixed voice interconnection services could be given further consideration in the future. This could involve separating out voice interconnection from the other resale fixed line services and considering the FTAS and the MTAS together in a holistic review. Such a review would consider issues raised by Optus and VHA such as the appropriate pricing methodologies for the FTAS and the MTAS, and whether a consistent pricing approach would be appropriate.

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50 ACCC, *MTAS FAD — Final decision*, August 2015, p. 10.

51 See VHA Submission, p. 19.

52 See ACCC, *MTAS FAD — Draft Decision*, May 2015, p. 11.

53 ACCC, *Fixed Line Service FAD — Final decision*, November 2019, pp. 15–16.

4. Price terms

As discussed in the previous chapter, the ACCC has formed the final view that:

- an MTAS price based on the efficient cost of providing the MTAS using TSLRIC+ pricing principles is appropriate, and
- estimating the MTAS cost by using an international benchmarking approach rather than developing a cost model is the most appropriate approach to take for this inquiry.

This chapter discusses in detail the final methodology adopted in undertaking the international benchmarking exercise, the results of the benchmarking exercise and the ACCC's final view on an MTAS price having regarding the outcome of the benchmarking exercise.

In summary, the ACCC has reached the final view that the following methodology is appropriate in undertaking an international benchmarking exercise to estimate the cost of the MTAS for a hypothetically efficient operator:

- the selection of a benchmark set which includes nine publicly available cost models that are capable of producing TSLRIC+ cost outputs, or can be adjusted to produce TSLRIC+ cost outputs,
- making adjustments to relevant inputs and parameters in the benchmark cost models to reflect specific cost drivers in Australia. These include adjustments made to the level of demand, assumed market share, geography and cell radii, mobile technologies in use, spectrum holdings, the weighted average cost of capital (WACC) and the mix of backhaul solutions,
- several other adjustments have been made outside the benchmark models:
    - the original spectrum costs in the models have been removed and Australia-specific spectrum costs have been calculated separately to be added onto the cost outputs,
    - the cost outputs have also been converted in to Australian currency with adjustments made for purchasing power parity (PPP) for the portion of the costs that are non-tradeable, and
    - a 3 per cent uplift has been applied to the cost outputs to account for potential higher costs of transmission arising from the average longer lengths of transmission links in Australia.

Having regard to the outcome of the benchmarking exercise, the ACCC's final position is to adopt an MTAS price of 1.19 cents per minute for the duration of the FAD.

4.1. Methodology adopted for the Draft Report

The ACCC commissioned Analysys Mason to undertake the international benchmarking exercise to estimate the cost of the MTAS in Australia. The ACCC instructed that the benchmarking exercise should include two important parts:

- the selection of a benchmark set which includes TSLRIC+ cost estimates of equivalent services that have been derived from publicly available cost models, and
- the application of appropriate adjustments to reflect Australia-specific cost driving factors.

After considering stakeholder feedback on Analysys Mason's proposed benchmark methodology as outlined in the Position and Consultation Paper, the ACCC adopted the following benchmark methodology for the purpose of the Draft Report.

Table 2: Benchmark methodology used for the Draft Report

Aspect of benchmarking exercise	Methodology
Benchmark set	Nine publicly-available cost models that are capable of producing TSLRIC+ (or LRAIC+) costs: • East Caribbean • France[54] • Mexico • Netherlands • Peru • Portugal • Spain • Sweden • United Kingdom
Adjustments	
Level of demand	A time series of total market demand for Australia was developed based on information provided by the MNOs, information provided under the ACCC's Division 12 Record Keeping Rules, information from the Australian Bureau of Statistics website and Analysys Mason's research information.
Assumed market share	33.3 per cent market share was assumed having regard to the fact that there are currently three MNOs in Australia and this is unlikely to change in the foreseeable future.
Geography	The 2,200 Statistical Areas Level 2 (SA2) areas used in the Australian Communications and Media Authority's (ACMA) Mobile Network Infrastructure Forecasting Model[55] was used as the basis for Australian geography to be implemented in each cost model. The definitions of geotypes in each benchmark model were used to classify each SA2 area.
Cell coverage radii	The cell coverage radii for spectrum used in the most rural geotype was adjusted to reflect that used in the ACMA's Mobile Network Infrastructure Forecasting Model. For actual implementation in each cost model, a cell coverage area reflecting a cell radius of 15 km was targeted.

[54] For the France model, Analysys Mason has created a separate workbook containing LRACI+ calculations. This file entitled 'France PlusLRAIC' is available at: https://www.accc.gov.au/regulated-infrastructure/communications/mobile-services/mobile-terminating-access-service-access-determination-inquiry-2019/draft-report.

[55] The ACMA's Mobile Network Infrastructure Model is available at: https://www.acma.gov.au/publications/2015-06/report/mobile-network-infrastructure-forecasting-model.

	This adjustment is necessary because Australia is likely to have coverage in far more sparse areas than other countries included in the benchmark set and coverage sites in these areas would be overestimated if this adjustment is not made.
Mobile technologies in use	2G technology was assumed to be switched off from 2019 (or reduced to negligible deployment); with 2G network costs assumed to be recovered prior to 2019. A network coverage profiled was developed based on those of Optus' coverage, as Optus' level of coverage is capable of supporting the assumed level of market share of 33.3 per cent.
Spectrum holdings	Nationwide spectrum licence holdings were assumed due to some benchmark models not able to accommodate regional licences. The following conservative assumption of holdings in each band were assumed: • 700 MHz: 2 x 10 MHz • 800 MHz: 2 x 5 MHz • 900 MHz: 2 x 5 MHz • 1800 MHz: 2 x 15 MHz • 2100 MHz: 2 x 10 MHz • 2500 MHz: 2 x 20 MHz
Spectrum costs	Spectrum costs were removed from the benchmark models in the first instance. The spectrum costs for the assumed spectrum holdings were then calculated using auction fees, recurring fees (for apparatus licences), and renewal fees set by the Minister for Communications.[56] The total spectrum costs were then allocated to a time series of traffic and a per minute cost was added onto the benchmark MTAS price separately.
Weighted Average Cost of Capital (WACC)	The following WACC values were provided by the ACCC and implemented in the models: • Pre-tax nominal: 4.98% • Pre-tax real: 2.53%.
Currency	Cost outputs from benchmark models were converted to Australian currency using exchange rate, and the portion of non-tradable costs were further adjusted for purchasing power parity (PPP).

[56] For the 1800 MHz and 2100 MHz bands, a blended unit cost based on the relevant renewal fees and auction prices was calculated. For details on how the weighting is derived, please see **Appendix B**.

The ACCC also considered that it would be reasonable to adjust for the mix of backhaul solutions deployed at mobile sites, as some solutions such as microwave backhaul would be significantly cheaper than others, such as leased lines and fibre backhaul. As the ACCC did not consider it had sufficient information on the proportions of the MNOs' sites that were connected using each type of backhaul, Analysys Mason conducted a sensitivity analysis using the following assumed mix of backhaul solutions:

- Microwave backhaul – 25 per cent
- Leased lines – 25 per cent
- Dark fibre or owned fibre – 50 per cent.[57]

The ACCC noted in the Draft Report that it would refine the inputs to this adjustment once information from the MNOs is available.

The sections below set out the submissions in response to the approach implemented for each aspect of the benchmarking exercise outlined above and the ACCC's final view regarding the benchmark methodology.

4.2. Benchmark set

4.2.1. Submission views

VHA submitted that although the initial benchmark set contained nine models, the ACCC's reliance on only five of the resultant outputs (due to suitability post-adjustment) means that the benchmarking exercise can 'only be described' as relying upon a small sample.[58] Similarly, VHA also submitted that there was clear variance in the estimates of MTAS cost produced by each of the models under the benchmarking exercise, and that the draft price decision was therefore highly sensitive to which model outputs are included and how they are weighted.[59]

VHA was also of the view that given each of the models dimensions a hypothetical network based on proportional levels of subscribers and traffic to population in each geotype modelled, other factors used in the dimensioning of actual mobile networks are missed, which may introduce bias that leads to systemic divergences between modelled costs and actual costs.[60] As a consequence, VHA submitted that the ACCC cannot be confident about the direction and magnitude of any possible regulatory error. As such, VHA argued that the uncertainty provides further reasons for the ACCC to take a conservative approach to setting a price for the MTAS.[61]

4.2.2. ACCC final view

The ACCC considers the initial set of nine publicly available benchmark models proposed in the Position and Consultation Paper remains the appropriate starting point for the benchmarking exercise. The ACCC has had regard to the suitability of each of the model outputs post-adjustment, and has based the final MTAS price on a subset of these having regard to Analysys Mason's recommendations.

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57 Analysys Mason, Draft Benchmark Report, p. 14.

58 VHA submission, p. 8.

59 VHA submission, p. 8.

60 VHA submission, pp. 8–9.

61 VHA submission, p. 9.

The ACCC notes VHA's submission that using a subset of the initial nine models represents a 'small sample', but reiterates our view expressed in the Draft Report that the benchmarking exercise is a very different process to that of traditional statistical analysis.[62] The purpose of the country-specific adjustments made to each of the models is to replicate in each, the specific cost drivers of a mobile network in Australia, rather than take a statistical sample of the results from other jurisdictions.

Having regard to the recommendation of Analysys Mason, the ACCC has discounted the results of the adjusted Dutch, Eastern Caribbean, Mexican and Spanish models, and has relied upon the outputs of five models, namely those models originally developed for France, Peru, Portugal, Sweden and the UK. The ACCC remains of the view that the outputs of these five models represent a reasonable basis for deriving the efficient cost of providing the MTAS in Australia.

On the other hand, the ACCC accepts that there is variance in the cost outputs produced by the benchmark models even after adjusting the inputs and parameters to reflect Australian conditions (see section 4.12). Analysys Mason explains that this is because many key features of the models have been developed in a bespoke fashion tailored for each model.[63] As such, the ACCC considers that while the benchmarking exercise is able to provide a reasonable estimated range for where the cost of the MTAS in Australia may lie, the ACCC cannot assess with certainty which point on that range would be closest to what a cost mode developed for Australia would produce. For these reasons, the ACCC agrees with VHA that a conservative approach to determining a MTAS price based on the outcome of the benchmarking exercise is justified. This is further discussed in section 4.13.

4.3. Levels of demand and assumed market share

4.3.1. Submission views

VHA did not have any specific comments on the approach taken to assumed demand.[64] VHA caveated this however by suggesting it may be prudent to conduct a sensitivity test on the growth in forecast data traffic to ensure the models respond as expected. VHA's suggested demand growth profile is illustrated in the table below.

Table 3: VHA's proposed data demand growth scenario for sensitivity testing

	2020	2021	2022	2023	2024	2025
Assumed data growth profile	40%	40%	30%	30%	20%	20%
VHA proposed growth profile (for sensitivity)	35%	30%	25%	20%	15%	10%

No submissions were made in response to the assumed number of subscribers and level of demand (outside of VHA's submission regarding growth over time) as implemented in the Draft Report.

Neither did the ACCC receive any submissions on the assumed level of market share, set at one-third, for the hypothetical operator in each model.

62 Draft Report, p. 27.

63 See Analysys Mason, Final Benchmark Report, pp. 3–4.

64 VHA submission, p. 9.

4.3.2. ACCC final view

The ACCC is of the view that the historic and forecast subscriber numbers and levels of demand derived by Analysys Mason for the purposes of the benchmarking exercise are appropriate. These time series have been derived from information provided to the ACCC by the MNOs, as well as supplementary information from the ACCC's Division 12 Record-Keeping Rules, the Australian Bureau of Statistics (ABS), and Analysys Mason Research.[65] A detailed description of Analysys Mason's process for deriving these inputs are available in chapter 4 of Analysys Mason's Final Benchmark Report.[66]

Analysys Mason has modelled VHA's proposed alternative demand growth profile for the years 2020–2025 as part of their suite of sensitivity tests. As expected, a lower forecast of data traffic increases the cost of MTAS marginally in seven models.[67] In two models (Portugal and Sweden), the cost of MTAS decreased slightly. Analysys Mason have confirmed that this is a function of the economic depreciation and allocation of costs in each of these models.[68] The ACCC is satisfied that each of the candidate models is behaving in the expected manner under this scenario with regards to network deployment and the calculation of network expenditure.

The ACCC considers that 33.3 per cent market share remains the appropriate benchmark for the hypothetically efficient operator, given the fact that there are three national MNOs operating in Australia. Following the recent merger between VHA and TPG Telecom, the ACCC does not consider it likely that a fourth entrant will emerge in the short to medium term.

4.4. Geography and cell coverage radii

4.4.1. Submissions

VHA submitted that while the use of the SA2s as defined by the ABS is reasonable, the ACCC should be aware of the limitations of solely relying on population density to determine geotype classification. VHA raised a few issues regarding this approach:

- Geotype classifications used for some areas in the models could be misleading in terms of the location and the level of traffic, and are biased against industrial parts of major urban centres. VHA noted a selection of SA2s in major cities that are classified as rural or remote based on population density. VHA suggested that the ACCC may want to consider combining population density data with the number of businesses or, preferably, employees by SA2.
- Commuters provide another example of how relying solely on population density to determine traffic volumes may not yield an appropriate distribution of traffic volumes to determine network dimensioning requirements. VHA provided information on utilisation at two sample sites and data traffic analysis across all SA2s. Based on this information, VHA argued that there is a flow of commuter traffic into certain SA2s, that the busy hour occurs at different times of day and the average traffic per user

[65] Analysys Mason, Final Benchmark Report, pp. 5, 16.

[66] Analysys Mason, Final Benchmark Report, p. 16. The time series of demand is also available in the Excel file entitled 'Inputs and Outputs of MTAS benchmark', available at: https://www.accc.gov.au/regulated-infrastructure/communications/mobile-services/mobile-terminating-access-service-access-determination-inquiry-2019/final-report.

[67] Analysys Mason, Final Benchmark Report, pp. 32–33.

[68] Analysys Mason, Final Benchmark Report, p. 33.

appears to increase with population density, suggesting that data traffic is unlikely to be in proportion to the number of residents in an SA2.[69]

Commpete and MNO Group both raised a number of issues regarding the adjustments made regarding the Australian geography and the cell radii in the most rural geotype, based on the findings of an expert report by Competition and Economics Group (CEG).[70]

Commpete submitted that the incompatibility of the geotypes in the East Caribbean, Mexican and Dutch models with the actual population densities of rural and suburban Australia warrants the exclusion of the results of those particular models.[71] This is based on CEG's finding that in these three models, the most rural geotype includes areas of significantly higher population densities than would be viewed as rural (or even suburban) in Australia. In addition, CEG's report also considers that a similar concern may also be raised with the Portuguese model given the significant step between the rural and suburban population density cut-offs.[72]

MNG Group submitted that instead of adjusting the cell radii for the most rural geotype in each model to reflect a specific cell radii for Australia, it would be more appropriate to adjust the cell radii in the most rural geotype to be in line with the number of sites observed in Optus' network as this would more accurately reflect Australia's population distribution.[73] This is based on an alternative approach suggested in the CEG report. The CEG report notes that the cut-offs for the most rural geotype in the cost models are significantly different, and suggests that, instead of targeting a cell radius of 15 kilometres in the most rural geotype, a better approach would be to adjust the cell radii in the most rural geotype so it calibrates to the number of sites observed in Optus' network. CEG's report also sets out the results after implementing this alternative approach.[74]

4.4.2. ACCC final view

The ACCC considers there are a number of issues raised in the submissions regarding the implementation of the Australian geography and cell radius for the most rural geotype. Having considered the submissions on these issues, we have provided our final views to each of these issues below.

Commuting effect

The ACCC understands that geotyping purely based on population in each SA2 would not fully capture how an MNO deploys and dimensions its network in SA2 areas where commuters or workers, are higher than residential population. In response to VHA's submission on this issue, Analysys Mason has further investigated how this effect could be captured in the benchmarking exercise. Analysys Mason noted in its Final Benchmark Report that it would not be possible to take into account the number of businesses or employees in each SA2 area in the geotyping, but it would be possible to adjust the split of traffic by geotype in each model to capture this effect.[75]

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69 VHA submission, pp. 9–12.

70 See CEG, Review of Analysys Mason MTAS report, July 2020. (CEG report)

71 Commpete, *Submission in response to the Australian Competition and Consumer Commission's draft report on the public inquiry on the access determination for the Domestic Mobile Terminating Access Service*, 10 July 2020, p. 3 (Commpete submission).

72 CEG report, p. 11.

73 MNF Group submission, p. 6.

74 CEG report, p. 12.

75 Analysys Mason, Final Benchmark Report, p. D-18.

Analysys Mason has undertaken the following steps to adjust the split of traffic by geotype in the benchmark models:

- To estimate the distribution of voice traffic across geotypes, the maximum of the number of resident population and workers in an SA2 area is taken to be the traffic generating population in each SA2.
- For distribution of data traffic across geotypes, the above split is further weighted by the de-averaged data traffic per user as provided by VHA as a starting point.
- The split of voice and data traffic in each of the benchmark models was then adjusted accordingly.[76]

The ACCC considers that this is a reasonable approach to capturing the commuting effect and would result in network dimensioning that more closely resembles what an MNO would do given the level of traffic, particularly in CBD areas.

Different threshold for the most rural geotype

Commpete and MNF Group raised concerns regarding the incompatibility of the geotypes in some of the models with Australia's actual geography, based on findings from the CEG report. In particular, there is concern the high population density thresholds for the most rural geotype in some of the models would capture what would not otherwise be considered rural in Australia, i.e. areas with much denser population.

Analysys Mason recognised this issue in proposing to implement the ACCC SA2 areas in the benchmark models. Analysys Mason noted that the most rural geotype in each model is a capture all with no lower bound threshold but the actual lowest covered population density in the modelled country could vary significantly. Specifically, Analysys Mason noted that Australia is likely to have coverage in far sparser areas than the other modelled countries, so the models will likely overestimate the number of coverage sites required in rural areas when Australian geo-demographic information is used. Analysys Mason's original proposed solution to this issue is to adjust the cell radii assumed in the most rural geotype in each of the benchmark models to reflect that in Australia. Based on this, Analysys Mason implemented an assumed cell coverage area of 585 square kilometres, equivalent in the most rural geotype, in each of the models.[77]

MNF Group recommended an alternative approach based on the findings of the CEG report whereby the cell radius in the most rural geotype is adjusted to align the number of sites in that geotype with the actual number of sites in Optus' network.

Analysys Mason investigated this approach and considers it is reasonable to adopt MNF Group's suggestion. For the purpose of the Final Benchmark Report, after initially adjusting the cell radii for the most rural geotype to target a cell coverage area of 585 square kilometres, Analysys Mason further calibrated the cell radii in each model so that the modelled site numbers in the most rural geotype exactly match the actual numbers of sites in Optus' network in that geotype.[78] Analysys Mason concluded that it was possible to align the modelled site number and Optus' actual site number in the most rural geotype for all

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[76] Analysys Mason, Final Benchmark Report, pp. D-18–D-19. The ACCC understands that for some of the models which do not differentiate between voice and data traffic distribution, the estimated distribution of data traffic is implemented as this is the dominant traffic type. An example of how the distribution of traffic is derived is provided in the Excel file entitled 'Inputs and Outputs of MTAS benchmark', available at: https://www.accc.gov.au/regulatedinfrastructure/communications/mobile-services/mobile-terminating-access-service-access-determination-inquiry2019/final-report.

[77] Analysys Mason, Draft Benchmark Report, p. 10.

[78] Analysys Mason, Final Benchmark Report, p. 10.

benchmark models except for Spain where the modelled site number remains significantly above the actual Optus' number.[79]

Analysys Mason then compared the total numbers of modelled sites to the total number of Optus' actual sites. Analysys Mason noted that the number of modelled sites in the Peruvian model was just over half of that in the Optus' network due to higher than usual cell radius assumption in the dense urban geotype. As such, Analysys Mason further adjusted this cell radius to bring it in line with the values assumed in other models, which improved the alignment of the total number of modelled sites in the Peruvian model with the actual number of site in Optus' network.[80]

Having compared the outcomes from Analysys Mason's initial approach to cell radii adjustment adopted for the purpose of the Draft Benchmark Report and the revised approach in the Final Benchmark Report, the ACCC considers that the adoption of the revised approach is reasonable because it:

- resulted in the number of modelled site in the most rural geotype exactly matching Optus' actual number of sites in that geotype; and
- improved the overall alignment of the total number of modelled sites across all geotypes with total number of sites in Optus' network for all benchmark models except for Peru.

In this case, the ACCC also considers it was appropriate for Analysys Mason to further calibrate the cell radius in the dense urban geotype in the Peruvian model to bring it in line with the assumptions in the other benchmark models and improve the calibration for the Peru model.

The ACCC considers that the combined effect of using the revised approach to cell radii adjustment and the additional adjustment in the Peruvian model is that overall, the networks deployed in the benchmark models better resemble the actual networks deployed in Australia after the relevant adjustments have been made in the benchmark exercise. The ACCC further discusses site numbers in relation to the results of the benchmarking exercise in section 4.12.

4.5. Mobile technologies in use

4.5.1. Submissions

VHA submitted in response to the Draft Report that it continues to support the implementation of a 2G shutdown in 2019 and the recovery of 2G network costs prior to 2019.[81]

VHA raised concerns about the potential closure of 3G networks, arguing that government policy regarding the management of spectrum in the 850/900 MHz band has the potential to create a situation where VHA would be forced to stop delivering 3G services should they not secure any 900 MHz spectrum during the upcoming reallocation process.[82] VHA suggested that this should be taken into account in calculating the cost of the 900 MHz band which will be discussed in section 4.6 below.

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79 Analysys Mason, Final Benchmark Report, p. 31.

80 Analysys Mason, Final Benchmark Report, p. 32.

81 VHA submission, p. 12.

82 VHA submission, p. 12.

VHA also submitted that the ACCC should conduct sensitivity analysis on the impact of an early closure of the 3G network for the hypothetically efficient operator.[83]

4.5.2. ACCC final view

The ACCC considers that it remains appropriate to assume a shutdown of 2G networks in 2019, and to assume that all associated costs are recovered prior to shutdown. As part of the international benchmarking exercise, Analysys Mason has modified each of the models such that this is the case.

In regards to VHA's concerns around the premature closure of 3G networks due to government spectrum policy, Analysys Mason has conducted sensitivity testing on the impact of a premature shutdown of 3G networks as part of the international benchmarking exercise.[84] This test assumes a 3G network shutdown in 2023 in the Swedish model. The impact of this test is to lower the cost of MTAS in all years 2020–2024, with a particularly pronounced drop in the final year. Analysys Mason explained that the lower cost in all years is due to the use of two parallel networks for fewer years, when there is inefficiency arising from the networks not fully utilised by the traffic carried, and the final year drop represents the '4G only' cost of MTAS, reflecting the more efficient carriage of voice traffic over VoLTE only as compared to carriage of voice traffic using a mix of VoLTE and 3G.[85]

The ACCC's final position is to assume a coverage level similar to that of Optus for the hypothetically efficient mobile operator,[86] using a coverage level similar to that of Telstra as a sensitivity test during the benchmarking exercise.[87]

4.6. Spectrum holdings and costs

4.6.1. Submissions

VHA submitted that it generally supports the assumption regarding spectrum holdings and the approach to determining spectrum costs and agrees that it is reasonable for the ACCC to consider the spectrum holdings of VHA post its merger with TPG. However, VHA submitted that the assumed use of the 800 MHz band for 3G does not match its experience and that should the 900 MHz band becomes unavailable due to reallocation it would not be reasonable to assume that it could rely on 800 MHz band to deliver 3G services. In this regard, VHA proposed that the ACCC consider the potential loss of the 900 MHz band in assessing the mobile technologies in use as mentioned in section 4.5 above.[88]

In addition, VHA suggested that when calculating the spectrum cost component of MTAS, the ACCC should replace the current recurring 900 MHz apparatus licence costs with an estimate of the upfront auction costs for a hypothetically efficient operator to retain its current holdings in 900 MHz. VHA suggested using recent spectrum auction outcomes (specifically the cost of the 700 MHz residual lots auctioned in 2017) as a proxy for the cost of 900 MHz spectrum licences.[89]

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83 VHA submission, p. 13.

84 Analysys Mason, Final Benchmark Report, pp. D-19–D-20.

85 Analysys Mason, Final Benchmark Report, p. D-20.

86 The network coverage inputs are detailed in the Excel file entitled 'Inputs and Outputs for MTAS Benchmark' available at: https://www.accc.gov.au/regulated-infrastructure/communications/mobile-services/mobile-terminating-access-serviceaccess-determination-inquiry-2019/final-report. As the assumed network coverage is based on information provided by Optus on its actual coverage, the coverage inputs contained in the published file have been rounded.

87 See Analysys Mason, Final Benchmark Report, p. 11.

88 VHA submission, p. 14.

89 VHA submission, pp. 12–13.

Optus, however, raised concerns regarding the assumed spectrum holdings and the calculation of spectrum costs. Optus submitted that:

- the simplification of spectrum holdings to reflect nationwide licences does not reflect the acute differences between metro and regional holdings,
- while the smaller spectrum holdings should be a conservative assumption that may drive the deployment of additional site deployments, the smaller spectrum holdings do not recognise the actual spectrum costs incurred by operators, and the fact that spectrum auction costs in Australia have been among the highest on a MHz/pop basis across various bands,
- other ongoing spectrum licence fees, such as other apparatus licence fees including for some regional mobile spectrum bands, and annual spectrum licence taxes, are not currently considered, and
- the entirety of the actual costs of the 900 MHz band should be recovered, rather than just the costs for 2 x 5 MHz assumed.[90]

4.6.2. ACCC final view

The ACCC has considered VHA's argument regarding the potential risk of early 3G closure due to the loss of the 900 MHz band and discussed the sensitivity testing that Analysys Mason conducted on a potential 3G shutdown in 2023 in section 4.5 above. In particular, the ACCC does not consider it would be appropriate to replace the recurring fees for the 900 MHz band with an assumed upfront spectrum cost from 2023 based on the spectrum costs for the unsold 700 MHz band allocated in 2017. The ACCC considers that given the uncertainty around the auction price that would be achieved for the 900 MHz in a potential auction and the final decision on the reallocation period, adopting VHA's suggestion would give rise to a high risk that the spectrum cost assumed for the 900 MHz band in the benchmarking exercise would not reflect a reasonable cost estimate.

Optus' concerns regarding the assumed spectrum holdings and the calculation of spectrum costs can be broadly summarised as three issues.

First, Optus is concerned about the assumption of nationwide licences as it considers this does not reflect the differences between metro and regional holdings. As the ACCC explained in the Position and Consultation Paper and the Draft Report, the assumption of nationwide licences is a necessary simplification given that most of the benchmark models do not accommodate sub-national spectrum licences.[91] As a result of this, conservative spectrum holdings are used for the purpose of making the relevant adjustments in the cost models, which would mean that more sites would need to be deployed given a level of demand.

Second, Optus argued that in calculating spectrum costs, the costs actually incurred by the MNOs, which reflect their actual holdings, should be taken into account. The relevant costs include the costs incurred for apparatus licensing in some regional areas and for the 900 MHz band. As the spectrum costs implemented in the benchmarking exercise should reflect those of a hypothetically efficient operator in Australia, the ACCC does not consider that the calculation of spectrum costs should necessarily reflect actual costs incurred by any particular MNO. As such, the ACCC does not consider that the additional spectrum costs mentioned by Optus should be included in so far as they reflect spectrum holdings that are different to those assumed in the benchmarking exercise. The ACCC also considers that the

[90] Optus submission, pp. 13–14.

[91] See Position and Consultation Paper, p. 27; Draft Report, p. 31.

ways in which spectrum costs are calculated in the benchmark exercise, which are based on actual auction prices achieved in Australia for various bands or relevant renewal fees (apart from the 900 MHz band), properly reflect the differences in spectrum costs on a per MHz/pop basis compared to the benchmark countries.

In response to Optus' submission, Analysys Mason investigated the cost contribution of the 850 MHz and 900 MHz bands and found that these two bands contribute to a significant proportion of the overall spectrum costs. This means that the assumed holdings in these two bands would have a material impact on the spectrum costs and hence MTAS cost. Analysys Mason considers that it would be reasonable to increase the assumed holdings in the 900 MHz band to 2 x 10 MHz, which would mean that overall assumed holdings in the 850 MHz and 900 MHz bands (2 x 15 MHz) would represent a third of total bandwidth available in these two bands in practice (2 x 45 MHz). This would result in an increase in the spectrum costs as well as a reduction in network costs due to the increased spectrum holdings.[92] The ACCC considers that this is a reasonable revision to the assumed spectrum holdings.

