



ACCESS DETERMINATION FOR THE MOBILE TERMINATING ACCESS SERVICE

**SUBMISSION TO THE
AUSTRALIAN COMPETITION AND
CONSUMER COMMISSION**



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Executive summary

Vodafone Hutchison Australia welcomes the opportunity to contribute to the next stage of the Australian Competition and Consumer Commission's (ACCC) *Public inquiry into the access determination for the Domestic Mobile Terminating Access Service (MTAS)*. The Position and Consultation Paper provides clarity on the ACCC's views and work program for interested stakeholders.

The MTAS and consumer welfare

Australian consumers are not benefiting from the ACCC's regulation of the MTAS. This is largely due to the lack of pass-through of past MTAS reductions to the retail price of fixed-to-mobile (FTM) calls. There is no evidence this trend will change in the future. The fixed voice services market is shrinking and the volume of fixed call origination minutes is in rapid decline. Many Australian consumers are abandoning their fixed line phones and the households that are retaining the service are using their phones less. At the same time, there has been a trend toward the use of unlimited calling plans in the fixed line services market. These factors mean the benefit to consumers of fixed voice services from further reductions to the already low MTAS rate is likely to be negligible. The lack of FTM pass through and the lack of a quantitative assessment of the benefits to consumers in the fixed services industry are two of the major unresolved issues in the Public Inquiry.

The impact of the MTAS on competition in the mobile services industry is not well understood. MTAS is both a source of revenue and a cost. [REDACTED]

[REDACTED].] For this reason, reductions in the MTAS rate may adversely impact consumers in the mobile services industry as MNOs seek to recoup net MTAS-related revenues from other sources or reduce their level of investment to offset the loss of net MTAS-related revenue if the ACCC decides to reduce the MTAS rate in circumstances where it has decided to maintain the fixed termination rate.

The absence of an economic framework for assessing the various impacts of the MTAS on the fixed and mobile services market means that the ACCC appears predisposed to a course of action (i.e., lowering MTAS rates) that may be detrimental to the LTIE. It is critical that the ACCC adopt a principles and evidence-based approach to assessing the welfare impacts of changes to the MTAS prior to releasing its draft decision.

High FTAS prices require urgent action

The ACCC must take urgent action to remedy deficiencies in the regulation of the Fixed Terminating Access Service (FTAS). The FTAS price was rolled-over without due consideration to major and obvious structural changes which are prima facie likely to have substantially reduced the underlying costs of delivering the service. The Australian FTAS rate (0.86 cents per minute (cpm)) vastly exceeds many European benchmarks. The FTAS rate in 28 European countries is roughly one quarter of the Australian rate (less than 0.23 cpm), with an average rate across these countries which is 15% of the Australian rate (0.13 cpm). This provides strong evidence that the current Australian FTAS price is likely to be set at a level that is well above the efficient cost of supplying the service. We find it indefensible that the ACCC has decided to maintain FTAS rates in light of this.

Furthermore, the ACCC's approaches to the MTAS and the FTAS are fundamentally inconsistent. For instance, the ACCC has cited the shift from voice towards data use and the transition to more efficient technologies as relevant to its decision to consider "more appropriate pricing options" for the MTAS.¹ Both these factors are also relevant, if not even more relevant, to the provision of fixed line services and yet the ACCC came to opposite conclusions with MTAS and FTAS and it did not pursue new pricing for the FTAS.

Australia has the sixth highest regulated rates for both the FTAS and the MTAS when compared to 37 European countries.² However, this fact is given different weight across the ACCC's MTAS and fixed line service inquiries. In the case of the MTAS inquiry, Australia's relatively high MTAS rate is seen by the ACCC as a reason to develop a new cost estimate with the ACCC stating: "Since the last MTAS FAD inquiry a general trend of decline in prices for mobile termination services around the world... has continued. This suggests the cost of providing the mobile termination services has also continued to decline".³ By comparison, the ACCC did not examine international trends in the price of fixed termination services in its review of fixed line services.

The ACCC also appears to weight the interests of access seekers differently across its inquiries. In the case of the FTAS inquiry, the ACCC stated that "it is not appropriate to review FTAS pricing in isolation of the pricing of other declared fixed line services provided over Telstra's network... the review of pricing of one declared service whilst maintaining the pricing for all other services risks unduly advantaging some access seekers over others".⁴ We find it bewildering that the ACCC is preoccupied by presumed modest differences in the position of different access seekers, yet has chosen to ignore clear evidence of undue advantage to certain access providers/seekers when it comes to the FTAS and the MTAS. It is clear the ACCC's decisions will have the unfortunate effect of selecting winners and losers based on defective reasoning. [REDACTED]

There are negative long-term consequences from leaving the FTAS at its current level. The ACCC's FTAS rate appears to be anchoring and perpetuating inefficient, legacy PSTN pricing despite the investment in efficient, new NBN-related technologies which bring a fundamental transformation in circuit-switched voice to software-based VoIP packet-switched voice with negligible incremental cost for termination of incremental minutes. [REDACTED]. An inefficiently high FTAS price reduces the scope for price-based competition at the retail level and may deter entry into the fixed voice services market. Both factors have a detrimental impact on competition during the NBN migration.

The ACCC's claim that the NBN creates an extraordinary set of circumstances that warrants holding regulatory prices constant for legacy fixed line services is illogical and at the very least invalid for the FTAS. As the ACCC acknowledges, the FTAS is supposed to be technology-neutral and applies to the termination of calls to a geographic number regardless of whether it is provided over the legacy copper network, the NBN or other fixed line networks.⁵ The arrangements for fixed voice services do not rely on the NBN for interconnection so it is reasonable for the ACCC to develop a cost estimate for the FTAS.

¹ ACCC (2019), *Public inquiry on the access determination for the Domestic Mobile Terminating Access Service*, Position and Consultation Paper, 18 December, p18.

² Body of European Regulators for Electronic Communications (BEREC) 2019, *Termination rates at the European level: January*, 13 June.

³ ACCC (2019), *Public inquiry on the access determination for the Domestic Mobile Terminating Access Service*, Discussion Paper, August, p11.

⁴ ACCC (2019), *Inquiry into final access determinations for fixed line services*, Final decision, November, p16.

⁵ ACCC (2019), *Inquiry into final access determinations for fixed line services*, Final decision, November, p16.

We call on the ACCC to urgently commence a review of FTAS pricing in a stand-alone inquiry or as part of a holistic investigation into the MTAS and the FTAS. The ACCC must remove the advantages that have been unduly created for certain access providers / seekers through its different treatments of the MTAS and the FTAS. The NBN migration is not a reason for delay, it is a substantial change which drives a powerful reason for action. The NBN migration is precisely when the ACCC needs to be taking regulatory steps that promote competition in the fixed voice services market because of the heightened propensity for customers to switch providers during this period. It is therefore in the long-term interest of end-users (**LTIE**) for a review of the FTAS to commence now.

Estimating the cost of the MTAS

We are disappointed by the ACCC's decision to pursue an international benchmarking exercise rather than develop a cost model to estimate the cost of the MTAS in Australia or roll over the MTAS rate to ensure consistency of approach between MTAS and FTAS. It is very odd that international benchmarking reveals a powerful indication that Australia's FTAS rates are too high, yet the ACCC ignores that indication, chooses to focus instead on MTAS, and then chooses an international benchmarking approach to determine MTAS prices. If the ACCC considers changes to the MTAS are likely to have a material impact on the LTIE then it ought to develop a model to accurately estimate its costs. That said, we are pleased with the steps the ACCC and its consultant, Analysys Mason, have taken to provide information on the proposed methodology for the international benchmarking exercise.

The international benchmarking exercise proposes to use a small, "opportunity sample" of nine countries. This creates two risks – (i) there might be an unknown bias in the sample merely because the models were selected on the basis of their availability (as distinct from being selected as part of a random sample); and (ii) the small dataset is susceptible to high variance – that is, the output is highly dependent on the set of countries selected in the sample and could vary significantly if it were possible to choose a different set of nine countries. There are validation steps that can be implemented to address the latter issue (see **section 3.1**) however the former issue is more difficult to detect and address.

To develop a credible estimate for the cost range of the MTAS, there are at least three areas in the benchmarking exercise that warrant close scrutiny by the ACCC and Analysys Mason:

- **Geography:** The impacts of Australia's geography on costs extend beyond merely scaling the models for Australia's population and area. For instance, commuting patterns increase expected demand in certain geotypes. In addition, Australia's vast geography impacts the mix of transmission solutions adopted by Mobile Network Operators (**MNO**). It is important that both these effects are properly reflected by the ACCC in determining the benchmark outputs. The proposed methodology did not specify the geographic area of the network that will be used for the hypothetically efficient operator – this is a critical issue as there are large differences in the geographic coverage provided by Australia's mobile networks;
- **Currency:** The general approach of converting costs using either market or Purchasing Power Parity (**PPP**)-adjusted exchange rates will not capture specific structural cost drivers in the Australian market. There are several areas that warrant a specific examination of costs including transmission, site deployment costs, the impact of very specific and recent national security requirements which have imposed unique costs upon Australian operators, and infrastructure costs associated with natural disasters.
- **Spectrum holdings:** The treatment of Australia's spectrum holdings requires further consideration in the methodology. Australia has geographically fragmented spectrum holdings. It is not appropriate to assume nation-wide spectrum holdings if the ACCC intends to determine an

estimate for the cost of the MTAS in Australia. There are acute shortages of spectrum in regional areas as evidenced by the high prices that MNOs have been willing to pay for regional spectrum Australia at recent auctions. At the same time, each of the MNOs have extensive metropolitan spectrum holdings. The differences between metropolitan and regional spectrum holdings are so large that it is disingenuous to group these areas together and make “conservative” assumptions to engineer a nation-wide spectrum holding.

The ACCC ought to develop options for establishing a price point for the MTAS prior to receiving Analysys Mason’s recommendation on the cost range for the MTAS. The Position and Consultation Paper makes a vague statement that the availability of information for the purpose of the adjustment process could influence the ACCC’s decision on the price point. We are unsure what this means and, given several statements that suggest the ACCC is predisposed toward reducing the MTAS rate, we are concerned about how the cost range will be used if it does not produce the results expected by the ACCC.



1 Unresolved issues in the Public Inquiry

The Position and Consultation Paper provided welcome clarity on the ACCC's views and its proposed method for undertaking the international benchmarking exercise. The Paper has, however, left several critical issues in the consideration of the MTAS unresolved and it will be important for the ACCC to further consider these matters prior to making its draft decision.

There are three areas that are critical to determine whether changes to the MTAS will promote the LTIE:

- assessing the lack of FTM pass-through and other relevant trends in the fixed voice services markets;
- assessing the welfare impacts from changes in the MTAS; and
- ensuring consistency between the ACCC's reasons for not developing a cost model and the implementation of the international benchmarking exercise.

1.1 State of competition and relevant market trends

The Position and Consultation Paper's makes the assertion that a reduction in the MTAS price will create an environment that enables more competitive retail offers in downstream markets. However, several trends in the fixed services market suggest this is unlikely to be the case:

- There has been a lack of pass-through from past MTAS reductions.
- The size of the fixed voice services market has declined rapidly and will continue to decline, reducing prospects that future MTAS reductions will promote competition.
- The MTAS has become a less relevant cost driver for FNOs.

Lack of FTM pass-through

The lack of FTM pass-through is one of the most critical issues in any regulatory consideration of the MTAS. In the absence of full FTM pass through, it is possible that MTAS reductions may not promote the LTIE. Several reports commissioned by both the ACCC and telecommunications companies have highlighted issues with the lack of FTM pass-through and the corresponding implications this has for consumer welfare.⁶ Hence, we are deeply concerned that the Position and the Consultation Paper mentions "the problem of estimating the extent of any pass through" yet it does not make any attempt to investigate the issue.⁷

⁶ See for example:

Analysys (2009), *Regulatory treatment of fixed-to-mobile passthrough*, Report for the ACCC, October.

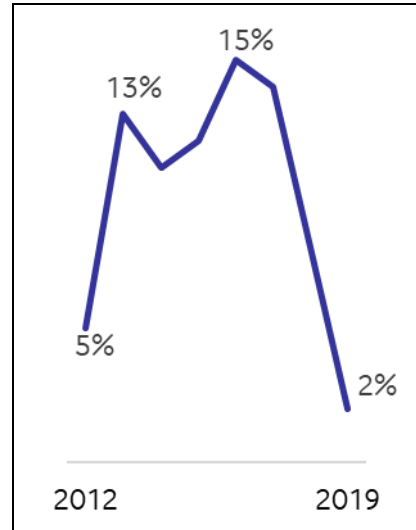
Covec (2011), *Mobile termination welfare analysis*, Report of Optus, March.

Frontier Economics (2011), *Welfare implications of reduced mobile termination rates*, Report for VHA, July.

⁷ ACCC (2019), *Public Inquiry on the access determination for the Domestic Mobile Terminating Access Service*, Position and Consultation Paper, December, p20.

Lack of FTM pass-through is an area where the ACCC has been unable to reconcile its theory that MTAS reductions will promote competition in the market in which FTM calls are supplied against evidence indicating persistent high margins on FTM calls. High margins during a sustained period of reducing market demand are not consistent with the economic outcomes expected in a competitive market; it suggests the firm is exercising pricing power. The Position and Consultation Paper avoids this issue by suggesting that “because FTM calls are sold as part of fixed line services, service providers can choose to pass on savings from reduced MTAS prices in many ways, some of which will not be transparent”. This observation is problematic as there is no evidence that such behaviour is occurring and the data that is available demonstrates Telstra’s capacity to generate super-normal profits across the bundle of its retail PSTN services. Telstra’s data shows economic returns on the bundle of retail PSTN services as high as 15% (see **Figure 1**), and persistently above the return expected in a competitive market for much of the most recent regulatory period. The latter is, in part evidenced by the ACCC’s decision to set a nominal WACC of 6% for the fixed services Final Access Determination in 2015.⁸

Figure 1: Telstra’s economic return for Retail PSTN services



Source: ACCC TEM reports (various years).

The ACCC should also be cautious in assessing the implications from Telstra’s low economic return in 2019. The low return suggests that it might have less scope to pass on any potential future MTAS reductions to consumers as the company’s earnings now appear to be below the expected level of return.

The lack of FTM pass-through warrants a thorough examination of the linkages between the MTAS rate and the fixed services market by the ACCC. This is imperative as it will inform the ACCC as to whether changes to the MTAS rate are likely to promote the LTIE.