Finally, Optus raised the issue that the spectrum licence tax is not currently considered. The spectrum licence tax is a yearly tax payable by spectrum licence holders to cover the costs of managing spectrum, and is charged in addition to the costs incurred in acquiring the spectrum licence. The *Radiocommunications (Spectrum Licence Tax) Determination 2014*[93] sets out the methodology for calculating the spectrum licence tax payable for various bands, which include all bands assumed to be held by the hypothetically efficient operator apart from the 900 MHz band held under apparatus licence. The ACCC therefore considers that it would be reasonable to assume that a hypothetically efficient operator in Australia would be liable to pay the spectrum licence tax and that an amount commensurate with the assumed spectrum holdings should be calculated for inclusion in the spectrum costs.

The ACMA has recently made the *Radiocommunications (Spectrum Licence Tax) Amendment Determination 2020 (No. 1)* to implement the Minister's Australian Communications and Media Authority (Modifications to Apparatus and Spectrum Licences Taxes) Direction 2020.[94] As instructed by the Direction, an additional component for the spectrum licence tax for the purpose of recovering the costs associated with the Government's Electromagnetic Energy Program (EME Program) will be introduced from October 2020. The ACCC has estimated the additional amount that a hypothetically efficient operator would be expected to pay based on the methodology determined by the ACMA.

Details on how the spectrum licence tax payable by the hypothetically efficient operators for the purpose of the benchmarking exercise is available in **Appendix B**.

The final assumed spectrum holdings for implementation in the benchmarking exercise are show in tables below.

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92 Analysys Mason, Final Benchmark Report, p. D-23. For calculation of overall spectrum costs, see the Excel file entited 'Inputs and Outputs of MTAS benchmark', available at: https://www.accc.gov.au/regulatedinfrastructure/communications/mobile-services/mobile-terminating-access-service-access-determination-inquiry2019/final-report.

93 This Determination is available on the Federal Register of Legislation website at: https://www.legislation.gov.au/Details/F2018C00553.

94 See Radiocommunications (Spectrum Licence Tax) Amendment Determination 2020 (No. 1) at: https://www.legislation.gov.au/Details/F2020L01167. See also ACMA website at: https://www.acma.gov.au/consultations/2020-07/amending-spectrum-licence-tax-determination-apportioning-eme-program-costs-consultation-212020.

Table 4: Spectrum bands considered[95]

Band	Spectrum frequencies (MHz)	Spectrum allocation (MHz)	First year
700 MHz	703–748 paired with 758–803	2×10	2014
800 MHz/ 900 MHz	825–845 paired with 870–890 and 890–915 paired with 935–960	2×10 of 900 MHz 2×5 of 850 MHz	Beginning of model
1800 MHz	1710–1785 paired with 1805–1880	2×15	2000
2100 MHz	1920–1980 paired with 2110–2170	2×10	2002
2.5 GHz	2500–2570 paired with 2620–2690	2×20	2014

Table 5: Spectrum holdings assumptions (MHz)[96]

	Before 2004	2004–2013	2014–2016	2017–2018	2019 onward
2G coverage	900: 2×10 850: 2×5	900: 2×10	900: 2×10	900: 2×10	
2G capacity	1800:2×15	1800: 2×15	1800: 2×15		
3G coverage		850: 2×5	850: 2×5	850: 2×5	850: 2×5 900: 2×10
3G capacity		2100: 2×10	2100: 2×10	2100: 2×10	2100: 2×10
4G coverage			700: 2×10	700: 2×10	700: 2×10
4G capacity			2500: 2×20	1800: 2×15 2500: 2×20	1800: 2×15 2500: 2×20

4.7. Currency

4.7.1. Submission views

VHA supports the adjustment of the benchmark outputs based on purchasing power parity (PPP), noting that some of the countries included in the exercise display a notably different cost of living to that of Australia.[97] However, VHA reiterated its view that PPP may not adequately capture differences in the price level between jurisdictions in four key areas: transmission costs, site deployment costs, network costs associated with natural disasters and national security requirements.[98]

[95] Reproduced from Figure 5 in Analysys Mason, Final Benchmark Report, p. 12.

[96] Reproduced from Figure 6 in Analysys Mason, Final Benchmark Report, p. 12.

[97] VHA submission, p. 14.

[98] VHA submission, p.14.

Optus submitted that there is a risk of regulatory error when exchange rates are highly variable. In particular, Optus argued that the PPP inputs adopted by Analysys Mason should be updated to include 2019 figures.[99]

Both MNF and Commpete submitted that it would be more appropriate to adopt a telecommunications-specific PPP factor, based on the CEG report prepared for Commpete.[100] The CEG report contends that because the purpose of the PPP adjustment in the benchmarking exercise is to capture cost differences in the non-tradeable portion of costs incurred in the supply of MTAS, the appropriate proxy for PPP is that which reflects only the costs of telecommunications services.[101]

4.7.2. ACCC final view

The ACCC agrees with VHA that adopting an adjustment for PPP when converting model outputs to Australian currency is appropriate, given the differing costs of living displayed in each of the jurisdictions for which the cost models were developed. Analysys Mason also recommend adopting the PPP adjustment for the tradable proportion of the output cost.[102]

With regard to VHA's view that PPP is not an adequate adjustment in relation to four specific areas (transmission costs, site deployment costs, network costs associated with natural disasters and national security requirements), the ACCC has addressed these issues in turn at sections 4.8, 4.9 and 4.10.

Analysys Mason has updated the PPP indices used to the most recent available data for 2019. This has led to a marginal change in the magnitude of the PPP adjustment for each of the outputs as compared to those in the Draft Report.

The ACCC considers that the most appropriate way to capture the differing purchasing power between jurisdictions remains the broad-based measure of PPP, rather than any telecommunications-specific PPP factor. Analysys Mason has investigated the viability of implementing a telecommunications-specific PPP adjustment, and found that the indices are updated only infrequently, with the most recent data available dating to 2017, and the data before that dating to 2011.[103]

Moreover, Analysys Mason noted that this index also reflects the cost of services other than mobile communications, such as fixed line products, telecommunications equipment and postal services. It is unclear to what extent these unrelated services could distort the calculation of the PPP adjustment, as compared to a broader based purchasing power index.[104] With more consistent and reliable data available in the broader PPP indices, the ACCC considers the broad-based adjustment is a more appropriate choice.

4.8. Transmission costs

4.8.1. Submissions

VHA reiterated its views that there are two factors that mean the costs in the benchmark models are unlikely to reflect the costs of transmission in Australia:

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99 Optus submission, p. 12.

100 MNF Group submission, p. 5—6; Commpete submission, p. 3.

101 CEG report, p. 13.

102 Analysys Mason, Final Benchmark Report, p. 34.

103 Analysys Mason, Final Benchmark Report, pp. D-12–D-13.

104 Analysys Mason, Final Benchmark Report, p. D-13.

- the average distance between sites and the nearest aggregation point is likely to be longer in Australia compared to the benchmark countries, and
- the mix of transmission solutions in Australia is likely to be different to the benchmark countries.

VHA submitted that while Analysys Mason conducted a sensitivity analysis regarding the second point for the purpose of the Draft Report, the first point remains unaddressed. VHA argued that it is possible for the ACCC using data collected through its public inquiry into the domestic transmission capacity service (DTCS) to determine the average distance of transmission links used in Australia's mobile networks and the annual cost for different types of transmission services. VHA provided an example where it used the average distance for metropolitan and regional links, the 2016 DTCS FAD prices and the draft prices proposed in the draft report of the 2020 DTCS FAD inquiry to derive weighted average annual costs for leased line services at different capacities. VHA then provided a comparison of these cost figures to the last mile access cost in the Peru model, and noted that the cost of leased line transmission in Australia appears to be substantially higher than the unit cost for leased line transmission in the benchmark models.[105]

VHA also submitted that the proposed adjustment to reflect the mix of transmission technologies used in Australia should be included. VHA noted that in this regard, the Swedish model only permits a split between microwave and leased line transmission solutions and that the ACCC will need to consider this issue further before placing reliance on the results produced from the Swedish model after making this adjustment.

4.8.2. ACCC final view

The ACCC has considered the further submission from VHA on transmission costs and the information VHA provided. The ACCC's final views on these issues are discussed below.

Average distance between sites and nearest aggregation points

The benchmarking exercise undertaken for the purpose of the Draft Report made no adjustments to account for potential differences in the average distance between sites and nearest aggregation points. VHA provided information which it argues provides a basis for making the relevant adjustment. Specifically, VHA provided two types of information to support its view that transmission costs in Australia are materially higher than in the benchmark models:

- average lengths of metropolitan and regional transmission links, and
- weighted average cost of transmission services for various capacities, using the average length data and the regulated DTCS prices in the 2016 DTCS FAD and the draft report for the 2020 DTCS FAD inquiry.

The ACCC considered the information provided by VHA. While the ACCC considers that the estimated average length of transmission links appear reasonable, we have reservations in adopting the weighted average cost of transmission services proposed by VHA as reflecting the annual cost of transmission services in Australia. This is because the weighted average cost presented by VHA has been calculated using the regulated DTCS prices. The ACCC considers that the regulated DTCS price, which applies to a single service for a one year period, provides a reference point for commercial negotiations on prices, including discounts that may apply, for periods other than one year. The ACCC has noted in the past that such discounting is observed in the market and indicates that DTCS pricing provides the base for

[105] VHA submission, pp. 15–16.

longer term contract to be discounted.[106] This means that in practice, operators generally pay less for transmission services than indicated by the DTCS prices. The ACCC therefore, does not consider that the weighted average costs of transmission service reasonably reflect the cost of transmission service that would be incurred by a hypothetically efficient operator in Australia.

Nonetheless, Analysys Mason has conducted a test to show that increasing the unit cost of backhaul does not necessarily lead to increased MTAS cost. Analysys Mason increased the capital and operational expenditure of all backhaul options in the Swedish model by a factor of 20, which resulted in a decrease in the cost of MTAS in all years.[107]

Analysys Mason also tested the impact of implementing the average link lengths provided by VHA in two of the benchmark models where this is feasible. In the Portuguese model, Analysys Mason was able to adjust the link lengths for all backhaul options based on the information provided by VHA. This has resulted in an increase of approximately 3 per cent in the cost outputs. In the Dutch model, Analysys Mason first assumed that all sites are connected via leased line backhaul (as only link lengths for lease line backhaul are adjustable), with the incremental impact of further adjusting the link lengths based on VHA provided information to be around 2 per cent increase in the MTAS cost.[108]

Based on the outcomes of these tests, Analysys Mason concluded that it is not the case that higher backhaul costs will lead to significantly higher MTAS costs when using a LRAIC+ calculation. Analysys Mason explained that this is because modern backhaul solutions are data centric and therefore cost allocation usually reflects that these costs have a greater impact on data services rather than voice services. Based on the more comprehensive test conducted in the Portuguese model, Analysys Mason considers that the ACCC could include a 3 per cent uplift on the MTAS cost to account for the average link lengths in Australia, consistent with the approach taken in relation to backhaul costs in the previous MTAS FAD inquiry in 2015.[109]

The ACCC considers that based on the available information and the outcomes of the tests conducted by Analysys Mason, it would be reasonable to include a 3 per cent uplift on the derived MTAS cost when determining the new MTAS price. This is implemented in section 4.12.

Mix of backhaul solutions

The ACCC received further information from the MNOs after the release of the Draft Report on the proportions of the MNOs' mobile sites that are connected via various backhaul solutions. Based on this addition information, the ACCC considers that the following split of backhaul solutions is reasonable:

- microwave backhaul – 20 per cent,
- leased lines – 10 per cent, and
- dark fibre or owned fibre – 70 per cent.

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106 ACCC, *Public inquiry to make a Final Access Determination for the Domestic Transmission Capacity Service: Final Report*, April 2016, p. 71.

107 Analysys Mason explained that this is because the calculation of LRAIC+ includes a mark-up to allocate network common costs, with backhaul considered incremental rather than common costs. See Analysys Mason, Final Benchmark Report, p. D-27.

108 Analysys Mason, Final Benchmark Report, pp. D-26–D-27.

109 Analysys Mason, Final Benchmark Report, pp. D-27–D-28.

The Swedish model only has two backhaul options, which are microwave backhaul and leased lines. In order to properly implement the above split, Analysys Mason has created a dark fibre backhaul asset with the assumed unit cost and link lengths either consistent with or derived from other inputs used in the model.[110] The ACCC considers that this approach is reasonable and ensures that the cost outputs from the Swedish model can adequately reflect the impact of the assumed backhaul mix in Australia.

The ACCC understands that that the East Caribbean model cannot properly implement the adjusted mix as the model calculates the lowest-cost mix of backhaul solutions. This means that the cost outputs from the East Caribbean model cannot properly account for the impact of the assumed backhaul mix in Australia. This is further discussed in section 4.12.

4.9. Site deployment costs

4.9.1. Submissions

VHA reiterated its view that the cost of site deployment in Australia is significantly above the costs incurred in other countries. VHA provided a sample of recent site build costs to support its view. VHA acknowledged that for the purpose of making the relevant adjustment in the cost models, average costs would need to be for 'site deployments across all sites not just limited recent/new deployments'. VHA argued that this evidence request is unreasonable given some sites have been built and upgraded over a 25-year history and it does not have a business requirement to maintain records for this purpose. Moreover, VHA is concerned by the attempt to reverse the burden of proof as there is no reason to expect that site and construction costs would be the same in Australia as it is in other benchmark countries and considers that the ACCC should demonstrate why it is reasonable to rely on the site cost assumptions from the benchmark models without making adjustments for the purposes of estimating the cost of the MTAS in Australia.

VHA also raised issues with the ACCC's reliance on the site cost figure from the 2007 WIK Model on the basis that the WIK model was a 2G only model and that a significant part of the cost relates to land values where VHA considers the main driver of site costs to be construction costs. VHA also noted that, depending on site location, additional site deployment costs are incurred due to the need to provide natural disaster protections.[111]

4.9.2. ACCC final view

VHA provided site build cost data for six sites, two of which are labelled as small cells. The ACCC considers that while unabridged itemised cost data has been provided to assist the ACCC in its comparison with the unit cost of site deployment costs in the benchmark models, the cost information provided cannot be reasonably indicative of the average cost of site acquisition in Australia. Analysys Mason noted that only two of the sites in the information provided could be seen as reference sites for the wider network, as the others are either small cells or bespoke developments. Overall, Analysys Mason considers that the information provided does not support a finding that there are high average site costs in Australia: they are singular examples of (potentially) high-cost sites in Australia.[112]

The ACCC acknowledges that there may be difficulties in deriving an average site build costs over a long period. However, as noted by Analysys Mason, the information on the cost of a limited number of individual sites in recent years provided by VHA does not provide an

[110] Analysys Mason, Final Benchmark Report, pp. D-25–D-26.

[111] VHA submission, pp. 17–18.

[112] Analysys Mason, Final Benchmark Report, p. D-29.

adequate basis for estimating the average site cost for a hypothetically efficient operator in deploying a network in Australia. Relying on this information would likely lead to an overestimation of the average cost of site acquisition.

VHA also raised concerns regarding the ACCC's reliance on the site acquisition cost used in the 2007 WIK-Model. The ACCC is not suggesting that the average site acquisition cost should be at the same level as when the WIK-Model was developed. However, the figure used in the WIK-Model did provide a useful reference point to assess the reasonableness of the site cost figures originally provided by VHA in its submission to the Position and Consultation Paper. As those figures were significantly above the site cost used in the WIK-Model, the ACCC clarified the average cost information required and sought further information on this issue in the Draft Report.

For the reasons discussed above, the ACCC's final view is that it is not appropriate to make adjustments to the site acquisition cost in the benchmark models based on the figures provided by VHA.

4.10. National security arrangements

4.10.1. Submissions

VHA submitted that, by not making any adjustment to reflect the impact of national security arrangements in Australia, the ACCC is making an assumption that the incremental cost of national security requirements is zero. VHA considered that this is unreasonable and inconsistent with the ACCC's own observations on the impact of the national security requirements on the competitiveness of the market for the supply of equipment.

VHA argued that outside of the direct cost on 5G infrastructure, there is an indirect link to the operation of 3G and 4G networks if the latter utilises equipment supplied by a non-compliant vendor. Doing so means that operators would need to replace all non-compliant vendor equipment or make a range of technical adjustments to prevent leakage of 5G traffic onto non-compliant vendor equipment.

VHA suggested that a practical way for the ACCC to replicate the impact of MNOs replacing 3G and 4G network equipment due to 5G-related national security requirements would be to set a shorter asset life for 3G and 4G Radio Access Network (RAN) equipment. In addition, VHA suggested that the cost of 3G and 4G equipment should be subject to an uplift of 17 per cent, based on a previous study submitted regarding the impact of national security arrangements on the investment costs of 5G infrastructure.

Finally, VHA considers that multi-vendor approaches and bargaining power are irrelevant to the ACCC's consideration of national security requirements on the cost of network equipment.[113]

4.10.2. ACCC final view

The ACCC has carefully considered VHA's further submissions on this issue but remains of the view that there is currently no evidence on the impact of Australia's natural security arrangements on the costs of providing services over the 3G and 4G networks by a hypothetically efficient operator. The reasons for this final view are two-fold.

First, the ACCC understands the reasons put forward by VHA as to why the national security arrangement specific to the deployment of 5G equipment may indirectly affect an MNO's 3G

[113] VHA submission, p. 13.

and 4G deployment. However, whether there is in practice a material impact would depend on whether the operator has originally deployed equipment from the non-compliant vendor, and the scale of such deployment across the entire network. That is, there is insufficient evidence to assume that a hypothetically efficient operator would need to replace all of its 3G and 4G equipment to comply with national security arrangements and that, accordingly, would be subject to significantly higher prices for 3G and 4G equipment.

Second, there is no reliable information on the impact of national security arrangements on the costs of 3G and 4G equipment. The ACCC notes that the study provided by VHA to support its arguments only relate to the impact on investment costs of 5G networks, with no direct or indirect reference to the impact on 3G and 4G deployments.[114] The ACCC therefore does not consider there is any basis for adopting VHA's suggested one-off uplift in the costs of 3G and 4G RAN equipment based on the findings of this study.

In addition, the ACCC does not consider there is justification for setting a shorter asset life for 3G and 4G RAN equipment in the benchmark models. Analysys Mason noted that VHA's suggestion would in fact trigger more regular replacement of equipment over the entire modelling period, rather than just one asset cycle.[115] This mean that VHA's proposal would not be a practical way to capture the impact of the national securities arrangements in the benchmarking exercise.

Overall, the ACCC remains of the view that national security requirements which restrict the participation of certain vendors to be involved in the deployment of 5G networks in Australia will have implications on the competitiveness of the market for the supply of equipment. This will in turn affect the price and quality of the equipment provided on the market. However, the ACCC considers that the exact impact of these restrictions on the cost of deploying mobile networks in Australia, particularly for the purpose of estimating the cost of the MTAS in this inquiry, is unclear. The ACCC expects that any impact on the costs of 5G equipment will likely become more apparent, in the event that the ACCC develops a cost model for the MTAS for the purpose of the next FAD review.

4.11. Weighted average cost of capital

The ACCC has determined a WACC appropriate for a hypothetically efficient operator in Australia for the purposes of the international benchmarking exercise. The ACCC has provided Analysis Mason with a pre-tax cost of capital of 4.996 per cent in nominal terms, and 2.511 per cent in real terms.

Key WACC parameters are set out in Table 6 below.

Table 6: Key WACC parameters

WACC parameter	Value
Risk free rate r_f	0.90%
Market risk premium MRP	6.1%
Corporate tax rate T_c	30.00%
Imputation factor γ	0.585
Equity beta β_e	0.80
Pre-tax cost of equity	6.62%
Gearing ratio D	37%

[114] See Oxford Economics, *Restricting competition in 5G network equipment: An economic impact study*, December 2019.

[115] Analysys Mason, Final Benchmark Report, p. D-22.

Cost of debt[116] K_d	2.18%
Debt issuance costs DIC	0.07%
Forecast inflation	2.42%
Nominal pre-tax WACC	**4.996%**
Real pre-tax WACC	**2.511%**

Source: ACCC calculations.

The ACCC has derived the WACC as follows:

$$WACC_{pre-tax,nominal} = [\frac{(r_f + \beta_e \times MRP)}{[1 - T_c \times (1 - \gamma)]}] \times (1 - D) + (K_d + DIC) \times D$$

$$WACC_{pre-tax,real} = \frac{1 + WACC_{pre-tax,nominal}}{1 + forecast\ inflation} - 1$$

Details on the ACCC's approach to deriving the individual parameters is set out in **Appendix C**.

4.11.1. Submissions

VHA was the only submitter to comment on individual WACC parameters. These comments concerned the benchmark credit rating, and the benchmark debt term. Optus submitted on the WACC approach more generally. No other submitters commented on cost of capital issues.

Benchmark credit rating

VHA submitted in support of using an A- benchmark credit rating for the cost of debt, noting that it considers it reasonable to use that credit rating for the purpose of determining the WACC.[117] However, VHA does not support the inclusion of either Vodafone Group Plc or CK Hutchison in the credit rating benchmark set, as both entities operate across diversified geographies and, in the latter case, diversified industries.[118]

Benchmark debt approach

On the benchmark debt term, VHA submitted that the ACCC ought to consider how typical the use of ten-year corporate bonds is in the telecommunications industry before relying on it to determine the cost of debt for the hypothetically efficient operator.[119] VHA is of the view that shorter debt terms (than the ACCC's draft benchmark debt term of ten years) are more widely used in the industry and this should be reflected in the ACCC's WACC calculations.[120] VHA further suggested that any such change should also be reflected in the cost of equity, by aligning the benchmark term for equity to that adopted for debt.

[116] Cost of debt not including separately itemised debt issuance cost

[117] VHA submission, p. 17.

[118] VHA submission, p. 17.

[119] VHA submission, p. 17.

[120] VHA submission, p. 17.

The WACC approach

Optus expressed concerns about the WACC more generally, arguing that the process of estimating the WACC was not benchmarked.[121] In expressing concerns about the estimated WACC being too low, Optus relied on two separate comparisons: firstly comparing the WACC to those found in European regulatory decisions and; secondly, comparing it to that of previous Australian fixed line decisions. In the latter comparison, Optus noted that in almost all markets, the mobile WACC is above the fixed WACC.[122] In both cases, Optus argued that the WACC proposed in the Draft Report is likely to be inappropriate having regard to these comparisons.

4.11.2. ACCC final view

Benchmark credit rating

The ACCC considers A- remains the appropriate benchmark credit rating of the hypothetically efficient mobile operator in Australia. This decision is based on a benchmarking process undertaken to determine the average credit rating of a number of Australian telecommunications firms, including the MNOs, and parent entities where applicable. These are set out in Table 7 below.

Table 7: Long term credit ratings of comparable entities

Entity	**Credit rating**
Telstra	A-
Optus	A
Vodafone Group Plc.	BBB
CK Hutchison	A
Singtel	A+
Spark NZ	A-
Median	A/A-

Source: Company annual reports.

VHA submitted that it was not appropriate to include Vodafone Plc and CK Hutchison, due to their diverse worldwide operations, and in the case of the latter, diverse industrial interests.[123]

The ACCC considers it is appropriate to have some regard to the credit rating of majority parent entities of an Australian MNO in assessing the typical credit rating of the hypothetically efficient operator. In the absence of any evidence regarding the credit rating of VHA, the ACCC must assume any debt financing for the Australian mobiles business is likely be performed at the group level.

In any case, the inclusion or exclusion of these two entities does not affect the overall assessment of the typical credit rating for the hypothetically efficient operator. On this, the ACCC agrees with VHA that an A- rating remains robust even discounting the inclusion of Vodafone Plc and CK Hutchison.

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121 Optus submission, p. 14.

122 Optus submission, p. 14.

123 VHA submission, p. 17.

Benchmark debt approach

While it is likely that in actuality the MNOs take on debt under a range of circumstances, the ACCC considers that estimating the cost of debt using the yield on ten year corporate bonds remains appropriate.

The use of the yield on Australian corporate bonds as a proxy for the cost of debt is a transparent and easily-replicable method of estimation, commonly used in regulatory determinations by both the ACCC and Australian Energy Regulator (AER).[124]

The use of ten years as the benchmark debt term is consistent with the term used for the estimation of the risk free rate (RFR), and reflects the relatively long-lived asset lives of telecommunications equipment, and the long-term investment cycles of mobile operators. VHA did not provide any supporting evidence for its claim that shorter debt terms are common in the mobiles sector.

The ACCC has adopted ten years as the debt term in previous regulatory decisions,[125] and considers it remains an appropriate assumption.

The WACC approach

The benchmarking approach

For the purposes of the benchmarking exercise, the ACCC has undertaken a process of estimating the cost of capital for a hypothetically efficient Australian mobile operator from individual WACC parameters. This 'bottom-up' approach contrasts with other possible approaches, such as using MNOs' actual costs of capital, or benchmarking against similar values estimated by other regulatory authorities.

This process included benchmarking exercises for the estimation of equity beta and gearing, as well as benchmarking of the credit rating based on a set of relevant telecommunications firms in Australia. Table 8 describes the category of estimation for each of the relevant WACC parameters.

Table 8: Method of estimation for WACC parameters

Category of estimation	Relevant WACC parameters
Sector-specific WACC parameters directly benchmarked	Equity beta, gearing, debt issuing costs
Sector-specific WACC parameters derived from benchmarked inputs	Cost of debt (from benchmark credit rating)
Economy-wide WACC parameters based on previous ACCC/AER research	MRP, gamma, company tax rate, inflation
Economy-wide WACC parameters provided by Bloomberg LP	Risk-free rate

As shown in Table 8, all industry-specific WACC parameters were either directly observed as the result of a benchmarking exercise, or derived from parameters informed by a benchmarking process. The ACCC has further accepted the use of some economy wide parameters based on the binding Rate of Return Instrument developed by the Australian Energy Regulator.

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[124] For example, see ACCC, *Public inquiry into final access determinations for fixed line services: Final Decision*, October 2015, p. 86, and Australian Energy Regulator, *Rate of return instrument — Explanatory Statement*, December 2018, p. 14

[125] For example, see ACCC, *Decision on Australian Postal Corporation 2019 price notification*, December 2019, p. 38, and ACCC, *Public inquiry into final access determinations for fixed line services: Final Decision*, October 2015, p. 86.

The cost of debt can also be understood to be the result of a benchmarking process, with the credit rating informing the use of Bloomberg financial data in deriving this as a forward-looking parameter.

It may well be the case that the WACC derived for the purposes of this exercise differs from the actual historical cost of capital for each of the regulated firms. However, in having regard to estimating a forward-looking cost of capital for a hypothetically efficient operator, the ACCC considers that the methodology adopted in the Draft Report remains appropriate.

International comparisons

Optus also argued that the average nominal pre-tax cost of capital found in European regulatory divisions was 8.22 per cent, with a minimum of 5.55 per cent, raising concerns that the ACCC is proposing a WACC that is less than the minimum across the 23 European Union (EU) markets.[126] In doing so, Optus cited the BEREC report Regulatory Accounting in Practice 2019.[127]

The ACCC considers that the appropriate WACC for the purposes of the benchmarking exercise is the domestic cost of capital for a hypothetically efficient operator in Australia, and has estimated the WACC accordingly. International comparisons of nominal rates can be misleading if they do not take into account the prevailing circumstances of the jurisdictions being compared.

For example, the minimum value of 5.55 per cent cited by Optus is found to be that used in Germany.[128] This WACC is comprised of a risk-free rate of 1.65 per cent[129] and a cost of debt of 3.15 per cent.[130] Both of these parameters are well above that estimated under Australian conditions at the time of this decision.

The individual market conditions found in each jurisdiction must be accounted for before any meaningful international comparisons can take place. Market conditions determining the RFR, cost of debt at a given term and credit rating, and market risk premium will vary widely from country to country, as will the taxation policies that drive the WACC as estimated under a pre-tax cost of equity framework.