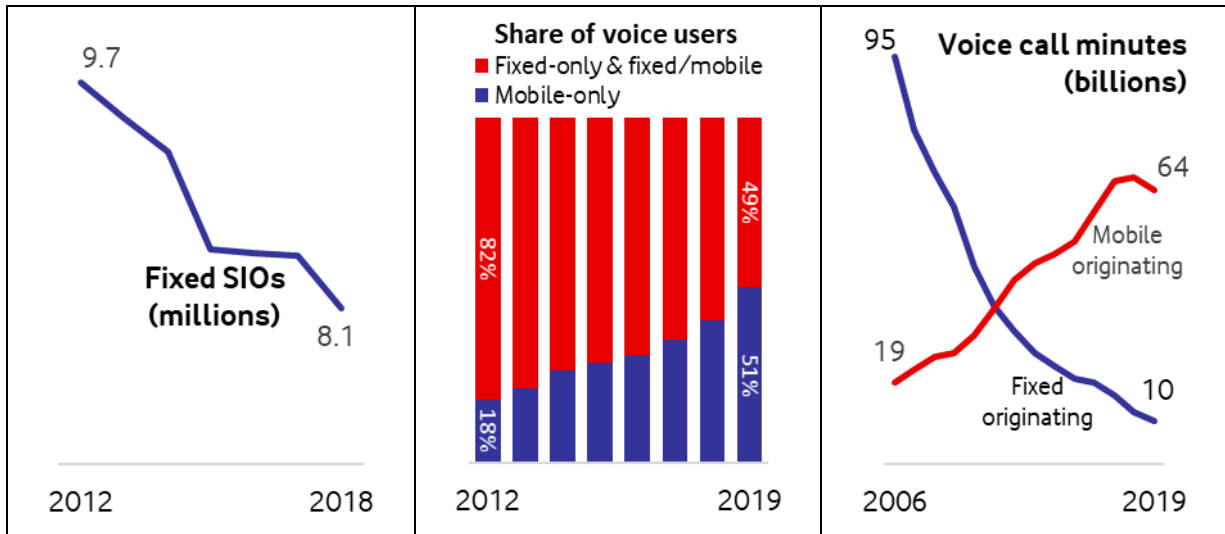
The declining use of fixed line services

Over the past two decades there has been a dramatic decline in the use of fixed line services. There were 1.6 million fewer households with fixed line phones in 2018 compared to 2012. Today more than half the adult population are mobile-only for voice calls. Fixed originating call volumes have plummeted from 95 billion minutes in 2006 to 10 billion minutes in 2019 (see **Panel 1**). The decline in fixed originating minutes has not been completely offset by the growth in mobile originating minutes. Indeed, mobile originating voice minutes plateaued in 2018 and declined in 2019. The ACCC has attributed this to “an increasing preference for over the top (OTT) communications services (e.g. WhatsApp, iMessage and Facebook Messenger), either voice or message based over traditional voice services”.⁹ The rise of non-traditional voice services is also likely to adversely impact the use of fixed line services.

⁸ ACCC (2015), *Public inquiry into final access determinations for fixed line services*, Final decision, October, p67.

⁹ ACCC (2019), *Communications report 2018-19*, p7.

Panel 1: The declining use of traditional fixed voice services in Australia



Note: Mobile-only user data for 2019 sourced from the ACCC Communications Market report, all other years sourced from ACMA. SIO is an acronym for Service in Operation. Source: ACCC Communications Market Reports (various years), ACMA Communications reports (various years).

The shrinking fixed voice services market is relevant to the ACCC’s consideration of the MTAS. The macro-environment data on fixed voice services indicates the market is in decline. In this context, FNOs are unlikely to develop aggressive marketing strategies that stimulate competition. Moreover, consumer inertia is high in the fixed voice services market, which means consumers are less likely to switch providers even if lower priced services are available. The consumer switching that does occur is likely to be linked to competition in the fixed broadband market and the subsequent bundling of fixed voice services with a broadband plan. This means that the prospect of price-based competition emerging in the fixed voice market is low. Changes in the MTAS rate will not stimulate any change in the macro-environmental settings of the fixed services market. Therefore, the impact from further reductions in the MTAS rate on competition in the fixed voice services market is likely to be negligible.

Further investigation into the nature of competition in the fixed voice services market is required before the ACCC can assert that changes in the MTAS rate will promote competition in the fixed voice services market.

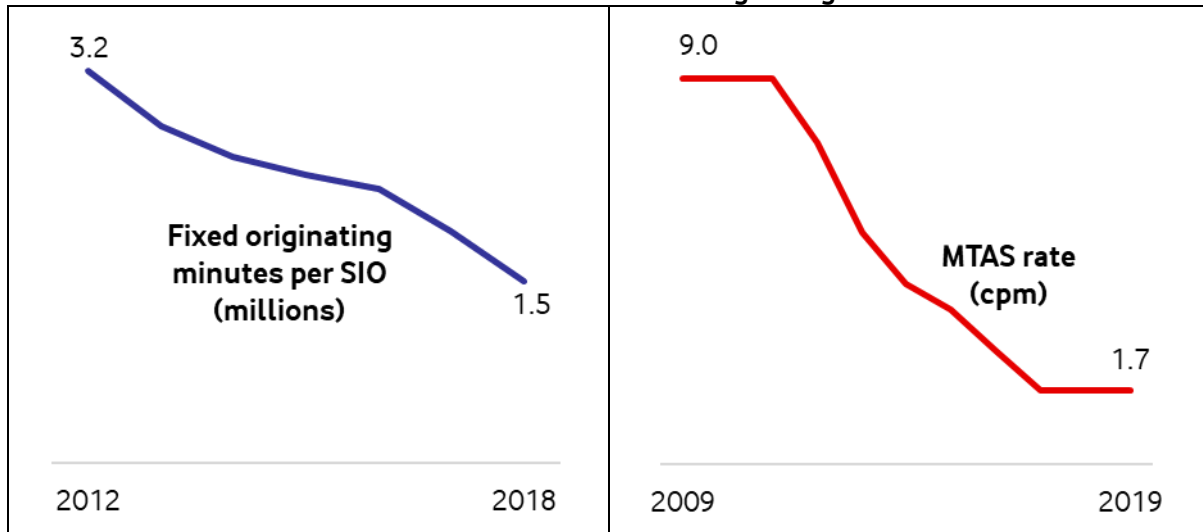
MTAS is a less relevant cost driver for FNOs and MVNOs

The relevance of the MTAS as cost driver in the fixed market services has diminished. There has been a sharp decline in the use of fixed line services from households that have chosen to retain their phone. Fixed originating minutes per SIO has halved, falling from 3.2 million in 2012 to 1.5 million in 2018. During a similar period, the MTAS rate has fallen by 81 per cent from 9 cpm at the end of 2011 to 1.7 cpm in 2018 (see **Panel 1** **Panel 2**).

Part of the reason for the decline in fixed originating volumes might be due to ‘multi-homing’ by consumers.¹⁰ For instance, consumers have a choice of making call with a mobile phone or a fixed line phone in their home and may opt to use their mobile phone even if a fixed line phone is available. Today, consumers also use over-the-top voice services and non-verbal communications platforms to connect with other people. The normalisation of this behaviour is likely to be irreversible and has important implications for the ACCC’s assessment of future FTM calling behaviour.

¹⁰ Single-homing is where consumers rely on one platform (e.g., fixed line phone). Multi-homing is where consumers use multiple platforms (e.g., fixed line phone, mobile phone and/or over-the-top voice service).

Panel 2: Both the MTAS rate and the used of fixed originating minutes have declined



Sources: Vodafone, ACCC Communications Market reports and the Position and Consultation Paper.

There is less capacity for future reductions in the MTAS rate to impact retail pricing in the fixed services market. With significant declines in both the volume of fixed originating call minutes and the unit cost of the MTAS, the MTAS is now less relevant to competition in the fixed voice services market than it was when the ACCC last undertook its FAD inquiry in 2014. This has two implications for the Public Inquiry: (i) it means that there is likely to be less capacity for FNOs to pass-through the benefits of the future MTAS reductions in other parts of the fixed services bundle; and (ii) an assessment of the likeliness of pass-through of future MTAS reductions directly to retail FTM prices is more relevant than it was in past access determination (and pricing principle) inquiries.

It is unreasonable to use unsubstantiated, hypothetical benefits in the MVNO market to support the ACCC's case for regulatory action on the MTAS. Changes in the MTAS rate are unlikely to fundamentally alter MVNOs ability to compete in downstream markets. The Position and Consultation's assessment of the MTAS on MVNOs is anecdotal and appears overly reliant on a single MVNO's submission.

1.2 Negligible benefits for fixed consumers

In our original submission, we noted that the benefits of further MTAS reductions (from their already low levels) were likely to be negligible due to the lack of FTM pass-through and the increasing prevalence of unlimited call plans.¹¹ The Position and Consultation Paper refutes this assertion by stating that the MTAS is likely to have a significant impact on small fixed line operators. However the small fixed line operator cited in the Position and Consultation Paper, MNF Group, already provides unlimited FTM calls on many plans (as noted by the Paper) and these plans start from \$20 per month.¹² Hence, we reiterate our position that MTAS is unlikely to lead to any direct impact on the market in which FTM calls are supplied and the indirect impacts are likely to be negligible for fixed line consumers.

¹¹ VHA (2019), *Mobile Terminating Access Service*, Submission to the ACCC, p17.

¹² See <https://www.mynetfone.com.au/Residential/Home-Phone/Plans>.

The consumer welfare implications of MTAS reductions need to be more fully explored by the ACCC. Past analysis has indicated adverse consumer welfare outcomes may occur from MTAS reductions due to the presence of a 'waterbed' effect,¹³ or due to a reduction in the level of investment. The 'waterbed effect' refers to the decrease in a MNO's ability to compete for subscribers due to reduced marginal revenues caused by reductions in MTAS rates. Our expectation is that the impact of any 'waterbed' effect (or reduced investment) is likely to be modest due to declining fixed originating volumes, which is consistent with our expectation that there are negligible benefits from further MTAS reductions for fixed line consumers. Nonetheless, overall welfare might be lower from further MTAS reductions due to the impact it has on mobile consumers, investment and competition.

The ACCC ought to investigate the cross-market welfare impacts of changes in the MTAS rate for both the fixed and mobile services market. We are concerned that MTAS reductions have had an unacknowledged negative impact on consumer welfare by reducing the dimensions of mobile services competition, and by failing to create incentives for the timely deployment of quality-of-service improvements (e.g., HD voice and VoLTE) to interconnection arrangements. These matters ought to be more fully explored by the ACCC using a quantitative economic framework as should the relationship between changes in the MTAS rate and industry investment levels. The negligible benefits for fixed voice consumers mean that there are serious doubts that future MTAS reductions will enhance overall economic welfare and promote the LTIE.

1.3 Cost estimation options

Vodafone does not support the ACCC's decision to use international benchmarking to estimate the cost of the MTAS in Australia. The ACCC's reliance on international benchmarking might fulfil its legislative requirement to consider the direct costs of supplying the MTAS but we are not convinced that it duly considers the legitimate business interests of domestic suppliers of the MTAS. Specifically, international benchmarking is defective at taking into account factors that are relevant to the deployment of mobile networks in Australia.

The Position and Consultation Paper identifies several reasons for the ACCC's preference to use international benchmarking rather than develop a forward-looking cost model. The Paper suggests that "any forward looking cost model should incorporate the most efficient technology to provide the service, and specifically, should include 5G technology".¹⁴ However, the Paper indicated that this would be difficult to do, and that it was not justifiable to "invest the time and resources in developing a cost model that does not incorporate the use of 5G technology".¹⁵ Yet, the international benchmarking exercise will only consider 3G and 4G technologies. The ACCC's consultant, Analysys Mason, states that "only 3G and 4G technologies are relevant to the forward-looking costs of mobile termination in Australia".¹⁶ Given the international benchmarking exercise has been quick to dismiss the relevance of 5G, it is unclear why the ACCC considers it reasonable to reject the use of a cost model on the basis 5G technologies are difficult to model.

¹³ For example:

Valletti, T. and Genakos, C. (2015), 'Evaluating a Decade of Mobile Termination Rate Regulation', *The Economic Journal*, Vol 125, No. 586, August, pp. F31-F48.

Frontier Economics (2011), *Welfare implications of reduced mobile termination rates*, Report for VHA, July.

¹⁴ ACCC (2019), *Public inquiry on the access determination for the Domestic Mobile Terminating Access Service*, Position and Consultation Paper, p22.

¹⁵ Ibid.

¹⁶ Analysys Mason (2019), *Approach to benchmarking the cost of providing MTAS in Australia*, 13 December, p7.

We are also unclear why the ACCC has formed the view that it does “not consider that this FAD inquiry is the most appropriate time to develop a cost model”.¹⁷ As the ACCC has noted of the mobile services industry: “the pace of technological change is more rapid than in the fixed line services market”.¹⁸ The time between the introduction of new mobile technologies is around eight years (see **Table 1**). If the ACCC does not develop a cost model incorporating 5G technology now it is unlikely to consider it appropriate to do so in five years as 6G technology could be on the horizon by that point in time.

Table 1: Year mobile technologies introduced to Australia

Generation of mobile technology	Year of introduction
1G (AMPS)	1987
2G (GSM)	1993
3G (W-CDMA)	2003
4G (LTE)	2011
5G (LTE-A)	2019

The ACCC has only developed one cost model for the MTAS in over 20 years of regulation – the 2G-only WiK model developed in 2006. The Position and Consultation Paper does not identify compelling reasons why the ACCC deems it unnecessary to develop an accurate view of the costs of supplying the MTAS in Australia. Developing an accurate view of costs is consistent with best-practice price regulation and the ACCC’s typical approach to price regulation for many other regulated services.

¹⁷ ACCC (2019), *Public inquiry on the access determination for the Domestic Mobile Terminating Access Service*, Position and Consultation Paper, p22.

¹⁸ *Ibid*, p16.



2 A combined review of the MTAS and the FTAS is urgently required

The ACCC's claim that the NBN creates an extraordinary set of circumstances for fixed line services is invalid for the provision of the FTAS – the interconnection arrangements for these services have not fundamentally changed in the transition to the NBN. Now the FTAS rate has been locked-in at levels that are likely to be well above the efficient cost of delivering the underlying service. The ACCC's inaction on the FTAS risks having a deleterious impact on competition in fixed voice services that directly contrasts with the pro-competitive outcomes desired in the fixed broadband market as the NBN nears completion.

The ACCC appears to be adopting different standards for its approach to the MTAS compared to its approach to the FTAS. In a context where the ACCC appears intent on pursuing reductions in the MTAS despite scant evidence of downstream benefits and ample evidence of profiteering by incumbent fixed network operators, its decision to maintain the FTAS rate at its current level for the next five years is unreasonable and inconsistent with promoting the LTIE. The current FTAS rate does not promote the economically efficient operation of the service nor does it reflect the direct cost of providing the service.

We are concerned by the apparent disregard the ACCC has had in Vodafone's interests to procure the FTAS on reasonable terms. [REDACTED]

There are no sound reasons for holding the FTAS rate constant. The FTAS rate is likely to be above the efficient cost of the service and this will have the effect of distorting competition in the mobile services market and it may do irreparable harm in the transition to the NBN.

An urgent review of the FTAS is required. The ACCC cannot wait until the end of the fixed services access determination to undertake this review. Vodafone supports the ACCC proposal for a holistic review of the MTAS and the FTAS. However, if this cannot be undertaken in a timely manner then the ACCC should conduct a stand-alone review of FTAS pricing as soon as possible.