The values proposed by the ACCC for equity beta and gearing are well within the range found across the BEREC survey: estimated equity beta of 0.8, compared to the average across 23 European Union (EU) National Regulatory Agencies (NRAs) of 0.85 with a standard deviation of 0.11[131] and gearing of 0.37, compared to the average across 23 EU NRAs of 0.34 with a standard deviation of 0.13.[132]

Further, Optus claims that the EU report also demonstrates that in almost all markets, the mobile WACC is above the fixed WACC.[133] The ACCC notes that this is the case for 16 out of 26 BEREC NRAs that publish both a fixed and a mobile WACC[134], and does not take account of the fact that many of these intra-jurisdiction comparisons will not be valid, for the

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126 Optus submission, p. 14.

127 BEREC, *Regulatory Accounting in Practice 2019 (BEREC report),* December 2019, available here: https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/8907-berec-report-regulatory-accounting-in-practice-2019.

128 BEREC, p. 7

129 BEREC, p. 10.

130 BEREC, p. 37.

131 BEREC report, p. 25.

132 BEREC report, p. 42.

133 Optus submission, p. 14.

134 BEREC report, p. 7.

same reasons outlined above in regards to inter-jurisdictional comparisons. For example, WACCs for each service may have been derived by the NRA in different years, or using different internal parameters.[135]

The Mobile WACC compared to the Fixed WACC

Finally, Optus submitted that at the minimum, the ACCC should adopt a WACC value greater than that used for fixed services.[136]

Aside from the BEREC survey noted in the section above, Optus provided no compelling evidence as to why the mobile WACC ought to be higher than the fixed WACC.

Regardless, the last five years have seen a considerable fall in the RFR. The RFR used in the 2015 Fixed Services final FAD was 2.76 per cent – almost 200 basis points lower than that used in the MTAS Draft Report. Substituting in the RFR prevailing in 2015 to the WACC framework used in the Draft Report (and assuming a constant debt risk premium) yields a nominal pre-tax WACC of more than 7 per cent. In order to compare the 2015 Fixed WACC, converting this pre-tax WACC at the higher RFR to a vanilla WACC returns 6.3 per cent, a figure slightly higher than the 6 per cent estimated as the 2015 Fixed WACC, despite minor variations to internal parameters between them.

There is also little evidence that there is any significant difference in the business risk of fixed networks and mobile networks. In a report prepared for Ofcom, NERA Economic Consulting in 2017 compared the quantitative differences in asset betas between fixed and mobile networks in Western Europe and found 'no evidence of statistically significant difference in the betas of fixed vs. mobile telecoms network operators'.[137]

4.12. Results

This section outlines and discusses the results from the benchmark exercise after implementing the methodology discussed in the sections above. The ACCC then explains its consideration of the benchmarking results, including Analysys Mason's recommendations, and presents its final position on the MTAS price having regard to the outcome of the benchmarking exercise. In reaching its final position on the MTAS price, the ACCC has also had regard to all submissions from stakeholders in response to Draft Report and information provided during the course of the inquiry.

4.12.1. Summary of benchmarking results

Analysys Mason presents and discusses the benchmarking results in chapter 5 of its Final Benchmark Report.[138] The ACCC has reproduced the figures from Analysys Mason's Draft Benchmark Report showing the MTAS costs from each of the benchmark models after making the Australian-specific adjustments, but before Australian spectrum costs are added.

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135 For example, of the 16 NRAs with higher mobile WACCs than fixed WACCs, 5 had both a higher RFR and a higher Kd for the mobiles sector, 2 had a higher Kd only, and 1 had a higher RFR only.

136 Optus submission, p. 14.

137 Nera Economic Consulting, *Differences in the beta for fixed vs mobile telecommunications operators – For the Office of Communications (OFCOM)*, February 2017, available here: https://www.ofcom.org.uk/__data/assets/pdf_file/0028/99640/Annex-21.pdf.

138 See Analysys Mason, Final Benchmark Report, p. 26.

Figure 1: MTAS cost results for 2020–2024 (nominal AUD cents, no adjustments for PPP, excluding spectrum costs)[139]

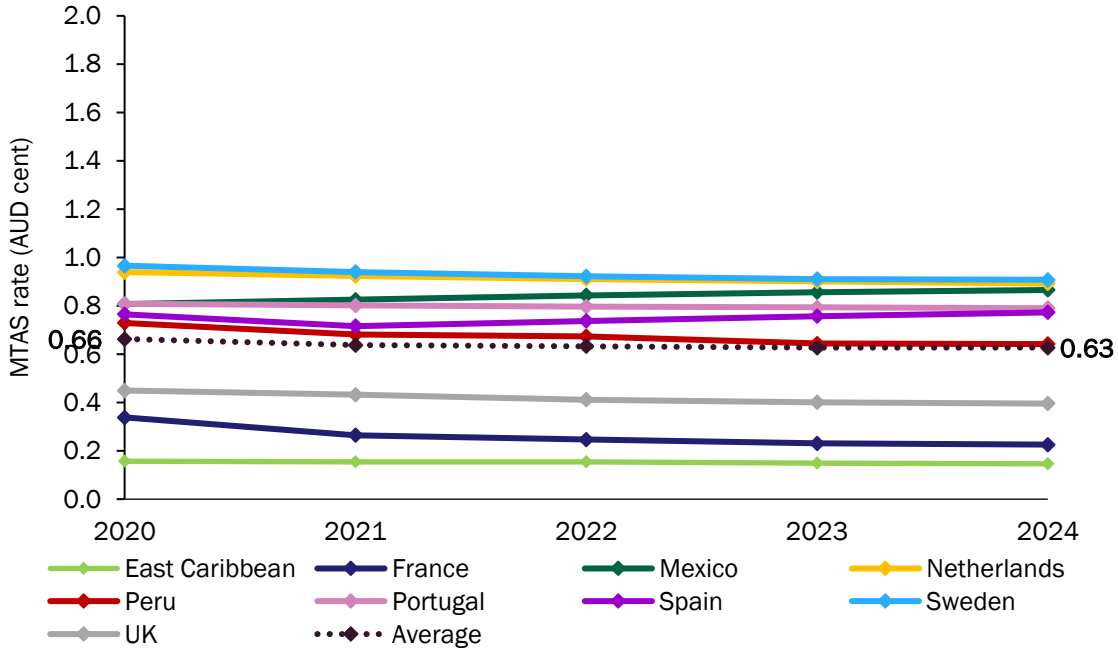
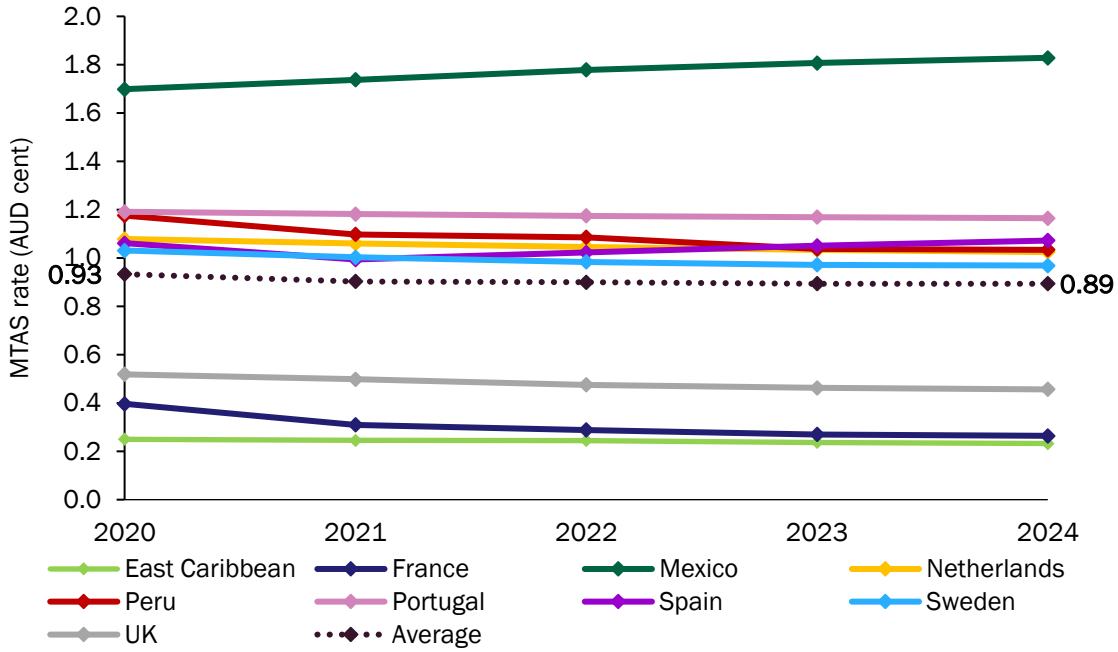


Figure 2: MTAS cost results from the benchmark models for 2020–2024 (nominal AUD cents, adjusted for PPP, excluding spectrum costs)[140]



The adjustment for PPP has had a material impact on the MTAS costs from some of the benchmark models and has resulted in an overall increase in the average MTAS cost across 2020 to 2024. For reasons discussed in Section 4.7, the ACCC considers it is appropriate to

[139] Reproduced from Figure 21 in Analysys Mason, Final Benchmark Report, p. 27.

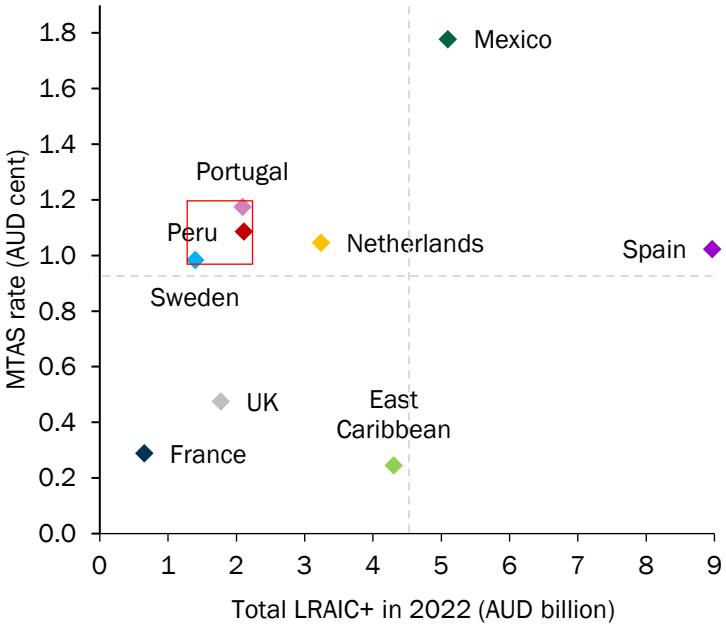
[140] Reproduced from Figure 23 in Analysys Mason, Final Benchmark Report, p. 29.

make PPP adjustments to the MTAS cost outputs and has therefore focused on the results in Figure 2.

Analysys Mason notes that after the PPP adjustments, there is a definite cluster of MTAS costs from five benchmark models around the range of 1.0 to 1.2 cents (Netherlands, Peru, Portugal, Spain and Sweden).[141] MTAS costs from UK, France and East Caribbean models are significantly below the clustered results while the MTAS costs from the Mexico model are significantly above the clustered results. Analysys Mason observes that the Mexico results increase over time due to its assumptions about inflation. Moreover, the high MTAS costs from the Mexico model are likely to be partly due to higher unit cost assumption for fibre transmission which is then exacerbated by the PPP adjustments.[142]

Analysys Mason then investigated whether the differences in the MTAS cost results are due to differences in overall cost base or internal cost allocation mechanisms, or both. For example, if two models have similar economic cost bases but different internal cost allocation mechanisms, the results from the models are still likely to differ. Analysys Mason presents a scatter plot of total economic cost and the MTAS cost results for 2022, which is reproduced in Figure 3 below.

Figure 3: Total economic cost versus MTAS rate per minute in 2023, including PPP adjustment[143]



Analysys Mason notes that the Portugal, Peru and Sweden models form a cluster as their results are similar in both the total economic cost base and the resulting MTAS rate. Analysys Mason then notes that compared to these three models, the other models appear to differ in the level of total economic cost base or internal cost allocation mechanism or both, and that has likely led to differences in the MTAS cost results. For example, Analysys Mason notes that UK model appears to be generating a similar level of economic cost base

141 Analysys Mason, Final Benchmark Report, p. 29.

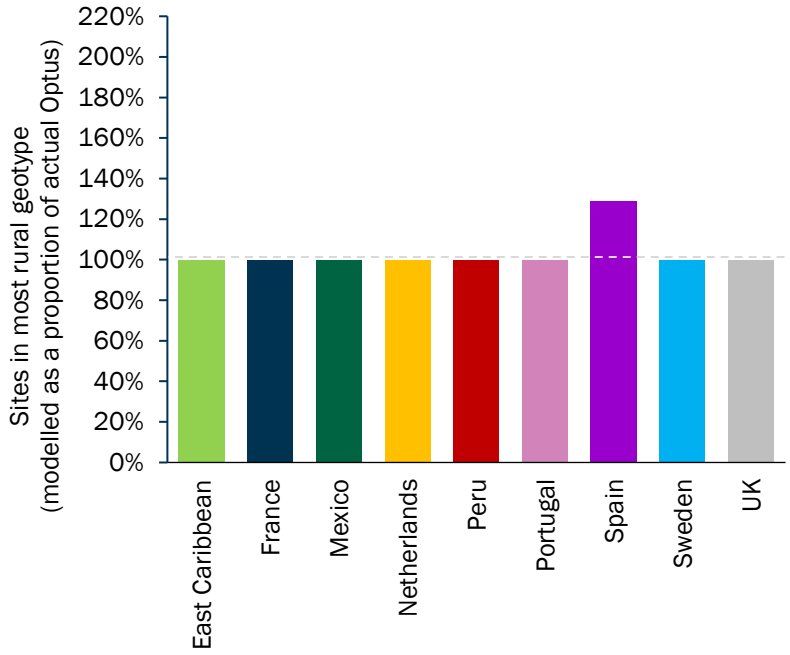
142 By comparing Figures 1 and 2, it can be seen that the PPP adjustment increases the Mexico results significantly.

143 Reproduced from Figure 25 in Analysys Mason, Final Benchmark Report, p. 30.

as the clustered models, and its much lower MTAS cost result is likely to be primarily due to its rather different approaches to both economic depreciation and cost allocation.[144]

Analysys Mason has also compared the number of mobile sites generated by each of the benchmark models after the Australia-specific adjustments are made with actual numbers deployed in Optus' network. As discussed in section 4.4, Analysys Mason has calibrated the cell radii in the most rural geotype in each benchmark model to align the number of modelled sites with that actual number in Optus' network. The figure below shows that the numbers of sites in the most rural geotype align for all benchmark models except for Spain.[145]

Figure 4: Modelled sites in the most rural geotype in 2019, as a proportion of the actual Optus sites in SA2 areas assigned to the most rural geotype for that model[146]



Analysys Mason then compared the total number of modelled sites with the actual total number of sites in Optus' network. As discussed in section 4.4, it was observed that the total number of modelled sites in the Peru model was reduced to just over half of the actual number of sites in Optus' network due to the materially higher cell radius assumption used in the dense urban geotype in this model compared to the other benchmark models. Analysys Mason further adjusted this cell radius to bring it in line with the assumptions in the other benchmark models, which increased the total number of modelled sites in the Peru model. The figure below shows the ratio of total number of modelled site as a proportion of actual total sites in Optus' network.

144 Analysys Mason, Final Benchmark Report, pp. 30–31.

145 Analysys Mason explained that the inability to fully calibrate the cell radius in the most rural geotype in the Spain model was due to the implementation of the radio calculation in that model, although Analysys Mason was able to partially calibrate the cell radius to get closer agreement between the number of modelled sites and the actual number of sites than was the case in the Draft Benchmark Report. See Analysys Mason, Final Benchmark Report, p. D-15.

146 Reproduced from Figure 26 in Analysys Mason, Final Benchmark Report, p. 31.

Figure 5: Total number of modelled sites in 2019, as a proportion of the actual total Optus sites as at the end of 2019/start of 2020[147]

[c-i-c]

[c-i-c]

Analysys Mason notes that the average ratio of total number of modelled sites as a proportion of actual total sites on Optus' network across all benchmark models is 112 per cent. In particular, Analysys Mason observes that the Netherlands and Spain models overestimate the total number of sites required and considers that this is evidence to exclude these two models from consideration.[148]

Finally, Analysys Mason conducted sensitivity analysis on the following inputs or adjustments made to the benchmark models to test the impact of changes in these inputs to the MTAS cost results:

- implementing the PPP adjustment,
- implementing the PPP adjustment pertaining to the communications sector only,
- increasing the nominal-terms WACC to 5.246 per cent and real-terms WACC to 2.755 per cent[149],
- reducing the spectrum allocation by 2×5 MHz of 1800 MHz spectrum (used for 2G and 4G) and 2×10 MHz of 2500 MHz spectrum,
- reducing the market share to 25 per cent,
- assuming a greater level of network coverage for the operator (closer to that of Telstra),

147 Reproduced from Figure 27 in Analysys Mason, Final Benchmark Report, p. 32.

148 Analysys Mason, Final Benchmark Report, p. 32.

149 The ACCC calculated the alternative WACC values for sensitivity testing. The alternative nominal pre-tax WACC represents a 5 per cent increase from the nominal pre-tax WACC implemented in the base case. The alternative pre-tax WACC is then converted to the alternative real pre-tax WACC based on the updated forecast inflation of 2.42 per cent. See **Appendix C** for details.

- assuming a lower level of data traffic[150], and
- retaining the original modelled mix of backhaul.

The results of the sensitivity analysis are reproduced in the table below.

Table 9: Results of sensitivity tests (using the 2022 unit costs of MTAS, expressed in nominal AUD cents with no PPP adjustment)[151]

Case	East Caribbean	France	Mexico	Netherlands	Peru	Portugal	Spain	Sweden	UK
Unadjusted MTAS cost	0.15	0.25	0.84	0.91	0.67	0.80	0.74	0.92	0.41
PPP	+58%	+17%	+111%	+15%	+61%	+47%	+39%	+7%	+15%
Comms PPP	–13%	+19%	+109%	–3%	+18%	+4%	–9%	+1%	+10%
WACC	+0.7%	+1.4%	+0.2%	+0.3%	+0.4%	+0.2%	+0.8%	+0.3%	+1.8%
Spectrum	–24%	+3%	–%	+3%	+0.2%	+0.0%	+21%	+9%	+1%
Market share	+15%	+15%	+10%	+11%	+9%	+6%	+11%	+2%	+14%
Increased Coverage	+25%	+15%	+8%	+12%	+6%	+0.2%	+9%	+3%	–0.2%
Lower data forecast	+3%	+5%	+2%	+0.5%	+3%	–2%	+4%	–0.7%	+4%
Retaining original backhaul mix	–0.1%	–0.4%	–7%	+1.5%	–0.0%	+0.8%	–8%	–0.1%	+0.0%

Analysys Mason observes that the benchmark models usually responded as expected in response to the changes in input. However, some models responded in the opposite direction in relation to changes to some of the inputs. Analysys Mason has examined and discussed what specific modelling assumptions may have contributed to these.[152]

Analysys Mason identified the East Caribbean and Mexico models as the two models that do not respond in the expected manner in the sensitivity test where spectrum allocations are reduced. Specifically, the Mexico models do not respond at all and the results in the East Caribbean model significantly reduce. Analysys Mason considers while some of the sensitivity test results indicate changes that are either smaller than, or in the opposite direction to, what would be expected, based on their inspection these are due to specificities in the network design. Analysys Mason considers that in the Mexico and East Caribbean models, their response to the reduction in spectrum allocation is a more material cause for concern. For these reasons, Analysys Mason considers that less weight should be attributed to the results from the East Caribbean and Mexico models.[153]

4.12.2. Analysys Mason recommendation

Based on the results of the international benchmarking exercise, Analysys Mason recommends that the ACCC adopts the following approach in considering the appropriate MTAS cost for Australia:

[150] Specifically, Analysys Mason assumed year-on-year changes in data usage per subscriber for the period 2020–2025 of 35%/30%/25%/20%/15%/10% rather than the base case values of 40%/40%/30%/30%/20%/20%.

[151] Reproduced from Figure 28 in Analysys Mason, Final Benchmark Report, p. 33. Where +0.0% or -0.0% are indicated, it suggests minimal change in the outputs in the indicated direction.

[152] Analysys Mason, Final Benchmark Report, p. 33.

[153] Analysys Mason, Final Benchmark Report, p. 34.

- PPP adjustments should be made to the MTAS cost outputs, using national level data instead of values calculated for the communications sector only.
- Less weight should be given to results from the East Caribbean and Mexico models on the basis that they do not respond in the expected manner to the sensitivity analysis where spectrum allocations are reduced.
- The results from the Netherlands and Spain models should also be treated with caution as they significantly overstate the total number of mobile sites required.
- The remaining models (UK, France, Sweden, Peru and Portugal) all merit consideration. However, the greatest weight should be given to the results of Sweden, Peru and Portugal. This is because given common inputs, the three models all calculate comparable total economic costs for network deployment and allocate a similar proportion of costs to voice services. The UK model could also be included in this group on the basis that its total modelled economic cost is comparable to Portugal, Peru and Sweden, and its lower MTAS costs is primarily due to its allocation of costs between modelled services.[154]

The averages of the MTAS costs using different subsets of the benchmark models are reproduced in the table below.

Table 10: Average costs per minute for the MTAS across different subsets of the models (nominal AUD cents, including PPP adjustment)[155]

Subset for averaging purposes (number of models)	2020	2021	2022	2023	2024
All (9)	0.93	0.90	0.90	0.89	0.89
All except East Caribbean and Mexico (7)	0.92	0.88	0.87	0.86	0.86
Also exclude Netherlands and Spain (5)	0.86	0.82	0.80	0.78	0.78
Portugal, Peru, Sweden and UK (4)	0.98	0.95	0.93	0.91	0.91
Portugal, Peru and Sweden only (3)	1.13	1.09	1.08	1.06	1.06

Analysys Mason has separately calculated the spectrum costs for Australia which will need to be added onto the MTAS cost outputs above. The unit spectrum costs for 2020 to 2024 are provided in the table below.

Table 11: Per unit contribution from Australian spectrum costs[156]

Years	2020	2021	2022	2023	2024
Spectrum cost (cents/minute)	0.155	0.157	0.160	0.162	0.165

Finally, as discussed in section 4.8, Analysys Mason considers that the ACCC could include a 3 per cent mark-up in setting the MTAS price to account for the impact on backhaul costs due to the longer average transmission link lengths in Australia.

[154] Analysys Mason, Final Benchmark Report, p. 34.

[155] Reproduced from Figure 29 in Analysys Mason, Draft Benchmark Report, p. 35.

[156] The calculations of spectrum costs are detailed in the Excel file entitled 'Inputs and Outputs of MTAS benchmark', available at: https://www.accc.gov.au/regulated-infrastructure/communications/mobile-services/mobile-terminating-access-service-access-determination-inquiry-2019/final-report.

4.12.3. ACCC final view on benchmarking results

The ACCC has considered Analysys Mason's Final Benchmark Report, including its discussion of the benchmarking results and recommendation. The ACCC provides its final view on the benchmarking results below.

As discussed in the Draft Report, the ACCC notes that, based on the PPP-adjusted MTAS costs and including Australian spectrum costs, all benchmark models with the exception of the Mexico model, generate MTAS costs that are well below the current MTAS price of 1.7 cents. The ACCC considers that unless overwhelming weight is to be attributed to the results from the Mexico model (which, based on Analysys Mason's recommendation, is not justified), the benchmarking results provide evidence that the cost of providing the MTAS has materially declined since the last FAD.

The ACCC considers that a key question when assessing the benchmarking results in order to determine the appropriate MTAS price, is the extent to which the ACCC should rely on the cost outputs of each of the benchmark countries. In forming its final view on this question, the ACCC has had regard to relevant stakeholders' submissions on this issue.

Analysys Mason has undertaken three exercises which formed the basis of its recommendations as to the weight that should be given to the results of each benchmark model:

- comparing the total economic cost calculated in each model with the MTAS cost,
- comparing the number of sites generated in each model with actual sites deployed by Optus, and
- sensitivity testing of a number of inputs and assumptions.

The ACCC discusses its final view on the findings of these three exercises.

Comparing total economic cost with MTAS cost

As discussed in the Draft Report, the ACCC considers that comparing the total economic cost with the MTAS cost output in each benchmark model is a useful exercise to undertake as it shows the underlying reasons for the differences in the MTAS costs produced by the benchmark models. The ACCC also considers that this exercise provides valuable insights on cost modelling exercises generally.

The comparison shows that three of the benchmark models, specifically Portugal, Peru and Sweden, are similar models which generate similar total economic costs and appear to allocate a comparable proportion of cost to voice services. Other models are different either in the level of total economic costs or internal cost allocation mechanisms, or both. The ACCC understands that these differences reflect different modelling inputs and design, which cannot be adjusted or controlled for in a benchmarking exercise.

The ACCC considers that by its very nature, the benchmarking exercise relies on different cost models that have been developed by various regulators and expert consultants that reflect the relevant factors within those jurisdictions. The ACCC considers that for the purpose of this benchmarking exercise, the important question is whether the adjustments reflect Australian circumstances and can be properly applied in the model and whether the cost output responds in the expected manner. If so, the ACCC's view is the relevant model should be included, even though it might produce cost estimates that appear materially higher or lower than others due to its specific modelling inputs and designs.

As such, the ACCC's final view remains that that the findings of this exercise do not in themselves justify excluding any of the models from consideration. However, on the basis that the models of Sweden, Portugal and Peru produce clustered results both in terms of the MTAS costs and total economic cost, the outcome of this exercise would suggest that it is appropriate to give the greatest weight to these three models compared to the others.

Comparing model generated sites and actual sites

The ACCC considers that it is a necessary and important step to examine the number of sites generated by the models and compare them with the actual number of sites deployed in Australia. This is because mobile sites constitute a significant cost in deploying a mobile network and some of the key adjustments, such as geography and spectrum holdings have a material impact on the number of sites generated in the models.

After implementing the revised approach to adjust the cell radii in the most rural geotype as discussed in section 4.4, Analysys Mason's comparison of site numbers shows that:

- in the most rural geotype, all benchmark models can generate the number of sites that are actually deployed in Optus' network in that geotype, apart from the Spain model which continues to generate a significantly higher number of sites than Optus' actual site number; and
- across all geotypes, the Netherlands and Spain models generate excessively high numbers of total sites compared to Optus' actual total site number.

Analysys Mason considers that this provides a basis for excluding the Netherlands and Spain models from consideration.

The ACCC understands that in a cost modelling exercise, the model is usually calibrated so that the number of sites generated by the model reflect the number deployed in practice. In this benchmarking exercise, only a partial calibration was done to align the number of modelled sites in the most rural geotype with actual number of sites in Optus' network in that geotype. It would not be feasible to adjust all relevant inputs in all nine models to achieve a consistent level of modelled sites overall. As such, while the ACCC accepts that the number of sites deployed by the MNOs provides a useful check on the number generated by the model, it is not reasonable to expect that all benchmark models will generate a consistent level of sites across all geotypes.

As such, the ACCC considers that a broad alignment of the total number of modelled sites with the actual number deployed by the MNOs in practice indicates that the modelled network reasonably reflects the network deployment requirements in Australia. Having assessed the comparisons done by Analysys Mason, the ACCC agrees that the Netherlands and Spain models appear to overstate the number of sites required in Australia and that this provides a basis for excluding these two models from consideration.

Sensitivity testing

As discussed in the Draft Report, the ACCC considers that the sensitivity testing conducted by Analysys Mason on a number of inputs and assumptions is useful in two ways. First, it provides clarity on the impact of certain inputs and assumptions on the cost outputs. Second, it identifies models which do not respond in the expected manner to changes in certain inputs which warrant further investigation.

In this case, Analysys Mason found that the East Caribbean and Mexico models do not respond in the expected manner to sensitivity tests where spectrum allocations are reduced, which Analysys Mason considers to be a material cause for concern.

In addition, the East Caribbean model could not properly implement the adjustment for the mix of backhaul solutions as the model calculates the lowest-cost mix of backhaul.[157]

As the cost outputs from the East Caribbean and Mexico models do not respond in the expected manner to changes in spectrum holdings and/or mix of backhaul solutions, this gives rise to concern that the adjustments that the ACCC is seeking to make in these two models may not be properly applied. The ACCC's final view is therefore, that as the adjustment process is integral to the benchmarking exercise, the inability to apply some of the adjustments properly would mean that these two models cannot produce reliable outputs which are reflective of the cost of the MTAS in Australia.