2.1 The FTAS rate is likely to be above efficient costs

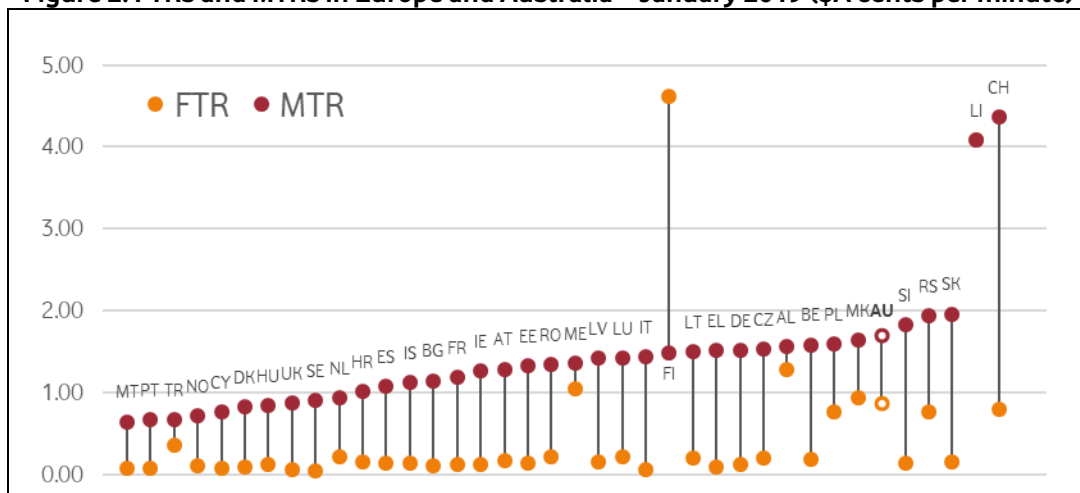
Our primary concern about the FTAS is that the ACCC rolled over its regulatory price for FTAS without proper scrutiny of the underlying costs for delivering the service. International benchmarks indicate the cost of the supplying the FTAS warrants attention. Australia has the sixth highest FTAS rate when compared to a sample of 37 European countries.¹⁹

This ought to have caused the ACCC to undertake a more thorough investigation of FTAS pricing. Instead, the FTAS price has been set at levels that are likely to be above the efficient cost of providing the service. This is likely to be detrimental to small fixed operators, mobile network operators and consumers (see **section 2.2**).

¹⁹ Body of European Regulators for Electronic Communications (BEREC) 2019, *Termination rates at the European level: January, 13 June*.

The Position and Consultation Paper’s citation of an article appraising 25 years of telecommunications regulation in Europe supports Vodafone’s position that a thorough investigation is required. The statement by Cave et al was that “as a result of regulation, mobile termination rates are getting *increasingly close* to fixed termination rates” [bold text added]. The phrase “increasingly close” is subjective. In our previous submission, we provided evidence of the fixed and mobile termination rates in Europe and Australia – of note is the almost uniform low pricing for fixed termination rates (see **Figure 2**). The outcomes in Europe reflect the decision to adopt a consistent cost-based approach for both fixed and mobile termination rates. In Europe, 27 of the 37 national regulatory authorities use some form of long-run incremental cost model to set fixed termination rates. Vodafone has sought a consistent approach to cost modelling in Australia but this has not yet been adopted by the ACCC.

Figure 2: FTRs and MTRs in Europe and Australia – January 2019 (\$A cents per minute)



Notes: AUD = 0.6253 EUR (average for January 2019). FTRs are for the incumbent’s lowest regulated FTR. The MTR and FTR rates in LI are the same – the FTR point is not visible on the chart.
Source: BEREC, Vodafone.

2.2 High FTAS costs distort competition and consumption

The high FTAS price is likely to distort competition. Specifically, it causes mobile network operators such as Vodafone to pay a higher cost for the FTAS than is likely to be faced by its competitors – Telstra and Optus. This directly impacts Vodafone’s profitability and it has indirect effects through its influence on the development and pricing of retail plans. This latter impact has broader implications for competition as it may cause Vodafone to refrain from the pursuit of certain pricing tactics or alter the price points at which it offers certain features. Without Vodafone’s competitive impetus it is less likely that the industry will move to economically efficient retail pricing in the mobile services market.

For Vodafone’s customers, the prices of calls to fixed and mobile numbers have converged as part of our unlimited calling plans. However, the ACCC should not take these retail pricing structures for granted. It is possible that inefficiently high prices for the FTAS could lead to a divergence in the retail pricing approach for fixed and mobile calls particularly for plans offered at lower price points. Aspects of this are already evident in the market through the lack of convergence in retail pricing for fixed and mobile calls in the PAYG plans offered by some of our competitors.

High FTAS costs are also likely to impact competition in the fixed voice services market. For instance, the FTAS rate might be used in setting prices as part of agreements in the wholesale fixed voice services market. If so, the high FTAS rate may have the effect of dampening downstream price competition for fixed calls

from wholesale customers that are dependent on the FTAS price. It may also have the effect of perpetuating pricing structures that reduce consumer's use of fixed voice services. These impacts are detrimental to the LTIE.

For these reasons, the ACCC should adopt a consistent approach for both the FTAS and the MTAS. Specifically, the ACCC should consider "that any reduction in the" FTAS "price, that is consistent with [a] reduction in cost, is still likely to promote competition in the retail mobile and fixed line services market".²⁰

2.3 Inefficient FTAS rates harm competition post-NBN migration

The NBN does not provide end-to-end wholesale fixed voice services. Instead, it provides an access component for connecting voice calls over the 'last mile' to end-users on its network. The Point of Interconnection for calls terminating on a fixed line numbers happens outside the NBN network. A number of players currently provide fixed termination access services. We understand these players host fixed voice numbers on their own platform and that the platforms are interconnected with each other. [REDACTED]

We are extremely concerned that the existing FTAS rate will anchor pricing for calls terminating on the NBN at inefficiently high levels. [REDACTED]

[REDACTED]. While aspects of the cost structure to supply the FTAS may be different under the NBN, its bottleneck characteristics have not fundamentally changed. In particular, suppliers of the FTAS with large customer bases have the ability and the incentive to maintain the FTAS at inefficiently high levels to raise rivals' costs and deter consumer switching.

The inefficiently high FTAS rate is highly beneficial to large incumbents during the NBN migration. During this period consumers are expected to exhibit a higher propensity to switch retail service providers. However, the high FTAS rate may provide a deterrent to switching by reducing the capacity of smaller retail providers to offer compelling retail fixed voice propositions. (It may also deter some fixed broadband providers from entering the fixed voice services market). These deterrents are extremely beneficial to large incumbents during the NBN migration as beyond this period consumer inertia is expected to be higher leading to less switching between retail service providers. This behaviour is evident in other utilities market – for instance, the Australian Energy Market Operator (**AEMO**) reported that:

*Around 50 per cent of consumers have not switched retailer or energy plan in the past five years. Market offer benefit periods of typically apply for around 12 months **from when consumers sign up with a retailer**, whereas most consumers generally stay with their retailer for longer periods.²¹*

The NBN migration is precisely when the ACCC should be taking regulatory actions that promote competition in fixed voice services. It is a unique event that will prompt consumers to consider switching suppliers. The extenuating circumstances of the NBN rollout are not a cause for inaction, rather they should

²⁰ ACCC (2019), *Public inquiry on the access determination for the Domestic Mobile Terminating Access Service*, Position and Consultation Paper, p19.

²¹ AEMO (2017), *2017 AEMC Retail Energy Competition Review*, 25 July, p17.

act as the catalyst for the ACCC to take urgent action to capitalise on the once-in-a-generation opportunity to stimulate competition in the fixed voice services market.

The ACCC has said it will wait until a future access determination inquiry to consider voice services.²² It should reconsider this decision – waiting to address FTAS pricing will not promote the LTIE. There is already sufficient evidence that prices are inefficiently high. The detrimental impact this will have on competition during the NBN migration cannot be remedied in a later regulatory period. The ACCC should urgently commence a review of FTAS pricing in a stand-alone inquiry or as part of a holistic investigation into the MTAS and the FTAS.

²² ACCC (2019), *Inquiry into final access determinations for fixed line services*, Final decision, November, p7.



3 Comments on the benchmarking methodology

We understand that the ACCC proposes to undertake an international benchmarking exercise for the purpose of estimating the cost of the MTAS in Australia. The exercise consists of three parts:

- Selecting an appropriate benchmark pool;
- Make appropriate adjustments to account for country-specific factors that drive differences in the cost of providing the mobile voice termination services in Australia; and
- Determining an appropriate MTAS price informed by the cost range produced by the international benchmarking exercise.

The ACCC have engaged Analysys Mason to assist it with the international benchmarking exercise. Analysys Mason's Draft Methodology was released along with the ACCC's Position and Consultation Paper. Our comments on the international benchmarking exercise have considered information from both sources.

3.1 Benchmark pool

The benchmark pool is small, consisting of only nine countries. We recognise there are a limited set of available countries to benchmark and this has driven the decision to use a small dataset. To that end, the methodology reflects an "opportunity sample" and, while we do not have any specific objections to the models chosen, the ACCC should be cognisant that opportunity sampling could lead to biased estimates of the cost of the MTAS.

A further challenge with a small dataset is that the cost estimate derived from the benchmarking could be susceptible to a high degree of variance. That is, the output is highly dependent on the set of countries selected in the sample and could vary significantly if it were possible to choose a different set of nine countries. For this reason, the ACCC must be cognisant that the cost range produced by the benchmarking exercise may not provide a true estimate of the cost of supplying the MTAS in Australia.

Vodafone supports Analysys Mason's proposal to exclude models that do not include the costs of 4G technologies and to exclude models where critical information has not been made available. We do not object to Analysys Mason making adjustments to the models for Mexico and France to derive a LRAIC+ output from these models.

The ACCC should use the benchmarking pool to identify the degree of error associated with the international benchmarking exercise and validate the appropriateness of relying on the adjustment process. One potential way to do this is to remove one of the countries from the sample and use it as a test case. Adjustments could then be made to the remaining set of models so that their outputs were reflective of the telecommunications environment used as a test case. The results of the in-sample benchmarking exercise could then be compared to the cost of the MTAS from the test case model. The process could be repeated for each of the countries in the sample using a "leave-one-out" methodology to provide an indication of the error associated with the international benchmarking exercise.

3.2 Proposed adjustment process

The adjustment process is critical if the ACCC is to rely on the international benchmarking exercise to develop a cost estimate for Australian conditions. The ACCC and Analysys Mason have identified a number of areas where they propose to make adjustments to the benchmark outputs:

- geography;
- cell coverage radii;
- currency;
- spectrum holdings;
- spectrum costs;
- levels of market demand;
- assumed market share;
- mobile radio technologies in use; and
- weighted-average cost of capital (WACC).

These adjustments are a reasonable starting point. However, we are concerned that the proposed currency adjustment process for non-tradeable goods and services is unsuitable for assessing the impact of critical cost drivers in Australia including transmission, site costs, national security arrangements and infrastructure costs associated with natural disasters.

Geography and cell coverage radii

The different geo-demographic characteristics of a country play a critical role in determining the costs of mobile network deployment. We are familiar with the approach commonly used in cost modelling to group areas into several classes with similar geo-demographics (or 'geotypes'). We are also aware of the work Analysys Mason undertook for the Australian Communications and Media Authority (ACMA) to define geotypes for Australia. The model divided Australia into seven different geotypes and used three different spectrum allocations (see **Table 2**).

Table 2: Geotypes used by Analysys Mason in ACMA forecasting model

Geotype based on pop. only	Geotype	Spectrum allocation	Density threshold	Avg pop. density	% pop.	% area
Dense urban	Dense Urban	Metropolitan	>3000	4,213	14.56	0.01
Urban	Urban in metropolitan areas	Metropolitan	1250-3000	1,971	31.70	0.05
Urban	Urban in regional areas	Regional	1250-3000	1,752	3.28	0.01
Suburban	Suburban in metropolitan areas	Metropolitan	100-1250	426	17.23	0.12
Suburban	Suburban in regional areas	Regional	100-1250	276	15.71	0.17
Rural	Rural	Regional	0.2-100	2.67	16.52	18.65
Remote	Remote	Remote	<0.2	0.04	0.99	80.99

Note: Data sourced directly from the model. The area figures are based on all Australian Statistical Area Level 2 (SA2) in the model including empty areas in the regional and remote geotype.

Source: ACMA (2015), 'Mobile network infrastructure forecasting model', June.

The ACMA's forecasting exercise highlighted some of the challenges associated with Australia's vast and changing geography. We understand Analysys Mason intend to use the underlying Statistical Area Level 2 (SA2) data for the international benchmarking exercise. We support this choice. The geotype definitions used by each benchmark model will then be applied to the SA2 data to estimate the different fractions of the population and area for the geotypes used in each of the benchmark models.

It is not clear that scaling the benchmark models for Australia’s area and implementing the benchmark models’ geotypes using our population density data will provide a reasonable proxy for the differences in costs associated with geography for all aspects of the network. The geotypes used in some of the benchmark models are different from Australia. For instance, the Swedish and Dutch models have three geotypes – Urban, Suburban and Rural and does not consider differences in spectrum allocations across geography (see **Table 3** and **Table 4**). The different density threshold used in the Swedish and Dutch are noteworthy for the magnitude of the difference in the thresholds used. These differences may impact the credibility of the classifications produced from these models when scaled to reflect Australia’s population and area.

Table 3: Geotypes used in the Swedish model

Geotype	Density threshold
Urban	>260
Suburban	15.8 – 260
Rural	< 15.8

Table 4: Geotypes used in the Dutch model

Geotype	Density threshold
Urban	>5825
Suburban	720 – 5825
Rural	< 720

There are several ways the use of different geotypes might not accurately reflect costs that are incurred in the Australian market:

- **Commuting:** Traffic demand in dense urban areas and urban areas should include people travelling to work. Often cost models the allocate traffic to geotypes on the basis of the population of each geotype but adjustments should be made to account for the flow of commuters. For instance, the ACMA’s network infrastructure model made an adjustment to the SA2 population data to reflect the increased number of users in the suburban, urban and dense urban geotypes due to commuters. These impacts can be significant – for instance, the uplift from commuting to dense urban areas in the ACMA model was 154% of the demand based solely on population estimates. Analysys Mason did not make a corresponding reduction in the number of suburban and rural users since it assumed that commuters used “mobile services in their commuting destination during the day and in their home location in the evenings, so the busy hours in different geotypes may well occur at different times”.²³ It is unclear whether and how models with fewer geotypes accurately capture the impacts of commuting on network dimensioning and costs.
- **Transmission:** The mix of transmission solutions used in Australia is likely to be different to many benchmark models. Technologies such as microwave transmission that are often used in other countries may not be deployable at sites in Australia due to a lack of line-of-sight between A-end and B-end locations. In addition, Australian consumers’ appetite for data has led to the use of dark fibre or leased lines at many sites in urban and suburban locations. These factors will impact the cost of services (see section on **Currency**) in a way that is not captured by merely scaling the benchmark models.