Stakeholder submissions on benchmark results

This section discusses stakeholders' submissions in response to the Draft Report on the results of benchmark models. It then sets out the ACCC's responses to each of the issues raised.

VHA submitted that the results from the UK model should be treated with caution because of the fact that the cost output decreased in response to a massive increase in network coverage in the sensitivity test. VHA also considered that Analysys Mason's explanation in its Draft Benchmark Report, which it attributes to economic depreciation, is unsatisfactory.[158]

In response to VHA's submission, Analysys Mason has further investigated the UK model's response to an increase in network coverage. The sensitivity test presented in the its Final Benchmark Report shows that the cost output from the UK model decreased by a marginal amount when network coverage is increased to a level resembling that of Telstra's network. Analysys Mason explained that an assessment of the calculation mechanisms in the model confirms that the network costs increased as a result of an increase in coverage, which is as expected. However, the economic depreciation method and network allocation mechanism used in the UK models means that the cost output for 2020 specifically has decreased – cost outputs for 2023 and 2024 increased.[159] The ACCC is satisfied that while the result for 2020 may appear anomalous, the model properly responds to network coverage assumptions, and there is no basis to exclude the UK model from consideration.

VHA also cautioned against the inclusion of the French model in deriving the cost estimate of the MTAS on the basis that the French model generates a significant outlier in terms of total economic cost.[160]

As discussed above, the ACCC considers that for the purpose of this benchmarking exercise, the more important question is whether the adjustments reflect Australian circumstances and can be properly applied in the model and whether the cost output responds in the expected manner. The fact that the French model generates a lower total economic cost base, which has led to the lowest MTAS cost output, is not in itself, a basis to exclude the model from consideration.

VHA also submitted that the Swedish model should be given less weight on the basis that it generates distinctively different and lower total economic cost compared to Peru and Portugal.[161]

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157 Analysys Mason, Final Benchmark Report, p. D-26.

158 VHA submission, p. 6.

159 Analysys Mason, Final Benchmark Report, pp. 33, D-16.

160 VHA submission, p. 6.

161 VHA submission, p. 6.

The ACCC notes that this assessment is inconsistent with Analysys Mason's findings in comparing the total economic costs of all benchmark models, where it noted that the total economic costs of these three models are in close proximity to each other. The ACCC does not consider there is a basis to conclude that the total economic cost generated by the Swedish model is distinctly lower than those of the Peru and Portugal models, when compared to all other benchmark models. As such, the ACCC does not consider it would be reasonable to give less weight to the Swedish model compared to the Peru and Portugal models.

The Australian Communications and Consumer Action Network (ACCAN) submitted that the UK and French models produce relatively low cost outputs which could be regarded as outliers. Therefore, ACCAN considers that while it is appropriate to consider these results, less weight should be given to these two models.[162]

The ACCC agrees with ACCAN's view and note that this approach was reflected in the ACCC's draft position.

Commpete and MNF Group both proposed the adoption of an MTAS cost estimate that is based on the cost outputs from four models, France, UK, Sweden and Peru.[163] This is based on the recommendation in the CEG report, which appears to suggest that comparatively less weight, if any, should be given to the Portugal model, due to concerns regarding the compatibility of the geotypes used in the Portugal model.[164]

The ACCC considers that issues associated with the use of different geotypes and geotyping definitions in the benchmark models are largely resolved by Analysys Mason's revised approach to calibrating the cell radii in the most rural geotype and the additional adjustment to the cell radius in dense urban geotype in the Peru model. These adjustments have resulted in better alignment between the number of modelled sites and Optus' actual sites in both the most rural geotype and across the geotypes for all models, including the Portugal model.[165] The Portugal model also behaves as expected to the sensitivity tests. Therefore, the ACCC does not consider there is ground to either exclude or give less weight to the Portugal model.

Commpete and MNF Group also submitted that greater weight should be given to the UK model because the trajectory of the MTAS price set by the ACCC in the past is similar to that of the cost outputs from the UK model.[166] This is based on commentary in the CEG report that the price path in the UK is more reflective of the depreciation profile implicit in the MTAS prices previously set by the ACCC. The CEG report also suggested that the MTAS price in Australia has historically been high compared to modelled rates and argued that this shows the hypothetically efficient operator has historically earned higher revenue than modelled in the benchmark set.[167]

Analysys Mason noted that all benchmark models (apart from Peru) uses economic depreciation, although the UK model calculates economic depreciation differently. Analysys Mason explained that it is the assumed cost trends by asset, which vary from model to model, that is affecting the final output. Overall, Analysys Mason does not consider that the

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162 ACCAN, *Public inquiry on the access determination for the Domestic Mobile Terminating Access Service,* 10 July 2020, p. 1 (ACCAN submission).

163 Commpete submission, p. 3; MNF Group submission, p. 6.

164 CEG report, p. 11.

165 For avoidance of doubt, the alignment in the Netherlands and Spain models also improved although the number of total sites is still overstated in these two models.

166 Commpete submission, p. 3; MNF Group, p. 6.

167 CEG report, pp. 5–7.

UK model should be given any particular emphasis in this regard. It also noted that the calculation of the present value of revenues is of little relevance in this case, since the MTAS price has not been set in the past using a 2G/3G/4G network cost model.[168]

The ACCC agrees with Analysys Mason's views and does not consider that the apparent similarity between the price path in the UK model and historical MTAS price could justify placing more weight on the UK model. The ACCC also considers it is not appropriate to compare historical MTAS prices with the price paths generated by the benchmark models. As noted by Analysys Mason, historical MTAS prices have not been set based on a 2G/3G/4G model. As such, the ACCC does not consider that the comparison could be used to infer that the hypothetically efficient operator in Australia has over-recovered in MTAS revenue in the past.

ACCC final view on estimated MTAS costs

For reasons discussed above and consistent with the view expressed in the Draft Report, the ACCC's final view is that there is evidence that the cost results from the East Caribbean, Mexico, Netherlands and Spanish models are not reliable and should be excluded from consideration. This is because:

- The East Caribbean and Mexican models do not respond as expected to one of more changes in the adjustments or inputs. This suggests that the required adjustments may not be properly applied in the models to have a corresponding effect on the cost outputs. These two models produce the highest and lowest cost outputs in the benchmark set.
- The models from the Netherlands and Spain overstate the number of sites required to deploy a mobile network in Australia so the network deployed after making the relevant adjustments in the model is not broadly reflective of a network deployed in Australia. As such, the ACCC's final view is that these two models should not be given consideration, even though they produce outputs that are within the closely clustered results between the 1.0 to 1.2 cents range.

The key question for the ACCC is the relative weight that should be given to the remaining five models (Peru, Sweden, Portugal, France and UK).

Having had regard to the submissions and consistent with the views expressed in the Draft Report, the ACCC agrees with Analysys Mason's recommendation that that the results from Sweden, Peru and Portugal models should be given the greatest weight. This is on the basis that these models are relatively similar in that, given a set of common inputs, they calculate comparable total economic cost and allocate a similar proportion of costs to voice services. As such, the cost results from these three models are also comparable and form a relatively close cluster.

The ACCC also considers it would be appropriate to give some weight to the UK and France models and that equal weight should be given to these two models. The UK and France models both generate relatively low cost outputs, but for different reasons. The UK model generates similar levels of economic costs compared to Sweden, Portugal and Peru but it has a different cost allocation mechanism which has resulted in its cost output being significantly lower. The French model is considered to be a low-cost model overall, i.e. low total economic base and low cost output. This would suggest, however, that the low cost output is primarily the result of France having a lower total economic cost base. It may still

[168] Analysys Mason, Final Benchmark Report, p. D-30.

be allocating a similar level of overall costs to voice services compared to the models of Sweden, Peru and Portugal.

In other words, although the UK and French models generate relatively low cost outputs, and may therefore appear to be 'outliers' in terms of the MTAS unit costs, this is due to different reasons. It relates to specific modelling assumptions and designs, which, as noted earlier, are matters that the ACCC does not consider necessary or appropriate to examine in a benchmarking exercise. For this reason, the ACCC's final view remains that there is no sufficient basis, in principle, for the ACCC to place different weight on the UK and French models respectively, or to exclude either from consideration altogether.

Having regard to all of the above considerations, the ACCC's final view, is that it would be reasonable for the ACCC to determine an MTAS price within the range of the average costs resulting from two subsets of the benchmark models. These are set out in the table below.

Table 12: Upper and lower bounds for a reasonable cost estimate for 2020 to 2024 (nominal AUD cent, including spectrum costs and 3 per cent uplift)[169]

Years	2020	2021	2022	2023	2024
Upper bound (Sweden, Peru and Portugal)	1.32	1.28	1.27	1.25	1.25
Lower bound (UK, France, Sweden, Peru and Portugal)	1.04	1.00	0.99	0.97	0.96

4.13. ACCC final view on MTAS price

4.13.1. ACCC approach in Draft Report

In the Draft Report, the ACCC expressed the view that it would be appropriate to adopt the 75th percentile of the cost range for 2020 as the new MTAS price. Two forward-looking matters informed the ACCC's consideration at the time, specifically that the ACCC:

- is intending to consider whether to conduct a holistic review of the MTAS and FTAS prior to the expiry of the current FTAS and MTAS declarations, which will examine, among other matters, issues of whether a common pricing methodology should apply to both services and whether there are pricing relativities between the MTAS and the fixed voice interconnection services, and
- is likely to explore the possibility of developing a cost model once 5G deployment is more advanced to inform that review, which will involve a more accurate and robust assessment of the cost of providing the MTAS in Australia.

Given these two matters will have a significant impact on how the MTAS will be priced in the future, the ACCC considered that a conservative approach to determining the MTAS price in the interim is appropriate, that is, a price point that is at the higher end of the cost range.

For these reason, the ACCC proposed a MTAS price of 1.22 cents per minute for the FAD period.

[169] Calculation based on numerical results in Annex E of Analysys Mason's Final Benchmark Report; for clarify, the 3 per cent uplift was applied first before adding the spectrum costs.

4.13.2. Submissions

Telstra supports the adoption of a conservative approach and the proposed MTAS price of 1.22 cents per minute, and considers that it balances the need for an efficient return for operators and is also in the LTIE.[170]

VHA submitted that it is not necessary for the ACCC to produce upper and lower bound estimate for the cost of the MTAS as the fundamental task is to determine how to weight the model outputs to determine a cost estimate for the MTAS in Australia. VHA considered that the ACCC should consider two revised options. While not explicit, VHA's revised approach appear to support giving respective weight to models in the upper and lower bound that is equivalent to picking the 75th percentile in the cost range.[171]

Other stakeholders raised concerns regarding the ACCC's approach to determining the MTAS price in the Draft Report.

Commpete, MNF Group, Macquarie Telecom and ACCAN submitted that the ACCC should adopt the mid-point of the estimated cost range with some also arguing that the cost estimates for the later years should be taken into account in the regulatory period in determining the MTAS price.

Commpete argued that the CEG report shows that the MTAS prices in Australia have been consistently set well above the benchmark models' estimates of the efficient cost range, meaning that the MNOs have been substantially over-recovering on the efficient costs of supplying the MTAS. Commpete also considers that international trends and investments in 5G will likely see the cost of call termination continue to decline in the coming year. As such, Commpete argued that the ACCC should focus on the latter years of its estimated cost range to ensure its price determination captures the cost trend over the forward-looking period. Commpete also disputes the need for a conservative approach, noting that the probability that a potential cost modelling exercise will produce a cost estimate that is higher than the cost estimates for the latter years in the benchmarking exercise is low.[172]

MNF Group argued that the adoption of the 75th percentile of the estimated cost range is an unwarranted departure from the usual practice of adopting the mid-point. MNF Group also considered that the CEG report supports that a more reasonable estimate of the MTAS cost is 0.75 cents.[173]

Macquarie Telecom submitted that the use of the cost estimate for 2020 only is perverse when the ACCC has set out to adopt a flat rate to apply for the years 2021–2024. It argued that it would be logical and preferable to adopt the average of the benchmark outcomes for the years 2021–2024. Macquarie Telecom also considers that the ACCC's reasons for adopting a conservative approach to setting the MTAS price is not compelling. Similar to the view expressed by Commpete, Macquarie Telecom does not consider it is likely the ACCC would end up setting an MTAS price that would need to be increased in the future due to cost modelling, on the basis that 5G is being introduced for data not voice services. As such, Macquarie Telecom considers that the MTAS cost will continue to decline into the future.[174]

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170 Telstra submission, pp. 1–2.

171 VHA submission, pp. 6–7.

172 Commpete submission, p. 4.

173 MNF Group submission, p. 6.

174 Macquarie Telecom submission, pp. 3–4.

ACCAN submitted that the ACCC's intention to conduct a holistic review of FTAS and MTAS as well as to explore cost modelling does not preclude the adoption of the 50th percentile of the cost range or for the MTAS price to decrease over the coming years.[175]

Optus raised concerns that the ACCC's approach to picking a price point in the Draft Report shows that the selection of a price point from the benchmarking exercise is not scientific or fact-based. It also stated that it is unclear why the intended holistic review of the FTAS and MTAS and potential cost modelling would mean that the 75th percentile of the estimated cost range is the most appropriate.[176]

Optus also submitted that the ACCC's draft price of 1.22 cents per minute is 'below the average EU rate at January 2020', and is therefore inappropriate as the EU termination rates are priced under a LRIC standard, rather than the TSLRIC+ pricing approach adopted by the ACCC for the purposes of this FAD.[177] Optus recommends the ACCC conduct 'a simple common-sense test on the proposed adjusted rate', by comparing the Australian FAD price with the EU average.[178]

4.13.3. ACCC final view

The submissions from stakeholders raised a number of issues which are considered below.

Comparison of MTAS price with EU termination rates

With regard to Optus' submission that the proposed MTAS price is below the average EU rate, Analysys Mason noted that the EU average termination rate, as nominated by Optus, is distorted upwards by including a considerable number of higher non-pure LRIC values. By excluding these non-pure LRIC values, Analysys Mason showed that the proposed MTAS price is in fact higher than the average pure LRIC value in Europe.[179]

In any case, the ACCC does not consider that it is appropriate to assess the reasonableness of the MTAS price derived from the benchmarking exercise based on comparisons with the termination rates in other European jurisdictions. The ACCC considers that it is problematic to compare overseas pure LRIC and TSLRIC+ rates which have not been adjusted to account for Australian conditions with the outcome of the benchmarking study. The ACCC notes that while TSLRIC+ estimates are on average higher than pure LRIC estimates, individual outcomes vary. This reflects differences in relative costs in each country and the characteristics of each network at the time the cost model is developed.[180]

An important indication of this is the fact that the TSLRIC+ estimate for Australia is in fact not comparable to the TSLRIC+ estimates from other countries. The preliminary benchmark results in Analysys Mason's Draft Benchmark Report show that after making adjustments to account for Australian conditions, the TSLRIC+ cost outputs from the benchmark models significantly decreased. This reflects the materially different cost drivers in Australia, including the use of more efficient network technology with the shutdown of 2G in 2019.[181]

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175 ACCAN submission, p. 2.

176 Optus submission, p. 11.

177 Optus submission, p. 6.

178 Optus submission, p. 6.

179 Analysys Mason, Final Benchmark Report, pp. D-10–D-11.

180 ACCC, *Mobile Terminating Access Service: Final Decision*, August 2015, pp. 29–30.

181 Analysys Mason, Draft Benchmark Report, pp. 25–26.

The use of upper and lower bounds

The ACCC agrees with VHA's view that the fundamental task for the ACCC in assessing the outcome of the benchmarking exercise is to determine the weight to be given to the results of each benchmark models. In this regard, the ACCC notes that Analysys Mason's Final Benchmark Report does not recommend the exact value of weight to be given to each benchmark model, and only provides recommendations on the *relative* weight to be given to various subsets of the models.

The ACCC considers the approach of determining an upper and lower bound for the cost estimate is a useful way to signal the highest and lowest value that the ACCC considers would represent a reasonable MTAS cost estimate. However, the ACCC acknowledges that in determining a price point within the upper and lower bound values, this ultimately determines the weight that is assigned to each model. In other words, the weighting of the models is the product of this process, rather than the starting point.

The ACCC does not agree with Optus' view that this approach is random. The cost of the MTAS is not observable and the ACCC is seeking to determine a reasonable estimate for this cost. The ACCC considers that it is important that the process of cost estimation, that is, in this case the benchmarking exercise, is rigorous and robust. However, the ACCC would be required to exercise a degree of regulatory judgment and discretion in picking a price point based on the outcome of that pricing exercise given that the benchmarking exercise does not produce one precise value which reflects the unit cost of the MTAS. In doing so, it is appropriate for the ACCC to have regard to all relevant circumstances, including forward looking matters which may affect the pricing of the MTAS in the future. This is discussed further below.

Conservative approach to determining the MTAS price

In adopting a conservative approach to picking a price point within the estimated cost range in the Draft Report, the ACCC was essentially saying that while any price point within the cost range would be justified on the basis of the benchmarking exercise, on balance a price point towards the upper bound would be more appropriate in the current circumstances.

The ACCC is aware of concerns raised by some stakeholders regarding this approach and their preference for adopting the mid-point of the cost ranges. This would mean increasing the weight given to the cost outputs from the French and UK models and decreasing the weight given to the Sweden, Peru and Portugal models.

At the outset, the ACCC does not accept the argument that the benchmarking exercise shows that the MNOs have been historically over-recovering the cost of the MTAS. As noted by Analysys Mason, it would be inappropriate to compare the historical MTAS price set by the ACCC with the benchmark modelled rates, given that the MTAS price has not always been set using a 2G/3G/4G cost model. As such, the ACCC does not consider any argument in support of a lower price point could be justified on the basis of a claim of historical over-recovery of MTAS costs by the MNOs.

The MTAS price has declined significantly since 2004 and is currently sitting at relatively low level. Any further decrease which may seem small in absolute values would still be proportionally large compared to the current price. The ACCC considers that the adoption of the 75th percentile within the cost range is supported by the outcome of the benchmarking exercise and would still result in a significant reduction in the MTAS price. This reduction is consistent with the reduction in the cost of providing the service and creates the environment in which end-users could benefit from flow-on effects in the retail markets.

In adopting a conservative approach to determining the MTAS price, the ACCC has also had regard, to other matters which it considers relevant in this case.[182]

As discussed in Sections 4.2 and 4.12, there is variance in the cost outputs from the benchmark models because of the various modelling assumptions used in the benchmark models. It is not within the scope of the benchmarking exercise to examine the various assumptions to assess their appropriateness for Australia. As such, the ACCC considers that while the benchmarking exercise produced a reasonable estimated range for the MTAS cost, the ACCC cannot assess with certainty which point on that range would be closer to what a cost model developed specifically for Australia would produce. For this reason, the ACCC considers it would be appropriate to take a conservative approach in determining the MTAS price based on the outcome of the benchmarking exercise.

Further, as discussed in the Draft Report, the ACCC intends to conduct a holistic review of the fixed voice termination services and the MTAS prior to the expiry of the MTAS declaration and potentially to develop a cost model to inform that review.

A holistic review of the fixed voice termination services and the MTAS would examine, among other things, whether there are pricing relativities between the MTAS and the FTAS, and if a common pricing approach should be adopted for these services. As noted above, the ACCC has decided to roll over the current FTAS price in the 2019 fixed line services FADs inquiry. The ACCC considers that it would not be in the LTIE to roll over the current MTAS price based on the fact that the FTAS price has been rolled over. However, in light of the concerns raised regarding the relative levels of the FTAS and MTAS prices in this inquiry, the ACCC considers that a conservative approach to setting the MTAS price is justified before the ACCC examine the issues closely as part of the holistic review.

A potential cost modelling exercise would be able to fully take into account the specific conditions of Australia, and is likely to produce a more accurate and robust cost estimate for the MTAS in Australia, compared to an international benchmarking exercise. It would also consider specific modelling assumptions and designs that would be appropriate for Australia after consultation with stakeholders, which as noted above was not within the scope of this benchmarking exercise.

For all the reasons above and on balance, the ACCC considers that a conservative approach, reflected in the selection of the 75th percentile of estimated cost range, is appropriate in the circumstances. With this approach, the ACCC is effectively giving 30 per cent weight to each of the results from Sweden, Peru and Portugal, and 5 per cent to each of the results from UK and France.

The table below shows the values reflecting the 75th percentile within the cost range (or after assigning the relevant weight to the models as described above) for years 2020 to 2024.

Table 13 Values at 75th percentile within the estimated cost range for 2020–2024 (nominal AUD cents, including spectrum costs and 3 per cent uplift)

	2020	2021	2022	2023	2024
75th percentile (30 per cent weight to each of Sweden/Peru/Portugal and 5 per cent weight to each of UK/France)	1.25	1.21	1.20	1.18	1.18

[182] Subsection 152BCA(3) of the CCA.

MTAS cost reductions during FAD period

The ACCC notes concerns that the proposed MTAS price in the Draft Report only reflects the cost estimate for the service in 2020 and that cost estimates in later years have not been taken into account.

The ACCC considers that a flat rate MTAS price across the FAD period is more appropriate than having the MTAS price reduce marginally every year over the course of the FAD period. However, the ACCC acknowledges that the adoption of the 2020 cost estimate gives rise to concern that the MTAS price does not take into account forecast cost reductions. As such, the ACCC has come to the view that it would be more appropriate to account for the estimated reduction in the MTAS cost in setting the flat rate MTAS price.

In this respect, the ACCC notes that the MTAS FAD will commence on 1 January 2021 (see section 6.2). As suggested by Macquarie Telecom, the ACCC considers that a reasonable approach in light of this commencement date is to average the benchmark outcomes for the years 2021 to 2024.

4.13.4. MTAS price

For reasons discussed above, the ACCC has determined that the new MTAS price is calculated by averaging the 75th percentile values within the cost range for years 2021–2024. This produces a new MTAS price of 1.19 cents per minute, which represents a 30 per cent reduction from the current MTAS price of 1.7 cents per minute.

5. Non-price terms and conditions (NPTCs)

This chapter provides the ACCC's final position on the NPTCs, if any, that should be included in the MTAS FAD.

5.1. ACCC draft view

In the Draft Report, the ACCC reached the position that it would be appropriate to continue to include the NPTCs in the MTAS FAD as they appear to provide a useful set of terms and conditions for commercial negotiation for both access seekers and access providers of the MTAS as well as other service providers such as the MVNOs. The ACCC proposed to retain the NPTCs that are currently included in the MTAS FAD.[183]

5.2. Submissions

Commpete and MNF Group support the ACCC's draft position to retain the current NPTCs without change on the basis that they provide an important set of reference for access seekers when negotiating agreements with the MNOs.[184]

5.3. ACCC final position

Consistent with the position expressed in the Draft Report, the ACCC's final position is that the current set of NTPCs included in the MTAS FAD should be retained. These NPTCs relate to the following matters:

- billing and notification,
- creditworthiness and security,
- general dispute resolution procedures,
- confidentiality,
- suspension and termination[185],
- liability and indemnity,
- communications with end-users,
- network modernisation and upgrade notice period,
- changes to operating manuals, and
- recourse to regulated terms.

The current NPTCs are included in the FAD instrument at **Appendix D**.

[183] Draft Report, p. 49.

[184] Commpete submission, p. 4.

[185] The ACCC has made minor drafting changes to subclause 7.10(b) to be consistent with the wording adopted in the most recent fixed line services FADs and the draft DTCS FAD.

6. Other issues

This chapter discusses the ACCC"s final positions on the following issues:

- the duration of the MTAS FAD,
- when the new MTAS FAD should come into force, and
- the next declaration and FAD reviews.

6.1. Duration of the FAD

6.1.1. ACCC draft view

In the Draft Report, the ACCC expressed the view that the new MTAS FAD should expire on 30 June 2024, and be aligned with the expiry of the current MTAS declaration.[186]

6.1.2. Submissions

MNF Group and Macquarie Telecom raised concerns regarding the proposed expiry date for the new MTAS FAD, particularly in relation to the sustained period of time that the new MTAS price is likely to remain effective.

MNF Group considered that a three-year duration would be appropriate which allows for a mid-term review of the MTAS price, in anticipation of the shutdown of the 3G networks and the rollout of 5G networks. MNF Group does not agree with the ACCC's view expressed in the Position and Consultation Paper that it 'would not be necessary' to conduct a mid-term review and considers that the opportunity for mid-term review is lost because of the extended time taken by the ACCC to prepare the Draft Report. Finally, MNF Group is concerned about the ACCC's proposal to have the MTAS FAD expire on the same date as the MTAS declaration because an FAD inquiry cannot be undertaken unless a declaration inquiry has been completed. It submitted that aligning the expiry dates would only work if the ACCC is prepared to commence its review of its MTAS declaration at a date which would enable the declaration and FAD inquiries to be completed before the expiry date. In light of these concerns, MNF Group suggests that the new MTAS FAD should expire on 30 June 2022 and argued that it would be appropriate to review the MTAS price at this time given the ongoing changes that are occurring in the mobile sector, in particular the closing down of 3G networks and the rollout of 5G networks.[187]

Macquarie Telecom submitted that, based on the proposed expiry date of 30 June 2024, there is a distinct possibility that the MTAS price determined in the current inquiry will increasingly overstate the efficient costs that should be recovered during the period that it is effective, because:

- it is likely that 5G technology will be operating across the board in Australia well before the proposed expiry date of 30 June 2024, and
- recent experience suggests that both the MTAS declaration and FAD may need to be extended beyond the expiry date.

Under these circumstances, Macquarie Telecom recommends that the ACCC commit to a review of the MTAS price determined in this inquiry by 31 December 2022. Macquarie Telecom suggests that such a review could be undertaken expeditiously by considering the

[186] ACCC Draft Report, p. 50.

[187] MNF Group submission, pp. 9–11.

continued relevance of the assumptions about key parameters in the cost models for the countries in the benchmark set, with suitable allowance for the proportion of the voice and data demand carried on 5G networks at that time.[188]

6.1.3. ACCC final view

The ACCC has carefully considered the submissions from MNF Group and Macquarie Telecom regarding the duration of the new MTAS FAD. The ACCC acknowledges the concerns expressed in both submissions. The ACCC agrees that such developments could affect the cost of providing the MTAS and should be taken into account in the regulated price for the MTAS in a timely manner.

Based on the information provided in this inquiry, it is assumed that the hypothetically efficient operator will continue to operate its 3G network beyond 30 June 2024. While all the MNOs have commenced the roll out of their 5G networks, the roll out needs to be more advanced before it could be properly considered in a cost modelling exercise for the purpose of determining the MTAS price. These two considerations are important in assessing the appropriate timing for reviewing the MTAS price determined in this inquiry.

The ACCC does not consider that either of the alternative expiry dates suggested by MNF Group and Macquarie Telecom is appropriate or feasible. As noted in the Draft Report, the ACCC does not consider that a review of the MTAS price to take into account the 5G rollout by 2022 would be straightforward.[189] The ACCC does not consider it would be feasible to expeditiously update the benchmarking exercise conducted for the purpose of this inquiry to account for 5G traffic as suggested by Macquarie Telecom. This is because none of the benchmark models used in the current benchmark exercise incorporates 5G technology and therefore would not reflect the cost of providing services over the 5G network. While the ACCC expects that, by 2022, regulators in other jurisdictions may have developed cost models that incorporate 5G technology, the likelihood is low that there will be a significant number of these available publicly for a fresh benchmarking exercise by that time.

For these reasons, the ACCC considers that a more realistic option for reviewing the MTAS price to account for 5G technology in a timely manner is to develop a cost model that explicitly incorporates this technology when 5G rollout is more advanced in Australia.

Adopting an expiry date of 30 June 2022 for the FAD would mean that the cost modelling process would potentially need to start sometime in 2021. This timeframe is premature for a number of reasons:

- the rollout of 5G networks in Australia may not have advanced far enough for the purpose of cost modelling, and
- there may not be a better indication of the timing of the 3G shutdown by that time.

The ACCC has also considered the suggestion by Macquarie Telecom that the ACCC commits to a review or the MTAS price by the end of 2022. While this provides more time for market developments to occur, as the ACCC intends to explore a holistic review of the FTAS and the MTAS, the ACCC considers it would be more appropriate to consider questions of declaration for both services in the first instance, before embarking on an extensive cost modelling process.