²³ Analysys Mason (2015), *Mobile Network Infrastructure Forecasts*, Prepared for the ACMA, June.

- **Spectrum:** Australia uses non-national spectrum licences and spectrum holdings vary by geography. While many of Australia’s spectrum licences are divided into different geographic areas in practice there are three different categories of spectrum holdings – metropolitan, regional and remote (see section on **Spectrum holdings and costs**). The differences in spectrum holdings impact the number of sites an efficient operator needs to deliver capacity in different areas. Unfortunately, the different geographic categories for Australia’s licences do not mirror the geotyping classification process typically used in cost models. For instance, if the Swedish or Dutch geotypes are used then there will be urban geotypes with metropolitan spectrum holdings and other urban geotypes with regional spectrum holdings. As a consequence, the cost drivers arising from differences in Australia’s geography (e.g., the number of sites required for capacity) will not be adequately reflected if the differences in spectrum holdings are not properly represented.

We are satisfied that the method proposed by Analysys Mason is capable of producing a reasonable proxy for the number of sites deployed in Australia provided the differences in spectrum holdings across geotypes is factored into the assessment. To validate whether the number of sites modelled is accurate, the outputs can be compared to the actual MNO site numbers and the ACMA’s network infrastructure forecasting model.

At this stage, we are unclear on the proposed assumption for the size of the network for the hypothetical operator. Analysys Mason has indicated that it will determine the size during implementation. Given the differences in the geographic area of existing MNOs’ networks, interested stakeholders should be consulted on this design choice prior to its adoption and implementation.

Vodafone supports the proposal to adjust the cell radii assumed for mobile coverage in the rural geotype. We agree that the cell coverage radii used for the rural and remote geotypes in the ACMA’s network infrastructure model provides a reasonable starting point. Vodafone does not consider an adjustment to the radius used for urban geotypes is required.

Currency

It is not credible to solely rely on the market exchange rate and purchasing power parity (**PPP**) adjustments to the benchmark models to reflect differences in the cost of deploying and operating a mobile network in Australia. PPP provides a general measure of price level differences in goods and services across different countries. However, there are several costs associated with the deployment and operation of mobile networks in Australia that are unlikely to be accurately reflected by a general measure of price differences across countries. In addition, the influence of national security requirements and natural disasters may increase infrastructure costs in ways that are not adequately captured by converting equipment costs using the market exchange rate.

There are four areas where Analysys Mason should consider specific adjustments to reflect Australia’s unique circumstances:

- Transmission costs;
- Site deployment costs;
- Network costs associated with natural disasters; and
- National security arrangements.

There are several methods for addressing these issues. For instance, Analysys Mason could make adjustments to the costs directly in the models and then convert the output using a market exchange rate.



Alternatively, it could make an ex-post adjustment to reflect these issues after making the currency conversion adjustment.

Where costs are unlikely to be influenced by specific Australian factors, we consider it reasonable to make adjustments using a mix of the market exchange rate and PPP rates for tradeable and non-tradeable inputs respectively.

Transmission

The transmission cost assumption used in the benchmark models is unlikely to reflect the true cost of transmission incurred by MNOs in Australia. The cost of delivering transmission to mobile sites varies significantly across the country, with the distance between the site and the nearest aggregation point is often the key cost driver. The mix of transmission solutions is also likely to be different for the reasons set out in the section on **Geography and cell coverage radii** and this will impact transmission cost estimates as it will require further adjustments to the data used in the benchmarking models.

It may be possible to determine a proxy for metropolitan and regional transmission costs using the ACCC's DTCS price formula and working out the average distance from sites in different geotypes to major aggregation points. However, this method will not capture the cost of augmenting Telstra's existing transmission network for new sites in regional locations. To address this issue, it may be possible to include a capital expenditure uplift for connecting new sites in rural and remote geotypes.

Site deployment costs

Australia's site costs are significantly above the costs incurred in other countries. Based on our internal data, the cost of services for site deployment in Australia is typically between [REDACTED] per site. Our analysis of a selection of models suggest that PPP adjustments may not adequately reflect the difference in costs associated with differences in site deployment costs. For instance, the unit cost of site acquisition and preparation in the Swedish and UK models are far below the cost incurred in Australia for deploying a site (see **Table 5**). Given the scale of the discrepancy and the materiality of site costs to the TSLRIC+ cost estimate, it is not appropriate to rely on a generalised PPP-adjustment for site acquisition and preparation costs – a specific adjustment is required.

Table 5: Unit sites costs from selected benchmark models

Country	Local currency unit	AUD – market exchange rate	AUD – PPP-adjusted
Sweden	656,211	100,735	109,080
United Kingdom	93,132	177,631	211,294

Notes: Macro site costs sourced from the unit cost figures for 2019 in the respective countries model. Sweden is based on site costs for urban areas. The market exchange rates were as at 22 January. The PPP-adjusted figures were derived from ratio of Australia to the respective country's price level ratio of the PPP conversion factor to the market exchange rate.

Sources: RBA, XE.com, World Bank and the selected benchmark models.

One option is to make an adjustment to the site acquisition unit costs within each model and then exclude these items from the adjustment proportion of costs that relate to non-tradeable items. As an alternative, it may also be possible for Analysys Mason to make an ex-post adjustment to the site acquisition proportion of the costs after making PPP-adjustments for non-tradeable goods and services.

Network costs associated with natural disasters

Mobile telecommunications infrastructure is vulnerable to many types of natural disasters including bushfires, floods and cyclones. The recent Australian bushfire crisis has highlighted the community's need



and desire for continuous mobile telecommunications before, during and after natural disasters. Australian telecommunications companies implement numerous measures to improve the resilience of their telecommunications infrastructure and incur costs to ensure the recovery of services in areas impacted by natural disasters.²⁴ The ACCC and Analysys Mason must determine if Australian telecommunications companies have a different approach to hardening mobile infrastructure against natural disasters and developing network redundancy options compared to countries in the benchmark pool. The findings would mean a higher cost profile compared to telecommunications companies in other countries.

Impact of national security arrangements on input costs

Australia has a fundamentally different approach to its national security arrangements compared with the countries in the benchmark set. Most notably, the Australian Government's Telecommunications Sector Security Reforms (TSSR) introduced and clarified security obligations requiring carriers to protect their networks and facilitate against threats to national security from unauthorised access or interference. Some vendors that are likely to operate in countries from the benchmark pool are not permitted to be involved in the deployment of networks in Australia. Some aspects of these rules are solely targeted at the access layer of 5G networks and other parts restrict the use of certain vendors in the core network regardless of the underlying technology.

The rules targeting the 5G access layer impact the deployment of backward-compatible technologies due to the lack of a clear upgrade path for vendors whose equipment is not permitted to be part of the 5G deployment. Hence, the national security requirements are relevant to estimating the efficient cost of deploying 3G and 4G networks in Australia.

The national security requirements raise telecommunications costs in two ways: (i) they limit the ability of cost-efficient vendors from participating in network deployments in Australia leading to a direct increase in equipment costs; and (ii) they restrict competition in an already concentrated market to a near duopoly leading to an indirect increase in costs. Some commentators suggest the cost of networking equipment could be up to 30% more expensive as a result of the national security requirements.²⁵ One of the impacted vendors suggests the annual investment cost for 5G infrastructure will increase by 8-27 per cent over the next decade.²⁶

Spectrum holdings and costs

The proposed methodology for considering spectrum holdings is flawed and requires further consideration. The proposed simplification to assume nationwide licences does not reflect the acute differences in spectrum holdings between metropolitan areas and, regional and remote parts of Australia. Lack of spectrum is a major cost driver for some MNOs in regional and remote areas as it means more sites are required to meet capacity requirements. Hence it is important to reflect the nuances of Australia's geographically-based spectrum licensing regime in the benchmarking exercise as it will materially affect the cost estimates derived from the models.