Therefore, the ACCC has concluded that an expiry date of 30 June 2024 for the MTAS, which aligns with the expiry date for the MTAS declaration is appropriate.

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[188] Macquarie Telecom submission, pp. 2–3.

[189] Position and Consultation Paper, p. 35.

6.2. Commencement of the FAD

6.2.1. ACCC draft view

In the Draft Report, the ACCC expressed the draft view that a commencement date of 1 January 2021 is likely appropriate, having regard to significant disruptions to business activities resulting from the outbreak of novel coronavirus (COVID-19) in the short term. The ACCC considered that the proposed commencement date would provide additional time for industry to renegotiate agreements before the new MTAS price comes into force. The ACCC noted however that it would consider feedback from industry as to whether a longer timeframe is required for industry to implement the new MTAS price.[190]

6.2.2. Submissions

Macquarie Telecom submitted that the ACCC should commit to a commencement date no later than 1 January 2021. Macquarie Telecom considers that a commitment of this kind will remove any incentives for regulatory gaming from parties who may benefit from the delay.[191]

Commpete similarly submitted that 1 January 2021 should be the latest that the FAD should take effect. Commpete would support bringing forward the commencement date to 1 July 2020.[192]

On the other hand, MNF Group submitted that the proposed commencement date of 1 January 2021 is not appropriate for the following reasons:

- a change in the MTAS price will only lead to a rate change within an existing inter-operator billing system, and this does not require nay lead time for implementation,
- delaying the implementation of the MTAS price has a negative impact on the LTIE as consumers are denied the flow on benefits from lower prices, and other potential benefits such as innovations in service and pricing packages,
- it would not be acceptable to maintain the current price of 1.7 cents per minute in an environment where MTAS prices are known to be falling, and
- the current COVID-19 situation should not be used to justify any further delay of the MTAS FAD commencement date, when Telstra is reported to have accelerated significant investment in its 5G network deployment.

MNF Group argued that the new MTAS price should be backdated to 1 July 2019 when the existing MTAS FAD was due to expire.[193]

6.2.3. ACCC final view

The ACCC considers that backdating the implementation of a regulated price is only appropriate in limited circumstances. In general, backdating a regulatory determination is more appropriate in a negotiate/arbitrate framework as parties involved have more ability to influence the timeframe.[194] In contrast, under the current Part XIC access regime, the ability of stakeholders to influence the timing of the FAD inquiries and the potential for backdating

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190 Draft Report, p. 50.

191 Macquarie Telecom submission, p. 5.

192 Commpete submission, p. 4.

193 MNF Group submission, pp. 8–9.

194 See for instance, ACCC, *Guidelines relating to deferrals of arbitrations and backdating of determinations under Part IIIA of the Competition and Consumer Act 2010*, August 2017.

to prevent regulatory gaming, is likely to be more limited. The ACCC has generally not backdated the FADs made under the current Part XIC framework in the past.[195]

The ACCC has decided that it would be appropriate in the current circumstances to provide some lead time for the implementation of the new MTAS price although the ACCC received no evidence suggesting that a date later than 1 January 2021 would be necessary. As such, the ACCC's final position is that the new MTAS FAD should commence on the 1 January 2021.

6.3. The next declaration and FAD reviews

The ACCC is intending to explore a holistic review of the MTAS and the fixed voice interconnection services in the future. This is likely to take place is through combined declaration and FAD inquiries for the MTAS and the FTAS/Fixed Originating Access Service at the next regulatory review period. Issues that are likely to be explored during this holistic review include whether these interconnection services should remain declared, and if so, whether there should be a common pricing approach to these services and what that approach should be.

For the MTAS specifically, the ACCC is of the view that cost modelling is a realistic option and that should be explored should the service continue to be declared. Given the time and resources involved in developing a new cost model, as well as concerns from some stakeholders that the next FAD inquiry may not be completed prior to the expiry date of 30 June 2024, the ACCC considers it would be useful to undertake appropriate planning regarding the next review process.

While there are time limits before which the ACCC can formally commence a declaration inquiry, it is open to the ACCC to conduct targeted consultation in preparation of a declaration inquiry. As such, the ACCC intends to consult with stakeholders on preliminary issues relevant to the question of declaring both MTAS and FTAS/FOAS prior to the formal commencement of the declaration inquiries.

[195] The only instance where the ACCC has backdated the commencement of an FAD was in 2011 where the ACCC backdated both the Interim Access Determination and the FAD for the declared fixed line services to the date when the new access regime under Part XIC of the CCA came into force, i.e. 1 January 2011. This decision was made to provide pricing certainty to industry after the expiry of the relevant pricing principles made under the previous negotiate/arbitrate regime on 31 December 2010. See the ACCC website on the 2011 fixed line services FAD inquiry at: https://www.accc.gov.au/regulated-infrastructure/communications/fixed-line-services/fixed-line-services-final-access-determination-fad-2011.

Appendix A Legislative framework

This section sets out the relevant legislative framework in relation to final access determinations (FADs).

Content of final access determinations

Section 152BC of the *Competition and Consumer Act 2010* (CCA) specifies what a FAD may contain. It includes, among other things, terms and conditions on which a carrier or carriage service provider (CSP) is to comply with the standard access obligations (SAOs) and terms and conditions of access to a declared service.

An FAD may make different provisions with respect to different access providers or access seekers.

Fixed principles provisions

An FAD may contain a fixed principles provision, which allows a provision in a FAD to have an expiry date after the expiry date of the FAD.[196] Such a provision allows the ACCC to 'lock-in' a term so that it would be consistent across consecutive FADs.

Varying final access determinations

Section 152BCN allows the ACCC to vary or revoke an FAD, provided that certain procedures are followed.

A fixed principles provision cannot be varied or removed unless the FAD sets out the circumstances in which the provision can be varied or removed, and those circumstances are present.[197]

Commencement and expiry provisions

Section 152BCF of the CCA sets out the commencement and expiry rules for FADs.

A FAD comes into force on the day specified in the FAD as the day on which the FAD is to come into force.

A FAD must have an expiry date, which should align with the expiry of the declaration for that service unless there are circumstances that warrant a different expiry date.[198]

Matters to consider when making FADs

The ACCC must have regard to the matters specified in subsection 152BCA(1) of the CCA when making an FAD. These matters are:

- whether the determination will promote the LTIE of carriage services or services supplied by means of carriage services,
- the legitimate business interests of a carrier or CSP who supplies, or is capable of supplying, the declared service, and the carrier's or provider's investment in facilities used to supply the declared service,

196 Section 152BCD of the CCA.

197 Subsection 152BCN(4) of the CCA.

198 Subsection 152BCF(6) of the CCA.

- the interests of all persons who have rights to use the declared service,
- the direct costs of providing access to the declared service,
- the value to a person of extensions, or enhancement of capability, whose cost is borne by someone else,
- the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility, and
- the economically efficient operation of a carriage service, a telecommunications network or a facility.

Subsection 152BCA(2) sets out other matters that the ACCC may take into account in making FADs in certain circumstances, while subsection 152BCA(3) allows the ACCC to take into account any other matters that it thinks are relevant.

The ACCC's views on how the matters in section 152BCA should be interpreted for the FAD process are set out below.

1. Promoting the LTIE (paragraph 152BCA(1)(a))

The first matter for the ACCC to consider when making an FAD is 'whether the determination will promote the long-term interests of end-users of carriage services or of services supplied by means of carriage services'.

The ACCC has published a guideline explaining what it understands by the phrase 'long-term interests of end-users' in the context of its declaration responsibilities.[199] This approach to the LTIE was also used by the ACCC in making determinations in access disputes. The ACCC considers that the same interpretation is appropriate for making FADs for the mobile terminating access service (MTAS).

In the ACCC's view, particular terms and conditions promote the interests of end-users if they are likely to contribute towards the provision of:

- goods and services at lower prices
- goods and services of a high quality, and/or
- a greater diversity of goods and services.[200]

The ACCC also notes that the Australian Competition Tribunal (the Tribunal) has offered guidance in its interpretation of the phrase 'long-term interests of end-users' (in the context of access to subscription television services):

> *Having regard to the legislation, as well as the guidance provided by the Explanatory Memorandum, it is necessary to take the following matters into account when applying the touchstone – the long-term interests of end-users:*
>
> ** End-users: "end-users" include actual and potential [users of the service]…*
>
> ** Interests: the interests of the end-users lie in obtaining lower prices (than would otherwise be the case), increased quality of service and increased diversity and scope in product offerings. …[T]his would include access to innovations … in a quicker timeframe than would otherwise be the case …*

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199 ACCC, *Telecommunications services — declaration provisions: a guide to the declaration provisions of Part XIC of the Trade Practices Act*, July 1999, in particular pp. 31–38.

200 ibid., p. 33.

> ** Long-term: the long-term will be the period over which the full effects of the … decision will be felt. This means some years, being sufficient time for all players (being existing and potential competitors at the various functional stages of the … industry) to adjust to the outcome, make investment decisions and implement growth – as well as entry and/or exit – strategies.*[201]

To consider the likely impact of particular terms and conditions on the LTIE, the CCA requires the ACCC to have regard to whether the terms and conditions are likely to result in:

- promoting competition in markets for carriage services and services supplied by means of carriage services
- achieving any-to-any connectivity, and
- encouraging the economically efficient use of, and economically efficient investment in:
    - the infrastructure by which listed carriage services are supplied, and
    - any other infrastructure by which listed services are, or are likely to become, capable of being supplied.[202]

Promoting competition

In assessing whether particular terms and conditions will promote competition, the ACCC analyses the relevant markets in which the declared services are supplied (retail and wholesale) and considers whether the terms set in those markets remove obstacles to end-users gaining access to telephony and broadband services.[203]

Obstacles to accessing these services include the price, quality and availability of the services and the ability of competing providers to provide telephony and broadband services.

The ACCC is not required to precisely define the scope of the relevant markets in which the declared services are supplied. The ACCC considers that it is sufficient to broadly identify the scope of the relevant markets likely to be affected by the ACCC's regulatory decisions.

The ACCC's view is that the relevant markets for the purpose of making an FAD for the MTAS are:

- the markets for wholesale mobile voice termination services on each MNO's network,
- the downstream market for retail mobile services, and
- the downstream market for retail fixed voice services.

Any-to-any connectivity

The CCA gives guidance on how the objective of any-to-any connectivity is achieved. It is achieved only if each end-user who is supplied with a carriage service that involves communication between end-users is able to communicate, by means of that service, with each other end-user who is supplied with the same service or a similar service. This must be the case whether or not the end-users are connected to the same telecommunications network.[204]

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201 *Seven Network Limited (No 4)* [2004] ACompT 11 at [120].

202 Subsection 152AB(2) of the CCA.

203 Subsection 152AB(4) of the CCA. This approach is consistent with the approach adopted by the Tribunal in *Telstra Corporations Limited (No 3)* [2007] A CompT 3 at [92]; *Telstra Corporation Limited* [2006] A CompT at [97], [149].

204 Subsection 152AB(8) of the CCA.

The ACCC considers that this matter is relevant to ensuring that the terms and conditions contained in FADs do not create obstacles for the achievement of any to any connectivity.

Efficient use of and investment in infrastructure

In determining the extent to which terms and conditions are likely to encourage the economically efficient use of and investment in infrastructure, the ACCC must have regard to:

- whether it is, or is likely to become, technically feasible for the services to be supplied and charged for, having regard to:
    - the technology that is in use, available or likely to become available,
    - whether the costs involved in supplying and charging for the services are reasonable or likely to become reasonable, and
    - the effects or likely effects that supplying and charging for the services would have on the operation or performance of telecommunications networks,
- the legitimate commercial interests of the supplier or suppliers of the service, including the ability of the supplier or suppliers to exploit economies of scale and scope,
- incentives for investment in the infrastructure by which services are supplied; and any other infrastructure (for example, the NBN) by which services are, or are likely to become, capable of being supplied, and
- the risks involved in making the investment.[205]

The objective of encouraging the 'economically efficient use of and economically efficient investment in ... infrastructure' requires an understanding of the concept of economic efficiency. Economic efficiency consists of three components:

- productive efficiency – this is achieved where individual firms produce the goods and services that they offer at least cost,
- allocative efficiency – this is achieved where the prices of resources reflect their underlying costs so that resources are then allocated to their highest valued uses (i.e., those that provide the greatest benefit relative to costs), and
- dynamic efficiency – this reflects the need for industries to make timely changes to technology and products in response to changes in consumer tastes and in productive opportunities.

On the issue of efficient investment, the Tribunal has stated that:

> *An access charge should be one that just allows an access provider to recover the costs of efficient investment in the infrastructure necessary to provide the declared service.*[206]
>
> *…efficient investment by both access providers and access seekers would be expected to be encouraged in circumstances where access charges were set to ensure recovery of the efficient costs of investment (inclusive of a normal return on*

[205] Subsections 152AB(6) and (7A) of the CCA.

[206] Telstra Corporation Ltd (No. 3) [2007] ACompT 3 at [159].

investment) by the access provider in the infrastructure necessary to provide the declared service.[207]

…access charges can create an incentive for access providers to seek productive and dynamic efficiencies if access charges are set having regard to the efficient costs of providing access to a declared service.[208]

2. The legitimate business interests of a carrier or carriage service provider (paragraph 152BCA(1)(b))

The second matter requires the ACCC to consider 'the legitimate business interests' of the carrier or CSP when making an FAD.

In the context of access disputes, the ACCC considers that it is in the access provider's legitimate business interests to earn a normal commercial return on its investment.[209] The ACCC is of the view that the concept of 'legitimate business interests' in relation to FADs should be interpreted in a similar manner, consistent with the phrase 'legitimate commercial interests' used elsewhere in Part XIC of the CCA.

For completeness, the ACCC notes that it would be in the access provider's legitimate business interests to seek to recover its costs as well as a normal commercial return on investment having regard to the relevant risk involved. However, an access price should not be inflated to recover any profits the access provider (or any other party) may lose in a dependent market as a result of the provision of access.[210]

The Tribunal has taken a similar view of the expression 'legitimate business interests'.[211]

3. The interests of all persons who have a right to use the declared service (paragraph 152BCA(1))

The third matter requires the ACCC to consider 'the interests of all persons who have the right to use the service' when making an FAD.

The ACCC considers that this matter requires it to have regard to the interests of access seekers. The Tribunal has also taken this approach.[212] The access seekers' interests would not be served by higher access prices to declared services, as it would inhibit their ability to compete with the access provider in the provision of retail services.[213]

People who have rights to currently use a declared service will generally use that service as an input to supply carriage services, or a service supplied by means of carriage service, to end-users.

The ACCC considers that this class of persons has an interest in being able to compete for the custom of end-users on the basis of their relative merits. This could be prevented from

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207 ibid. at [164].

208 ibid.

209 ACCC, *Resolution of telecommunications access disputes — a guide,* March 2004 (revised) (Access Dispute Guidelines), p. 56.

210 ACCC, *Access pricing principles—telecommunications,* July 1997 (1997 Access Pricing Principles), p. 9.

211 Telstra Corporation Limited [2006] ACompT 4 at [89].

212 Telstra Corporation Limited [2006] ACompT 4 at [91].

213 ibid.

occurring if terms and conditions of access favour one or more service providers over others, thereby distorting the competitive process.[214]

However, the ACCC does not consider that this matter calls for consideration to be given to the interests of the users of these 'downstream' services. The interests of end-users will already be considered under other matters.

4. The direct costs of providing access (paragraph 152BCA(1)(d))

The fourth matter requires the ACCC to consider 'the direct costs of providing access to the declared service' when making an FAD.

The ACCC considers that the direct costs of providing access to a declared service are those incurred (or caused) by the provision of access.

The ACCC interprets this matter, and the use of the term 'direct costs', as allowing consideration to be given to a contribution to indirect costs. This is consistent with the Tribunal's approach in an undertaking decision.[215] A contribution to indirect costs can also be supported by other matters.

However, the matter does not extend to compensation for loss of any 'monopoly profit' that occurs as a result of increased competition.[216]

The ACCC also notes that the Tribunal (in another undertaking decision) considered the direct costs matter 'is concerned with ensuring that the costs of providing the service are recovered.'[217] The Tribunal has also noted that the direct costs could conceivably be allocated (and hence recovered) in a number of ways and that adopting any of those approaches would be consistent with this matter.[218]

5. The value to a person of extensions, or enhancement of capability, whose cost is borne by someone else (paragraph 152BCA(1)(e))

The fifth matter requires that the ACCC consider 'the value to a party of extensions, or enhancements of capability, whose cost is borne by someone else' when making an FAD.

In the 1997 Access Pricing Principles, the ACCC stated that this matter:

> *…requires that if an access seeker enhances the facility to provide the required services, the access provider should not attempt to recover for themselves any costs related to this enhancement. Equally, if the access provider must enhance the facility to provide the service, it is legitimate for the access provider to incorporate some proportion of the cost of doing so in the access price.*[219]

The ACCC considers that this application of paragraph 152BCA(1)(e) is relevant to making FADs.

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214 ibid.

215 Application by Optus Mobile Pty Limited and Optus Networks Pty Limited [2006] ACompT 8 at [137].

216 See Explanatory Memorandum for the *Trade Practices Amendment (Telecommunications) Bill 1996*, p. 44: [T]he 'direct' costs of providing access are intended to preclude arguments that the provider should be reimbursed by the third party seeking access for consequential costs which the provider may incur as a result of increased competition in an upstream or downstream market.

217 Telstra Corporation Limited [2006] ACompT 4 at [92].

218 ibid. at [139].

219 ACCC, 1997 Access Pricing Principles, p. 11.

6. Any necessary operational and technical requirements (paragraph 152BCA(1)(f))

The sixth matter requires the ACCC to consider 'the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility' when making an FAD.

The ACCC considers that this matter requires that terms of access should not compromise the safety or reliability of carriage services and associated networks or facilities, and that this has direct relevance when specifying technical requirements or standards to be followed.

The ACCC has previously stated in the context of model non-price terms and conditions, it is of the view that:

> *…this consideration supports the view that model terms and conditions should reflect the safe and reliable operation of a carriage service, telecommunications network or facility. For instance, the model non-price terms and conditions should not require work practices that would be likely to compromise safety or reliability.*[220]

The ACCC considers that these views will apply in relation to paragraph 152BCA(1)(f) for the making of FADs.

7. The economically efficient operation of a carriage service, a telecommunications network or a facility (paragraph 152BCA(1)(g))

The final matter of subsection 152BCA(1) requires the ACCC to consider 'the economically efficient operation of a carriage service, a telecommunications network facility or a facility' when making an FAD.

The ACCC noted in the Access Dispute Guidelines (in the context of arbitrations) that the phrase 'economically efficient operation' embodies the concept of economic efficiency as discussed earlier under the LTIE. That is, it calls for a consideration of productive, allocative and dynamic efficiency. The Access Dispute Guidelines also note that in the context of a determination, the ACCC may consider whether particular terms and conditions enable a carriage service, telecommunications network or facility to be operated efficiently.[221]

Consistent with the approach adopted by the Tribunal, the ACCC considers that in applying this matter, it is relevant to consider the economically efficient operation of:

- retail services provided by access seekers using the access provider's services or by the access provider in competition with those access seekers, and
- the telecommunications networks and infrastructure used to supply these services.[222]

8. Consideration of aspects of other eligible services (subsection 152BCA(2))

Subsection 152BCA(2) provides that, in making an access determination that applies to a carrier or CSP who supplies, or is capable of supplying, the declared services, the ACCC may, if the carrier or provider supplies one or more eligible services[223], take into account:

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220 ACCC, Final Determination — Model Non-price Terms and Conditions, November 2008, p. 8.

221 ACCC, Access Dispute Guidelines, p. 57.

222 *Telstra Corporation Limited* [2006] ACompT at [94]–[95].

223 'Eligible service' has the same meaning as in section 152AL of the CCA.

- the characteristics of those other eligible services,
- the costs associated with those other eligible services,
- the revenues associated with those other eligible services, and
- the demand for those other eligible services.

The Explanatory Memorandum states that this provision is intended to ensure that the ACCC, in making an AD, does not consider the declared service in isolation, but also considers other relevant services.[224] As an example, the Explanatory Memorandum states:

> *…when specifying the access price for a declared service which is supplied by an access provider over a particular network or facility, the ACCC can take into account not only the access provider's costs and revenues associated with the declared service, but also the costs and revenues associated with other services supplied over that network or facility.*[225]

9. Consideration of other matters (subsection 152BCA(3))

This subsection states the ACCC may take into account any other matters that it thinks are relevant when making an FAD.

The ACCC is of the view that considerations of regulatory certainty and consistency will be important when setting the terms and conditions of the FADs.

The ACCC also considers that it should have regard to:

- its previous decisions in relation to the MTAS,
- consultation documents and submissions in response to those documents, and
- information provided to the ACCC by stakeholders.

These considerations and documents do not limit the matters that the ACCC may have regard to when making the FAD for the MTAS.

[224] Explanatory Memorandum, Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill 2010, p. 178.

[225] ibid.

Appendix B Calculation of spectrum costs

B.1 Deriving unit costs for the 1800 MHz and 2100 MHz bands

For the purpose of the benchmarking exercise, the ACCC has calculated the unit cost ($/MHz paired/pop) for the 1800 MHz and 2 GHz bands spectrum by weighting the following:

- the unit cost of renewal fees of the spectrum as prescribed in the Radiocommunications (Spectrum Access Charges) Direction 2012[226]
- the unit cost of the spectrum derived from auction prices achieved in the 2016 1800 MHz regional spectrum and the 2017 multiband residual lots auction.

Weighting applied to each of the unit costs specified above is calculated as the proportion of population covered by the spectrum renewed and auctioned respectively. As some of the lots renewed and auctioned cover the same geographic area and technically the same population, a weighted population coverage is calculated based on the proportion of total bandwidth that is renewed or auctioned in a geographic area.

The derivation of the weighted population coverage is shown in the tables below.

Table B.1: Weighted population coverage derivation for 1800 MHz band[227]

Licence area	Population covered*	Proportion of bandwidth auctioned (instead of renewed) (%)	Weighted population
Darwin	126,476	80	101,181
North Queensland (Cairns/Townsville)	474,328	83	393,693
Central Queensland (Mackay)	362,120	80	289,696
South Queensland (Maryborough)	1,089,864	80	871,891
Northern New South Wales (Grafton)	500,478	80	400,383
Western New South Wales (Dubbo)	316,164	80	252,931
Canberra (including south coast of New South Wales)	671,691	80	537,353
Southern New South Wales/Riverina (Albury)	541,328	80	433,062
Regional Victoria	838,575	80	670,860
Tasmania	521,269	80	417,016

[226] Available at: https://www.communications.gov.au/what-we-do/spectrum/spectrum-licences.

[227] Estimated population data as in 2012 when the direction for licence renewal was made, which was used to calculate the amount of spectrum costs payable by the MNOS according to the Minister's direction 2012.

Regional South Australia	325,313	83	270,010
Regional Western Australia	282,104	80	225,683
Adelaide	1,348,457	7.7	103,831
Sydney	5,661,548	0	0
Melbourne	4,485,652	0	0
Brisbane	2,816,867	0	0
Perth	1,855,221	0	0
Total population	**22,217,456**	***Total weighted population***	**4,967,589**
		Percentage of population covered by auctioned spectrum	**22.36%**
		Percentage of population covered by renewed spectrum	**77.64%**

Table B.2: Weighted population coverage derivation for 2 GHz band[228]

Licence area	Population covered*	Proportion of bandwidth auctioned (instead of renewed) (%) **	Weighted population
Sydney	5,922,368	0	0
Melbourne	4,735,633	0	0
Brisbane	3,338,427	8.3	277,089
Perth	1,946,317	8.3	161,544
Adelaide	1,423,768	8.3	118,173
Canberra	467,539	25	116,885
Darwin	133,539	25	33,385
Hobart	271,219	25	67,805
Regional East	4,889,231	0	0
Regional West	351,135	0	0
Total population	**23,479,176**	***Total weighted population***	**774,881**
		Percentage of population covered by auctioned spectrum	**3.30%**
		Percentage of population covered by renewed spectrum	**96.7%**

B.2 Calculating spectrum licence tax

For the purpose of the benchmarking exercise, the ACCC has calculated the spectrum licence tax payable by the hypothetically efficient operator based on the assumed spectrum holdings. The calculation involves two components:

[228] Population data as in 2016 when the licences were renewed, which was used to calculate the amount of spectrum costs payable by the MNOs according to the Minister's Direction in 2012.

- deriving the spectrum licence tax payable under the current Radiocommunications (Spectrum Licence Tax) Determination 2014, and
- estimating the additional amount to be paid from 2020 under proposed changes to the Radiocommunications (Spectrum Licence Tax) Determination 2014 to recover the cost of the EME Program.

B.2.1 Spectrum licence tax currently payable

The Radiocommunications (Spectrum Licence Tax) Determination 2014 sets out the following methodology for calculating the spectrum tax payable for each of the bands.

$$Base\ amount\ for\ the\ frequency\ range\ \times\ A\ \times \frac{Spectrum\ licence\ bandwidth}{total\ specified\ spectrum}$$

Where $A\ = \frac{area\ poplation}{Australian\ population}$

As nationwide licences are assumed in the benchmarking exercise, it is therefore assumed that every licence that the hypothetically efficient operator holds covers the entire Australian population. Therefore, A is equal to 1 for the purpose of this calculation.

The table below shows the derivation of the spectrum licence tax payable for each band held by the hypothetically efficient operator.

Table B.3 Derivation of hypothetical spectrum licence tax for each band

Bands	Assumed bandwidth (MHz)	Total specified spectrum (MHz)	Base amount ($)	Spectrum licence tax payable ($)
700 MHz	20	90	49,938	11,097
850 MHz	10	40	22,195	5,549
1800 MHz	30	150	83,107	16,621
2100 MHz	20	120	66,485	11,081
2500 MHz	40	140	77,566	22,162

Based on the assumptions regarding when each band starts to be used by the hypothetically efficient operator as outlined in Table 5, the annual spectrum licence fees payable by the hypothetically efficient operator for the relevant years are calculated in the table below.

Table B.3 Annual spectrum licence fees currently payable

Time period	Annual spectrum licence fees ($)
Before 2004	22,170
2004–2013	33,251
2014 onwards	66,510

B.2.2 Additional EME component

The ACCC has approximated the additional EME component to be included in the spectrum licence tax payable by the hypothetically efficient operator from 2020 based on the methodology outlined the Radiocommunications (Spectrum Licence Tax) Amendment Determination 2020 (No. 1), which is as follows:

$$\frac{MCL}{total\ Main\ Component\ for\ that\ financial\ year}\ \times total\ annual\ EME\ Component\ for\ that\ financial\ year$$

Where MCL refers to the Main Component for the licence tax calculated calculated using methodology under Schedule 1 of the Radiocommunications (Spectrum Licence Tax) Determination 2014.

For the purpose of this calculation, the ACCC has broadly estimated the total Main Component be the sum of the base amounts specified in Radiocommunications (Spectrum Licence Tax) Determination 2014 for all specified frequency ranges other than the mid-gap of the 2.5 GHz band (i.e. 2570–2620 MHz), on the basis that the EME costs will not apply to this spectrum licences in this frequency range.[229] This amounts to a total of $478,111. The ACCC notes that this is a figure calculated only for the purpose of this benchmarking exercise and, given the simplified assumptions adopted, will not reflect that actual total Main Component for a financial year that will be determined by the ACMA in practice.

In practice, the EME costs will also not apply to spectrum licences in the 1800 MHz band with a condition that they be used only for the provision of rail safety, rail operations or rail control. These relate to licences held by state rail authorities covering 2 x 10 MHz in the five major capital cities. To properly account for these licences, it would be necessary to separately calculate the main spectrum licence tax for the MNOs based on both population coverage and bandwidth. This approach is more complicated and would be somewhat inconsistent with the assumption of nationwide licences for the hypothetically efficient operator. The ACCC has therefore not accounted for these licences when estimating the total of the main spectrum licence tax for all designated spectrum licences. This would slightly underestimate the proportion of the EME program costs that should be recovered from the hypothetically efficient operator but the ACCC considers the overall impact on the per unit spectrum costs is likely to be insignificant.

Accordingly, the table below shows the estimation of the EME component for the spectrum licence tax payable by the hypothetically efficient operator to be included from 2020.

Table B.4 Estimated EME component for 2020–2024

Years	2020	2021	2022	2023	2024
EME Program costs ($)	2,600,000	2,600,000	2,600,000	1,945,980[230]	1,993,072.72[231]
Proportion of EME Program costs to be recovered from the hypothetically efficient operator	13.91%	13.91%	13.91%	13.91%	13.91%
EME component ($)	361,686.05	361,686.05	361,686.05	270,705.32	277,256.39

[229] See ACMA, *Amending the spectrum licence tax determination: Apportioning EME program costs consultation paper*, July 2020, p. 3.

[230] Indexed for inflation based on forecast inflation of 2.42%.

[231] Indexed for inflation based on forecast inflation of 2.42%.

Appendix C Derivation of WACC parameters

Market risk premium

The market risk premium (MRP) is the expected risk premium between a diversified market portfolio and the risk free asset. The MRP compensates an investor for the systemic risk of the market portfolio, and is a key driver of the required return on equity.

The ACCC has adopted a MRP at 6.1 per cent, consistent with recent ACCC regulatory decisions, as well as the Australian Energy Regulator's (AER) most recent Rate of Return Instrument. The ACCC considers that this is appropriate as by definition, the MRP is not an industry specific parameter but applies economy wide.

Value of imputation credits

Gamma (γ), represents the value of imputation credits attached to the dividends equity holders receive. Under a pre-tax WACC framework, gamma is a WACC parameter, and has the effect of lowering the effective rate of company taxation for the purposes of calculating a required cost of equity prior to taxation.

The ACCC has adopted the value of imputation credits as represented by gamma at 0.585, consistent with the AER's most recent Rate of Return Instrument. As gamma is estimated as an economy-wide parameter, the ACCC considers that applying the estimated during the AER's most recent Rate of Return process is appropriate.

Risk free rate

The risk free rate measures the return that an investor would expect from a hypothetical asset with no risk of default. The ACCC has estimated this rate at 0.90%, using the average yield on 10-year Commonwealth Government Securities (CGSs) over a twenty trading day period close to the date of this decision.[232]

CGSs provide an appropriate proxy for the risk free rate due to the very low probability of the Commonwealth government defaulting on its debt. The ACCC considers that a 10-year maturity is also appropriate

Cost of debt

The cost of debt is the return required by the market to lend to an entity of a given level of risk. The cost of debt reflects the creditworthiness of the borrower (indicated by the credit rating), and the term of the debt.

The ACCC has estimated a forward-looking cost of debt for a hypothetically efficient Australian mobile network operator at 2.18%, assuming a benchmark credit rating of A- and a term of ten years. This figure includes debt issuance costs of 0.07%.

For the purpose of estimating the cost of debt, the ACCC has synthesised a debt yield at an A- rating and a term of debt years by applying a weighted average to Bloomberg's BVAL 10-year Australian corporate bond yield curves for broad-A and broad-BBB.[233] By weighting the

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[232] The ACCC has used the Bloomberg BVAL service to estimate the risk free rate and crosschecked against RBA estimates of CGS yields. The relevant BVAL curve is BV100127.

[233] The relevant BVAL curves are BVCSAE10 for broad-A, and BVCSAB10 for broad-BBB.

average 2/3 A, and 1/3 BBB, an estimate can be taken of the cost of debt for a hypothetical entity rated A-.

This approach of weighting existing 'broad' curves to more accurately estimate the cost of debt at a specific credit rating mirrors the approach taken by the AER in determining the cost of debt for regulated energy businesses.[234]

Credit rating

In determining the credit rating of a hypothetically efficient mobile operator, the ACCC considers a benchmarking approach is appropriate, given its clear empirical basis and reproducibility.

The ACCC has had regard to the credit ratings of a range of relevant telecommunications firms where available, including the Australian MNOs and parent entities of the Australian MNOs. The long-term Standard and Poor's credit ratings of these entities is set out in Table C.1 below.

Table C.1: Long term credit ratings of comparable entities

Entity	**Credit rating**
Telstra	A-
Optus	A
Vodafone Group Plc.	BBB
CK Hutchison	A
Singtel	A+
Spark NZ	A-
Median	A/A-

Source: Company annual reports.

The ACCC was unable to obtain a credit rating for TPG Telecom, and has relied on the publicly available credit ratings of its parent entities, Vodafone Group Plc.,CK Hutchison, and Spark New Zealand.[235]

Although there is a mix of ownership structures amongst the comparator companies, the exact impact of ownership structure and parent entity involvement on individual credit ratings is unclear. The ACCC considers that it is not appropriate to make arbitrary adjustments to observed credit ratings in order to reflect these differences.

Having regard to the above, the ACCC has determined that a conservative benchmark credit rating of A- is appropriate based on the observed credit ratings of relevant entities in Table D.1 above and the median rating of A/A-. The median rating of A/A- does not change with the exclusion of Singtel and Spark NZ, and does not change when taking into account only those firms (Telstra and Optus) that have been rated directly. The ACCC also notes that the median credit rating has not changed in three years, indicating a generally stable risk profile for the sector.

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[234] The AER targets a BBB+ credit rating, and so applies a 1/3 broad-A and 2/3 broad-BBB to the curves used. A rating of A- can be considered one 'notch' above BBB+, requiring the use of 2/3 broad A and 1/3 broad-BBB. Note that a 50/50 weighting of broad-A and broad-BBB would approximate a credit rating halfway between A- and BBB+.

[235] The ACCC has also been unable to determine a credit rating for Washington H. Soul Pattinson, a major shareholder of TPG Telecom.

Debt term

The ACCC considers that ten years is an appropriate benchmark term for estimating the cost of debt. This reflects the relatively long-lived asset lives of telecommunications equipment, and the long-term investment cycles of mobile operators.

Ten years is also the term used in estimating the risk free rate for the purposes of estimating the return on equity.

Equity beta and gearing

The ACCC has estimated a pre-tax cost of equity for a hypothetically efficient Australian mobile network operator at 6.62%. The ACCC has based its estimation on the Sharpe-Lintner CAPM, composed of the risk free rate and an equity risk premium (ERP), itself the product of the MRP and equity beta.

Equity beta

The ACCC estimates that an equity beta of 0.80 is representative of an efficient mobile operator within the OECD, and considers that it is appropriate to adopt this estimate for the purposes of estimating a WACC for a hypothetical mobile operator in Australia.[236]

The ACCC has undertaken a benchmarking exercise for the purpose of estimating the equity beta and gearing. A benchmark set of 25 comparable firms has been assembled for this purpose. These firms are listed in Table C.2.

In considering which firms should be included in the comparator set, the ACCC first sought to include firms that are mobile-only operators. However, given the nature of mature telecommunications markets, the ACCC found that partitioning participant firms into 'mobile-only' and 'integrated' categories is becoming increasingly difficult, as most mobile operators now also provide fixed line services. The ACCC notes that this is the case in Australia and overseas.

The ACCC has investigated how other regulators determine comparable firms in estimating equity beta for the purpose of determining a WACC for mobile termination service. For example, Ofcom has previously used mobile-related revenue as a share of total revenue to measure a firm's exposure to risk in competitive mobile markets.[237] Where this share is greater than 50 per cent, a mobile operator can be assumed to be primarily a mobile provider, and a reasonable proxy for an efficient mobile network operator.

The ACCC considers it appropriate to adopt a similar approach. Instead of seeking to construct a comparable set comprising of 'mobile-only' operators, where the definition of 'mobile-only' has become increasingly untenable, it is more practical to include firms that are likely to be subject to significant exposure to mobile activities.

For the above reasons, the ACCC's final decision is that the selection criteria for the benchmark set of firms includes being a publicly-listed telecommunications firm in the OECD, with a market capitalisation of greater than AUD 500 million and a greater than 50

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[236] The ACCC notes that an equity beta of 0.80 is also comparable to those used by NRAs in Europe for mobile operators. See BEREC, *BEREC Report Regulatory Accounting in Practice 2019,* November 2019, 24–26, available here: https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/8907-berec-report-regulatory-accounting-in-practice-2019.

[237] See Nera Economic Consulting, *Differences in the beta for fixed vs mobile telecommunications operators — For the Office of Communications (OFCOM),* February 2017, available here: https://www.ofcom.org.uk/__data/assets/pdf_file/0028/99640/Annex-21.pdf.

per cent exposure to the mobiles market in terms of revenue.[238] Firms are excluded from this set where insufficient data is available either for the purposes of calculating a five-year average gearing level, or a robust beta.[239]

Table C.2: Comparator set for equity beta and gearing

Company	Listed Country
America Movil SAB DE C-SER L	Mexico
AT&T Inc	United States
Cellcom Israel Ltd	Israel
Deutsche Telekom AG	Germany
Elisa Oyj	Finland
Empresa Nacional De Telecom	Chile
KDDI Corp	Japan
Orange Belgium	Belgium
Orange SA	France
Rogers Communications Inc-B	Canada
Shenandoah Telecommunications Co	United States
Sprint Corp	United States
Tele2 AB-B SHS	Sweden
Telefonica Deutschland Holding AG	Germany
Telefonica SA	Spain
Telekom Austria AG	Austria
Telenor ASA	Norway
Telia Co AB	Sweden
Telstra Corp Ltd	Australia
Telus Corp	Canada
T-Mobile US Inc	United States
Turkcell Iletisim Hizmet AS	Turkey
US Cellular Corp	United States
Verizon Communications Inc	United States
Vodafone Group Plc	United Kingdom

Source: Bloomberg BICS; ACCC research.

The ACCC has estimated raw equity betas for each of these firms using the Bloomberg BETA function. The ACCC considers the appropriate estimate to be a weekly beta, over a five year period, regressed against the relevant total returns index for each equity.

De-levering and re-levering

The ACCC has de-levered each entity's equity beta using their debt to equity ratio obtained from the Bloomberg FA function. The de-levering process to asset beta is completed using the Brealey-Myers formula, as formulated:

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238 Firm selection has been completed using the Bloomberg BICS search functionality.

239 For a firm to be included, five years of data for market cap and long term debt, and five years of weekly equity beta observations must be available from Bloomberg.

$$\beta_e = \beta_a \left(1 + \frac{D}{E}\right)$$

Where β_e is the equity beta, β_a is the asset beta, and $\frac{D}{E}$ is the debt to equity ratio. The use of this formula is consistent with the AER's current practice for de-levering and re-levering the equity beta.[240]

The arithmetic average of the 25 asset betas is taken as an estimate of the benchmark asset beta. Re-levering this asset beta by the benchmark gearing yields an estimate of the equity beta of 0.80.

Gearing

Gearing is used to weight the cost of equity and the cost of debt in the overall WACC.

The ACCC has estimated a benchmark gearing level of 37 per cent using the same benchmark set of 25 comparable firms as used for the estimation of the equity beta. This figure represents debt funding as a percentage of enterprise value.

The ACCC has obtained five years' data on each company's market cap and total debt using Bloomberg's FA function. A five-year average gearing level can then be calculated for each entity, taking the book value of debt as a proxy for the market value of debt. For each year then:

$$G = \frac{D}{D + E}$$

Where G is the gearing, D is the book value of long-term debt and E is the market value of equity.

The arithmetic average of these five-yearly average gearing levels is taken as an estimate of the efficient gearing level for a hypothetically efficient operator

Debt issuance cost

The ACCC has adopted a debt issuance cost of 0.07 per cent in line with previous ACCC regulatory decisions.[241]

Expected inflation

In order to undertake the international benchmarking exercise, Analysys Mason requires a WACC both in nominal terms and in real terms. Calculating a real WACC requires forming an expectation of expected inflation.

The ACCC has estimated expected inflation at 2.42 per cent, using an annualised ten year geometric average of the Reserve Bank of Australia's (RBA) headline forecasts for the first two years, and the midpoint of the RBA's target band for years 3–10. The RBA's most recent Statement on monetary policy estimates inflation to end of FY21 and FY22 at 3.0 per cent and 1.25 per cent, respectively.[242] The mid-point of the target band remains 2.5 per cent.

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[240] See Australian Energy Regulator, *Equity Beta — Discussion Paper*, March 2018, p. 18, available here: https://www.aer.gov.au/system/files/AER%20-%20Equity%20Beta%20Discussion%20Paper%20-%20March%202018.pdf

[241] ACCC, *Public inquiry into final access determinations for fixed line services — Final Decision*, October 2015, p. 66.

[242] Reserve Bank of Australia, *Statement on Monetary Policy,* August 2020, available here: https://www.rba.gov.au/publications/smp/2020/aug/forecasts.html

This approach replicates the method used by the AER, and incorporates the most up to date evidence on the appropriate estimation of inflation for regulatory purposes.[243]

Corporate tax rate

Under a pre-tax WACC framework, the corporate tax rate is a WACC parameter. In this case, the rate of taxation payable on company profits affects the required return on equity, reflecting the need for the cost of company tax to be compensated.

The ACCC estimates a pre-tax WACC on the assumption of a 30 per cent corporate tax rate. This is consistent with the Australian company tax rate. The ACCC does not consider that the hypothetically efficient operator would be eligible for the lower company tax rate payable by small and medium businesses.[244]

Sensitivity analysis

Analysys Mason has conducted sensitivity testing as part of their benchmarking study and report. In addition to the WACC of 4.996 per cent (nominal, 2.511 per cent real), the ACCC has also provided Analysys Mason with a pre-tax WACC adjusted for the purpose of testing the sensitivity of the benchmark models.

The adjusted WACC is 5.246 per cent (nominal, 2.755 per cent real), and represents a 5 per cent increase to the baseline nominal WACC.

This marginal increase in the WACC resulted in a marginal increase in the unit cost output of the benchmark models of between 0.2 per cent and 1.8 per cent.[245] Therefore, it appears that a marginal increase in the WACC creates a marginal increase in the cost of the MTAS. This is in line with the ACCC's expectations.

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[243] Australian Energy Regulator, *Regulatory treatment of inflation — Final position,* December 2017, p. 47, available here: https://www.aer.gov.au/system/files/AER%20-%20Final%20position%20paper%20-%20Regulatory%20treatment%20of%20inflation%20-%20December%202017%20-%20Web%20upload.PDF.

[244] The turnover threshold for the lower rate for FY21 is AUD 50m.

[245] Analysys Mason, Final Benchmark Report, p. 33.

Appendix D FAD Instrument

Final Access Determination No. 1 of 2020 (MTAS)

Competition and Consumer Act 2010

The AUSTRALIAN COMPETITION AND CONSUMER COMMISSION makes

this final access determination under section 152BC of the *Competition and Consumer Act 2010.*

Date of decision: 30 September 2020

1. Application

1.1 This instrument sets out the final access determination (FAD) in respect of the declared domestic mobile terminating access service (MTAS).

1.2 This FAD replaces the previous FAD for the MTAS (Final Access Determination No. 1 of 2015).

1.3 The prices in this FAD are exclusive of tax payable under *the Utilities (Network Facilities Tax) Act 2006* (ACT).

1.4 The prices in this FAD are exclusive of Goods and Services Tax (GST).

2. Definitions and interpretation

2.1 Schedule 1 applies to the interpretation of this instrument.

2.2 The Schedules form part of this instrument.

3. Commencement and duration

3.1 This FAD comes into force on 1 January 2021.

3.2 This FAD remains in force up until and including 30 June 2024.

4. Terms and conditions of access

4.1 If a carrier or carriage service provider is required to comply with any or all of the standard access obligations as defined in the *Competition and Consumer Act 2010* in respect of the MTAS, the carrier or carriage service provider must comply with those obligations on the terms and conditions set out in this clause 4.

Note: The terms and conditions in a FAD apply only to those terms and conditions where terms and conditions on that matter in an Access Agreement cannot be reached, no special access undertaking is in operation setting out terms and conditions on that matter and no binding rules of conduct have been made setting out terms and conditions on that matter: section 152AY of the *Competition and Consumer Act 2010*.

4.2 If the carrier or carriage service provider is required to supply the MTAS to a service provider, the carrier or carriage service provider must supply the service at the price specified in Schedule 2.

The non-price terms and conditions set out in Schedules 3–12 apply to the access to the MTAS.

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Schedule 1 - Interpretation and definitions

Interpretation

In these FADs, unless the contrary intention appears:

(a) the singular includes the plural and vice versa;

(b) the words "including" and "include" mean "including, but not limited to"; and

(c) terms defined in the Competition and Consumer Act 2010 or the *Telecommunications Act 1997* have the same meaning.

Definitions

ACCC means the Australian Competition and Consumer Commission

Access Agreement has the same meaning as given to that term in section 152BE of the CCA

Access Provider has the same meaning as given to that term in subsection 152AR(2) of the CCA

Access Seeker has the same meaning as given to that term in section 152AG of the CCA

ACDC means the Australian Commercial Disputes Centre Limited

ACDC Guidelines means the mediation guidelines of the ACDC in force from time to time

ACMA means the Australian Communications and Media Authority

Billing Dispute means a dispute relating to a Charge or an invoice issued by the Access Provider

Billing Dispute Notice means a notice given pursuant to clause 3.10 in Schedule 3

Billing Dispute Procedures means the procedures set out in clauses 3.10 to 3.30 in Schedule 3

Breach Notice has the meaning set out in clause 7.5 of Schedule 7

Business Hours means 8.00 am to 5.00 pm Monday to Friday, excluding a day which is a gazetted public holiday in the place where the relevant transaction or work is to be performed

Business Day means any day other than Saturday or Sunday or a day which is a gazetted public holiday in the place concerned

Calendar Day means a day reckoned from midnight to midnight

Carriage Service has the same meaning given to that term in section 7 of the *Telecommunications Act 1997* (Cth)

CCA means the *Competition and Consumer Act 2010* (Cth)

Charge means a charge for the supply of a Service

Confidential Information means all information, know-how, ideas, concepts, technology, manufacturing processes, industrial, marketing and commercial knowledge of a confidential nature (whether in tangible or intangible form and whether coming into existence before or after the commencement of this FAD) relating to or developed in connection with or in support of the Service supplied under this FAD (the "**first mentioned party**") but does not include:

(a) information which is or becomes part of the public domain (other than through any breach of this FAD);

(b) information rightfully received by the other party from a third person without a duty of confidentiality being owed by the other party to the third person, except where the other party has knowledge that the third person has obtained that information either directly or indirectly as a result of a breach of any duty of confidence owed to the first mentioned party; or

(c) information which has been independently developed or obtained by the other party; or

(d) information about Services supplied by the Access Provider (including where that information is generated by the Access Provider) that has been aggregated with other information of a similar or related nature, such that the Access Seeker cannot be identified by the information or any part of it.

Disclosing Party has the meaning set out in clause 6.5 in Schedule 6 of this FAD

Emergency means an emergency due to an actual or potential occurrence (such as fire, flood, storm, earthquake, explosion, accident, epidemic or war-like action) which:

a) endangers or threatens to endanger the safety or health of persons or

1.

b) destroys or damages, or threatens to destroy or damage property, being an emergency which requires a significant and co-ordinated response

Emergency Network Modernisation and Upgrade means a Major Network Modernisation and Upgrade that is required and is reasonably necessary and a proportionate response to address an Emergency

Equivalent Period of Notice means a period of notice commencing at the time that the Access Provider has approved and allocated the capital expenditure or otherwise approved and made a decision to commit to a Major Network Modernisation and Upgrade

Event means an act, omission or event relating to or arising out of this FAD or part of this FAD

Expert Committee means a committee established under clause 5.11 in Schedule 5

FAD means Final Access Determination

Fault means:

(a) a failure in the normal operation of a Network or in the delivery of a Service; or

(b) any issue as to the availability or quality of a Service supplied to an end-user via the Access Seeker, notified by the end-user to the Access Seeker's help desk, that has been reasonably assessed by the Access Provider as being the Access Provider's responsibility to repair

General Notification has the meaning set out in clause 10.1

Indemnifying Party means the Party giving an indemnity under this FAD

Individual Notification has the meaning set out in clause 10.1 of Schedule 10

Initiating Notice has the meaning as set out in clause 5.11 of Schedule 5

Innocent Party means the Party receiving the benefit of an indemnity under this FAD

Liability (of a party) means any liability of that party (whether in contract, in tort, under statute or in any other way and whether due to negligence, wilful or deliberate breach or any other cause) under or in relation to this FAD, or part of this FAD or in relation to any Event or series of related Events

Listed Carriage Service has the same meaning given to that term in section 7 of the *Telecommunications Act 1997* (Cth)

Loss includes liability, loss, damage, costs, charges or expenses (including legal costs)

Major Network Modernisation and Upgrade means a modernisation or upgrade that results in a Service no longer being supplied or adversely affects the quality of that Service (or any services supplied by an Access Seeker to their end-users using the Service), but does not mean, or include, an Emergency Network Modernisation Upgrade or an National Broadband Network related upgrade

Month means a period commencing at the beginning of any day of a named month and ending:

(a) at the end of the day before the corresponding day of the next named month; or

2.

(b) if there is no such corresponding day – at the end of the next named month

MTAS means the mobile terminating access service declared under section 152AL of the CCA.

National Broadband Network means a national telecommunications network for the high-speed carriage of communications, where NBN Co has been, is, or is to be, involved in the creation or development of the network. To avoid doubt, it is immaterial whether the creation or development of the network is, to any extent, attributable to:

(a) the acquisition of assets that were used, or for use, in connection with another telecommunications network; or

(b) the obtaining of access to assets that are also used, or for use, in connection with another telecommunications network

NBN Co means NBN Co Limited (ACN 136 533 741), as the company exists from time to time (even if its name is later changed).

Network of a party, means that party's system, or series of systems, that carries, or is capable of carrying communications by means of guided or unguided electromagnetic energy

Non-Billing Dispute means a dispute other than a Billing Dispute

Ongoing Creditworthiness Information has the meaning as set out in clause 4.8 of Schedule 4 of this FAD

Party means a party to this FAD

People of a party, means each of that party's directors, officers, employees, agents, contractors, advisers and representatives but does not include that party's end-users or the other party;

Regulatory Determination means an access determination or a binding rule of conduct

Representative of a Party means each of that party's directors, officers, employees, agents, contractors, advisers and representatives, but does not include that Party's end-users or the other Party

Security means the amount and type of security provided, or required to be provided, to the Access Provider in respect of the provision by the Access Provider of Services, as set out in Schedule 4

Security Deposit means any sum of money deposited by the Access Seeker with the Access Provider, from time to time, for the purposes of fulfilling in whole or in part the requirement under this FAD that the Access Seeker provide Security to the Access Provider

Service means a service declared under section 152AL of the CCA

Structural Separation Undertaking means:

(a) an undertaking given by Telstra under subsection 577A(1) of the *Telecommunications Act 1997* (Cth) which came into force in accordance with section 577AB, and any amendment to that undertaking which comes into force in accordance with subsection 577B(6); and

(b) a migration plan approved by the ACCC under Subdivision B of Division 2 of Part 33 of the *Telecommunications Act 1997* (Cth) which, pursuant to subsection 577BE(5), formed part of the undertaking referred to in paragraph (a), and any amendment to that plan which is approved by the ACCC in accordance with section 577BF,and includes all binding schedules, annexures and attachments to such documents

Suspension Event has the meaning set out in clause 7.2 of Schedule 7

Suspension Notice has the meaning set out in clause 7.2 of Schedule 7

Schedule 2 - Price

2.1 The price applicable to the MTAS is as follows:

Time period	Cent per minute
1 January 2021 – 30 June 2024	1.19

Schedule 3 - Billing and notification

3.1 The Access Seeker's liability to pay Charges for the Service to the Access Provider arises at the time the Service is supplied by the Access Provider to the Access Seeker, unless the parties agree otherwise.

3.2 The Access Seeker must pay Charges in accordance with this FAD, including but not limited to this Schedule 3.

3.3 The Access Provider must provide the Access Seeker with an invoice each month in respect of Charges payable for the Service unless the parties agree otherwise

3.4 The Access Provider is entitled to invoice the Access Seeker for previously uninvoiced Charges or Charges which were understated in a previous invoice, provided that:

a) the Charges to be retrospectively invoiced can be reasonably substantiated to the Access Seeker by the Access Provider; and

b) subject to clause 3.5, no more than 6 Months have elapsed since the date the relevant amount was incurred by the Access Seeker's customer, except where:

i. the Access Seeker gives written consent to a longer period (such consent not to be unreasonably withheld); or

ii. to the extent that the Charges relate to services supplied by an overseas carrier and the Access Provider has no control over the settlement arrangements as between it and the overseas carrier, in which case the Access Provider shall invoice such amounts as soon as is reasonably practicable.

3.5 The parties must comply with the provisions of any applicable industry standard made by the ACMA pursuant to Part 6 of the *Telecommunications Act 1997 (Cth)* (Standard) and the provisions of any applicable industry code registered pursuant to Part 6 of the *Telecommunications Act 1997 (Cth)* (Code) in relation to billing. Where the effect of a Standard or Code is that an Access Seeker is not permitted to invoice its customers for charges that are older than a specified number of days, weeks or months (the Backbilling Period), the Access Provider must not invoice the Access Seeker for a Charge which was incurred by the Access Seeker's customers that, as at the date the invoice is issued, is older than the Backbilling Period.

3.6 Subject to clause 3.12

a) An invoice is payable in full 30 Calendar Days after the date the invoice was issued or such other date as agreed between the parties.

b) The Access Seeker may not deduct, withhold, or set-off any amounts for accounts in credit, for counter-claims or for any other reason or attach any condition to the payment, unless otherwise agreed by the Access Provider.

c) All amounts owing and unpaid after the due date shall accrue interest daily from the

due date up to and including the date it is paid at the rate per annum of the 90 day authorized dealers bank bill rate published in the *Australian Financial Review* on the first Business Day following the due date for payment, plus 2.5 per cent.

3.7 In addition to charging interest in accordance with clause 3.6 or exercising any other rights the Access Provider has at law or under this FAD, where an amount is outstanding and remains unpaid for more than 20 Business Days after it is due for payment, and is not an amount subject to any Billing Dispute notified in accordance with this FAD, the Access Provider may take action, without further notice to the Access Seeker, to recover any such amount as a debt due to the Access Provider.

3.8 Unless the parties otherwise agree, there is no setting-off (i.e. netting) of invoices except where a party goes into liquidation, in which case the other party may set-off. However, in order to minimise administration and financial costs, the parties must consider in good faith set-off procedures for inter-party invoices which may require the alignment of the parties' respective invoice dates and other procedures to allow set-off to occur efficiently.

3.9 The Access Provider must, at the time of issuing an invoice, provide to the Access Seeker all information reasonably required by the Access Seeker to identify and understand the nature and amount of each Charge on the invoice, and the service the Charge relates to. Nothing in this clause 3.9 is intended to limit subsections 152AR(6) and 152AR(7) of the CCA.

3.10 If the Access Seeker believes a Billing Dispute exists, it may invoke the Billing Dispute Procedures by providing written notice to the Access Provider (Billing Dispute Notice). A Billing Dispute must be initiated only in good faith.

3.11 Except where a party seeks urgent injunctive relief, the Billing Dispute Procedures must be invoked before either party may begin legal proceedings in relation to any Billing Dispute.

3.12 If a Billing Dispute Notice is given to the Access Provider by the due date for payment of the invoice containing the Charge which is being disputed, the Access Seeker may withhold payment of the disputed Charge until such time as the Billing Dispute has been resolved or otherwise terminated. Otherwise, the Access Seeker must pay the invoice in full in accordance with this FAD (but subject to the outcome of the Billing Dispute Procedures).

3.13 Except where payment is withheld in accordance with clause 3.12, the Access Provider is not obliged to accept a Billing Dispute Notice in relation to an invoice unless the invoice has been paid in full.

3.14 A Billing Dispute Notice must be given to the Access Provider in relation to a Charge, at the earlier of:

a) as soon as reasonably practicable after the Access Seeker becomes aware a Billing Dispute exists, or

b) within six Months of the invoice for the Charge being issued in accordance with clause 3.6.