The ACCC has suggested that its hypothetical operator will obtain 33.3% market share. Given this premise, it is not reasonable to assume a disproportionate allocation of spectrum for the hypothetical operator in

²⁴ See for example:

news.com.au (2011), 'Telstra, Optus could face \$50 million flood repair bill', 14 January.

Sydney Morning Herald (2020), '“Tens of millions”: Telstra, Optus start counting bushfire cost', 9 January.

²⁵ Beer, S. (2019), 'Huawei 5G ban could to 30% higher costs in Australia', *ITWire*, 4 March.

²⁶ Oxford Economics (2019), *Restricting competition in 5G network equipment: An economic impact study*, December.

any given spectrum band nor do we consider it reasonable to assume a reallocation of spectrum. That is, at least three operators should have access to the spectrum holdings assumed for the hypothetical operator – the proposed assumptions regarding spectrum holdings do not meet this criterion:

- The amount of spectrum available for 3G coverage has been overstated – only Telstra has 2x10 MHz available on a nationwide basis using their holdings in the 850 MHz band. By contrast, Vodafone and Optus rely on the 900 MHz band for 3G coverage. Within this context only 2x5 MHz is available for 3G coverage.
- Vodafone does not have 2x10 MHz of contiguous spectrum for 4G coverage in regional and remote areas. It relies on the 850 MHz band for 4G coverage and has a licence for 2x10 MHz in metropolitan and 2x5 MHz in regional and remote areas.
- The amount of spectrum available for 3G and 4G capacity available to Vodafone in regional and remote areas is less than was proposed. To meet its regional and remote 4G capacity requirements, Vodafone uses 2x10 MHz of 1800 MHz spectrum in certain regional areas and up to 2x20 MHz in the 2100 MHz band where required. In practice, this means there is less spectrum available for 3G capacity in the 2100 MHz band in regional areas.
- The 2100 MHz band is no longer used for 3G capacity in metropolitan areas. We are finalising the re-farm of our 2100 MHz holdings from 3G to 4G capacity to reflect consumers’ changing demand for these technologies.
- Vodafone does not have access to the 2.5 GHz band for 4G capacity. That said, for metropolitan areas we have additional spectrum in the 1800 and 2100 MHz bands that we use for 4G capacity.

It is clear from the points above that spectrum use is dynamic in nature as bands are re-farmed from use by one technology to use by newer technologies. These challenges will increase with respect to spectrum identified for 4G use. [REDACTED]

[REDACTED] This will likely have a material impact on 4G spectrum availability as we expect it to decrease in line with users switching to 5G. However, we are unclear whether this is material to Analysys Mason’s proposed consideration of spectrum holdings and how Analysys Mason intends to treat past ‘re-farming’ of spectrum for use by newer technologies.

If a static view of spectrum holdings is adopted for the international benchmarking exercise then we propose an alternative characterisation of spectrum holdings (see **Table 6**) to the one proposed by Analysys Mason. Critically, we urge the ACCC and Analysys Mason to reconsider the treatment of spectrum to reflect Australia’s different geographic categories. One option for implementing this approach might be to determine the sensitivity of the models to changes in spectrum holdings and, if material, weight the different outcomes based on the demand by region to derive the MTAS cost estimates for Australia.

Table 6: Proposed approach to spectrum holdings for Australia’s different geographic categories

	Metropolitan	Regional	Remote
3G coverage	2x5 MHz (900 MHz)	2x5 MHz (900 MHz)	2x5 MHz (900 MHz)
3G capacity	2x10 MHz (2100 MHz)*	2x5 MHz (2100 MHz)	2x10 MHz (2100 MHz)
4G coverage	2x10 MHz (700 or 850 MHz)	2x5 MHz (850 MHz)	2x5 MHz (850 MHz)
4G capacity	2x20 MHz (1800, 2100 or 2500 MHz)	2x10 MHz (1800 or 2100 MHz)	2x10 MHz (1800 MHz)

Notes: *Vodafone no longer user the 2100 MHz band for 3G capacity. We have suggested holding of up to 2x10 MHz for 3G capacity however, we would expect a hypothetical operator to no longer be using this spectrum for 3G capacity from 2019.

The proposed approach to modelling spectrum costs appears reasonable. Any models used to calculate the spectrum costs should be made available for stakeholders to review.



Other matters

Level of market demand and assumed market share

We recognise that the level of market demand is a significant driver of the mobile network costs. There is insufficient information in Analysys Mason's *Methodology Report for the ACCC* to determine how it will forecast the level of market demand to 2060. Greater transparency is required on the forecasting methods to determine if they are consistent with MNOs demand expectations over the medium term (or have been produced in a reasonable manner in the event they are not consistent with expectations).

We consider the network market share assumption of 33.3% reasonable.

Mobile radio technologies in use

We support the approach of assuming 2G networks are switched off from 2019 onwards. We consider Analysys Mason's assumption that all 2G-related network costs are to be recovered before 2019 critical to ensure the integrity of developing forward-estimates cost estimates for 3G and 4G technologies. The ACCC's summary of Analysys Mason's approach does not mention this important assumption and gives the impression that 2G networks could be excluded altogether. As such, we would appreciate the ACCC's clarification on this issue.

We support the proposal to assume that 3G networks will continue to operate beyond the current declaration period ending in June 2024. [REDACTED]

Determination of the WACC

We understand the ACCC intends to determine the Weighted Average Cost of Capital (WACC) that is appropriate for a hypothetically efficient operator in the Australian market. We support the proposal to obtain estimates for certain components of the WACC from the latest Australian Energy Regulator (AER) Rate of Return instrument,²⁷ including the market risk premium (6.1 per cent) and the gamma estimate (0.585). We also support the proposed method for determining the risk-free rate.

The determination of the equity beta and the gearing ratio are arguably the most subjective aspects in determining a WACC for a hypothetically efficient Australian MNO. There are only three Australian MNOs and only one of them is listed on the Australian Stock Exchange. The company that is listed is a diversified telecommunications company, which makes it difficult to isolate and determine systemic risks that are solely related to the mobile portion of its business. It is possible to consider publicly listed companies outside the Australian market though care is required to ensure these businesses are similar to the hypothetical Australian MNO. As such, we reserve our position on this topic until we have more information on how the ACCC intends to determine its set of comparable companies.

Some of the information the ACCC has sought on debt-related components of the WACC cannot be provided. [REDACTED]

²⁷ AER (2018), *Rate of return instrument*, December.

[REDACTED]
[REDACTED] Given this, we are unclear on how the ACCC intends to proceed and would appreciate further information on this matter.

We broadly support the proposed approach for determining the expected inflation using a ten-year geometric annualised average of a short-term inflation forecast and mid-point (2.5 per cent) of the Reserve Bank of Australia's inflation target. We understand that the forecast inflation for the first two years will be sourced from the RBA (e.g., as set out in its quarterly Statement of Monetary Policy).

3.3 Approach to determining the MTAS price

We understand Analysys Mason will provide a recommendation to the ACCC on a cost range for the MTAS in Australia that it has derived from the international benchmarking exercise. The ACCC will then determine a price point for setting the new, regulated MTAS price.

The ACCC should consider and discuss its options for determining the price point for the MTAS with interested stakeholders prior to receiving information from Analysys Mason on the cost range. We also request the ACCC clarify how the factors it has described (e.g., the availability of information for the purpose of the adjustment process) could influence its views on the appropriate price point for the MTAS.