3.15

a) The Access Provider must acknowledge receipt of a Billing Dispute Notice within two Business Days by providing the Access Seeker with a reference number.

b) Within five Business Days of acknowledging a Billing Dispute Notice under clause 3.15(a), the Access Provider must, by written notice to the Access Seeker:

i. accept the Billing Dispute Notice; or

ii. reject the Billing Dispute Notice if the Access Provider reasonably considers that:

A. the subject matter of the Billing Dispute Notice is already being dealt with in another dispute;

B. the Billing Dispute Notice was not submitted in good faith; or

C. the Billing Dispute Notice is incomplete or contains inaccurate information.

c) If the Access Provider fails to accept or reject the Billing Dispute Notice within five Business Days of acknowledging the Billing Dispute Notice under clause 3.15(a), the Access Provider is taken to have accepted the Billing Dispute Notice.

d) For avoidance of doubt, if the Access Provider rejects a Billing Dispute Notice under clause 3.15(b)(ii)C, the Access Seeker is not prevented from providing an amended Billing Dispute Notice to the Access Provider relating to the same dispute provided that the amended Billing Dispute Notice is provided within the timeframe under clause 3.14.

3.16 The Access Seeker must, as early as practicable and in any case within five Business Days, unless the Parties agree on a longer period, after the Access Provider acknowledges a Billing Dispute Notice, provide to the other party any further relevant information or materials (which were not originally provided with the Billing Dispute Notice) on which it intends to rely (provided that this obligation is not intended to be the same as the obligation to make discovery in litigation).

3.17 Without affecting the time within which the Access Provider must make the proposed resolution under clause 3.1, the Access Provider may request additional information from the Access Seeker that it reasonably requires for the purposes of making a proposed resolution pursuant to clause 3.18. This additional information may be requested up to 10 Business Days prior to the date on which the Access Provider must make the proposed resolution under clause 3.18. The Access Seeker must provide the requested information within five Business Days of receiving the request. If the Access Seeker fails to do so within five Business Days, the Access Provider may take the Access Seeker's failure to provide additional information into account when making its proposed resolution.

3.18 The Access Provider must try to resolve any Billing Dispute as soon as practicable and in any event within 30 Business Days of accepting a Billing Dispute Notice under clause 3.15

(or longer period if agreed by the parties), by notifying the Access Seeker in writing of its proposed resolution of a Billing Dispute. That notice must:

a) explain the Access Provider's proposed resolution (including providing copies where necessary of all information relied upon in coming to that proposed resolution); and

b) set out any action to be taken by:

   i. the Access Provider (e.g. withdrawal, adjustment or refund of the disputed Charge); or

   ii. the Access Seeker (e.g. payment of the disputed Charge)

If the Access Provider reasonably considers that it will take longer than 30 Business Days after accepting a Billing Dispute Notice to provide a proposed resolution, then the Access Provider may request the Access Seeker's consent to an extension of time to provide the proposed resolution under this clause 3.18 (such consent not to be unreasonably withheld).

3.19 If the Access Seeker does not agree with the Access Provider's decision to reject a Billing Dispute Notice under clause 3.15 or the Access Provider's proposed resolution under clause 3.17, it must object within 15 Business Days of being notified of such decisions (or such longer time as agreed between the parties). Any objection lodged by the Access Seeker with the Access Provider must be in writing and state:

a) what part(s) of the proposed resolution it objects to;

b) the reasons for objection;

c) what amount it will continue to withhold payment of (if applicable); and

d) any additional information to support its objection.

If the Access Seeker lodges an objection to the proposed resolution under this clause, the Access Provider must, within 5 Business Days of receiving the objection, review the objection and

e) provide a revised proposed resolution (Revised Proposed Resolution in this Schedule 3); or

f) confirm its proposed resolution

3.20 Any:

a) withdrawal, adjustment or refund of the disputed Charge by the Access Provider; or

b) payment of the disputed Charge by the Access Seeker (as the case may be),

must occur as soon as practicable and in any event within one Month of the Access Provider's notice of its proposed resolution under clause 3.18 or its Revised Proposed Resolution under clause 3.19 (as applicable), unless the Access Seeker escalates the

Billing Dispute under clause 3.23. If the Access Provider is required to make a withdrawal, adjustment or refund of a disputed Charge under this clause but its next invoice (first invoice) is due to be issued within 48 hours of its proposed resolution under clause 3.18 or its Revised Proposed Resolution under clause 3.19 (as applicable), then the Access Provider may include that withdrawal, adjustment or refund in the invoice following the first invoice notwithstanding that this may occur more than one Month after the Access Provider's notice of its proposed resolution or Revised Proposed Resolution.

3.21 Where the Access Provider is to refund a disputed Charge, the Access Provider must pay interest (at the rate set out in clause 3.6) on any refund. Interest accrues daily from the date on which each relevant amount to be refunded was paid to the Access Provider, until the date the refund is paid.

3.22 Where the Access Seeker is to pay a disputed Charge, the Access Seeker must pay interest (at the rate set out in clause 3.6) on the amount to be paid. Interest accrues daily from the date on which each relevant amount was originally due to be paid to the Access Provider, until the date the amount is paid.

3.23 If

a) the Access Provider has not proposed a resolution according to clause 3.18 or within the timeframe specified in clause 3.18, or

b) the Access Seeker, having first submitted an objection under clause 3.19 is not satisfied with the Access Provider's Revised Proposed Resolution, or the Access Provider's confirmed proposed resolution, within the timeframes specified in clause 3.19,

the Access Seeker may escalate the matter under clause 3.24. If the Access Seeker does not do so within 15 Business Days after the time period stated in clause 3.18 or after being notified of the Access Provider's Revised Proposed Resolution under clause 3.19(e) or confirmed proposed resolution under clause 3.19(f) (or a longer period if agreed by the parties), the Access Seeker is deemed to have accepted the Access Provider's proposed resolution made under clause 3.18 or Revised Proposed Resolution under clause 3.19(e) or confirmed proposed solution under clause 3.19(f) and clauses 3.21 and 3.22 apply.

3.24 If the Access Seeker wishes to escalate a Billing Dispute, the Access Seeker must give the Access Provider a written notice:

a) stating why it does not agree with the Access Provider's Revised Proposed Resolution or confirmed proposed resolution; and

b) seeking escalation of the Billing Dispute.

3.25 A notice under clause 3.24 must be submitted to the nominated billing manager for the Access Provider, who must discuss how best to resolve the Billing Dispute with the Access Seeker's nominated counterpart. If the Parties are unable to resolve the Billing Dispute within five Business Days of notice being given under clause 3.24 (or such longer period as agreed between the parties) the Billing Dispute must be escalated to the Access Provider's nominated commercial manager and the Access Seeker's nominated counterpart who must

meet in an effort to resolve the Billing Dispute.

3.26 If the Billing Dispute cannot be resolved within five Business Days of it being escalated to the Access Provider's nominated commercial manager and the Access Seeker's nominated counterpart under clause 3.25 (or such longer period as agreed between the parties):

a) either party may provide a written proposal to the other party for the appointment of a mediator to assist in resolving the dispute. Mediation must be conducted in accordance with the mediation guidelines of the Australian Commercial Disputes Centre (ACDC) and concluded within three Months of the proposal (unless the parties agree to extend this timeframe); or

b) if the parties either do not agree to proceed to mediation within five Business Days of being able to propose the appointment of a mediator under clause 3.26(a) or are unable to resolve the entire Billing Dispute by mediation, either party may commence legal proceedings to resolve the matter.

3.27 The parties must ensure that any person appointed or required to resolve a Billing Dispute takes into account the principle that the Access Seeker is entitled to be recompensed in circumstances where the Access Seeker is prevented (due to regulatory restrictions on retrospective invoicing) from recovering from its end-user an amount which is the subject of a Billing Dispute (a Backbilling Loss), provided that:

a) such principle applies only to the extent to which the Billing Dispute is resolved against the Access Provider; and

b) such principle applies only to the extent to which it is determined that the Backbilling Loss was due to the Access Provider unnecessarily delaying resolution of the Billing Dispute.

c) Each party must continue to fulfil its obligations under this FAD while a Billing Dispute and the Billing Dispute Procedures are pending.

3.28 Each party must continue to fulfil its obligations under this FAD while a Billing Dispute and the Billing Dispute Procedures are pending.

3.29 All discussions and information relating to a Billing Dispute must be communicated or exchanged between the parties through the representatives of the parties set out in clause 3.25 (or their respective nominees).

3.30 There is a presumption that all communications between the Parties during the course of a Billing Dispute are made on a without prejudice and confidential basis.

3.31 If it is determined by the Billing Dispute Procedures, any other dispute resolution procedure, or by agreement between the parties, that three or more out of any five consecutive invoices for a given Service are incorrect by 5 per cent or more, then, for the purposes of clause 3.21, the interest payable by the Access Provider in respect of the

overpaid amount of the invoices in question is the rate set out in clause 3.6, plus 2 per cent. The remedy set out in this clause 3.31 is without prejudice to any other right or remedy available to the Access Seeker.

Schedule 4 - Creditworthiness and Security

4.1 Unless otherwise agreed by the Access Provider, the Access Seeker must (at the Access Seeker's sole cost and expense) provide to the Access Provider and maintain, on terms and conditions reasonably required by the Access Provider and subject to clause 4.2, the Security (as is determined having regard to clause 4.3 and as may be varied pursuant to clause 4.4) in respect of amounts owing by the Access Seeker to the Access Provider under this FAD.

4.2

a) The Access Seeker acknowledges that unless otherwise agreed by the Access Provider, it must maintain (and the Access Provider need not release or refund) the Security specified in clause 4.1 for a period of six Months following (but not including) the date on which the last of the following occurs:

   i. cessation of supply of the Service under this FAD, and

   ii. payment of all outstanding amounts under this FAD.

b) Notwithstanding clause 4.2(a), the Access Provider has no obligation to release the Security if, at the date the Access Provider would otherwise be required to release the Security under clause 4.2(a), the Access Provider reasonably believes any person, including a provisional liquidator, administrator, trustee in bankruptcy, receiver, receiver and manager, other controller or similar official, has a legitimate right to recoup or claim repayment of any part of the amount paid or satisfied, whether under the laws or preferences, fraudulent dispositions or otherwise.

4.3 The Security (including any varied Security) may only be requested where an Access Provider has reasonable grounds to doubt the Access Seeker's ability to pay for services, and must be of an amount and in a form determined reasonably by the Access Provider taking into account all the relevant circumstances. As a statement of general principle the amount of any Security is calculated by reference to:

a) the aggregate value of all Services likely to be provided to the Access Seeker under this FAD over a reasonable period; or

b) the value of amounts invoiced in respect of the Service but unpaid (excluding any amounts in respect of which there is a current Billing Dispute notified in accordance with this FAD).

For the avoidance of doubt, any estimates, forecasts or other statements made or provided by the Access Seeker may be used by the Access Provider in determining the amount of a Security

4.4 Examples of appropriate forms of Security, having regard to the factors referred to in clause 4.3, may include without limitation:

a) fixed and floating charges;

b) personal guarantees from directors;

c) Bank Guarantees;

d) letters of comfort

e) mortgages;

f) a right of set-off;

g) a Security Deposit; or

h) a combination of the forms of security referred to in paragraphs (a) to (g) above.

If any Security is or includes a Security Deposit, then:

i) the Access Provider is not obliged to invest the Security Deposit or hold the Security Deposit in an interest bearing account or otherwise; and

j) the Access Seeker is prohibited from dealing with the Security Deposit or its rights to that Security Deposit (including by way of assignment or granting of security).

If any security is or includes a Bank Guarantee and that Bank Guarantee (Original Bank Guarantee) has an expiry date which is the last day by which a call may be made under a Bank Guarantee, the Access Seeker must procure a replacement Bank Guarantee for the amount guaranteed by the Original Bank Guarantee no later than two Months prior to the expiry date of the Original Bank Guarantee, such replacement Bank Guarantee to have an expiry date of no less than 14 Months from the date of delivery of the replacement Bank Guarantee.

If the Access Seeker fails to procure a replacement Bank Guarantee, then in addition to any other of the Access Provider's rights under this FAD, the Access Provider may, at any time in the Month prior to the expiry date of the Bank Guarantee, make a call under the Bank Guarantee for the full amount guaranteed. The amount paid to the Access Provider pursuant to a call on the Bank Guarantee will become a Security Deposit.

4.5 The Access Provider may from time to time where the circumstances reasonably require, request Ongoing Creditworthiness Information from the Access Seeker to determine the ongoing creditworthiness of the Access Seeker. The Access Seeker must supply Ongoing Creditworthiness Information to the Access Provider within 15 Business Days of receipt of a request from the Access Provider for such information. The Access Provider may, as a result of such Ongoing Creditworthiness Information, having regard to the factors referred to in clause 4.3 and subject to clause 4.7, reasonably require the Access Seeker to alter the amount, form or the terms of the Security (which may include a requirement to provide additional security), and the Access Seeker must provide that altered Security within 20 Business Days of being notified by the Access Provider in writing of that requirement.

4.6 The Access Seeker may from time to time request the Access Provider to consent (in writing) to a decrease in the required Security and/or alteration of the form of the Security. The Access Provider must, within 15 Business Days of the Access Seeker's request,

comply with that request if, and to the extent, it is reasonable to do so (having regard to the factors referred to in clause 4.3). The Access Provider may request, and the Access Seeker must promptly provide, Ongoing Creditworthiness Information, for the purposes of this clause 4.6.

4.7 If the Access Seeker provides Ongoing Creditworthiness Information to the Access Provider as required by this Schedule 4, the Access Seeker must warrant that such information is true, fair, accurate and complete as at the date on which it is received by the Access Provider and that there has been no material adverse change in the Access Seeker's financial position between the date the information was prepared and the date it was received by the Access Provider. If there has been a material adverse change in the Access Seeker's financial position between the date the information was prepared and the date it was received by the Access Provider, the Access Seeker must disclose the nature and effect of the change to the Access Provider at the time the information is provided.

4.8 For the purposes of this Schedule 4, **Ongoing Creditworthiness Information** means:

a) a copy of the Access Seeker's most recent published audited balance sheet and published audited profit and loss statement (together with any notes attached to or intended to be read with such balance sheet or profit and loss statement);

b) a credit report in respect of the Access Seeker or, where reasonably necessary in the circumstances, any of its owners or directors (Principals) from any credit reporting agency, credit provider or other third party. The Access Seeker must co-operate and provide any information necessary for that credit reporting agency, credit provider or other independent party to enable it to form an accurate opinion of the Access Seeker's creditworthiness. To that end, the Access Seeker agrees to procure written consents (as required under the *Privacy Act 1988* (Cth)) from such of its Principals as is reasonably necessary in the circumstances to enable the Access Provider to:

   i. obtain from a credit reporting agency, credit provider or other independent party, information contained in a credit report;

   ii. disclose to a credit reporting agency, credit provider or other independent party, personal information about each Principal; and

   iii. obtain and use a consumer credit report;

c) a letter, signed by the company secretary or duly authorised officer of the Access Seeker, stating that the Access Seeker is not insolvent and not under any external administration (as defined in the *Corporations Act 2001* (Cth)) or under any similar form of administration under any laws applicable to it in any jurisdiction; and

d) the Access Seeker's credit rating, if any has been assigned to it; and

e) any other information reasonably required to determine the ongoing creditworthiness of the Access Seeker, as agreed between the parties before the request under clause 4.5 is made.

4.9 The Access Seeker may require a confidentiality undertaking to be given by any person having access to confidential information contained in its Ongoing Creditworthiness Information prior to such information being provided to that person.

4.10 Subject to this Schedule 4, the parties agree that a failure by the Access Seeker to provide the warranties set out in clause 4.7 or to provide Ongoing Creditworthiness Information constitutes:

a) an event entitling the Access Provider to alter the amount, form or terms of the Security (including an entitlement to additional Security) of the Access Seeker and the Access Seeker must provide that altered Security within 15 Business Days after the end of the period set out clause 4.5; or

b) breach of a material term or condition of this FAD.

Any disputes arising out of or in connection with Schedule 4 must be dealt with in accordance with the procedures in Schedule 5. Notwithstanding that a dispute arising out of or in connection with Schedule 4 has been referred to the procedures in Schedule 5 and has not yet been determined, nothing in this clause 4.10 or Schedule 5 prevents the Access Provider from exercising any of its rights to suspend the supply of a Service under Schedule 7.

Schedule 5 - General dispute resolution procedures

5.1 If a dispute arises between the parties in connection with or arising from the terms and conditions set out in this FAD for the supply of the Service, the dispute must be managed as follows:

a) in the case of a Billing Dispute, the dispute must be managed in accordance with the Billing Dispute Procedures; or

b) subject to clause 5.2, in the case of a Non-Billing Dispute, the dispute must be managed in accordance with the procedures set out in this Schedule 5.

5.2 To the extent that a Non-Billing Dispute is raised or arises in connection with, or otherwise relates to, a Billing Dispute, then unless otherwise determined, that Non-Billing Dispute must be resolved in accordance with the Billing Dispute Procedures. The Access Provider may seek a determination from an independent third party on whether a dispute initiated by the Access Seeker as a Billing Dispute is a Non-Billing Dispute. If the independent third party deems the dispute to be a Non-Billing Dispute, the Access Provider may provide written notice to the Access Seeker to pay any withheld amount to the Access Provider on the due date for the disputed invoice or if the due date has passed, immediately on notification being given by the Access Provider.

For the purposes of this clause 5.2:

a) the independent third party must be a person who:

i. has an understanding of the relevant aspects of the telecommunications industry (or have the capacity to quickly come to such an understanding);

ii. have an appreciation of the competition law implications of his/her decisions; and

iii. not be an officer, director or employee of a telecommunications company or otherwise have a potential for a conflict of interest;

b) the independent third party may include an arbiter from the ACDC.

5.3 If a Non-Billing Dispute arises, either party may, by written notice to the other, refer the Non-Billing Dispute for resolution under this Schedule 5. A Non-Billing Dispute must be initiated only in good faith.

5.4 Any Non-Billing Dispute notified under clause 5.3 must be referred:

a) initially to the nominated manager (or managers) for each party, who must endeavour to resolve the dispute within 10 Business Days of the giving of the notice referred to in clause 5.3 or such other time agreed by the parties; and

b) if the persons referred to in paragraph (a) above do not resolve the Non-Billing Dispute

within the time specified under paragraph (a), then the parties may agree in writing within a further five Business Days to refer the Non-Billing Dispute to an Expert Committee under clause 5.11, or by written agreement submit it to mediation in accordance with clause 5.10.

5.5 If:

a) under clause 5.4 the Non-Billing Dispute is not resolved and a written agreement is not made to refer the Non-Billing Dispute to an Expert Committee or submit it to mediation; or,

b) under clause 5.10(f), the mediation is terminated; and

c) after a period of five Business Days after the mediation is terminated as referred to in paragraph (b), the parties do not resolve the Non-Billing Dispute or agree in writing on an alternative procedure to resolve the Non-Billing Dispute (whether by further mediation, written notice to the Expert Committee, arbitration or otherwise)

either party may terminate the operation of this dispute resolution procedure in relation to the Non-Billing Dispute by giving written notice of termination to the other party.

5.6 A party may not commence legal proceedings in any court (except proceedings seeking urgent interlocutory relief) in respect of a Non-Billing Dispute unless:

a) the Non-Billing Dispute has first been referred for resolution in accordance with the dispute resolution procedure set out in this Schedule 5 or clause 5.2 (if applicable) and a notice terminating the operation of the dispute resolution procedure has been issued under clause 5.5; or

b) the other party has failed to substantially comply with the dispute resolution procedure set out in this Schedule 5 or clause 5.2 (if applicable).

5.7 Each party must continue to fulfil its obligations under this FAD while a Non-Billing Dispute and any dispute resolution procedure under this Schedule 5 are pending.

5.8 All communications between the parties during the course of a Non-Billing Dispute and in connection with that Non-Billing Dispute, are made on a without prejudice and confidential basis.

5.9 Each party must, as early as practicable, and in any case within 14 Calendar Days unless a longer period is agreed between the parties, after the notification of a Non-Billing Dispute pursuant to clause 5.3, provide to the other party any relevant materials on which it intends to rely (provided that this obligation is not intended to be the same as the obligation to make discovery in litigation).

5.10 Where a Non-Billing Dispute is referred to mediation by way of written agreement between

the parties, pursuant to clause 5.4(b):

a) any agreement must include:

   i. a statement of the disputed matters in the Non-Billing Dispute; and

   ii. the procedure to be followed during the mediation, and the mediation must take place within 15 Business Days upon the receipt by the mediator of such agreement;

b) it must be conducted in accordance with the mediation guidelines of the ACDC in force from time to time (**ACDC Guidelines**) and the provisions of this clause 5.10. In the event of any inconsistency between them, the provisions of this clause 5.10 prevail;

c) it must be conducted in private;

d) in addition to the qualifications of the mediator contemplated by the ACDC Guidelines, the mediator must:

   i. have an understanding of the relevant aspects of the telecommunications industry (or have the capacity to quickly come to such an understanding);

   ii. have an appreciation of the competition law implications of his/her decisions; and

   iii. not be an officer, director or employee of a telecommunications company or otherwise have a potential for a conflict of interest;

e) the parties must notify each other no later than 48 hours prior to mediation of the names of their representatives who will attend the mediation. Nothing in this subclause is intended to suggest that the parties are able to refuse the other's chosen representatives or to limit other representatives from the parties attending during the mediation;

f) it must terminate in accordance with the ACDC Guidelines;

g) the parties must bear their own costs of the mediation including the costs of any representatives and must each bear half the costs of the mediator; and

h) any agreement resulting from mediation binds the parties on its terms.

5.11 The parties may by written agreement in accordance with clause 5.4(b), submit a Non-Billing Dispute for resolution by an Expert Committee (**Initiating Notice**), in which case the provisions of this clause 5.11 apply as follows:

a) The terms of reference of the Expert Committee are as agreed by the parties. If the terms of reference are not agreed within five Business Days after the date of submitting the Initiating Notice (or such longer period as agreed between the parties), the referral to the Expert Committee is deemed to be terminated.

b) An Expert Committee acts as an expert and not as an arbitrator.

c) The parties are each represented on the Expert Committee by one appointee.

d) The Expert Committee must include an independent chairperson agreed by the parties or, if not agreed, a nominee of the ACDC. The chairperson must have the qualifications listed in paragraphs 5.10(d)(i), (ii) and (iii).

e) Each party must be given an equal opportunity to present its submissions and make representations to the Expert Committee.

f) The Expert Committee may determine the dispute (including any procedural matters arising during the course of the dispute) by unanimous or majority decision.

g) Unless the parties agree otherwise the parties must ensure that the Expert Committee uses all reasonable endeavours to reach a decision within 20 Business Days after the date on which the terms of reference are agreed or the final member of the Expert Committee is appointed (whichever is the later) and undertake to co-operate reasonably with the Expert Committee to achieve that timetable.

h) If the dispute is not resolved within the timeframe referred to in clause 5.11(g), either party may by written notice to the other party terminate the appointment of the Expert Committee.

i) The Expert Committee has the right to conduct any enquiry as it thinks fit, including the right to require and retain relevant evidence during the course of the appointment of the Expert Committee or the resolution of the dispute.

j) The Expert Committee must give written reasons for its decision.

k) A decision of the Expert Committee is final and binding on the parties except in the case of manifest error or a mistake of law.

l) Each party must bear its own costs of the enquiry by the Expert Committee including the costs of its representatives, any legal counsel and its nominee on the Expert Committee and the parties must each bear half the costs of the independent member of the Expert Committee.

5.12 Schedule 5 does not apply to a Non-Billing Dispute to the extent that:

a) there is a dispute resolution process established in connection with, or pursuant to, a legal or regulatory obligation (including any dispute resolution process set out in a Structural Separation Undertaking)

b) a party has initiated a dispute under the dispute resolution process referred to in clause 5.12(a), and

c) the issue the subject of that dispute is the same issue in dispute in the Non-Billing Dispute.

Schedule 6 - Confidentiality

6.1 Subject to clause 6.4 and any applicable statutory duty, each party must keep confidential all Confidential Information of the other party and must not:

a) use or copy such Confidential Information except as set out in this FAD; or

b) disclose or communicate, cause to be disclosed or communicated or otherwise make available such Confidential Information to any third person.

6.2 For the avoidance of doubt, information generated within the Access Provider's Network as a result of or in connection with the supply of the relevant Service to the Access Seeker or the interconnection of the Access Provider's Network with the Access Seeker's Network (other than information that falls within paragraph (d) of the definition of Confidential Information) is the Confidential Information of the Access Seeker.

6.3 The Access Provider must upon request from the Access Seeker, disclose to the Access Seeker quarterly aggregate traffic flow information generated within the Access Provider's Network in respect of a particular Service provided to the Access Seeker, if the Access Provider measures and provides this information to itself. The Access Seeker must pay the reasonable costs of the Access Provider providing that information.

6.4 Subject to clauses 6.5 and 6.10, Confidential Information of the Access Seeker may be:

a) used by the Access Provider:

i. for the purposes of undertaking planning, maintenance, provisioning, operations or reconfiguration of its Network;

ii. for the purposes of supplying Services to the Access Seeker;

iii. for the purpose of billing; or

iv. for another purpose agreed to by the Access Seeker; and

b) disclosed only to personnel who, in the Access Provider's reasonable opinion require the information to carry out or otherwise give effect to the purposes referred to in paragraph (a) above.

6.5 A party (**Disclosing Party**) may to the extent necessary use and/or disclose (as the case may be) the Confidential Information of the other party:

a) to those of the Disclosing Party's directors, officers, employees, agents, contractors (including sub-contractors) and representatives to whom the Confidential Information is reasonably required to be disclosed in connection with the provision of the Service to which this FAD relates;

b) to any professional person for the purpose of obtaining advice in relation to matters arising out of or in connection with the supply of a Service under this FAD;

c) to an auditor acting for the Disclosing Party to the extent necessary to permit that auditor to perform its audit functions;

d) in connection with legal proceedings, arbitration, expert determination and other dispute resolution mechanisms set out in this FAD, provided that the Disclosing Party has first given as much notice (in writing) as is reasonably practicable to the other party so that the other party has an opportunity to protect the confidentiality of its Confidential Information;

e) as required by law provided that the Disclosing Party has first given as much notice (in writing) as is reasonably practicable to the other party, that it is required to disclose the Confidential Information so that the other party has an opportunity to protect the confidentiality of its Confidential Information, except that no notice is required in respect of disclosures made by the Access Provider to the ACCC under section 152BEA of the CCA;

f) with the written consent of the other party provided that, prior to disclosing the Confidential Information of the other party:

   i. the Disclosing Party informs the relevant person or persons to whom disclosure is to be made that the information is the Confidential Information of the other party;

   ii. if required by the other party as a condition of giving its consent, the Disclosing Party must provide the other party with a confidentiality undertaking in the form set out in Annexure 1 of this Schedule 6 signed by the person or persons to whom disclosure is to be made; and

   iii. if required by the other party as a condition of giving its consent, the Disclosing Party must comply with clause 6.6;

g) in accordance with a lawful and binding directive issued by a regulatory authority;

h) if reasonably required to protect the safety of personnel or property or in connection with an emergency;

i) as required by the listing rules of any stock exchange where that party's securities are listed or quoted;

j) in accordance with a reporting obligation, or in response to a request from a regulatory authority or any other Government body, in connection with the Access Provider's Structural Separation Undertaking where the party cannot comply with the reporting obligation or request without using or disclosing the Confidential Information, provided that:

   i. prior to disclosing the Confidential Information of the other party the Disclosing Party informs the relevant person or persons to whom disclosure is to be made

that the information is the Confidential Information of the other party; and

ii. unless prohibited by law, the Disclosing Party informs the other Party in writing as soon as reasonably practicable after receiving the request that the Disclosing Party will disclose Confidential Information to the regulatory authority or any other Government body to fulfil that reporting obligation or respond to that request.

k) in response to a request from a regulatory authority or any other Government body in connection with interception capability (as that term is used in Chapter 5 of the *Telecommunications (Interception and Access) Act 1979* (Cth)) relating to access to a declared service, where the party cannot comply with the request without using or disclosing the Confidential Information, provided that:

i. prior to disclosing the Confidential Information of the other party the Disclosing Party informs the relevant person or persons to whom disclosure is to be made that the information is the confidential information of the other party; and

ii. unless prohibited by law, the Disclosing Party informs the other Party as soon as reasonably practicable after receiving the request that the Disclosing Party will disclose Confidential Information to the regulatory authority or any other Government body to respond to that request.

6.6 Each party must co-operate in any action taken by the other party to:

a) protect the confidentiality of the other party's Confidential Information; or

b) enforce its rights in relation to its Confidential Information.

6.7 Each party must establish and maintain security measures to safeguard the other party's Confidential Information from unauthorised access, use, copying, reproduction or disclosure.

6.8 Confidential Information provided by one party to the other party is provided for the benefit of that other party only. Each party acknowledges that no warranty is given by the Disclosing Party that the Confidential Information is or will be correct.

6.9 Each party acknowledges that a breach of this Schedule 6 by one party may cause another party irreparable damage for which monetary damages would not be an adequate remedy. Accordingly, in addition to other remedies that may be available, a party may seek injunctive relief against such a breach or threatened breach of this Schedule 6.

6.10 If:

a) the Access Provider has the right to suspend or cease the supply of the Service under:

i. Schedule 7 due to a payment breach, or

ii. under clause 7.8

b) after suspension or cessation of supply of the Service under this FAD, the Access Seeker fails to pay amounts due or owing to the Access Provider by the due date for payment,

then the Access Provider may do one or both of the following:

c) notify and exchange information about the Access Seeker (including the Access Seeker's Confidential Information) with any credit reporting agency or the Access Provider's collection agent; and

d) without limiting clause 6.10, disclose to a credit reporting agency:

   i. the defaults made by the Access Seeker to the Access Provider; and

   ii. the exercise by the Access Provider of any right to suspend or cease supply of the Service under this FAD.

Annexure 1 of Schedule 6

Confidentiality undertaking form

[Amend where necessary]

CONFIDENTIALITY UNDERTAKING

I, of [employer's company name] ([undertaking company]) undertake to [full name of party who owns or is providing the confidential information as the case requires] ([Provider]) that:

1 Subject to the terms of this Undertaking, I will keep confidential at all times the information listed in Attachment 1 to this Undertaking (Confidential Information) that is in my possession, custody, power or control.

2 I acknowledge that:

(a) this Undertaking is given by me to [Provider] in consideration for [Provider] making the Confidential Information available to me for the Approved Purposes (as defined below);

(b) all intellectual property in or to any part of the Confidential Information is and will remain the property of [Provider]; and

(c) by reason of this Undertaking, no licence or right is granted to me, or any other employee, agent or representative of [undertaking company] in relation to the Confidential Information except as expressly provided in this Undertaking.

3 I will:

(a) only use the Confidential Information for:

(i) the purposes listed in Attachment 2 to this Undertaking; or

(ii) any other purpose approved by [Provider] in writing;

(the Approved Purposes);

(b) comply with any reasonable request or direction from [provider] regarding the Confidential Information.

4 Subject to clause 5, I will not disclose any of the Confidential Information to any other person without the prior written consent of [Provider].

5 I acknowledge that I may disclose the Confidential Information to which I have access to:
(a) any employee, external legal advisors, independent experts, internal legal or regulatory staff of [undertaking company], for the Approved Purposes provided that:

(i) the person to whom disclosure is proposed to be made (**the person)** is notified in writing to [Provider] and [Provider] has approved the person as a person who may receive the Confidential Information, which approval shall not be unreasonably withheld;

(ii) the person has signed a confidentiality undertaking in the form of this Undertaking or in a form otherwise acceptable to [Provider]; and

(iii) a signed undertaking of the person has already been served on [Provider];

(b) other persons, if required to do so by law, but then only:

(i) if I notify [Provider] of that request within 7 days of receiving the request;

(ii) to the person(s) to whom I am obliged to provide the Confidential Information;

(iii) to the extent necessary as required by law; and

(iv) if I notify the recipient of the Confidential Information that the information is confidential and is the subject of this Undertaking to the [Provider]; and

(c) any secretarial, administrative and support staff, who perform purely administrative tasks, and who assist me or any person referred to in paragraph 5(a) for the Approved Purpose.

6 I will establish and maintain security measures to safeguard the Confidential Information from unauthorised access, use, copying, reproduction or disclosure and will protect the Confidential Information using the same degree of care as a prudent person in my position would use to protect their own confidential information.

7 Except as required by law and subject to paragraph 10 below, within 14 days after whichever of the following first occurs:

(a) termination of this Undertaking;

(b) my ceasing to be employed or retained by [undertaking company] (provided that I continue to have access to the Confidential Information at that time); or

(c) my ceasing to be working for [undertaking company] in respect of the Approved Purposes (other than as a result of ceasing to be employed by [undertaking company]);

I will destroy or deliver to [Provider] the Confidential Information and any documents or things (or parts of documents or things), constituting, recording or containing any of the Confidential Information in my possession, custody, power or control other than electronic records stored in IT backup system that cannot be destroyed or deleted.

8 Nothing in this Undertaking shall impose an obligation upon me in respect of information:

(a) that is in the public domain; or

(b) that has been obtained by me otherwise than from [Provider] in relation to this Undertaking;

provided that the information has not been obtained by me by reason of, or in circumstances involving, any breach of this Undertaking, any other confidentiality undertaking in favour of [Provider] for the Approved purpose, or by any other unlawful means.

9 I acknowledge that damages may not be a sufficient remedy for any breach of this Undertaking and that [Provider] may be entitled to specific performance or injunctive relief (as appropriate) as a remedy for any breach or threatened breach of this Undertaking, in addition to any other remedies available to [Provider] at law or in equity.

10 The obligations of confidentiality imposed by this Undertaking survive the destruction or delivery to [Provider] of the Confidential Information pursuant to paragraph 7 above.

11 I acknowledge that this Undertaking is governed by the law in force in the State of [insert relevant state] and I agree to submit to the non-exclusive jurisdiction of the court of that place.

Signed: _____

Print name: _____

Dated: _____

Witness signature: _____

Witness name: _____

ATTACHMENT 1

Any document, or information in any document provided by [provider] to [undertaking company] which [provider] claims is confidential information for the purposes of this Undertaking.

ATTACHMENT 2

[Approved purpose(s)]

Schedule 7 – Suspension and Termination

7.1 The Access Provider may immediately suspend the supply of a Service or access to the Access Provider's Network, provided it notifies the Access Seeker where practicable and provides the Access Seeker with as much notice as is reasonably practicable:

a) during an Emergency; or

b) where in the reasonable opinion of the Access Provider, the supply of that Service or access to the Access Provider's Network may pose a threat to safety of persons, hazard to equipment, threat to Network operation, access, integrity or Network security or is likely to impede the activities of authorised persons responding to an Emergency;

c) where, in the reasonable opinion of the Access Provider, the Access Seeker's Network or equipment adversely affects or threatens to affect the normal operation of the Access Provider's Network or access to the Access Provider's Network or equipment (including for the avoidance of doubt, where the Access Seeker has delivered Prohibited Traffic onto the Access Provider's Network);

d) where an event set out in clauses 7.8(a) to (i) occurs

e) and is entitled to continue such suspension until (as the case requires) the relevant event or circumstance giving rise to the suspension has been remedied.

7.2 If:

a) the Access Seeker has failed to pay monies payable under this FAD;

b) a Court determines that (and the decision is not subject to an appeal) the Access Seeker's use of:

   a. its Facilities in connection with any Service supplied to it by the Access Provider;

   b. the Access Provider's Facilities or Network; or

   c. any Service supplied to it by the Access Providers,

   is in contravention of any law; or

c) the Access Seeker breaches a material obligation under this FAD (**Suspension Event**) and:

d) as soon as reasonably practicable after becoming aware of the Suspension Event, the Access Provider gives a written notice to the Access Seeker:

   i. citing this clause;

   ii. specifying the Suspension Event that has occurred;

iii. requiring the Access Seeker to institute remedial action (if any) in respect of that event; and

iv. specifying the action which may follow due to a failure to comply with the notice, (**Suspension Notice**) and:

e) the Access Seeker fails to institute remedial action as specified in the Suspension Notice within 10 Business Days after receiving the Suspension Notice (in this clause 7.2, the **Remedy Period**), the Access Provider may, by written notice given to the Access Seeker as soon as reasonably practicable after the expiry of the Remedy Period:

f) refuse to provide the Access Seeker with the Service:

i. of the kind in respect of which the Suspension Event has occurred; and

ii. a request for which is made by the Access Seeker after the date of the breach, until the remedial action specified in the Suspension Notice is completed or the Suspension Event otherwise ceases to exist; and

g) suspend the provision of the Service until the remedial action specified in the Suspension Notice is completed.

7.3 For the avoidance of doubt, subclause 7.2(a) does not apply to any monies payable that are the subject of a Billing Dispute that has been notified by the Access Seeker to the Access Provider in accordance with the Billing Dispute Procedures set out in this FAD.

7.4 In the case of a suspension pursuant to clause 7.2, the Access Provider must reconnect the Access Seeker to the Access Provider's Network and recommence the supply of the Service as soon as practicable after there no longer exists a reason for suspension and the Access Provider must do so subject to payment by the Access Seeker of the Access Provider's reasonable costs of suspension and reconnection.

7.5 If:

a) an Access Seeker ceases to be a carrier or carriage service provider; or

b) an Access Seeker ceases to carry on business for a period of more than 10 consecutive Business Days or

c) in the case of an Access Seeker, any of the reasonable grounds specified in subsection 152AR(9) of the CCA apply; or

d) an Access Seeker breaches a material obligation under this FAD, and:

i. that breach materially impairs or is likely to materially impair the ability of the Access Provider to deliver Listed Carriage Services to its customers; and

ii. the Access Provider has given a written notice to the first-mentioned party within 20 Business Days of becoming aware of the breach (**Breach Notice**); and

iii. the Access Seeker fails to institute remedial action as specified in the Breach Notice within 10 Business Days after receiving the Breach Notice (in this clause 7.5, the **Remedy Period**), or

e) the supply of the Service(s) to the Access Seeker has been suspended pursuant to the terms and conditions of this FAD for a period of three Months or more, the Access Provider may cease supply of the Service under this FAD by written notice given to the first-mentioned party at any time after becoming aware of the cessation, reasonable grounds or expiry of the Remedy Period specified in the Breach Notice (as the case may be).

7.5A If an Access Provider ceases to carry on business for a period of more than 10 consecutive Business Days, the other party may cease acquisition of the Service under this FAD by written notice given to the Access Provider at any time after becoming aware of the cessation.

7.6 A party must not give the other party both a Suspension Notice under clause 7.2 and a Breach Notice under clause 7.5 in respect of:

a) the same breach; or

b) different breaches that relate to or arise from the same act, omission or event or related acts, omissions or events;

except:

c) where a Suspension Notice has previously been given to the Access Seeker by the Access Provider in accordance with clause 7.2 in respect of a Suspension Event and the Suspension Event has not been rectified by the Access Seeker within the relevant Remedy Period specified in clause 7.2; and

d) where an Access Seeker has not rectified a Suspension Event, then notwithstanding clause 7.5(d)(ii), the time period for the purposes of clause 7.5(d)(ii) will be 20 Business Days from the expiry of the time available to remedy the Suspension Event.

7.7 For the avoidance of doubt, a party is not required to provide a Suspension Notice under clause 7.2 in respect of a breach before giving a Breach Notice in respect of that breach under clause 7.5.

7.8 Notwithstanding any other provision of this FAD, either Party may at any time immediately cease the supply of the Service under this FAD by giving written notice of termination to the other Party if:

a) an order is made or an effective resolution is passed for winding up or dissolution without winding up (otherwise than for the purposes of solvent reconstruction or amalgamation) of the other Party; or

b) a receiver, receiver and manager, official manager, controller, administrator (whether voluntary or otherwise), provisional liquidator, liquidator, or like official is appointed over the undertaking and property of the other Party; or

c) a holder of an encumbrance takes possession of the undertaking and property of the other party, or the other party enters or proposes to enter into any scheme of arrangement or any composition for the benefit of its creditors; or

d) the other party is or is likely to be unable to pay its debts as and when they fall due or is deemed to be unable to pay its debts pursuant to section 585 or any other section of the *Corporations Act 2001* (Cth); or

e) as a result of the operation of section 459F or any other section of the *Corporations Act 2001* (Cth), the other party is taken to have failed to comply with a statutory demand; or

f) a force majeure event substantially and adversely affecting the ability of a party to perform its obligations to the other party, continues for a period of three Months; or

g) the other party breaches any of the terms of any of its loans, security or like agreements or any lease or agreement relating to significant equipment used in conjunction with the business of that other party related to the supply of the Service under this FAD; or

h) the other party seeks or is granted protection from its creditors under any applicable legislation; or

i) anything analogous or having a substantially similar effect to any of the events specified above occurs in relation to the other party.

7.9 The cessation of the operation of this FAD:

a) does not operate as a waiver of any breach by a party of any of the provisions of this FAD; and

b) is without prejudice to any rights, liabilities or obligations of any party which have accrued up to the date of cessation.

7.10 Without prejudice to the parties' rights upon termination of the supply of the Service under this FAD, or expiry or revocation of this FAD, the Access Provider must refund to the Access Seeker a fair and equitable proportion of those sums paid under this FAD by the Access Seeker which are periodic in nature and have been paid for the Service:

a) for a period extending beyond the date on which the supply of the Service under this FAD terminates, or this FAD ceases to have effect, and/or,

b) as applicable, in respect of a Service which has been suspended for a period of 10 or more consecutive Business Days under Schedule 7 of this FAD, for the period extending

beyond that 10 Business Day suspension period to the extent the Service remains suspended under Schedule 7 of this FAD,

subject to any invoices or other amounts outstanding from the Access Seeker to the Access Provider. In the event of a dispute in relation to the calculation or quantum of a fair and equitable proportion, either party may refer the matter for dispute resolution in accordance with the dispute resolution procedures set out in Schedule 5 of this FAD.

Schedule 8 - Liability and Indemnity

8.1 Subject to clause 8.2, each Party's liability in respect of:

a) the 12 Month period commencing on the date of the first supply of the Service under this FAD is limited to the aggregate amount paid or payable by the Access Seeker to the Access Provider for the Service provided by the Access Provider in that initial 12 Month period;

b) any subsequent 12 Month period commencing on any anniversary of the date of the first supply of the Service under this FAD is limited to the aggregate amount paid or payable by the Access Seeker to the Access Provider for the Service provided by the Access Provider in the 12 Month period immediately prior to that anniversary.

For the purposes of this clause 8.1, Liability arises when the act or omission giving rise to the Liability occurs, not when any claim is made by a party under this FAD in connection with that Liability.

8.2 The liability limitation in clause 8.1 does not apply to the Access Seeker's liability to pay the Charges for the Service provided under this FAD, or the Parties' indemnification obligations under clauses 8.3 and 8.4.

8.3 Each Party indemnifies the other Party against all Loss arising from the death of, or personal injury to, a Representative of the other Party, where the death or personal injury arises from:

a) an act or omission that is intended to cause death or personal injury; or

b) a negligent act or omission;

by the first Party or by a Representative of the first Party.

8.4 Each Party indemnifies the other Party against all Loss arising from any loss of, or damage to, the property of the other party (or the property of a representative of the other Party), where the loss or damage arises from:

a) an act or omission that is intended to cause death or personal injury; or

b) a negligent act or omission;

by the first Party or by a Representative of the first Party.

8.5 Each Party indemnifies the other Party against all Loss arising from a claim by a third person against the Innocent Party to the extent that the claim relates to a negligent act or omission by the first Party or by a Representative of the first Party.

8.6 Subject to clauses 8.3 and 8.4, a Party has no Liability to the other Party for or in respect of

any consequential, special or indirect Loss or any loss of profits or data.

8.7 A Party has no Liability to the other Party for or in relation to any act or omission of, or any matter arising from or consequential upon any act or omission of, any end-user of a Party or any other third person who is not a Representative of a Party.

8.8 The Indemnifying Party is not obliged to indemnify the Innocent Party under this Schedule 8 to the extent that the liability the subject of the indemnity claim is caused or contributed to by:

a) a breach of this FAD;

b) an act intended to cause death, personal injury, or loss or damage to property; or

c) a negligent act or omission;

by the Innocent Party.

8.9 The Indemnifying Party is not obliged to indemnify the Innocent Party under this Schedule 8 or for in respect of a claim brought against the Innocent Party by an end-user of the Innocent Party, or a third person with whom the Innocent Party has a contractual relationship, to the extent that the Loss under such claim could have been excluded or reduced (regardless of whether such a Liability actually was excluded or reduced) by the Innocent Party in its contract with the end-user or third person.

8.10 The Innocent Party must take all reasonable steps to minimise the Loss it has suffered or is likely to suffer as a result of an event giving rise to an indemnity under this Schedule 8. If the Innocent Party does not take reasonable steps to minimise such Loss then the damages payable by the Indemnifying Party must be reduced as is appropriate in each case.

8.11 A Party's liability to the other Party for Loss of any kind arising out of the supply of the Service under this FAD or in connection with the relationship established by it is reduced to the extent (if any) that the other Party causes or contributes to the Loss. This reduction applies whether the first Party's liability is in contract, tort (including negligence), under statute or otherwise.

8.12 The Indemnifying Party must be given full conduct of the defence of any claim by a third party that is the subject of an indemnity under clause 8.3 or 8.4, including, subject to the Indemnifying Party first obtaining the written consent (which must not be unreasonably withheld) of the Innocent Party to the terms thereof, the settlement of such a claim.

8.13 Nothing in this Schedule 8 excludes or limits a Party's entitlement to damages under Part 5 of the Telecommunications (Consumer Protection and Service Standards) Act 1999.

Schedule 9 - Communication with end users

9.1 The Access Provider may communicate and deal with an Access Seeker's end-users as expressly provided in clauses 9.2 to 9.4 and as otherwise permitted by law.

9.2 Subject to clause 9.3, the Access Provider may communicate and deal with the Access Seeker's end-users:

a) in relation to goods and services which the Access Provider currently supplies or previously supplied to the end-user provided that the Access Provider only communicates and deals through its retail division;

b) as members of the general public or a part of the general public or members of a particular class of recipients of carriage or other services;

c) where the Access Provider performs wholesale operations which require communications or dealings with such end-users, to the extent necessary to carry out such operations;

d) in a manner or in circumstances agreed by the Parties; or

e) in or in connection with an Emergency, to the extent it reasonably believes necessary to protect the safety of persons or property.

9.3 If:

a) an end-user of the Access Seeker initiates a communication with the Access Provider in relation to goods and/or services supplied to that end-user by the Access Seeker, the Access Provider must advise the end-user that they should discuss any matter concerning the Access Seeker's goods and/or services with the Access Seeker and must not engage in any form of marketing or discussion of the Access Provider's goods and/or services;

b) an end-user of the Access Seeker initiates a communication with the Access Provider in relation to goods and/or services supplied to that end-user by the Access Provider, the Access Provider may engage in any form of marketing or discussion of the Access Provider's goods and/or services; and

c) an end-user of the Access Seeker initiates a communication with the Access Provider in relation to goods and/or services supplied to that end-user by the Access Provider and the Access Seeker, the Access Provider must advise the end-user that they should discuss any matter concerning the Access Seeker's goods and/or services, with the Access Seeker, but may otherwise engage in any form of marketing or discussion of the Access Provider's goods and/or services.

9.4 Where a Party communicates with the end-user of the other Party, that first mentioned Party must, where practicable, make and maintain records of that communication with the other Party's end-user in circumstances where that communication discusses anything concerning the other Party's goods or services with the end-user. For the avoidance of

doubt, the obligation in this paragraph does not include a requirement to provide such records to the other Party (however such a requirement may arise pursuant to any dispute resolution procedure).

9.5 For the purposes of clauses 9.2 to 9.4, a "**communication**" shall include any form of communication, including without limitation telephone discussions and correspondence.

9.6 Neither Party may represent that:

a) it has any special relationship with or special arrangements with the other Party, including through the use of the other party's trade marks, service marks, logos or branding unless otherwise agreed;

b) there are no consequences for an end-user when an end-user signs an authority to transfer their accounts or services;

c) a Service has any characteristics or functionality other than as specified in a relevant standard form of agreement or the service description for the Service or in any specifications, collateral or brochures published in relation to the Service; or

d) the other Party participates in the provision of the first mentioned Party's services, provided that a Party may, upon enquiry by an end-user, inform the end-user of the nature of its relationship with the other Party.

9.7 Where a Party communicates with an end-user of either Party, the first mentioned Party shall ensure that it does not attribute to the other Party:

a) blame for a Fault or other circumstance; or

b) the need for maintenance of a Network; or

c) the suspension of a Service,

provided that this requirement does not require a Party to engage in unethical, misleading or deceptive conduct.

9.8 This Schedule 9 shall be subject to any applicable industry standard made by the ACMA pursuant to Part 6 of the *Telecommunications Act 1997* (Cth) and any applicable industry code registered pursuant to Part 6 of the *Telecommunications Act 1997* (Cth) in relation to communications or dealings with end-users.

Schedule 10 - Network modernisation and upgrade notice periods

Notice to be provided where Access Provider undertakes a Major Network Modernisation and Upgrade

10.1 Except where the parties agree otherwise, the Access Provider may make a Major Network Modernisation and Upgrade by:

a) providing the Access Seeker with notices in writing in accordance with clauses 10.2 and 10.4 (**General Notification**) and clauses 10.3 and 10.5 (**Individual Notification)**; and

b) consulting with the Access Seeker, and negotiating in good faith, to address any reasonable concerns of the Access Seeker, in relation to the Major Network Modernisation and Upgrade.

This clause 10.1 does not apply to an Emergency Network Modernisation and Upgrade.

10.2 The period of notices given under a General Notification provided by the Access Provider to the Access Seeker:

a) must be an Equivalent Period of Notice; and

b) in any event, must not be less than 30 weeks before the Major Network Modernisation and Upgrade is scheduled to take effect.

10.3 An Individual Notification must be provided by the Access Provider to the Access Seeker as soon as practicable after the General Notification, taking account of all the circumstances of the Major Network Modernisation and Upgrade.

Information to be provided in the notices

10.4 A General Notification must include a general description of the proposed Major Network Modernisation and Upgrade, including the indicative timing for the implementation of the Major Network Modernisation and Upgrade.

10.5 An Individual Notification must include the following information in addition to the information provided in the relevant General Notification:

a) the anticipated commencement date for implementing the Major Network Modernisation and Upgrade

b) the anticipated amount of time it will take to implement the Major Network Modernisation and Upgrade;

c) details of the Access Seeker's activated Services, or Services in the process of being activated at the date of the notice, that are likely to be affected by the Major Network

Modernisation and Upgrade;

d) the likely action required by the Access Seeker as a result of the Major Network Modernisation and Upgrade (including the possible impact of the Major Network Modernisation and Upgrade upon the Access Seeker's Service); and

e) details of who the Access Seeker may contact to obtain further information about the Major Network Modernisation and Upgrade.

10.6 An Individual Notification only needs to be given where a Service has been activated or the Access Provider is in the process of activating a service as at the date of the Individual Notification, and:

a) the Major Network Modernisation and Upgrade will require the Access Seeker to take particular action in order to continue to use the Service; or

b) the Major Network Modernisation and Upgrade will result in the Service no longer being supplied or the Service being suspended for a period of no less than 20 Business Days.

10.7 Where the Access Provider has provided the Access Seeker with an Individual Notification, the Access Provider must provide the Access Seeker with:

a) updates about the Major Network Modernisation and Upgrade covered by the notice, including:

i. any update or change to the information provided in the Individual Notification;

ii. any new information available at the time of the update about:

1. how the Access Seeker may be impacted by the Major Network Modernisation and Upgrade; and

2. what steps the Access Seeker will be required to take to facilitate the Major Network Modernisation and Upgrade.

10.8 The updates referred to in subclause 10.7(a) must be provided regularly (which is not required to be any more frequently than Monthly) after the Individual Notification.

Emergency Network Modernisation and Upgrade

10.9 In the event of an Emergency, the Access Provider may conduct an Emergency Network Modernisation and Upgrade, and

a) must use its best endeavours to provide the Access Seeker with an Individual Notification prior to the Emergency Network Modernisation and Upgrade being implemented; or

b) where it is not practicable for prior notice to be given, the Access Provider must provide

the Access Seeker with an Individual Notification as soon as reasonably practicable after the Emergency Network Modernisation and Upgrade is implemented.

Negotiations in good faith

10.10 Except where the parties agree otherwise, the Access Provider must not commence implementation of a Major Network Modernisation and Upgrade unless:

a) it complies with clauses 10.1 to 10.8; and

b) it has consulted with the Access Seeker and has negotiated in good faith, and addressed the reasonable concerns of the Access Seeker in relation to the Major Network Modernisation and Upgrade.

10.11 Notwithstanding any continuing negotiations between the Access Provider and the Access Seeker pursuant to clauses 10.1 and 10.10, if the Access Provider has complied with this Schedule 10, a Major Network Modernisation and Upgrade may proceed within a reasonable time period, taking account of all the circumstances, after an Individual Notification has been issued, unless both parties agree otherwise.

10.12 In attempting to reach a mutually acceptable resolution in relation to a variation under clauses 10.1 and 10.10, the parties must recognise any need that the Access Provider may have to ensure that the specifications for the Services which the Access Providers supplies to more than one of its customers need to be consistent (including, without limitation having regard to the incorporation by the Access Provider of any relevant international standards).

Dispute Resolution

10.13 If a dispute arises in relation to a Major Network Modernisation and Upgrade, then the matter may be resolved in accordance with the dispute resolution procedures set out in Schedule 5 of this FAD.

Miscellaneous

10.14 A requirement for the Access Provider to provide information in written form includes provision of that information in electronic form.

10.15 Any information provided by the Access Provider in electronic form must be in a text-searchable and readable format.

Schedule 11 - Changes to operating manuals

11.1 Operational documents concerning the Service that have been provided to the Access Seeker by the Access Provider, or should be provided because they affect the supply of the Service including the technical and operational quality of the Service, or affect the rights and/or obligations of an Access Seeker, may be amended:

(a) by the Access Provider from time to time to implement or reflect a change to its standard processes, subject to:

i. giving 20 Business Days prior written notice to the Access Seeker including a documented list of all amendments, and a marked-up copy of the proposed new operational document that clearly identifies all amendments; and

ii. allowing the Access Seeker to provide comments during the notice period on the proposed amendments, and where provided, the Access Provider having reasonably considered those comments and implemented any such comments where the Access Provider considers it reasonable to do so; and

(b) otherwise, by agreement of the parties.

11.1A Operational documents referred to in this clause include ordering and provisioning manuals, fault management procedures and operational manuals.

11.1B For the purposes of 11.1(a)(ii), an Access Provider in considering whether it is reasonable for it to implement any comments may consider whether the changes reflect all Access Seeker and the Access Provider's interests.

11.2 Upon completion of the process set out in clause 11.1, the Access Provider must notify the Access Seeker and make available to the Access Seeker a copy of the new operational document

11.3 Where operational documents concerning the Service are amended in accordance with clause 11.1 and the Access Seeker believes that the amendments:

a) are unreasonable; or

b) deprive the Access Seeker of a fundamental part of the bargain it obtained under this FAD;

the Access Seeker may seek to have the matter resolved in accordance with the dispute resolution procedures set out in Schedule 5 of this FAD.

Schedule 12 – Recourse to regulated terms

12.1 Unless otherwise agreed by the parties, if

(a) an Access Agreement between an Access Provider and an Access Seeker is in force and the Access Agreement relates to access to the same Service which this FAD relates to;

(b) the ACCC makes or varies a Regulatory Determination in relation to the Service and the new Regulatory Determination or the variation deals with a matter other than price; and

(c) a party to the Access Agreement proposes, by written notice, to the other party to vary the Access Agreement to reflect the terms and conditions in the new or varied Regulatory Determination about that matter,

each party must:

(i) consider the proposed changes in good faith; and

(ii) negotiate the proposed changes in good faith for a reasonable period not exceeding 20 Business days unless a longer period of time is agreed in writing, including, if requested by the other party, to meet with the other party to discuss the other party's proposal.

12.1A If the process under clause 12.1 does not result in a variation to the Access Agreement, this is not a Non-Billing Dispute or Billing Dispute for the purposes of this FAD.

12.2 Unless otherwise agreed by the parties, if

(a) an Access Agreement between an Access Provider and an Access Seeker is in force and the Access Agreement relates to access to the same Service which this FAD relates to; and

(b) the ACCC makes or varies a Regulatory Determination in relation to the Service and the new Regulatory Determination or the variation deals with a matter other than price;

either party may terminate the Access Agreement in respect of that Service (but only in respect of that Service) by providing the other party with a written notice, and termination will take effect on the expiry of the period specified in the notice, which must be no less than 120 Business Days after the day that notice is provided.